BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL

WESTERN ZONE BENCH AT PUNE

APPEAL NO. 19 of 2025

IN THE MATTER OF:

Vijaykumar Karsanbhai Gadhavi & Ors. …Appellants

-Versus-

Union of India & Ors. …Respondents

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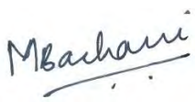
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Date: 22.03.2025
Place: Pune

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REPLY AFFIDAVIT ON BEHALF OF GREENFIELD CHEMICAL COMPLEX, GHCL LTD. (RESPONDENT NO. 4) TO THE ORIGINAL APPLICATION

1. That this Hon'ble Tribunal is currently seized of the abovementioned Appeal which challenges the Environmental Clearance 12.12.2024 granted to Greenfield Chemical Complex, GHCL Ltd., (Respondent No 4 herein) for the proposed production of 11,00,000 TPA capacity of Light Soda Ash (LSA), 5,00,000 TPA capacity of Dense Soda Ash (DSA) and 2,00,000 TPA capacity of Sodium Bicarbonate in Village Bada, Taluka Mandvi, Kutch District of Gujarat. It is alleged, albeit wrongly, that the Environmental Clearance dated 12.12.2024 has been granted in violation of the EIA Notification, 2006, the siting criteria in the Technical EIA Guidance Manual for Soda Ash Industry, 2010, Species Best Interest Principle and the Precautionary Principle.

2. That the Greenfield Chemical Complex, GHCL Ltd. (hereinafter referred as the "**Answering Respondent**"), who has been arrayed as Respondent No. 4, is submitting the instant Reply in the present Appeal and is the Project Proponent responsible for the implementation of the Project for the proposed production of 11,00,000 TPA capacity of Light Soda Ash ("**LSA**"), 5,00,000 TPA capacity of Dense Soda Ash ("**DSA**") and 2,00,000 TPA capacity of Sodium Bicarbonate (hereinafter referred as "**Soda Ash Project**") in Village Bada, Taluka Mandvi, Kutch District of Gujarat.

3. That the Answering Respondent, at the outset, submits that all those averments in the present Reply Affidavit that have not been specifically admitted are herewith denied and are not to be construed as having been accepted by the Answering Respondent as if *traversed seriatim.*

4. That before averting to the para wise reply on the merits of the Appeal, the Answering Respondent seeks to place on record its Preliminary Objections, which in its humble opinion, are crucial for a holistic adjudication of the present matter.

I. **Preliminary Objections on Maintainability of the Appeal.**

5. That at the outset, the present Appeal has challenged the Environmental Clearance dated 12.12.2024 by submitting incomplete factual information and misled this Hon'ble Tribunal to issue notice and admit the Appeal, vis a vis the position of facts and law on the first date of hearing on 03.02.2025. Thus, the antecedents of the Appellants under Section 18 of the National Green Tribunal Act, 2010 are clearly questionable and merit serious consideration of this Hon'ble Tribunal.

6. That the Appellants herein have alleged misrepresentation and submission of incomplete and incorrect information by the answering Respondent herein while at the same time themselves submitting the incorrect factual position before this Hon'ble Tribunal. The Appellants, specifically Appellant No. 3, who is a trader in garments based out of Dadar, Mumbai and runs a shop with trade name "Meena Bazar" has previously challenged the validity of the public hearing dated 17.10.2022 before the Hon'ble High Court of Gujarat in W.P.(PIL) No. 85/2022 titled Bharat Gangji Gala and Others v. Gujarat Pollution Control Board & Others. The Hon'ble High Court vide Order dated 18.10.2022 held that the contention raised by the Petitioner, Bharat Gangji, is without any merit as the amended EIA Notification dated 09.05.2022 clearly specifies the time-period for prior notice for a public hearing which has been rescheduled. It is also pertinent to mention that the Hon'ble High Court imposed costs on the Appellants herein noting that despite being aware of the of the law, the Appellants herein had wilfully suppressed to bring on record the EIA Amendment Notification dated 09.05.2022. The said Writ Petition was dismissed with cost of Rs. 50,000/- on the Petitioner (Appellant No 3 herein) for suppression of the EIA Amendment Notification. Now the same Petitioner, who is Appellant No. 3 herein, has approached this Hon'ble Tribunal against the same project, with one of the grounds of challenge being improper conduct of the public hearing of 17.10.2022, by suppressing material facts and position of law as is evident from

the abovementioned Order of the High Court of Gujarat. The Order dated 18.10.2022 of the Hon'ble High Court in W.P.(PIL) No. 85/2022 titled Bharat Gangji Gala and Others v. Gujarat Pollution Control Board & Others is marked and annexed as **ANNEXURE R/1.**

7. That this Order of the Hon'ble High Court was subsequently challenged in the Hon'ble Supreme Court by the Appellant No. 3 herein in Special Leave Petition (Civil) Diary No. 4709/2023 titled Bharat Gangji Gala & Ors. v. Gujarat Pollution Control Board and Others. The said SLP was dismissed by the Hon'ble Supreme Court on 27.03.2023 for want of merit. The copy of the Order dated 27.03.2023 is marked and annexed as **ANNEXURE R/2.**

8. That it is also pertinent to highlight that the Appellants herein have purposefully suppressed and have not annexed the minutes of the 84th and 87th meeting of the Expert Appraisal Committee which suppression is both, an intentional and a material suppression going to the root of the matter, which is the subject matter of the present appeal and clearly designed to mislead this Hon'ble Tribunal into admitting the present appeal and issue notice and therefore is a clear abuse of the judicial process. Without prejudice to the above, the Answering Respondent most respectfully submits that the EAC in the said meeting, while appraising the project of the Answering Respondent herein had constituted a sub-committee including officials from the Integrated Regional Office (IRO) of the Ministry of Environment, Forest and Climate Change as well as the Gujarat Pollution Control Board to undertake a site inspection of the proposed project. Subsequently, the Environmental Clearance was recommended in the 87th Meeting after a detailed discussion of the report of the sub-committee and additional mitigation measures suggested by them.

9. That the EAC has also reviewed and scrutinized all approvals and recommendations with conditions of State government authorities such as the coastal regulation zone clearance by the Gujarat Coastal Zone Management Authority (GCZMA) and Forest clearance and advised to follow all the conditions and recommendations of state government authorities. However, the Appellants herein, for reasons best known to them, have conveniently concealed these material facts and approached this Hon'ble Tribunal to challenge only the Environmental Clearance dated 12.12.2024 on the ground of non-application of

mind by the Expert Appraisal Committee which is dehors the facts and designed to mislead this Hon'ble Tribunal.

10. That it is evident from the material found by the Answering Respondent that the Appellants herein are proxies of one Vipasana Meditation Centre, which has established one of its centers at Dham Sidhu, Bada Village on approximately 35 acres of land near the1100 acres of land acquired for the Greenfield Chemical Complex of the Answering Respondent (hereinafter referred to as the "**Soda Ash Project Land**"). The RTI Application dated 28.06.2024 by Vipassana Kendra through one Samatsinh K. Sodha, who is apparently a Trustee of Vipassana, seeking information on lands allotted by the Government for the Soda Ash Project would show the direct interest and involvement of Vipassana Meditation in protesting against the Soda Ash Project of GHCL Limited. A copy of the said RTI application is annexed herewith as **ANNEXURE R/3.**

11. That it has come to the knowledge of the answering Respondent that the Vipasana Meditation Centre, is the real opponent of the proposed "Greenfield Chemical Complex" of GHCL as the Centre is near the said Project and is visited by influential people. Copy of the letter being circulated by Vipassana on its Website is annexed herewith as **ANNEXURE R/4.**

12. That when all their attempts to scuttle the Soda Ash Project were foiled and the Appellants realized that the Soda Ash Project of the answering Respondent is being established in compliance with the EIA Notification, 2006, the Appellants, in their desperation to scuttle the Soda Ash Project, chose to go ahead and purchase 21.19 Acres of land in Survey No.426 of Village Bada, Taluka Mandvi identified and earmarked for the said "Soda Ash Project" by entering into a criminal conspiracy with the Consolidators appointed by the Answering Respondent. The Appellants went on to acquire lands of the "Soda Ash Project" with full knowledge of the fact that the said lands measuring 21.19 Acres in Survey No.426 of Village Bada, Taluka Mandvi, District Kutch was the subject matter of an open ended Agreement to Sell (ATS) dated 23.12.2021 between the Consolidators of the Answering Respondent Viz., GHCL Limited and the Owners of the said land (hereinafter referred to as the "**Disputed Land**"). The said ATS was entered into and executed between the parties thereto without any time limit for completion and execution of sale deed in view of the fact that acquisition of land for the Soda Ash Project was to be subject to several

clearances and permissions required by law and was likely to take more time than under normal circumstances. It is also significant to note that the Disputed Land was the subject matter of the Approval granted by the Industrial Commissioner, Gandhinagar on 27.07.2021 i.e., even before the open ended Agreement to Sell dated 23.12.2021 between the Consolidators of the Answering Respondent and the owners of the Disputed Land. This clearly establishes that there is something more than what meets the eye and the Appellants herein have not approached this Hon'ble Tribunal with clean hands as it is evident that no prudent businessman would purchase a land that is the subject matter of an Agreement to Sell by paying therefor a consideration of Rupees Twenty Six Lakhs and that too, with full knowledge that the Disputed Land is part of the Soda Ash Project of the Answering Respondent. Interestingly, the aforesaid Disputed Land was purchased by the Appellants herein, after the EAC had recommended grant of Environmental Clearance for the Soda Ash Project of the Answering Respondent in its 87th Meeting and the Minutes of Meeting dated 24.10.2024 was published. It is further submitted that the Appellants, to scuttle the Soda Ash Project, colluded with the Consolidators appointed by the Answering Respondent and completed the purchase of the Disputed Land just three (3) days before the Environmental Clearance was granted on 12.12.2024. Copy of the sale deed dated 09.12. 2024 is marked and annexed as **ANNEXURE R/5.**

13. That as recently as 12.03.2025 Vipassana has put out a petition on the Web-platform called "change.org" under the caption ***"Save Dhamma Sindhu Vipassana Meditation Centre from massive chemical plant by GHCL in Bada".*** The relevant Webpage containing the petition put out by Vipassana on **"change.org"**, reads as follows:

> *"The Dhamma Sindhu Vipassana Meditation Centre in Bada, Kutch, and its surrounding environment is under imminent danger due to the planned construction of a soda ash factory by Gujarat Heavy Chemicals Limited (GHCL) just 0.5km distance from the center. Project Details*
>
> *WE WILL LOSE DHAMMA SINDHU FOREVER IF THIS PROJECT GOES AHEAD.*
>
> *GHCL has received ALL environment clearance and project has been given the go ahead by the government. In the meantime, there is a petition*

filed in National Green Tribunal. First hearing is scheduled on 25.03 2025. Petition Copy

We are urgently calling all vipassana meditators across the world to come forward and support in this endeavor to fight this case.

This proposal threatens our cherished center where people practicing vipassana since more than 30 years, a profound meditation technique restored in contemporary India by the respected Padma Bhushan laureate, Shri S. N. Goenka ji."

The use of words, "WE WILL LOSE DHAMMA SINDHU FOREVER IF THIS PROJECT GOES AHEAD.", in the above petition put out by Vipassana, is clinching evidence of its direct involvement in the filing of false and frivolous complaints against the Soda Ash Project of the Answering Respondent for its own selfish reasons. The said petition is clearly a brazen attempt by Vipassana aimed to instigate all Vipassana Meditators across the world, who have no clue about the project or the project proponent to sign the above petition based on the false and misleading information spread by the said vested interest for its own selfish reasons is nothing but, a campaign of misinformation and disparagement against the project and the project proponent in an orchestrated and systematic manner to mislead the general public / common man by creating a false narrative or propaganda, which clearly amounts to interference with the course of administration of justice amounting to contempt and deserves to be dealt with iron hands by this Hon'ble Tribunal. A copy of their appeal to sign such petition downloaded from the website of "change.org" is annexed herewith as **ANNEXURE R/6.**

14. That it is further submitted that the Appellants, have also alleged violation of Coastal Regulation Zone Notification of 2011 by misrepresenting in their Appeal that the project falls within the CRZ IA whereas the Environmental Clearance dated 12.12.2024 itself records that only the pipeline through underground micro tunneling falls within CRZ IA, which is a permissible activity under the CRZ Notification of 2011 as well as CRZ Notification 2019 and for which permission has been obtained from the Gujarat Coastal Zone Management Authority vide File No. ENV/10/2021/184/T-Cell, dated 26.12.2023 as per the said Notification of 2011. However, as per the regulatory

framework, the Ministry of Environment, Forest, and Climate Change (MoEF&CC), Government of India, also has recommended CRZ clearance under CRZ-I classification. Further, pipelines are clearly permissible activity under the CRZ Notification, 2011. The copy of the relevant extracts from CRZ Notification of 2011 is marked and annexed as **ANNEXURE R/7.** A copy of GCZMA recommendation Letter is also appended as **ANNEXURE R/8.**

15. That from the above factual position of facts and law, it is evident that the Appellants herein have not approached this Hon'ble Tribunal with clean hands and are clearly not 'Aggrieved Persons' under Section 18 of the National Green Tribunal Act, 2010 but, are vested interests whose only objective is to scuttle or delay the Soda Ash Project which has been established in accordance with law. The Hon'ble Supreme Court in the case of State of Uttar Pradesh & Ors. Etc. Etc. vs. Uday Education and Welfare Trust & Anr. (2022 SCC OnLine SC 1469) has clearly held that –

"*When the credentials and bonafides of a litigant approaching the NGT are seriously raised, the same cannot be ignored Before a litigant is permitted to knock the doors of justice and seek orders which have far reaching effects of affecting the employment of thousands of persons, stopping investment in the State, prejudicing the interests of the farmers; the credentials and bonafides of the applicants must be tested.*"

Thus, the credentials of the Appellants herein are clearly questionable given that apart from whatever has been stated in the earlier paragraphs about their own credentials and locus standi, they have presented wrong position of facts as well as law before this Hon'ble Tribunal leading to the admission of the present Appeal. This itself is ground for dismissal of the present Appeal in limine with huge costs.

16. That further, this Hon'ble Tribunal in a catena of cases dismissed Appeals due to the failure of the Appellants to satisfy the test of Section 18 of the National Green Tribunal Act, 2010. [Anand Kumar Jha v. Union of India & Others (Appeal No. 05/2021), Satyabrata Sanjeev Kumar Mahanta v. Ministry of Environment and Forest and Others, Rana Sengupta v. Union of India and Others (2013 SCC OnLine NGT 31)].

II. Preliminary Submissions

A. Vibrant Gujarat Initiative

17. That the answering Respondent on 12th January 2017 signed a Memorandum of Understanding with the Gujarat Industrial Development Corporation (Government of Gujarat) for establishment of a Soda Ash Plant in the District of Kutch, Gujarat under the Vibrant Gujarat, 8th Global Summit to boost the economy of the State with a state of the art technology. A copy of the MOU is appended as **ANNEXURE R/9.**

B. The Environmental Clearance dated 12.12.2024 has been granted to GHCL Ltd. for the Greenfield Chemical Complex in accordance with the law.

18. That at the outset, even prior to the proposal for the prior Environment clearance, for the preparation of the EIA Study and for the establishment of the proposed Soda Ash Project, the answering Respondent wrote to the MoEF&CC on 23.11.2017 seeking clarification for the appointment of accredited consultants such as CSIR - NEERI for the preparation of EIA/ EMP Study as there were no accredited consultant specifically for soda ash Sector as per the list of QCI and NABET-2017. However, the answering Respondent did not receive any response from the MoEF&CC. The copy of the Letter dated 23.11.2017 is marked and annexed as **ANNEXURE R/10.** The QCI and NABET-2017 List is attached as **ANNEXURE R/11.** That in Akhil Bhartiya Jeev Raksha Bishnoi Sabha (Regd.) & Ors. Applicant(s) Versus Union of India and Ors. (Appeal No. 08 of 2018 and RA No. 06/2021), the Special Bench of this Hon'ble Tribunal vide Orders dated 24.09.2018 and 04.03.2021 upheld the EIA Report prepared by the Consultant on the ground that NABET QCI had not finalised the criteria for accreditation on the date the Consultant was engaged for preparation of the EIA Report. The copy of the Orders dated 24.09.2018 and 04.03.2021 in the Akhil Bhartiya case are marked and annexed as **ANNEXURE R/12.**

19. That subsequently, the Answering Respondent on 05.06.2018, for preparation of the EIA Study for the proposed Project, awarded the Work Order to CSIR NEERI, the most reputed national expert agency on environment based on their extensive experience in Environmental Impact Assessment (EIA) for projects of

similar nature, specifically for the Greenfield Soda Ash project on the Gujarat coast. The answering Respondent also decided to undertake a separate oceanographic study and the work order for the same was awarded to another globally reputed agency namely the CSIR-National Institute of Oceanography. It is most respectfully submitted that the observation of the Hon'ble Supreme Court of India in the case of Chinmay Mishra Vs. Union of India and Others decided on 27.02.2025 while considering a case before it, where it reflects on the credibility and reputation of NEERI is reproduced as follows: ***"****6. NEERI is the most recognized and reputed organization in the country dealing with the environmental matters. Whenever the Court finds difficulty in assessing the questions regarding environmental damage, it always relies on the expertise of NEERI.****".*** The relevant judgment which is annexed herewith as **ANNEXURE R/13.**

20. That in the meantime, the Answering Respondent also obtained a report regarding the rare presence or spotting of turtles in Mandvi Taluka from the Zoological Survey of India, the most premium Institution on Zoological wealth of this country, in April 2019. The said report, after detailed monitoring over a period of six months, recommended that the site for the proposed Soda Ash Project of the Answering Respondent has sporadic nesting habitats of turtles and the nesting activities are rare because of the presence of the steep slope and rocks in that part of beach making it not conducive for turtle habitation and nesting. Further, turtles seem to avoid the areas as being unsuitable for laying eggs as per the ZSI Report. The ZSI during its six monthly survey in 2019 did not encounter a single sea turtle and fresh/old crawl marks of the turtles on the beach. The relevant portion of the said report of ZSI which explains the basis for the opinion expressed by it categorically states that, ***"****During the nearly six months daily monitoring of the 3 km beach between September 2018 - March 2019 (From Mota Layja side to the Bada village creek), we did not encounter any sea turtle and fresh/old nests or crawl marks of turtles on the beach. Since many of the factors for selection of the suitable nesting site are not conducive (beach width, vegetation cover, rocky substratum and slope in the intertidal and sub-tidal region, tidal Inundation, presence of animals on the beach), nesting, if at all, occurring is therefore highly sporadic the project location of GHCL and on occasionally. However, the 7 km stretch between Rukmawatl river mouth and Mandvi palace is sandy, vegetation to HTL is wide and much of the sporadic*

nesting could be taking along this coastal stretch which is not included in the Core Zone of the Project Site.". The copy of the ZSI report is marked and annexed as **ANNEXURE R/14.**

21. That in August 2020, CSIR-NIO submitted the report on studies on sand dune mapping and morphological changes of the river mouth at the proposed greenfield chemical complex at District Kutch, Gujarat. A copy of the said study is marked and annexed as **ANNEXURE R/ 15.**

22. That the Marine EIA/EMP for Seawater intake and Effluent disposal for Greenfield chemical complex off Bada Coast, Arabian Sea, was prepared by CSIR- NIO in 2018-2020. The Study noted that no turtles were sighted outside the coast of Bada. The relevant excerpt of the study is extracted and marked and annexed as **ANNEXURE /R 16**.

23. That further, at the time of application for the Terms of Reference in July 2021, in the cover letter of the application, the status of appointment of CSIR NEERI for conducting EIA study was mentioned. Prior to the grant of TOR, MoEF&CC raised another EDS on 30.07.2021. Subsequently, in response to the EDS, it was clarified again vide its detailed reply dated 06.08.2021 that CSIR NEERI has been appointed for conducting the EIA Study. The copy of the Cover letter of the Application for TOR along with the response of the answering Respondent to the EDS raised by MOEF&CC is marked and annexed as **ANNEXURE R/17.**

24. That on 28.07.2021, after having gone through the above studies and findings carried out for abundant precaution as well as by way of legal mandate, the Answering Respondent submitted its application for obtaining the Terms of Reference (TOR) for the proposed Greenfield Chemical Complex. The TOR was granted on 10.08.2021 under Item 4(e) of the EIA Notification, 2006 for Soda Ash Plant.

25. That in October 2021, the Draft Environment Impact and Risk Assessment Study for Greenfield Chemical Complex (light soda ash plant of capacity 11,00,000 TPA, dense soda ash plant,5,00,000 TPA Sodium Bicarbonate 2,00,000 TPA) with solid fuel based captive co-generation power plant of 120 MW , sea water intake and effluent disposal system) was prepared by CSIR - NEERI. The Ecological Study & Wildlife Conservation Plan of the draft report records less

density of nesting of turtles on the coast of Bada and Bambhdai villages. Out of the 23km study area, only 2 km falls in the Project area. An Addendum to the Marine EIA/EMP for Seawater Intake and Effluent Disposal for Greenfield Chemical Complex off Bada coast, Arabian Sea EIA Study was also prepared by CSIR -NIO in March 2022, specifically for Seawater Intake and Effluent Disposal which includes measures for the conservation of sand dunes near the coastline during the construction and operation of the intake and outfall pipeline of the answering Respondent.

Public Hearing conducted in accordance with law

26. That on 04.03.2022 , the Notice of Public Hearing scheduled on 06.04.2022 was published in the newspaper in Gujarati as well as in English. Subsequently, on 05.03.2022, the Gujarat Pollution Control Board wrote to the District Collector, MoEFCC, District Industrial Centre, District Development Officer and Taluka Development Officer for displaying the copy of the EIA/EMP report of the answering Respondent.

27. That on 06.04.2022, the Public Consultation Proceedings for the answering respondent for the proposed project was organised. However, public consultation could not be concluded despite repeated requests from the officials for calming down the public as the protests fuelled by the Appellants, who had spread false information about the Soda Ash Project seemed to create a law and order situation. The Regional Office GPCB as well as the (Resident Additional Collector (RAC, Kutch) concluded that the atmosphere was not conducive for conducting public hearing and postponed the same.

28. That subsequently, on 30.09.2022, GPCB wrote again to the District Collector and other officers for displaying the EIA/EMP Report of GHCL. The Notice for the rescheduling the public hearing on 17.10.2022 was published in the newspapers in Gujarati on 30-09-2022 as well as English on 01.10.2022.

29. That against the said public notice, a Public Interest Writ Petition was filed in the Gujarat HC on 11.10.2022 (registered on 14.10.2022) titled WP (PIL) No. 85/2022 – Bharat Gangji Gala and Others v. Gujarat Pollution Control Board. The Petitioners therein, who somehow wanted to obtain a stay of the Public Hearing slated for 17.10.2022, suppressed the Amended EIA Notification dated

09.05.2022 and alleged that there was procedural impropriety in failing to give a 30 days' notice period of the public hearing, depriving stakeholders of fair and adequate representation.

30. That when the Writ Petition (PIL) No.85/2022 came up for hearing on 17.10.2022 the Petitioners therein, which included Appellant No. 3 herein, pressed for interim orders to stay the Public Hearing that was to commence at 11.00 AM on 17.10.2022 which was rejected and dismissed with cost of Rs. 50,000 by the Hon'ble First Bench of the Hon'ble High Court of Gujarat by a detailed judgment dated 18.10.2022.

31. Further, the grievances of the public, including the Appellants herein have been duly recorded in the minutes of the said Public Hearing held on 17.10.2022 leaving no scope for ambiguity. In fact the same has been incorporated in the revised EIA/EMP, the details of which have been described later here-in-this reply affidavit. The copy of the minutes of the Public Hearing held on 17.10.2022 is marked and annexed as **ANNEXURE /R 18.**

32. That an Ecology Study and Wildlife Conservation Plan was also prepared by Dr. Bharat Jethva, a well known environmental expert of the region, and NABET Accredited FAE, in pursuance of the Terms of Reference as well as the recommendation in the ZSI Report. The Conservation Plan was submitted to the Principal Chief Conservator of Forest on 09.11.2022. The copy of the Letter dated 09.11.2022 along with the Conservation Plan is marked and annexed as **ANNEXURE R/19.**

33. That on 24.04.2023, the Principal Chief Conservator of Forest and Chief Wildlife Warden, Gujarat also gave their approval to the above mentioned Conservation Plan of the answering Respondent. The copy of the Conservation Plan approval Letter dated 24.04.2023 is marked and annexed as **ANNEXURE R/20.**

Objections during and post Public Hearing were duly incorporated in the EIA/EMP Report

34. That on 31.10.2022 the MoEF&CC received numerous representations from the one Dr. Ramesh, Ms. Dhwani, including Appellant No. 3 Bharat Gangji Gala alleging discrepancy with the EIA Report of the proposed Soda Ash Project as CSIR NEERI was not accredited for preparation of soda ash.

35. That the allegations in the representations and the grievances in the Representations were duly responded to and incorporated within the EIA report (Public Hearing Minutes and Action Plan are attached in Public Hearing Section (Section-1) of Parivesh Portal of Part-C) as a part of Public hearing action plan by the CSIR NEERI. Accordingly, the Final EIA and Risk Assessment Report was prepared by CSIR- NEERI in November 2022. Copy of the final report is annexed as **ANNEXURE R/21.**

36. That the answering Respondent has also specifically responded to the allegations in the Representations dated 31.10.2022 clarifying that the EIA EMP has been prepared by CSIR NEERI at a time when there were no other accredited consultants, apart from clarifying the mitigations measures which will be incorporated for ensuring minimal impact of the project. The copy of the representations dated 31.10.2022 along with the response dated 10.01.2023 is marked and annexed as **ANNEXURE R/22 (Colly).**

37. That in the case of Ramesh Agarwal v. SEIAA & Ors (Appeal No. 20/2011), the Hon'ble Tribunal *inter alia* held that the defects and deficiencies pointed out to a large extent have been rectified by the project proponent through the final EIA and dismissed the Appeal for want of merit. In Budhasen Rathore v. Union of India and Others [Appeal no. 06/2020] the Hon'ble NGT dismissed the Appeal on the ground that there was a due public consultation with intimation to all concerned and we see no irregularity or illegality in the order impugned.

Forest Clearance obtained – not challenged

38. That the answering Respondent has also obtained the Forest Clearance on 04.01.2024 from the MoEF&CC for diversion of 0.9689 ha of unclassed forest for laying part of sea water intake and effluent disposal pipeline and passage for related construction equipment movement in Kutch. The Government of Gujarat has also accorded the Section 2 permission on 21.03.2025 under the Forest Conservation Act, 1980 (now Van Sanrakshan Evam Samvadhan Adhiniyam, 1980) for laying down the pipeline. The copy of the 04.01.2024 and 21.03.2025 permissions are marked and annexed collectively as **ANNEXURE R/24 (Colly).**

Due process under EIA Notification Followed:

39. That subsequently on 30.11.2022, the Answering Respondent submitted Form 1 along with the final EIA and Risk Assessment report prepared by CSIR NEERI, the oceanographic study by National Institute of Oceanography ("**NIO**") and the Zoological Survey of India report, among others. It is pertinent to reiterate here that the final EIA and Risk Assessment Report duly incorporated the grievances raised in the public hearing.

Alternative site assessment carried out

40. That, alternative site assessment was also conducted during the study period and five different sites namely Pingleshwar village, Suthri village in Abdasa Taluka, Bambdhai and Modhva Village in Mandvi Taluka including the present site at Bada village were studied and compared based on environmental and social dimensions. The selected site has been thoroughly evaluated based on environmental, social, and technical factors, ensuring its feasibility for the proposed project. In connection with this, the Government has provided in principle approval for the selected site. The present site at village Bada was considered to be most favourable from the ecological and social standpoint. The relevant pages of alternative site assessment is attached as **ANNEXURE R/24**.

41. That on 07.12.2022, certain essential details were sought (EDS) by the Member Secretary, MoEF&CC. The response to the said EDS was submitted by the Answering Respondent on 05.01.2023, which largely pertained to the accreditation details of the Consultant, the copy of the Coastal Regulation Zone Clearance, the copy of the Forest Clearance, among others. The copy of the EDS and response of the answering Respondent is marked and annexed herein as **ANNEXURE R/25.**

42. That another Report was prepared by the Gujarat Institute of Dessert Ecology, which is one of the most premier National Institutes on Desert Ecology, on the Conservation and Management Plan for the Conservation of Significant Species for the proposed Greenfield Chemical Complex of the Answering Respondent in February 2023 to compliment and supplement the earlier studies for a more rigorous understanding on conservation and management of significant species of the area**.** The copy of the relevant extracts of the report on Conservation and

Management Plan for the Conservation of Significant Species by the Gujarat Institute of Dessert Ecology is marked and annexed as **ANNEXURE R/26.**

43. That on 02.01.2024, in the 72nd Meeting of the EAC, the proposal of the Answering Respondent was deferred due to additional details sought, which included the requirement of the new Consultant of the Answering Respondent namely TR Associate to undertake a site visit and verify/check the entire data as well as the EIA EMP Report. The EAC further required from the new Consultant an undertaking that they are satisfied with the data submitted in the report and that they own the data, so provided. The Answering Respondent was also directed to submit baseline study for additional three months as the baseline study in the EIA Report was a little over three years old as on the date of its consideration by the EAC, even though, admittedly, at the time of its submission for appraisal – the baseline was well within the stipulated time of three years. The additional three months data sought was only to ensure that the new Consultant also ensures that the date so provided was adequate and sufficient. The copy of the 72nd Minutes of the Meeting is marked and annexed as **ANNEXURE R/27.**

44. That accordingly on 10.01.2024, the Answering Respondent wrote to TR Associates authorising TR Associates for undertaking site visit and verifying the entire data as well as the EIA/EMP Report. In pursuance of the authorisation, TR Associates verified the EIA/EMP Report prepared by CSIR NEERI and additionally prepared an Addendum to the EIA EMP Report. The said report was submitted to MoEF&CC on 30.01.2024. The Addendum to the EIA report by T.R. Associates, Authorization Letter to T R Associates and Undertaking by T.R. Associates are attached as **ANNEXURE R/28.**

45. That EAC in its 74th meeting on 06.02.2024 deferred the proposal of the Answering Respondent and was asked to compare the baseline data collected during December 2019-February 2020 and from December 2022-February 2023. A trend analysis was also directed to be carried out by collecting additional one-month baseline data. Further, several representations had been received by EAC during the appraisal of the project. Infact, the EAC or Environment Appraisal Committee has taken a very liberal stand and admitted even e-mail representations which should not have been considered after the public hearing. The Answering Respondent was also required to submit the response to the said

representations. The EAC also noted that in the next hearing they will go through the video of the Public Hearing. The Minutes of the 74th Meeting are marked and annexed as **ANNEXURE R/29.**

46. That on 30.04.2024, EAC in its 78th meeting went through the response of the Answering Respondent herein to the representations as well as the video of the public hearing and noted that the public therein were given due opportunity to raise their grievances. Further, the grievances of the public have been responded to by the Answering Respondent. However, the proposal was once again deferred to obtain the views of the CRZ division as the proposal involves CRZ clearance. The Minutes of the 78th Meeting are marked and annexed as **ANNEXURE R/30**.

47. That on 07.06.2024, the EAC in its 80th meeting discussed the comments of the CRZ Division which clarified that the project was permissible under the CRZ Notification, 2011. Further, the CRZ Division had recommended that the adequacy of the Marine Environmental Plan prepared by NIO may be examined along with the GCZMA recommendation. The EAC after detailed deliberations recommended the proposal for the grant of Environmental Clearance subject to compliance with twenty-five conditions. However, the Environmental Clearance was not granted to the Answering Respondent notwithstanding the said recommendation. The minutes of the 80th Meeting are marked and annexed as **ANNEXURE R/31.**

48. That on 21-22.08.2024, the EAC in its 84th Meeting again took up the project of the Answering Respondent in view of the recommendations received by the EAC. However, notwithstanding all the aforesaid recommendations, the EAC decided to constitute a Sub Committee to undertake a site visit and submit its report to the EAC for further consideration. The Sub Committee visited the site of the Answering Respondent along with representatives from the Integrated Regional Office of MoEF&CC as well as the Gujarat Pollution Control Board on 09.10.2024. Minutes of the 84th meeting are marked and annexed herein as **ANNEXURE R/32.**

49. That on 21-22.10.2024, the EAC in its 87th meeting discussed the observations and recommendations of the Sub-Committee in detail and thereafter recommended the grant of Environmental Clearance to the Answering

Respondent subject to additional mitigation measures as suggested by the Sub Committee. Minutes of the 87th meeting are marked and annexed herein as **ANNEXURE R/33.**

50. That on 24.10.2024, the Answering Respondent submitted a letter to the Ministry of Environment, Forest and Climate Change clarifying its response to the queries/suggestions of the EAC in its 87th Meeting. After due consideration of the response and the measures sought to be undertaken and incorporated by the Answering Respondent, the MoEF&CC finally granted the Environmental Clearance for the Soda Ash Project on 12.12.2024. Copy of the letter dated 25.10.2024 of the Answering Respondent is marked and annexed as **ANNEXURE R/34.**

51. It is reiterated that the above mentioned 80th Meeting, the 84th Meeting and the 87th Meeting of the EAC which are crucial material facts having a direct bearing on the merits and the outcome of the present appeal have been intentionally and wilfully suppressed by the Appellants from the Appeal and the reports have not been appended for reasons best known to the Appellants. Further, this conduct clearly shows that only selective information has been presented to mislead this Hon'ble Tribunal.

Consent to Establish Obtained- Never Challenged

52. That it is also pertinent to mention that as early as on 04.09.2021, the Consent to Establish (CTE) was granted to the Answering Respondent's Greenfield Chemical Complex. It is pertinent to note that there has been no challenge to the said CTE till date.

Coastal Regulation Zone Clearance obtained- Never Challenged

53. That significantly, on 11.10.2021, the Answering Respondent submitted its application to the Gujarat Coastal Zone Management Authority (GCZMA) for obtaining the Coastal Regulation Zone Clearance for the seawater intake and effluent disposal facilities. That in January 2021 (based on Draft CZMP as per CRZ Notification 2011), March 2023 (based on approved CZMP as per CRZ Notification 2011), the Local Level Coastal Regulation Zone Map for the Proposed Greenfield Chemical Complex – Soda Ash and Associated Sea Water Intake and Outfall Pipelines in Bada Village Mandvi Taluka, Kachch District,

Gujarat was prepared by the Anna University of Chennai by superimposing it on the approved Coastal Zone Management Plan as per the CRZ, 2011. The Map clarified that Out of 1342.96 acres, 2.96 acres falls in CRZ III (No Development Zone), 26.07 acres fall in CRZ III (200m to 500 m from HTL) and 1313.93 acres fall outside the approved CZMP as per the CRZ Notification, 2011. Thus, the area falling within the CRZ for the construction of the underground pipeline was duly within the permissible activities as per the CRZ Notification, 2011.

54. That on 26.12.2023, the Gujarat Coastal Zone Regulatory Authority gave its final recommendation and clearance for the construction of the seawater intake system in CRZ III, intake pipeline in CRZ 1A, CRZ IB and CRZ IV and outfall pipeline in CRZ 1A, CRZ IB and CRZ IV as per the Coastal Regulatory Zone Notification, 2011. The Copy of the Clearance dated 26.12.2023 is marked and annexed as **ANNEXURE R/35.** It is important to submit that the said clearance was never challenged before any competent forum.

55. That it is pertinent to mention that the High Court of Bombay and the Hon'ble Supreme Court in a catena of cases have upheld the construction of pipelines in CRZ area given the exemption granted by the CRZ Notification, 2011 [Essar Oil Limited v. Halar Ukarsh Samiti, Civil Appeal Nos. 352-357, 359-365 of 2004 AIR 2004 SC 1834, M. Nizamudeen v Chemplast Sanmar Limited and Ors., Civil Appeal No. 2284 of 2010 with WP (C) No. 130 of 2009 and TPs (C) Nos. 365-67 of 2009 (2010) 4 SCC 240; Environsare Foundation vs Union of India. 2003 (2) Bom CR 519.]

56. That in other words, it is clear from the above that the project was allowed to be cleared by several statutory institutions on environment and was never challenged in any competent forum. It is only when the final prior environment clearance was obtained, in an attempt to frustrate the project and certainly for oblique motives, which are writ large in the facts of the present case narrated hereinabove, that the present Appeal has been filed.

57. That the following paras depicts the key challenges and the response of the Answering Respondent to the vexatious claims by the Appellant.

C. The EIA Report has been prepared by accredited consultants and in accordance with the law.

58. That the list of accredited consultants as uploaded on the website of NABET QCI as on August, 2017 (copy annexed as Annexure R11) clarifies that there were no accredited consultants specifically for soda ash projects.

59. That prior to the allotment of the work order to CSIR NEERI in 2017, the Answering Respondent did their due diligence by enquiring from MoEF&CC on 23.11.2017 whether there are any specific EIA-accredited consultants for soda ash industry. However, no response was received from the MoEF&CC. Accordingly, based on the list of accredited consultants on the NABET QCI website, the answering Respondent allotted the work to CSIR NEERI, which was accredited for Chlor Alkali, which also involves the production of soda ash and had been engaged in the past by other producers of soda ash like RSPL Ltd. The other reputed companies such as Tata Chemicals Ltd., and Nirma Limited which were establishing soda ash manufacturing plants in Gujarat were granted EC on the basis of EIA study conducted by the consultant(s) accredited for Chlor Alkali. Last, but not the least, was the Covid – 19 Pandemic and the various restrictions imposed by the Government of India in a manner like never ever witnessed before which severely paralysed all normal activities even of the Government of India and the State Governments resulting in the total chaos that temporarily closed all known channels of personal interaction thus making it difficult, if not impossible for the Answering Respondent to personally visit and seek clarifications before making the online application on 28.07.2021 for grant of TOR. The letter is annexed above as Annexure R/10.

60. That further, as stated earlier, at the time of application for the Terms of Reference in July 2021, in the cover letter of the application, the status of appointment of CSIR NEERI for conducting EIA study was mentioned. Prior to the grant of TOR, MoEF&CC had raised another EDS on 30.07.2021. Subsequently, in response to the EDS, it was clarified again that CSIR NEERI has been appointed for conducting the EIA Study. After due appraisal of the application and the EDS response, MoEF&CC granted the TOR on 10.08.2021 to the Answering Respondent notwithstanding the fact that the Answering Respondent had promptly stated in its reply dated 06.08.2021 to the request for Essential Data Supply (“EDS”) dated 30.07.2021 that it had engaged CSIR-NEERI, Nagpur and will submit its report based on the TOR, which was admittedly issued on 10.08.2021 after considering the reply of Answering

Respondent dated 06.08.2021 covering all material aspects including, the appointment of CSIR-NEERI, an institution of very high repute to conduct the EIA Study.

61. That it is pertinent to mention that NABET QCI for the first time provided accreditation for soda ash to TR Associates in December 2019 as is evident from their Letter dated 27.01.2023. Thus, it is an established fact that at the time of grant of the Work Order to CSIR-NEERI, there were no accredited consultants specifically for Soda Ash Sector. The copy of the letter dated 27.01.2023 is marked and annexed as **ANNEXURE R/36.**

62. That it is also pertinent to note that the draft EIA EMP Report was prepared by CSIR NEERI prior to their disqualification for six months by NABET QCI on 23.12.2022. By this time, the Answering Respondent herein had submitted their EIA EMP Report along with Form 1 to the MoEF&CC for grant of Environmental Clearance.

63. That this issue was brought to the notice of the EAC in its 72nd Meeting on 02.01.2024 and the Answering Respondent clarified that a new Consultant, TR Associates, who has specific accreditation for soda ash, has been engaged by the Answering Respondent. The EAC suggested that the new Consultant, TR Associates, verify and adopt the EIA/EMP Report prepared for the proposed soda ash project of the Answering Respondent. TR Associates accordingly has verified the report and adopted the same clarifying that there are no deviations in the said report prepared by CSIR – NEERI. Further, T.R. Associates also prepared an addendum to the report, conducted baseline study of additional 03 months (December 2022 to February 2023) and again 01month (February 2024)) as advised by MoEF&CC. It is pertinent to mention that such situations of baseline are clarified in a few OMs including OM dated 07.11.2014 read with OM dated 08.06.2022. The said OMs clarify that, at the time of application for EC , in case of baseline data is older than three years, but less than five years old in case of river valley and HEP projects, or less than four years old in the case of other projects, the same shall be considered, subject to the condition that it is revalidated with one season fresh non-monsoon data collected after three years of the initial baseline data . Along with the additional baseline study, there was also a detailed reporting on biodiversity impact as well as EMP cost for the mitigation measures. Thus, the report has been prepared in accordance with the

law. The Copy of the OM dated 07.11.2014 and 08.06.2022 is marked and annexed collectively as **ANNEXURE R/37 (Colly).**

64. That it is important to note that prior to the NABET QCI accreditation for soda ash projects, EIA Reports for soda ash plants were prepared by Consultants accredited under the chlor alkali sector. Some industrial examples include, RSPL Ltd's soda ash project which was granted an EC on 12th November 2015, after undergoing an EIA by CSIR NEERI. Similarly, other major companies such as Tata Chemicals and Nirma Limited also received ECs based on their respective EIAs carried out by Chlor alkali accredited Consultants, who did not possess any accreditation expressly for the Soda Ash Sector. Publicly available data shows that Tata Chemicals' EIA, conducted by J. M. EnviroNet Pvt. Ltd., was approved on 5th July 2019, while Nirma Limited's EIA, prepared by San Envirotech Pvt. Ltd. and Kadam Environmental Consultant, leading to the grant of their Environmental Clearance on 6th August 2021. The Answering Respondent has submitted the above-mentioned details on 05.01.2023 in response to the Essential Detail Submission (EDS) sought by MoEF&CC on 07.12.2022, which inquired whether any QCI-NABET accredited consultant had been engaged. The detailed EDS reply is attached as **ANNEXURE R/38**.

65. It is important to add here that chlor-alkali is an industrial method or process for electrolysis of sodium chloride solutions or in other words, it is the technology used to produce chlorine and sodium hydroxide (caustic soda), which are commodity chemicals required by industry. Soda ash, also known as sodium carbonate, is a white, odourless, water-soluble powder that has many industrial and household uses which is produced in large quantities from sodium chloride and limestone by the Solvay process, as well as by carbonating sodium hydroxide which is made using the chlor-alkali process . In other words, accredited Consultants who are competent to prepare EIA for Chlor Alkali are also technically proficient to prepare such EIA reports for Soda Ash as in the case of NEERI in this case.

66. It is also significant to add that any derailment of this nationally important project will also hurt the economic interests of the nation on account of the cheap / dumped imports of soda ash coming from neighbouring countries such as China which is already a drain on the foreign exchange reserves of our country

apart from ruining the domestic soda ash industry. Establishing such projects like the Soda Ash Project here is a true reflection of **"Atmanirbhar Bharat".**

67. That in view of the abovementioned facts and position of law, it is humbly submitted that the EIA EMP Report has been prepared by CSIR NEERI, which is an accredited organization. Further, the Report has been additionally vetted and adopted by TR Associates, who has specific accreditation for the Soda Ash Sector. The lack of soda ash accredited agencies at the time of preparation of the EIA -EMP Report for the proposed Soda Ash Project of the Answering Respondent cannot prejudice the report prepared by CSIR NEERI, which has been often referred to and relied upon by this Hon'ble Tribunal as well as the Hon'ble Supreme Court for numerous site inspections, air and water quality reports, among other forms of environmental reporting.

68. That further, the Appellants have alleged that the EIA Study is faulty as it fails to address the impact on corals and have relied upon an Article on Kutch Coral Reefs by Earth Observatory NASA. At the outset, it is pertinent to note that article is restricted to the discussion on the presence of coral reefs in the Marine National Park in Gulf of Kutch. The Marine National Park and Sanctuary is located on the southern shoreline of the gulf of Kutch, along the Jamnagar coast, which is far away from the location of the proposed Soda Ash Project in village Bada. The NASA Earth Observatory report itself marks the presence of corals in the southern shore of the Gulf of Kutch on their map, but not in the northern shoreline. The Project of the Answering Respondent is located at the Northern shoreline of the Gulf of Kutch. It is also pertinent to highlight that the EIA Study as well as the Conservation and Management Plan for Conservation of Significant Species prepared by Gujarat Institute of Desert Ecology (Study by NIO in its Marine EIA Report-December-2020 and Addendum Report in May 2023) clearly states that there are no corals present in the area and thus there cannot be any adverse impact or destruction from the construction of the proposed Soda Ash Project.

69. Further, as per the MoEF&CC document *"Climate Change and The Vulnerable Indian Coast" (2018)*, which identifies coral sites across India, the Soda Ash Project site does not fall within the mapped coral areas. Additionally, it is observed that the northern shoreline of the Gulf of Kutch does not show the

presence of corals on the map, whereas the southern shoreline indicates a concentration of corals. The relevant map showing coral sites in India is attached as **ANNEXURE R/38**.

D. The Oceanographic Study has been prepared by Accredited Agencies.

70. That the allegation of the Appellants with respect to the lack of accreditation of NIO is baseless and without any merit. At the outset, it is pertinent to note that the National Institute of Oceanography was engaged for conducting and preparing marine EIA Report in compliance with the requirement for obtaining GCZMA/CRZ clearance for establishment of seawater intake and effluent disposal facility for the project, in addition to the EIA studies for the project of the Answering Respondent herein. The Answering Respondent engaged NIO to ensure that the environmental impact of the project on the sea water, if any, is duly assessed before the implementation of the project.

71. That further, till date there is no specific scheme for undertaking marine EIA assessment accreditation by NABET QCI. In its Letter of May 2012, NABET QCI clarified to NIO that it can undertake specialized assessments in collaboration with other EIA accredited consultants. Accordingly, NIO has undertaken marine EIA of the proposed Soda Ash Project of the Answering Respondent in collaboration with CSIR-NEERI, which is an accredited institute.

72. That the EAC in its Appraisal Meetings has also not objected to the engagement of NIO for conducting additional oceanographic assessments of the impact of the proposed Soda Ash Project. Moreover, there is no restriction on the engagement of specialized agencies of national and international repute for conducting assessments apart from the EIA and EMP Report. This clearly highlights the degree of due diligence undertaken by the Answering Respondent before implementation of the project. The Appellants are trying to take a hyper technical ground, which has no basis in facts and law and have failed to highlight that single discrepancy or deficiency on merits in the Marine EIA Report prepared by NIO.

73. That even the Gujarat Coastal Zone Management Authority recommended the grant of CRZ Clearance after perusing in detail the EIA EMP Report as well as

the NIO Marine EIA report. Thus, there is no bar on the engagement of specialized agencies for the preparation of specialized reports.

74. That further, this Hon'ble Tribunal in a catena of cases has relied upon the reports of NIO for conducting marine EIA. The same is evident from the Orders issued in Conservation Action Trust v. Union of India and Others (2023 SCC OnLine NGT 5957), Vanshakti v. MPCB and Others (OA No. 37/2013) wherein this Hon'ble Bench of the National Green Tribunal has issued directions to NIO for conducting marine EIA or relied upon the marine EIA reports of NIO for concluding the extent of pollution. In another instance, the Hon'ble Principal Bench of the National Green Tribunal in the News item published in Newspaper "The Hindu dated 19.03.2023" titled "India's Sinking Island" (OA No. 249.2023) had constituted a Committee consisting of representative from NIO to study the impact of sea level rise on islands and frame a policy, measures to protect these islands from submergence. The copy of the relevant orders of the Hon'ble NGT are marked and annexed herein as **ANNEXURE R/39.**

E. The Baseline Data has been collected in the EIA Report is in accordance with the EIA Notification, 2006

75. That the Appellants have alleged that the EIA report prepared by CSIR NEERI as well as the marine EIA prepared by CSIR NIO contains baseline study/data which is older than three years. It is pertinent to mention that the baseline studies were conducted between December 2019 to February 2020 by CSIR NEERI and the Form 1 for obtaining Environmental Clearance was submitted on 30.11.2022. At the time of the submission of the application for Environmental Clearance, the baseline data was clearly not older than three years and thus within the mandate prescribed by the Office Memorandum dated 08.06.2022. It is also important to add that while Answering Respondent intended to proceed with the project as soon as possible, the onset of the COVID-19 pandemic in early 2020 also caused significant disruptions. Restrictions on movement and operational constraints delayed field data collection, site surveys, public consultations, and the overall regulatory approval process. The impact of the pandemic extended the project timelines beyond the original schedule, affecting the completion of the environmental impact assessment and submission of necessary documents.

76. That it is also pertinent to note that a few OMs have been issued in this regard. More particularly the OM dated 07.11.2014 states that -All projects where the project proponent have already submitted their EIA/EMP Report for consideration by the EAC though the cases have still not been placed before the EAC and meanwhile the data had become more than three years old, shall be considered by the EAC.More importantly the latest OM dated 08.06.2022 has further clarified that where the baseline data is older than three years but less than four years, the same shall be considered by the EAC subject to the condition that it is revalidated with one season fresh non -monsoon data collected after three years of the initial baseline data.

77. That it is pertinent to note that at the time of the submission of the application for Environmental Clearance, the baseline data was within the three years validity however at the time of appraisal, the data was slightly older than three years. Accordingly, the EAC in in view of the OM dated 08.06.2022 directed the new Consultant TR Associates to conduct additional three months of baseline study, which is totally in accordance with the extant law. Further, the baseline study was also to be compared with trend analysis of one month which was undertaken by collecting baseline data in February 2024. Thus, clearly the baseline study conducted by TR Associates as well the CSIR NEERI is in compliance with the law as well as OM dated 08.06.2022 issued in this regard in supersession of previous OMs. The Appellants herein have merely stated one part of the clarification provided in the OM dated 08.06.2022 and have tried to mislead this Hon'ble Tribunal by providing an incomplete position of law in their pleadings. The additional baseline data has been duly incorporated in the Addendum to the EIA Report and considered by the EAC in its meetings in detail to conform compliance with the accuracy of the baseline data of CSIR -NEERI as well as the environmental parameters.

78. That further, the allegation that the baseline study conducted by NIO in the marine EIA Report is older than three years, it is humbly submitted that the report prepared by NIO was additionally undertaken by the Answering Respondent herein as a matter of abundant precaution and for presenting the holistic impact of the project underground submarine effluent pipe line before the public as well as the EAC. Marine EIA studies by CSIR-NIO were conducted

in compliance with the requirement for obtaining GCZMA/CRZ clearance for establishment of seawater intake and effluent disposal facility for the project, in addition to the EIA studies for the project. Further, the Answering Respondent has undertaken additional marine baseline study in November 2022, which was incorporated in the Addendum to the Marine EIA/EMP Report in May 2023. Thus, an additional baseline study was included as per the Office Memorandum dated 08.06.2022, as stated earlier. The findings clearly indicate stable water and sediment properties, with only minor, short-term seasonal fluctuations that do not significantly impact the overall marine ecosystem. The overall assessment suggests that the marine environment has remained stable, with no substantial deviations observed over time. The copy of the relevant extracts of the Marine EIA-EMP report containing the additional marine baseline study of November 2022 is marked and annexed as **ANNEXURE R/40.**

F. There is no violation of the Siting Criteria, including the criteria specified in the Technical EIA Guidance Manual for Soda Ash plants

79. That the EIA Technical Guidance Manual of 2010 (hereinafter referred to as the 'TGM') in its siting criteria explicitly states that the guidelines provided therein are not mandatory but rather serve as a reference framework for stakeholders when planning the siting of developmental projects. . The relevant provision states:

*"These are the guidelines, stakeholders '**may'** consider while siting the developmental projects, to minimize the associated possible environmental impacts. In some situations, adhering to these guidelines is difficult and unwarranted. Therefore these guidelines may be kept in the background, as far as possible, while taking the decisions."*

That while siting soda ash plants the industries 'may' maintain the following distances as far as possible from the specific areas listed which *inter alia* includes –

i. Ecologically and or otherwise sensitive areas: preferably 5 km depending on the geo climatic conditions the requisite distance may be decided appropriately

ii. Coastal areas: preferably ½ km from HTL

iii. Major settlements (3,00,000 population): Distance from major settlements is difficult to maintain because of urban sprawl. At the time of siting of the industry, if the notified limit of any major settlement is found to be within 50km from the project boundary, the spatial direction of growth of the settlement for at least a decade must be assessed. Subsequently, the industry may be sited at least 25 km from the projected growth boundary of the settlement.

iv. For all new projects, preferred location may be the sea coast with adequate plan for safeguarding the marine ecology.

80. That it is also pertinent to mention that the siting criteria is suggestive in the Technical Manual and not mandatory due to the use of the word 'may' However, the project of the Answering Respondent herein is compliant and adhering to the suggested siting criteria. The Environmental Clearance dated 12.12.2024 annexed at Annexure A1, Pg 93 clarifies that there are no National parks, Wildlife Sanctuaries, among other ecological sensitive areas. The main construction of plant facilities and utilities is beyond the CRZ area, which is also recorded in the said Environmental Clearance. Further, the siting Guidelines themselves state that for new projects preferred location will be sea coast. Thus, there has been no violation of the siting guidelines as stated in the Technical EIA Guidance Manual for Soda Ash. In addition to the above five alternative sites were examined as stated in para 34 and only then the most suitable site of the present location was selected. The same has been duly considered by the EAC.

G. The site of the proposed Soda Ash Project is not CVCA

81. The Coastal Regulation Zone (CRZ) Notification, 2011, issued under the Environment (Protection) Act, 1986, provides specific provisions regarding Critical Vulnerable Coastal Areas (CVCA).

82. That as per the CRZ Notification, CVCA includes ecologically sensitive regions that require a high degree of protection and conservation measures due to their environmental significance and vulnerability to coastal hazards. These areas include Sunderbans in West Bengal, the Gulf of Khambhat and Gulf of Kutch in Gujarat, Malvan and Achra in Maharashtra, Karwar and Coondapur in Karnataka, Vembanad in Kerala, Gulf of Mannar in Tamil Nadu, Bhitarkanika

in Odisha, and Coringa, East Godavari, and Krishna in Andhra Pradesh. The notification mandates that these areas be managed with the active participation of coastal communities, particularly fisherfolk, to ensure sustainable resource utilization and conservation. Additionally, the MoEF&CC is responsible for developing Integrated Management Plans (IMPs) in consultation with state governments and local communities to regulate activities, including disaster preparedness, mangrove conservation, and essential infrastructure development.

83. That in the context of the proposed Greenfield Chemical Complex of GHCL Limited, a CRZ Report and 1:4000 scale CRZ maps has been prepared by a nationally reputed institute, the Institute of Remote Sensing, Anna University, Chennai, which assesses the project's compliance with CRZ regulations. A thorough review of the CRZ Report and approved CRZ maps (1:4000 scale) attached as **ANNEXURE R/41** confirms that the proposed project site does not fall within a designated CVCA as per the CRZ Notification, 2011.

84. That the Gulf of Kutch and the Gulf of Khambhat have been identified as sensitive regions under CRZ regulations, but the specific location of the project site does not fall under any officially notified CVCA zone. The CZMP, duly prepared in accordance with CRZ Notification, 2011, serves as the legally recognized reference for CRZ classification, and based on its approved zonation, no part of the project falls within an ecologically designated CVCA region.

85. That based on the CZMP-approved maps for the Kutch region prepared by NCSCM for the Forest and Environment Department (Government of Gujarat) under the CRZ Notification, 2011, the CVCA (Critically Vulnerable Coastal Area) boundary is demarcated in 15 specific maps: GJ-192, GJ-193, GJ-195, GJ-196, GJ-201, GJ-202, GJ-203, GJ-204, GJ-205, GJ-217, GJ-218, GJ-219, GJ-220, GJ-221, and GJ-222. These maps indicate CVCA areas within the Kutch region. However, the project site is located far from these demarcated CVCA areas, and the maps GJ-176, GJ-188, and GJ-189, corresponding to the project site, do not contain any CVCA boundary demarcation. A Google Map overlayed file, prepared to show the location of the CVCA demarcated area and the project site, is marked and annexed as an **ANNEXURE/R42** . The CZMP Approved Maps 2011 is marked and annexed as **ANNEXURE/R43** .

86. That based on the above legal and technical assessment, the proposed project site does not fall within a Critical Vulnerable Coastal Area (CVCA) as per the definitions and classifications outlined in the CRZ Notification, 2011, and the approved CZMP. The project's regulatory compliance is validated through the GCZMA recommendation, MoEF&CC evaluations, and scientific assessments conducted by a nationally recognized institution (Institute of Remote Sensing, Anna University, Chennai). Therefore, the claim that the project is within a CVCA is not substantiated by legal and technical records.

The reference CRZ map, showing CVCA, is marked and annexed as **ANNEXURE R/44.** In the legend, the CVCA boundary is marked in yellow on the map.

Also CVCA area demarcation by MoEF&CC document "Climate Change and The Vulnerable Indian Coast" (2018), Map is attached for reference as **ANNEXURE R/45**.

87. That it is further submitted that the said CRZ clearance has not been challenged thus far. It is well established law that once an Order described in Section 16 of the NGT Act is issued, the only remedy is to appeal against the said Order. In the present case, the CRZ clearance has not been challenged.

H. The Biodiversity Impact Assessment has been conducted for the Soda Ash Project of the answering Respondent.

88. That the Appellants have alleged, albeit wrongly, that the Answering Respondent has not conducted a Biodiversity Impact Assessment as per the Biological Diversity Act, 2002. At the outset, it is pertinent to note that amended Section 36(4)(i) requires the Central Government to mandate the assessment of the environmental impact of projects that are likely to have adverse effects on biological diversity. In the present case, there has been no such direction or recommendation from the Central Government for undertaking a specific Biodiversity Impact Assessment in addition to the EIA Study undertaken by CSIR NEERI and subsequently by TR Associates. That it is humbly submitted that the Biodiversity Impact Assessment Study is an integral part of the Environment Impact assessment study. In the proposed Greenfield Chemical Complex, GHCL Limited has passed through following statutory authorities

after reviewing exhaustive study and prepared Conservation Plan for Schedule-I species including significant species (ZSI, GUIDE, CSIR-NEERI and T.R. Associates) present within the study area and subsequently approved by Chief Wildlife Warden (CWLW) Department.

89. That the Gujarat Coastal Zone Management Authority (GCZMA), while recommending a proposed project for approval, ensures that adequate measures are taken for biodiversity conservation. As part of the evaluation process, the GCZMA requests and reviews essential documents such as the Schedule 1 conservation plan, forest clearance, public hearing proceedings, and action plans. Additionally, a site visit is conducted by GCZMA, Forest Department and Sub-Committee constituted by EAC to assess the ecological impact and compliance with environmental regulations before making a recommendation. Similarly, the state government also takes necessary measures to safeguard biodiversity while recommending the project.

90. That it is important to submit that a Conservation Plan for Schedule-I species of Rs 136.50 lakhs has been prepared to mitigate potential ecological and biodiversity impacts. This plan has been reviewed and approved by the Principal Chief Conservator of Forests (PCCF) and Chief Wildlife Warden of Gujarat, facilitating the necessary approvals for M/s. GHCL Limited on November 9, 2022. The Conservation Plan encompasses the conservation of various Scheduled species which includes marine and terrestrial biodiversity. The application for approval of the conservation plan, dated November 9, 2022, submitted to the PCCF, underscores a proactive approach toward wildlife conservation. This plan will play a crucial role in ensuring the protection of marine species including turtles, reinforcing the commitment to ecological preservation while facilitating sustainable development.

The Biodiversity Impact Assessment for the proposed project has been comprehensively conducted as an integral part of the Environmental Impact Assessment (EIA) study. Various expert agencies, including ZSI, GUIDE, CSIR-NEERI, and T.R. Associates, have carried out detailed assessments, and the findings have been reviewed by statutory authorities including site visits (By Sub-Committee constituted by EAC, Forest Department and GCZMA). The project has undergone scrutiny at multiple levels, including the Expert Appraisal Committee (EAC), the Ministry of Environment, Forest & Climate Change

(MoEF&CC), the Gujarat Coastal Zone Management Authority (GCZMA) Forest Department, and the State Government, ensuring biodiversity conservation measures are in place. Additionally, as stated earlier, a Conservation Plan for Schedule-I species has been prepared with a budget allocation of 136.50 lakhs, approved by the Principal Chief Conservator of Forests (PCCF) and the Chief Wildlife Warden of Gujarat. The EIA reports, including those prepared by NEERI and TRA, provide extensive biodiversity assessments, impact evaluations, and mitigation strategies to ensure sustainable development. Considering the extensive biodiversity studies, regulatory approvals, and conservation commitments, it is evident that the EAC, MoEF&CC, and state government have taken biodiversity concerns into account while granting clearance for the project.

91. That the impact of the project on biological diversity has also been duly assessed in the EIA Study prepared by CSIR NEERI and subsequently in the Addendum prepared by TR Associates, ZSI and Gujarat Desert Ecological Institute (GUIDE). Further, the impact on marine biological diversity has been looked into by NIO in their oceanographic study. Thus, the allegation of absence of Biological Impact Assessment is without any basis in facts and law.

I. There is no incorrect information submitted in Form I Part A and B

92. That the Appellants have alleged that the Answering Respondent has submitted the wrong information in Form I by stating that there are no turtle nesting site in the area. It is pertinent to mention that the said allegation of the Appellants is completely devoid of merit. The Form I, Part A annexed at page 352 of the Appeal, at page 354-355 clearly states with respect to sea turtle nesting that as per the Survey undertaken by the Zoological Survey of India, there are no sea turtles and fresh/old nests or crawl marks on the beach. The ZSI report clearly notes that all suitable sites as per the literature available for sea turtle nesting were visited during the survey period. Further, the site is not suitable for turtle nesting. The Report was also submitted as an Annexure to the EIA Report. Even in Part C of Form 1, with respect to the issue of turtles it has been clearly stated that the Zoological Survey of India Report is annexed to address the said issue. Arguendo, any sporadic nesting occurs, due to the presence of feral animals, the nests are translocated by the local fishermen to the hatchery being maintained by the Forest Department. The sporadic nesting also occurs in the 7 km stretch

between Rukmavati river mouth (about 20 km from the proposed project site) and Mandvi Palace (about 16 km from the project site).

93. That further, the Conservation Plan prepared by Dr. Bharat Jethwa, M/s Bhagwati Enviro Care Pvt Ltd , a NABET accredited FAE, also records that there has been no presence of turtles nesting site at the site of the proposed soda ash plant. Thus, there has been no incorrect information submitted by the Answering Respondent and the allegations of the Appellants herein are wrong, false and devoid of all merit.

94. That further, the Appellants have cited numerous studies and annexed photographs to allege the presence of turtles at the site of the proposed soda ash project of the Answering Respondent and tried to question the credibility of the reports submitted by the Answering Respondent. At the outset, it is pertinent to highlight that the photographs submitted by the Appellant do not clarify the geo-coordinates and whether they are from the location of the proposed site of the Answering Respondent herein and thus cannot be relied upon. The location of the project of the Answering Respondent along with Geo-coordinates are marked and annexed as **ANNEXURE R/46.** From the geo coordinates barely visible in the photograph at page 384 of the Appeal and the Geo coordinates annexed herein as per the EIA Report, it is clear that the photographs annexed in the Appeal have been taken from another site. The photograph of the turtle included at page 385 is a picture from 2023 where a fisherman had caught a turtle in its fishing net and brought it back to the coast. The relevant article is marked and annexed as **ANNEXURE R/47.**

95. That further, the Appellants have submitted an RTI response from Range Forest Officer, Mandvi Kutch to state that the data shows the details of the turtle eggs found at the coastline. However, the data does not clarify whether the information regarding the number of eggs found on the coastline pertains to Bada village where the proposed soda ash plant is sought to be established by the Answering Respondent.

96. That specifically with respect to the reliance on article by Mr. Wesley, Mr. Justus and Mr. Vijaya at page 457 of the Appeal, it is pertinent to note that the article itself states that the Kachchh coast, due to its position in the funnel shaped gulf,

experiences high wind velocities leading to low encounter of nests during the survey. Moreover, the survey does not record the presence of turtles in Bada but in coastline connecting Bada to Layja Nana or Bambhdai. Thus, it cannot be relied upon to showcase turtle nesting on the project site of the Answering Respondent.

97. That with respect to the UN's report on Memorandum of Understanding on the Conservation and Management of Marine Turtles and their habitats of the Indian Ocean and South East Asia 2019, it is pertinent to note that the said report does not clarify anything pertaining to the presence of turtles in Bada Village but merely states the presence of sanctuary at the Gulf of Kutchch for the preservation of turtles.

98. That there are four different reports prepared by institutes of national repute including the Zoological Survey of India report on Status Survey and Conservation Plan for Sea Turtles along Mandvi Taluka, the EIA Study by CSIR-NEERI, the Marine EIA Study by NIO, the Conservation Plan by Bhagwati Enviro, the Addendum to the EIA Report prepared by TR Associates, the Gujarat Institute of Dessert Ecology Report on the Conservation and Management Plan for the Conservation of significant species. These Reports have been prepared at different intervals from 2019 to the latest one being of February 2024. None of the reports have confirmed the presence sea turtles and have only reported instances of sporadic nesting in the past. However, each report has suggested mitigation measures which will be duly incorporated at the time of the construction of the Soda Ash Project.

99. That the Gujarat Coastal Zone Management Authority, prior to the grant of Coastal Regulation Zone Clearance also visited the site of the proposed project and no adverse findings or presence of turtles have been recorded in the minutes of the GCZMA recommending the clearance for the project. The copy of the minutes are marked and annexed as **ANNEXURE R/48.**

100. That further, the Sub Committee constituted by EAC itself visited the site of the proposed Soda Ash Project of the Answering Respondent and also observed that steep slope is there and high tide water line marking was seen up to sand dune bottom. Such site is not suitable as a turtle nesting ground. The EAC Sub

Committee also did not record any presence of turtles or turtle egg/nesting site at the location of the proposed soda ash plant in Village Bada.

101. That the National Marine Turtle Action Plan (2021-2026), published by the Ministry of Environment, Forest & Climate Change (MoEF&CC), does not identify the Kutch region, including Bada, as an important marine turtle habitat. The Action Plan recognises the Western Saurashtra coast (covering Junagadh, Jamnagar, and Porbandar districts) as a significant nesting ground for Green and Olive Ridley turtles. Thus, the site of the Answering Respondent's project is clearly not recognised as a nesting site by the MoEF&CC.

102. That it is pertinent to mention that the main project and facilities of the Answering Respondent are not situated at the coastline. It is only the underground pipeline of the proposed Soda Ash Plant which would fall in CRZ I, III and IV. Thus, assuming for a moment without admitting that any sporadic turtle nesting site is present, it will not have any adverse impact on the same and the requisite conservation measures as prescribed in the Conservation Plan approved by the PCCF as has been duly incorporated and integrated as has also been stated by the EAC while recommending the grant of Environmental Clearance in its 87th Minutes of the Meeting.

J. The Public Hearing was conducted by the Gujarat Pollution Control Board in accordance with Appendix IV of the EIA Notification, 2006.

103. That the allegation of the Appellant regarding the failure of the Gujarat Pollution Control Board to conduct the public hearing in accordance with the EIA Notification, 2006, is wrong, false and devoid of all merit. The basis of alleged non-compliance is that the public hearing was forcibly concluded and was held in the presence of police, with cannons, lathis and shells.

104. That the Appellants herein are trying to mislead this Hon'ble Tribunal by misrepresenting the facts and this Hon'ble Tribunal should take strict note of the same. On 04.03.2022, the Notice of Public Hearing scheduled on 06.04.2022 was published in the newspaper in Gujrati as well as in English. Subsequently, on 05.03.2022, the Gujarat Pollution Control Board wrote to the District Collector, MoEFCC, District Industrial Centre, District Development Officer and Taluka Development Officer for displaying the copy of the EIA/EMP report of the Answering Respondent.

105. That on 06.04.2022, the Public Consultation Proceedings for the Answering respondent for the proposed project was organised. However, public consultation could not be concluded despite repeated requests from the officials to the public to not disrupt the public hearing. However, due to the continued protests orchestrated by the Appellants or some force that was providing them the financial and other support, the Regional Officer from GPCB as well as the District Collector (RAC) concluded that the atmosphere was not conducive for conducting public hearing and postponed the same.

106. That subsequently, on 30.09.2022, GPCB wrote again to the District Collector and other officers for displaying the EIA/EMP Report of GHCL. The Notice for the rescheduling the public hearing on 17.10.2022 was published in the newspapers in Gujarati on 30.09.2022 as well as English on 01.10.2022 in compliance with the prescribed time limit for giving notice under the EIA Notification, 2006 as amended on 09.05.2022.

107. That against the said public notice, a Public Interest Writ Petition was filed in the Hon'ble High Court of Gujarat on 11.10.2022 (registered on 14.10.2022) titled WP (PIL) No. 85/2022 – Bharat Gangji Gala and Others v. Gujarat Pollution Control Board and finally heard on merits and dismissed with costs of Rs.50,000/- on 17.10.2022 (i.e., the same date on which the public hearing had been fixed) wherein the Petitioners therein alleged that there was procedural impropriety in failing to give a 30 days' notice period of the proposed public hearing on 17.10.2022, thereby depriving stakeholders of fair and adequate representation which allegation had no basis and therefore was rejected by the Hon'ble High Court of Gujarat on merits.

108. That the Hon'ble High Court refused to stay of the public hearing scheduled for 17.10.2022 and in its judgment dated 18.10.2022 dismissing the Public Interest Litigation of the Petitioners observed at Para 23 as follows: ***"23**. Prerogative writs are issued for doing substantial justice. Hence, petitioners approaching the writ court must exercise due diligence; approach with clean hands by placing all the material facts before the court without concealing or suppressing anything. The courts would be knowing the law and not the facts and if a litigant were to suppress the facts and attempt to snatch an order from the court, cannot go scot-free or in other words, such litigant requires to be dealt with deft and iron hands and in such circumstances, the court would be perforced to impose*

costs on such persons. Though in the normal course, we would have desisted from making any observation in this regard, the facts unfolded in the present case including the conduct of the petitioners would not inspire confidence in us except observing that petitioners cannot be extended the benefit of doubt. The pleas put-forth in the writ petition do not disclose about petitioner Nos.1, 2 and 3 being rustic villagers or illiterate persons or not being well conversant with the procedural law and particularly petitioner No.4 who is said to be an Environmental Researcher who is required to exercise utmost care and caution while espousing a public cause.". Whilst, the aforesaid observation explains the conduct and desperation of the Petitioners therein to stall the publish hearing scheduled for 17.10.2022, the public hearing itself was held and completed on 17.10.2022 where the grievances of the public, including the Appellants herein were duly recorded in the minutes of the hearing.

109. That even after dismissal of W.P.(PIL) No. 85 of 2022 on 18.10.2022 with a cost of Rs.50,000/- noting that the Notice given in the public hearing was in accordance with the law, the Petitioners therein and the Appellants herein who have the same vested interest made numerous representations, which were duly responded to and incorporated within the EIA report by the CSIR NEERI. Accordingly, the Final EIA and Risk Assessment Report was prepared by CSIR-NEERI in November 2022. Thus, it is clear that the public hearing was concluded in accordance with the law and the grievances of the public have not only been recorded, but also responded to by the Answering Respondent and mitigation measures have been accordingly incorporated as is evident from the Action Plan for Public Hearing. Thus, to state that the public hearing was forcibly concluded without hearing the grievances of the Appellants or other members of the nearby village community is nothing but an attempt to mislead this Hon'ble Tribunal to snatch an order that would result in travesty of justice. Public hearing was carried up to 11 hrs and only after no additional questions/ concerns and continued repeated questions from the NGO's and outsiders, the authorities concluded the same. It is also pertinent to highlight that the Answering Respondent has also received numerous representations in favour of the project, in view of the CSR and CER activities planned under the EMP as well as the job opportunities that would be created from the establishment of the project. The representations are marked and annexed as **ANNEXURE R/49.**

K. The proposed Greenfield Chemical Complex has been appraised by the EAC in accordance with the law.

110. That the Appellants have alleged non-application of mind by the EAC on the grounds that the EAC has failed to incorporate coral surveys, the impact of climate change, no reevaluation of the baseline data and the impact of sea turtles has not been deliberated upon. It has been further alleged that the project is situated in CRZ I and could not have been granted clearance in violation of the CRZ Notification, 2011. The said allegations of the Appellant are false and without any merit in facts as well as law.

111. That the EAC has appraised the Project over a span of two years from November 2022 till December 2024, has raised numerous EDS (3 in number) and has held five meetings before recommending the grant of Environmental Clearance. Specifically, with respect to the accreditation of the Consultant and the baseline data, EDS was raised to the Answering Respondent seeking details of the same on 07.12.2022, which was duly clarified by the Answering Respondent on 05.01.2023. Further, in the first meeting of the EAC on 02.01.2024, the EAC deferred the proposal of the Answering Respondent and requested for additional details, including a condition for the new Consultant to verify and adopt the EIA Report prepared by CSIR-NEERI, reconducting baseline study for another season, among other details. Additionally, TR Associates was again requested by the EAC to compare the baseline data and submit a trend analysis by gathering data for an additional month. Since, the baseline data became older than three years after the submission of the application for Environmental Clearance, the EAC in accordance with the OM dated 08.06.2022 directed for collection of data for an additional season.

112. That further, the EAC in its meetings has deliberated in detail the grievances raised by the public not only during the public hearing but also vide representations to the EAC. In its 74th Meeting on 06.02.2024, the Answering Respondent was required to submit its response to the numerous representations received by the EAC to the public. Noting the number of representations, the EAC observed that they would go through the video of the public hearing on the next date of the meeting. That on the next date of meeting (78th Meeting) on 30.04.2024, EAC went through the video of the public hearing, the response of

the Answering Respondent to the representations as well as the Action Plan and was satisfied that the hearing has been conducted in accordance with the law.

113. That similarly, with respect to the issue alleged non-compliance with the CRZ Notification, 2011, the EAC deferred the grant of Environmental Clearance for seeking comments from their CRZ Division in its 78th Meeting. It is only after the CRZ Division submitted their detailed response clarifying that the construction of the Underground pipeline is permissible as per the CRZ Notification, 2011, that the grant of EC was recommended again by the EAC in its 80th Meeting.

114. That it is pertinent to reiterate, the EAC after recommending the grant of Environmental Clearance, constituted a Sub Committee for a site visit in view of the representations from the public in its 84th Meeting. This clearly clarifies that the EAC not only considered the grievances of the public but also went on the ground to verify the veracity of the grievance as well as the data submitted in the reports including the allegation of impact on biodiversity of the area, presence of reefs and sea turtles, violation of CRZ Notification, 2011.

115. That the EAC recommended the grant of Environmental Clearance again in its 87th Meeting and thereafter the final grant of the Environmental Clearance took place on 12.12.2024 by the MOEF&CC. From the abovementioned position of law and facts, it is evident that the project of the Answering Respondent has undertaken a detailed scrutiny by more than five organisations of national and international repute, State government authorities (GCZMA and Forest) and their site visit and thereafter by the EAC over a period of two years, including physical verification of the project site. The Appellants on the other hand, have approached this Hon'ble Tribunal by submitting half-baked facts, incorrect position of law and challenging the Environmental Clearance on hyper technical grounds which have no basis in facts or law. The observations made in the Hon'ble High Court in CWP No 85 of 2022 described above, with regard to the obstruction sought to be caused in the Public Hearing in this Project is also a testimony to the conduct of the Petitioners therein, one of whom is also an Appellant herein. This is ground enough to dismiss the present Appeal with huge costs.

116. That an additional point on propriety of procedure is also worth mentioning. That well aware of the conduct of the Appellants herein, the Answering Respondent had filed a Caveat on 13.12.2024, registered after clearing the defects on 30.12.2024. Despite the same the Registry failed to intimate the Answering Respondent about the same and therefore the opportunity to defend the said appeal on its admission was not provided. This is a serious procedural lapse on the part of the Registry which needs to be flagged for future correction to ensure impartial judicial process.

117. **Para Wise Response on Merits**

1. That the contents of para I-II are matters of record and to that extent do not merit any response from the Answering Respondent. However, it is pertinent to question the bonafides of the Appellant No. 1 who claims to reside in Panchotiya Vadi Vistar, but he resides in Mandvi town which is approximately 20 km away from Bada Village. The Aadhar Card of Appellant No.1 is annexed herewith as **ANNEXURE R/50** . -The other two Appellants No. 3 and 4 are the residents of Mumbai. Appellant No 3, who is a trader in garments and carries on business from Dadar in Mumbai with trade name "Meena Bazar" as is evident from the sale deed dated 09.12.2024 and his own GST related information on the Official Website of GST which are appended as **ANNEXURE R/ 51 .** The Appellant No.4., Rajesh Gangji Savla is a resident of Mumbai and a director in certain companies and operates from Mumbai. The details of the companies in which he is director as well as his Mumbai address as available on the official website of Ministry of Corporate Affairs is annexed herewith as **ANNEXURE R/52 .** The above details itself show that his and his companies addresses are one and same and he is carrying numerous business from the same premises and has nothing to do with environmental issue at village Bada in Mandvi Taluka.

2. That the contents of para III are wrong, false and devoid of all merit. The Appellants have challenged Environmental Clearance dated 12.12.2024 by submitting incorrect facts and incorrect position of law vis a vis the project of the Answering Respondent. The Appellants have tried to undertake a hyper technical view by challenging the accreditation of the consultant for soda ash projects, when in fact at the time of grant of Work Order, there was not a single EIA accredited Consultant for soda ash sector . This is an admitted fact by

NABET QCI. Further, CSIR -NEERI, NIO are institutes of not only national but also international repute and have prepared EIA and Marine Assessments in accordance with the law . The reports of such institutes are also often relied upon by the Hon'ble Tribunal as well as the Hon'ble Supreme Court. Further, the allegations of the presence of turtles, and violation of siting criteria are all without any basis in facts and law and in complete contravention to the reports presented by at least five institutes of national repute, which have clearly stated that only the coastline is not suitable for turtle nesting. The contents of the Preliminary Objections and Submissions may be read in response to the said para and is not being reiterated and repeated for the sake of brevity. A point wise reply has been given in paras 60- 76 for the allegations which has no basis either in facts or law.

Response to Array of Parties

1. That in response to the contents of para 1, it is submitted that the Appellants have approached this Hon'ble Tribunal by suppressing material facts with respect to the EAC meetings, visit of the EAC for verifying the grievance of the public, allegation of the presence of turtles, the proceedings before the Hon'ble High Court of Gujarat as well as purchasing land (within project proposed boundary)to the project of the Answering Respondent after the recommendation of the EAC for grant of Environmental Clearance, for reasons best known to the Appellants. At least three of them do not reside in the said Village but are from Mumbai and a near by town. The conduct of one of the Appellant who attempted to disrupt the public hearing has been well documented by the Hon'ble High Court which has been suppressed by the Appellants herein. The preliminary objections are reiterated as a response to the said para and are not being repeated for the sake of brevity.
2. That the contents of para 2 are matters of record and do not merit any response.

Response to Facts in Brief

3. That the contents of para 3 are matters of record and to that extent do not merit any response.
4. That the contents of paras 4 and 5 are wrong, false and devoid of all merit. The Appellant has alleged violation of EIA Notification, 2006, Technical EIA Guidance Manual and precautionary principle by misrepresenting the position of law vis a vis the facts. Further, the allegation pertaining to the project coming up in CRZ 1A and also in the Critically Vulnerable Coastal Area is incorrect.

Only the Underground pipeline of the Answering Respondent falls in CRZ 1A which is a permissible activity under the CRZ Notification , 2011 and for which the requisite clearance has been obtained after a due process by the GCZMA which has never been challenged by the Appellants herein. The main project facility is beyond the CRZ Area as has been clarified by the map prepared by Anna University by superimposing the project site with the approved CZMP under the Coastal Regulatory Zone Notification of 2011. Further, it has been clarified by at least four different institutes of national and international repute, CSIR-NEERI, Gujarat Institute of Dessert Ecology, NIO, ZSI (Zoological survey of India),TR Associates and Bhagwati Enviro Care Pvt Ltd that the area is not suitable for nesting of turtles. Further, the Sub Committee of EAC itself had visited the site and confirmed the validity of the presence of turtles. The preliminary submissions, specifically in paras 15-109 are reiterated as a response to this para and are not being repeated for the sake of brevity.

Response to CSIR-NEERI Lacks Accreditation for conducting EIA for Soda Ash Plants

5. That the contents of para 6 – 7 reproduce the provisions of the Office Memorandum dated 02.12.2009 and the EIA Amendment Notification of 03.03.2016 and to that extent does not merit any response. However, it is pertinent to mention that the EIA Reports of the Answering Respondent have been prepared by accredited consultants in compliance with the EIA Notification, 2006 as detailed in paras 52-61 in the Preliminary Submissions and are not being repeated for the sake of brevity.
6. That in response to para 8-10, it is reiterated that CSIR-NEERI was awarded the work for preparation of EIA Study as it was also accredited for Chlor Alkali apart from being an institute of national repute. There were no EIA Consultants which were specifically accredited for soda ash till December 2019 as has been made clear by NABET in its Letter dated 27.01.2023. However, in pursuance of the suggestions in the Public Hearing as well as the suspension of accreditation of NEERI by NABET QCI, the Answering Respondent engaged TR Associates, which was the first accredited agency for soda ash in December 2019. The EAC was apprised of the said developments and in pursuance of the conditions imposed by the EAC, TR Associates conducted two additional baseline studies along with comparison and trend analysis of the baseline data and found no inadequacies or deviations in the same. The submissions in paras 52-62 of the

Preliminary Submissions on the preparation of EIA Report by Accredited Consultants and in accordance with the law are reiterated herein in response and are not being repeated for the sake of brevity.

Procedure Adopted by EAC for Validating the EIA is illegal

7. That the contents of para 11- 18 are wrong, false and without any basis in law. The Appellant themselves have reproduced the Minutes of the 72nd EAC Meeting of 02.01.2024, wherein the EAC has clearly stated that since CSIR-NEERI is not accredited for soda ash, TR Associates is required to verify the EIA Report prepared by CSIR NEERI and submit an authorization adopting the same. Further, the requirement of conducting additional baseline study is in compliance with the Office Memorandum dated 08.06.2022, wherein para 6(iv) has clearly stated that where the baseline data is older than three years but less than four years, the same shall be considered by the EAC subject to the condition that it is revalidated with one season fresh non-monsoon data collected after three years of the initial baseline data. It is reiterated that at the time of submission of the application for grant of Environmental Clearance, the baseline data of 2019-2020 in the EIA Report was within the three year limitation. However, by the time the project was appraised by EAC, the baseline data had become older than three years but less than four years. Accordingly, the TR Associates, an accredited Institution, has collected baseline data for another season. The submissions in the Preliminary Submissions on the Baseline Data, especially in paras 69-72 are reiterated herein in response and are not being repeated for the sake of brevity. It is pertinent to note that the additional Addendum EIA report prepared by TR Associates is clearly another level of scrutiny, which cannot be considered to be in violation of the law or in contravention to the requirement of additional environmental safeguards. The reliance on the extracts from D. Swamy v. Karnataka State Pollution Control Board and Others (2022 SCC OnLine SC 1278) further strengthens the case of the Answering Respondent as the relevant extracts *inter alia* highlight the assessment of damage , preparation of remediation plan by a laboratory of CSIR and in the present case NEERI along with CSIR has prepared the EIA Report.

Response to Oceanographic Study conducted by NIO lacks credibility due to QCI NABET Accreditation Rejection

8. That the contents of para 19 to 20 are wrong, false and devoid of all merit. The oceanographic study or marine EIA undertaken by NIO was in addition to the EIA Report prepared by CSIR -NEERI. Thus, NIO merely prepared an additional report as a specialized agency of national and international repute. Further, CSIR-NIO in collaboration with CSIR-NEERI has undertaken the oceanographic study. CSIR NIO was engaged for special studies not for EIA report preparation. Hence, not fall under the ambit of EIA scheme EIA consultant may outsourced to any reputed agencies for specials studies The allegations of NIO lacking credibility are clearly without any basis in law. Moreover, this Hon'ble Tribunal in a catena of cases has upheld reports of NIO given its expertise in the field of marine and oceanographic studies. The contents of the Preliminary Submission on Oceanographic Study by NIO specially in paras 62-75 are reiterated and are not being repeated for the sake of brevity. It is also important to highlight the minutes of meeting of the QCI dated 20.03.2012 which *inter alia* states that NABET will identify functional areas and criteria for evaluation for specialized agencies for providing inputs to EIAs in rsuch aspects and notify on the QCI website in the next six months. However, the same has not been done specifically for marine EIA, till date. The copy of the Minutes of the NABET Meeting dated 20.03.2012 are marked and annexed as **ANNEXURE R/53.**

Response to Oceanographic Baseline Data is Bad and older than three years in violation of the OM dated 08.06.2022.

9. That in response to the contents of para 21-27 are denied as wrong, false and devoid of all merit. The baseline data collected by CSIR NIO was done as a part of compliance for obtain CRZ clearance by the Answering Respondent to present a holistic picture of the impact of the project as well as due to the expertise of NIO in oceanographic studies. However, the Appellant, without placing on record an iota of evidence on the discrepancies in the said Report is challenging the report on a hyper-technical ground by stating that the baseline collected is in violation of the OM dated 08.06.2022, which will not be applicable to an oceanographic study.
10. That further, the Answering Respondent has undertaken additional marine baseline study in November 2022, which was incorporated in the Addendum to the Marine EIA/EMP Report in May 2023. Thus, an additional baseline was included as per the Office Memorandum dated 08.06.2022. The findings

indicate stable water and sediment properties, with only minor, short-term seasonal fluctuations that do not significantly impact the overall marine ecosystem. The overall assessment suggests that the marine environment has remained stable, with no substantial deviations observed over time. The Copy of the relevant extracts of the EIA-EMP report containing the additional marine baseline study with respect to water parameters of November 2022 as well as the EIA Report Addendum prepared by TR Associates Report dated January 2024 is marked and annexed as **ANNEXURE R/54.**

11. That further, the NIO report has been duly considered by the EAC as is evident from the Minutes of the 87th meeting in which one of the conditions for recommendation is compliance with the measures suggested by NIO. The preliminary submissions on baseline data, specifically in para 72 is reiterated and are not being repeated for the sake of brevity.

Response to Public Hearing Conducted by GPCB failed to follow the procedure provided in para 7 and Appendix IV of the EIA Notification, 2006

12. That in response to the contents of para 28-37 are denied as wrong, false and devoid of all merit. The Appellants claim that the public hearing was forcibly held and concluded thereby depriving the local community of the opportunity to present its views is misleading as is evident from the minutes of public hearing dated 17.10.2022. Infact, the strong opposition and protests were being undertaken for disrupting the public hearing and delaying the procedure for appraisal of the EIA Study. Moreover, the first time the EIA Study was placed before the public in March 2022 and thus there was ample time for members of the village community to apprise themselves of the contents of the Study. Further, the first hearing was postponed due to the protests and opposition from certain members of village community which created a law and order situation and the hearing had to be rescheduled for 17.10.2022 in the presence of police.
13. That further, the Appellant had previously challenged the conduct of public hearing in the High Court of Gujarat , which was dismissed with costs on the Appellants for suppressing information and position of law vis a vis the time period for conducting public hearing.. This clearly highlights that this is not the first instance of suppression of facts and misrepresentation by the Appellants. The Appellants have also conveniently missed out on annexing the minutes of the 78th meeting where the EAC perused the video of the public hearing to satisfy

themselves on the allegations of conduct of public hearing in non-compliance with the provisions of the EIA Notification, 2006. The Judgments cited by the Appellants of the Hon'ble Supreme Court are not applicable in the present case as due opportunity was granted to the public to not only present their views twice on 06.04.2022 and thereafter on 17.10.2022 but also the Answering Respondent submitted clarifications to the verbal/written representations of the members of the village community and developed an Action Plan to address the grievances raised during the hearing. The preliminary submissions on Public Hearing specially at paras 96- 102 are reiterated and are not being repeated for the sake of brevity.

Response to failure of the EAC to do detailed scrutiny of the outcome of the public hearing and concerns raised in the minutes of the meeting

14. That in response to the contents of para 37 – 45, it is reiterated that the EAC has undertaken a detailed scrutiny of each and every allegation and grievance of the public not only during the public hearing but also with respect to the representations received from the members of the village community to the EAC with respect to the proposed project of the Answering Respondent.
15. That it is reiterated at the cost of repetition that the Appellants herein are again misleading this Hon'ble Tribunal by submitting half-baked facts. The 78th meeting of the EAC clearly records that the EAC has perused in detail the video of the public hearing as well as the response of the Answering Respondent to the representations of the public and thereafter concluded that adequate opportunity has been given to the public to raise its grievances. Infact, the Appellant has conveniently failed to annex and submit before this Hon'ble Tribunal that subsequent to the recommendation of the Environmental Clearance in its 80th meeting, the EC was not granted to the Answering Respondent herein. The project of the Answering Respondent was called for appraisal again on 21-22.08.2024 by the EAC in its 84th meeting and based on the representations received by the EAC, a Sub Committee was constituted to verify the nature of the allegations and grievances raised therein. The subsequent grant of Environmental Clearance is only after the EAC was satisfied with the Sub Committee's site inspection report and undertaking by the Answering Respondent to comply with the recommendations of the Committee. The preliminary submissions on Public Hearing and Appraisal by EAC in

accordance with the law as described in paras 96 -102 are reiterated and are not being repeated for the sake of brevity

Response to Violation of Technical EIA Guidance Manuals for Soda Ash Industry, 2010

16. That the contents of para 46 to 50 are denied as wrong, false and devoid of all merit. That while siting soda ash plants the industries 'may' maintain the following distances as far as possible from the specific areas listed which *inter alia* includes –

    - Ecologically and or otherwise sensitive areas: preferably 5 km depending on the geo climatic conditions the requisite distance may be decided appropriately
    - Coastal areas: preferably ½ km from HTL
    - Major settlements (3,00,000 population): Distance from major settlements is difficult to maintain because of urban sprawl.

    At the time of siting of the industry, if the notified limit of any major settlement is found to be within 50 km from the project boundary, the spatial direction of growth of the settlement for at least a decade must be assessed. Subsequently, the industry may be sited at least 25 km from the projected growth boundary of the settlement. For all new projects, preferred location may be the sea coast with adequate plan for safeguarding the marine ecology.

17. That it is also pertinent to mention that the siting criteria is suggestive in the Technical Manual and not mandatory due to the use of the word 'may'. However, the project of the Answering Respondent herein is compliant and adhering to the suggested siting criteria. The Environmental Clearance dated 12.12.2024 annexed at Annexure A1, Pg 93 clarifies that there are no National parks, Wildlife Sanctuaries, among other ecological sensitive areas. The main construction of plant facilities and utilities is beyond the CRZ area , which is also recorded in the said Environmental Clearance. Further, the siting Guidelines themselves state that for new projects preferred location will be sea coast. Thus, there has been no violation of the siting guidelines as stated in the Technical EIA Guidance Manual for Soda Ash.

18. The contents of preliminary submission on compliance with the siting criteria in the Technical EIA Guidance Manual for Soda Ash industry as described in paras 73- 74 are reiterated and are not being repeated for the sake of brevity.

Response to Incorrect Information in Form I part A by the Project Proponent

19. That the contents of para 51 to 56 are denied as wrong, false and devoid of any merit. It is reiterated that the allegation of the Appellants is completely devoid of merit. The Form I, Part A of the application for Environmental Clearance annexed at page 352 of the Appeal, at page 354-355 clearly states with respect to sea turtle nesting that as per the Survey undertaken by the Zoological Survey of India, there are no sea turtles and fresh/old nests or crawl marks on the beach. The ZSI report also clearly notes that all suitable sites as per the literature available for sea turtle nesting were visited during the survey period.and the site is not suitable for turtle nesting. The Report was also submitted as an Annexure to the EIA Report. Even in Part C of Form 1, with respect to the issue of turtles it has been clearly stated that the Zoological Survey of India Report is annexed to address the said issue. Arguendo, any sporadic nesting occurs, due to the presence of feral animals, the nests are translocated by the local fishermen to the hatchery being maintained by the Forest Department. The sporadic nesting also occurs in the 7 km stretch between Rukmavati river mouth (about 20 km from the proposed project site) and Mandvi Palace (about 16 km from the project site).The contents of the preliminary submission on information submitted by the Answering Respondent in Form I as described in paras 85-87is reiterated and is not being repeated for the sake of brevity. It is further submitted that the reliance placed by the Appellants on the judgment of the Southern Zone Bench of this Hon'ble Tribunal in the case of Sreeranganathan K. P. Vs. Union of India & Others is thoroughly misconceived and misplaced and deserves to be rejected outright as this is not a case of concealment or suppression of material facts by the Project Proponent, which is the Answering Respondent. On the contrary, it is the Appellants who have tried to play a fraud on the Hon'ble High Court of Gujarat and then before the Hon'ble Supreme Court of India in their first round of litigation by suppressing material facts to mislead the High Court and to somehow secure a stay of the public hearing scheduled for 17.10.2022. It would not be out of place to state that having lost the first round both, before the Hon'ble High Court of Gujarat as well as before the Hon'ble Supreme Court of

India, the Appellants in their desperation to stall the Soda Ash Project of the Answering Respondent have once again approached this Hon'ble Tribunal with a false and frivolous case. Therefore, reliance on the judgment of the Southern Zone Bench of this Hon'ble Tribunal in the case of Sreeranganathan K. P. Vs. Union of India & Others does not advance the case of the Appellants.

Response to monitoring for sea turtle nesting was done primarily during the non-nesting season

20. That the contents of para 57 to 62 are denied as wrong, false and without any basis in facts and law. The Appellants are put to strict proof with respect to the veracity of the nesting period of turtles. Further, Zoological Survey of India is one of the few institutes of national repute which are known for their studies on different species of animals. The report by ZSI clearly states that sporadic nesting happens throughout the year, however the peak season is from July to November. Accordingly, the time period between September 2018 to end of March 2019 was chosen so that sea turtle nesting activities during the peak season are documented effectively. Thus ZSI has effectively captured the breeding of turtles during the peak season and the submissions of the Appellant are devoid of all merit. Additionally full nesting season turtle study was carried out by GUIDE during June 2022 to January 2023, so that turtle nesting activities during the peak breeding seasons, if any in the study area could be documented effectively. This study by GUIDE also indicates the same results.
21. That further, the reliance on the Appellant on the UN's report in para 58 is for alleging presence of turtles in Bada Village is baseless as the Report makes a generic observation about the entire Gulf of Kutch, which cannot be attributable to village Bada.
22. That with respect to the allegations of downplaying the literature on turtles in the EIA Report, it is submitted that the EIA Report also concludes that on visiting the site no sea turtles were found in the area. However, a detailed appraisal may be undertaken by an expert regarding the same. Accordingly, the Gujrat Institute of Dessert Ecology were also approached and based on the study conducted by them from June 2022 to January 2023 does not identify the presence of sea turtles. Further, the CSIR-NIO Marine Impact Assessment Study also conducted extensive surveys from October 2018 and March 2019, however no turtles were sighted in the project area. Thereafter, TR Associates has also prepared an addendum to the EIA Report in January 2024 wherein the baseline

study was conducted between December 2022 and February 2023. Again the team of consultants did not encounter any sea turtle nesting sites. Thus , it is evident that the site is not suitable for turtle nesting based on the detailed field survey & monitoring of sea turtle nesting, due to its narrow beach width, the proposed GHCL site beach gets inundated during high tide and thereby unfavorable for sea turtles for laying eggs. It was observed that due to its narrow beach width, vegetation cover, slope, presence of pebbles and rubbles and presence of predators on the beach sea turtles may not favoring this area for laying eggs. as per the observations in the Zoological Survey of India Report, the EIA Report, the Marine EIA Report and the Gujarat Institute of Dessert Ecology report conclude the same as observed by the ZSI. It was also verified by EAC Sub-committee during Site visit. Further, it is reiterated that the National Marine Turtle Action Plan (2021-2026), published by the Ministry of Environment, Forest & Climate Change (MoEF&CC), does not identify the Kutch region, including Bada, as an important marine turtle habitat. The Action Plan recognises the Western Saurashtra coast (covering Junagadh, Jamnagar, and Porbandar districts) as a significant nesting ground for Green and Olive Ridley turtles. The copy of the National Marine Turtle Action Plan is marked and annexed as **ANNEXURE R/55.**

23. That specifically in response to para 60-62, it is clarified that the project of the Answering Respondent is situated in Bada Village, Mandvi Taluka while the report of WII relied upon by the Appellants highlight presence of turtles in the Mandvi Town and Nana layja Village. The town of Mandvi is approximately 22 km away from the village of Bada and Nana Lajya village is more than 10 km away from the Bada village and thus not the site of the project of the Answering Respondent. The allegations of the Appellant that the EAC has failed to appraise the project in detail in false and without any merit as the EAC has cross verified the presence of turtles from multiple reports , including a site visit by its own committee before concluding absence of turtle nesting at the site of the proposed soda ash plant. The contents of the Preliminary Submissions specially in paras 87-95 are reiterated and are not being repeated for the sake of brevity.

Response to Non Application of Mind by the Expert Appraisal Committee in Appraising the Project

24. That in response to the contents of para 63 to 74, the contents of the preliminary submissions especially in paras 103-109 .are being reiterated and are not being

repeated for the sake of brevity. It is however surprising that the Appellant has alleged non-appraisal when in fact the case of the Appellant herein is one where the EAC has appraised the project based on reports from CSIR -NEERI, NIO, TR Associates, Dr. Bharath Jethwa, Gujarat Institute of Dessert Ecology and Zoological Survey of India. Further, the EAC itself has visited the site by constituting a sub-committee before recommending the grant of Environmental Clearance. It is thus clear that procedure of appraisal was much more stringent compared to the parameters prescribed in the EIA Report in view of the opposition to the project by certain members of the village community, who have perhaps an ulterior motive beyond environmental considerations.

25. That it is also pertinent to note that the Appellants are alleging impact of the project on climate change, coral reefs without producing an iota of evidence of the alleged adverse environmental impact of soda ash plant. The EIA Studies prepared by CSIR NEERI as well as TR Associates duly capture these impacts, including the impact of seawater intake and outfall. Infact, an Addendum to the report was prepared by CSIR NIO to prescribe conservation measures to mitigate any impact of outfall on the seawater. The methodology adopted by the Answering Respondent would ensure that the constituents of the treated water quality after dilution being discharged will be well within CPCB/GPCB norms and will be the same as that of the sea water after 300 mtrs at discharge point. Thus minimizing any adverse impact on the marine ecology. The same is duly captured in the Marine EIA Studies, however, the Appellants for reasons best known to them have conveniently failed to apprise this Hon'ble Tribunal of the same. The CSIR NIO report also clearly states that there are no corals present in the project area or areas near the site of the proposed project. The contents of paras 103- 109 are reiterated as response to this para and is not being reiterated for the sake of brevity.

26. That the reliance on the case of Utkarsh Mandal by the Appellant is misplaced as the Delhi High Court was dealing with the issue of grant of EC for mining and the same was challenged inter alia on the ground of multiple public hearings on the same date credibility of the decision of the EAC as the EAC (Mines) was chaired by a person who was also a director on four other mining companies. Further, the reliance on the case of Gau Raxa Hitaxak the issue before the Hon'ble Tribunal was with respect to grant of EC for expansion of the port. While dealing with the grievance of reproduction of the part of the EAC recommendation as it is by the then MOEF, the Hon'ble Tribunal noted that the

appraisal had been faulty as the EAC and MoEF had failed to look into the relevant compliances required by the Project proponent . However, In the present case, the EAC and MOEF&CC have deliberated in detail over the compliances to be adopted by the Answering Respondent, including a field visit. In the final recommendation of EC in its 87th minutes of the meeting, additional conservation and mitigation measures were specified. Further, the Environmental Clearance was granted on 12.12.2024 only after a detailed scrutiny of the response and compliances to be undertaken by the Answering Respondent as submitted vide letter dated 25.10.2024.

27. That this Hon'ble tribunal in the case of Sayyed Mohd. Sabir Usman and Anr. v. Union of india and Others [2021 SCC Online NGT 2143] upheld the grant of Environmental Clearance for the expansion of the Soda Ash plant of M/s Saurashtra Chemicals at Birlasnagar, Porbandar, Gujarat. This Hon'ble Tribunal noted that the doctrine of proportionality has to be followed. Further, in the absence of any irreversible damage, quashing of EC is not the only option. The copy of the Judgment dated 07.07.2021 of the Special Bench constituted for the Western bench of this Hon'ble Tribunal is marked and annexed as **ANNEXURE R/56.**

Response to No Biodiversity Impact Assessment Study Conducted Despite the Project Coming up in a Biodiversity Rich Area

28. That the contents of para 75 to 79 are denied as wrong, false and devoid of all merit. The Biodiversity Impact Assessment has been incorporated in both the EIA Reports prepared by CSIR NEERI as well as the Report prepared by TR Associates. Moreover, the requirement of undertaking Biodiversity Impact Assessment under the amended Section 36(4)(i) of the Biological Diversity Act, 2002 is pursuant to the Central Government directing the same to any project proponent. However, in the present case the Answering Respondent has duly captured the impact on biological diversity and ecology and incorporated the measures for mitigation of the impact on the same. The contents of paras 81 -84 are reiterated here and not being repeated for the sake of brevity.
29. That the Grounds in Para 80 of the reply are denied and the preliminary submissions may be read in response to the allegations in the grounds and are not being repeated for the sake of brevity.
30. That in view of the abovementioned facts and position of law, it is humbly submitted that the Appellants herein have approached this Hon'ble Tribunal by

suppressing material facts and submitting incomplete position of law. This is not the first instance of suppression of facts and law as is evident from the order dated 18.10.2022 of the Hon'ble High Court of Gujarat. Further, the Appellants have tried to take a hyper-technical ground of accreditation for challenging the validity of the Environmental Clearance without placing on record that there was not a single accredited consultant for soda ash in 2018 when the work order for carrying out the EIA study was allotted to CSIR-NEERI. Further, siting of the soda ash plant is in accordance with the technical guidance manual which encourages establishment of new projects near the coastline. The allegation of the presence of turtle nesting site and turtles is baseless as five organizations have conducted assessments over a period of three-four years and not a single turtle or crawl mark was sighted by the experts. Infact, the Appellants have alleged non application of mind by the EAC when in fact the EAC constituted a subcommittee for verification of the data and the allegations against the project by doing a site visit. This is one of the few instances when the EAC has gone beyond the prescribed mandate and undertaken physical site inspections, clarification from the CRZ Division of the Ministry of Environment, Forest and Climate Change before recommending the grant of Environmental Clearance.

31. That the abovementioned factual and legal position vis a vis the Greenfield Chemical Complex of the Answering Respondent has been suppressed by the Appellants for reasons best known to them. In the humble submission of the Answering Respondent, the present Appeal should be dismissed with huge costs on the Appellants for submitting half-baked facts and suppressing vital information such as the in-depth appraisal by the EAC vide physical site visits for recommending the grant of Environmental Clearance.

32. That for all the reasons set out above, in the alternative and without prejudice to one another, and other oral submissions to be advanced and judgments to be referred to and relied upon by the Answering Respondent at the time of arguments, the Answering Respondent most respectfully submits and prays that the present appeal, which is a gross abuse of the process of law, deserves to be dismissed in limini by this Hon'ble Tribunal with exemplary costs as any further delay would cause irreparable prejudice and hardship to the Answering Respondent which is setting up the Soda Ash Project at a huge cost of Rs.7,000 Crores with the fond hope that its Soda Ash Project would amongst other factors: (a) help generate huge employment opportunities both, direct and indirect, (b) Implementation of Wild Life Conservation Plan and other bio diversity

improvement projects by the Answering Respondent to improve bio diversity of the regions. (c) help generate substantial revenue to the Central and State Exchequer in the form of direct and indirect taxes and (d) help bridge the demand supply gap present in the soda ash industry, all of which will cumulatively contribute to the growth and wealth of the Nation.

Date: 22.03.2025
Place: Pune

DRAWN AND FILED BY:



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IN THE HON'BLE NATIONAL GREEN TRIBUNAL

WESTERN ZONE BENCH AT PUNE

APPEAL NO. 19 OF 2025

IN THE MATTER OF:

Vijaykumar Karsanbhai Gadhavi & Ors. … Appellant (s)

-Versus-

Union of India & Ors. ...Respondent (s)

AFFIDAVIT

I, Mr. Ranjan Tiwari, S/o Late Shri H.C. Tiwari, aged about 55 years, Office of B-38, Institutional Area, Sector - 01 Noida, Uttar Pradesh – 201301, presently at New Delhi, do hereby solemnly affirms and declares as under:

1. That I am fully conversant of the facts and circumstances of the matter and am competent to swear this affidavit.
2. The contents of the accompanying Reply are true and correct to the best of my knowledge and have been drafted by the counsel on my instructions and nothing material has been concealed therefrom.
3. That the Annexures in the accompanying Reply are true and correct to the best of my knowledge.

NOTARY * GOVT. OF INDIA * Abha Tomar Advocate New Delhi Regn. No. 8313

20 MAR 2025

For GHCL LIMITED

Authorised Signatory

DEPONENT

VERIFICATION:

Verified at New Delhi on this……day of……., 2025 that the contents of the above affidavit are true and correct to my knowledge and belief and nothing material has been concealed there from.

For GHCL LIMITED

Authorised Signatory

DEPONENT

Certified that the deponent has affixed his signature in my presence

Certified that the above statement was declared on solemn affirmation before me which has been read over to the deponent who has admitted it as correct

Notary DELHI

20 MAR 2025

IN THE HIGH COURT OF GUJARAT AT AHMEDABAD

R/WRIT PETITION (PIL) NO. 85 of 2022

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BHARAT GANGJI GALA

Versus

GUJARAT POLLUTION CONTROL BOARD

==========

Appearance:
MR AJ YAGNIK(1372) for the Applicant(s) No. 1,2,3,4
MS MANISHA LAVKUMAR, SENIOR ADVOCATE for Opponent No.1
MR KM ANTANI, AGP for Opponent Nos.2 and 3
MR PARTH BHATT, for Opponent No.4
MR MIHIR JOSHI, SENIOR ADVOCATE for Opponent No.5

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CORAM:**HONOURABLE THE CHIEF JUSTICE MR. JUSTICE ARAVIND KUMAR**
and
HONOURABLE MR. JUSTICE ASHUTOSH J. SHASTRI

Date : 18/10/2022
CAV JUDGMENT
(PER : HONOURABLE THE CHIEF JUSTICE MR. JUSTICE ARAVIND KUMAR)

1. This petition has been filed on 11.10.2022 and even before scrutiny of the papers could take place, a request for matter being listed on 12.10.2022 or 13.10.2022 was moved in open Court and it came to be rejected on ground of there being no urgency. In the meanwhile, a writ petition under Article 32 came to be filed by the petitioners before the Hon'ble Apex Court in Writ Petition (Civil) Diary No.32929 of 2022 and it seems to have been mentioned before the Hon'ble Apex Court on

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13.10.2022 for being taken up. Learned counsel who represented the petitioners before the Hon'ble Apex Court conceded to the fact that petitioners had already approached this Court by filing a Special Civil Application under Article 226 of the Constitution of India namely the present application. However, it was submitted before the Hon'ble Apex Court that matter was not getting listed. Hence, the Hon'ble Apex Court granted liberty to the petitioners to withdraw the petition filed before it and gave further liberty to the petitioners to make an appropriate mention before this Court to have the pending matter listed at an early date. Petitioners do not seem to have submitted before the Hon'ble Apex Court about the date of filing of this writ petition [Writ Petition (PIL) No.85 of 2022] being 11.10.2022, when the writ petition filed before the Hon'ble Apex Court was mentioned namely on 13.10.2022. In this background, petitioners filed yet another request for grant of circulation of this writ petition on 14.10.2022 and the request was accepted and matter was ordered to be listed

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on 17.10.2022. In fact, this writ petition was registered on 14.10.2022 only.

2. Today when the matter was taken up for consideration, the learned advocates appearing for both the parties submitted that consideration of interim prayer and main prayer are one and the same. Hence, by passing the following order, we took up the matter for final disposal :

> *"Learned advocates appearing for the parties submit that consideration of interim prayer and main prayer are one and the same and as such, matter is taken up for final hearing.*
>
> *Shri A.J.Yagnik, learned counsel appearing for the petitioners has placed on record the gazette Notification dated 09.05.2022 issued by the Ministry of Environment and Forest, to which, Ms. Manisha Lavkumar Shah, learned Senior Advocate has seriously objected for the same. Gazette Notification dated 09.05.2022 is placed on record. To a pointed question posed by this Court to Mr. A.J. Yagnik, as to why Notification dated 09.05.2022 was not placed on record at the first instance, namely at the time of filing of the petition, he would fairly submit that it had gone unnoticed. His submission is placed on record.*

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This matter is listed at Serial No. 6 in Board-I, there was no attempt made by any advocate representing the parties for this matter being taken up at 11:00 am (the time of commencement of Court proceedings). Shri A.J.Yagnik, learned counsel appearing for the petitioners commenced his argument at 11:56 am and xxx xxx xxx.”

3. We have heard the arguments of Mr.Anandvardhan J. Yagnik, learned counsel appearing for the petitioner, Ms.Manisha Lavkumar, learned Senior Advocate appearing for respondent No.1, Mr.K.M.Antani, learned Assistant Government Pleader appearing for respondent Nos.2 and 3, Mr.Parth Bhatt, learned counsel appearing for respondent No.4 and Mr.Mihir Joshi, learned Senior Counsel appearing for respondent No.5. Perused the records.

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4. At the outset, it requires to be noticed that petitioners have filed this petition for the following reliefs:

“(A) To hold and declare that the public notice dated 26.09.2022 annexed at

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Annexure-B issued by the respondent Gujarat Pollution Control Board notifying the scheduled date of public hearing, for the project of 120 MW Captive Co-generation Power Plant for 1100000 TPA Light Soda Ash, 500000 TPA Dense Soda Ash, 200000 TPA Sodium Carbonate under Category "A" schedule to be undertaken by respondent no. 5 herein at Bada Village of Mandvi Taluka of Kutch District, on 17.10.2022 as being de hors the provisions of the Environment Impact Assessment Notification, 2006 and more specifically Clause 3 of Appendix IV of the EIA Notification 2006 in so far as it does not provide for minimum of 30 days period between the date of issuance of public notice for hearing and date of hearing and the actual date of public hearing and hence the same being illegal, arbitrary, irrational, violative of fundamental rights and Be further Pleased to quash and set aside the same.

(B) To hold and declare that failure to provide for minimum of 30 days' time as mandated in Clause 3 of the Appendix IV of the Environment Impact Assessment Notification, 2006 between the date of issuance of public notice for hearing and date of hearing and the actual date of public hearing by the respondent no. 1 herein is bad in law, illegal, arbitrary, irrational, violative of fundamental rights and the EIA notification of 2006 and Be Further Pleased to quash and set aside the public notice dated 26.09.2022 annexed at Annexure-B.

(C) To hold and declare that the Communication dated 30.09.2022 annexed

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at Annexure-C issued by the respondent Gujarat Pollution Control Board notifying the scheduled date of public hearing, for the project of 120 MW Captive Co-generation Power Plant for 1100000 TPA Light Soda Ash, 500000 TPA Dense Soda Ash, 200000 TPA Sodium Carbonate under Category "A" schedule to be undertaken by respondent no. 5 herein at Bada Village of Mandvi Taluka of Kutch District, on 17.10.2022 as being de hors the provisions of the Environment Impact Assessment Notification, 2006 and more specifically Clause 3 of Appendix IV of the EIA Notification 2006 in so far as it does not provide for minimum of 30 days period between the date of issuance of public notice for hearing and date of hearing and the actual date of public hearing and hence the same being illegal, arbitrary, irrational, violative of fundamental rights and Be further Pleased to quash and set aside the same."

5. A perusal of the averments made in the petition would clearly indicate that sum and substance of the plea put-forward by the petitioners in the petition or in other words, the thrust of the contentions raised in the writ petition revolves around the notification dated 14.09.2006, contending *inter-alia* said notification mandates public consultation for projects falling within Category-A and it also mandates public hearing has to be

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held for the stake-holders to have necessary information about the project so as to afford adequate opportunity to represent and address the environmental concerns of the proposed project and Paragraph 3.1 of Appendix-IV of the notification dated 14.09.2006 mandates that a minimum notice period of 30 days should be provided to the public for furnishing their response from the actual date of public notice and it was not provided since the impugned notice is dated 26.09.2022 and the date of hearing is fixed as 17.10.2022 at 11.00 a.m. which does not allow 30 days time as contemplated under the impugned notice.

6. The petitioners who claim to be public spirited persons and having their roots in the village where the proposed project of the 5th respondent is coming up though residing outside the village are claiming to be owning and possessing ancestral property and/or agricultural lands within the revenue limits of Bada village, Mandvi Taluka, Kutch District, where the proposed project is being set up and 4th respondent claims to be an Environment Researcher who is said to be

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working in the Kutch region since long and claims to have contributed in several significant studies and projects concerning environment and sustainable development, cannot be heard to feign ignorance about the amendment to the Environment Impact Assessment Notification dated 14.09.2006, which has taken place on 09.05.2022. On this aspect, we would be delving upon at a later stage.

7. The notification dated 09.05.2022 has been placed on record by the learned counsel appearing for the petitioners by tendering the same in the open Court today before commencement of arguments and without even seeking for amendment of the pleadings by laying the foundational facts to put-forth the petitioners' case, though notification dated 09.05.2022 is being assailed. On the short ground that prayers sought for in the petition has rendered itself infructuous in the light of the notification dated 09.05.2022, Paragraph 3.3(a) after Paragraph 3.3 has been inserted and the very edifice or the foundation laid in the writ petition has got crumbled

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by itself would be a good ground to dismiss the petition at the threshold. However, we desist from doing so to avoid any technical plea being put-forward and to stave off such plea being raised, we have heard the arguments of the learned advocates appearing for the parties at length, the timings of which is noted and recorded in the proceedings of this case, which reads :

> *"This matter is listed at Serial No.6 in Board-I, there was no attempt made by any advocate representing the parties for this matter being taken up at 11:00 am (the time of commencement of Court proceedings). Shri A.J.Yagnik, learned counsel appearing for the petitioners commenced his argument at 11:56 am and concluded it at 12:35 pm.*
>
> *Ms.Manisha Lavkumar Shah, learned Senior Advocate appearing for respondent no.2 has addressed her arguments from 12:35 pm to 12:56 pm.*
>
> *Mr.Paritosh Gupta, learned advocate appearing on behalf of Gupta and Law Associates submits that Vakalatnama is being filed today. Mr.Mihir Joshi, learned Senior Advocate appearing on his behalf has addressed argument on behalf of respondent no.5 by commencing his argument at 1:00 pm, and concluded the argument at 1:08 pm.*
>
> *Mr.A.J.Yagnik, has commenced his reply argument at 1:10 pm and concluded at 1:15 pm."*

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8. It is the contention of Mr.Anandvardhan J. Yagnik, learned counsel appearing for the petitioners that notification dated 09.05.2022 is prospective in nature and can be applied to the proceedings taken subsequent to the amendment coming into force i.e. after 09.05.2022. He would submit that in the instant case the first hearing having been taken place on 06.04.2022 and the proposed postponed hearing is scheduled to be held today i.e. 17.10.2022 at 11.00 a.m., during the interregnum an amendment has been brought to the Environment Impact Assessment Notification dated 14.09.2006 by notification dated 09.05.2022 and Paragraph 3.3(a) has been inserted, by virtue of which the proceedings already commenced under the old notification would be governed by the conditions stipulated in Appendix-IV, Paragraph 3.0 in general and Paragraphs 3.1 to 3.4. He would submit that under Paragraph 3.1 a minimum notice period of 30 days is to be provided by the Member Secretary of the concerned Pollution Control Board by advertising the same in one major national daily and one regional

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vernacular State language newspaper which has not been done or in other words, time-gap for public hearing is less than 30 days. He would submit that if for any reason the hearing is postponed, such postponement has to be notified to the public through national and regional vernacular dailies and fresh hearing has to be held notifying the fresh date, time and venue as per procedure under Paragraph 3.1 namely it is to be held by giving 30 days minimum notice period or in other words, as per Paragraph 3.4 the procedure adopted as prescribed under Paragraph 3.1 has to be adopted for postponed hearing also. He would submit that by virtue of Paragraph 3.3(a) having been inserted by notification dated 09.05.2022 which is a delegated legislation, it would not take away the case of the petitioners or in other words, in respect of the proceedings which had already commenced by way of first public hearing which had already taken place. As such, contending that amended notification would be of no consequence to the proceedings already commenced, he prays for the petition being allowed. He would also submit

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that though the notification dated 09.05.2022 does not indicate it to be retrospective, even the principles of retroactive would not be applicable particularly when the first hearing has commenced much prior to the issuance of the second notification. He would also contend that for application of retroactive activity of a notification, such notification itself should indicate that the facts or events taken place earlier will be taken care of while implementing the said notification and the subsequent notification should clearly specify this fact. He would also contend that having regard to the importance of public hearing, such public hearing should be meaningful and larger participation of all the stake-holders like the petitioners should be allowed to participate in such public hearing and with this avowed object, 30 days time has been provided under the notification dated 14.09.2006 which cannot be erased by a subsequent amendment and that too in respect of proceedings which had already commenced. In support of his submissions, he has relied upon the following judgment :

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(i) State Bank's Staff Union Madras vs Union Of India & Ors, reported in **(2005) 7 SCC 584.**

(ii) Vijay vs State Of Maharashtra & Ors, reported in **(2006) 6 SCC 289.**

(iii) Securities and Exchange Board of India vs. Rajkumar Nagpal and others, reported in **2022 SCC Online 1119.**

9. Ms.Manisha Lavkumar Shah, learned Senior Counsel appearing on behalf of respondent No.1 by seeking leave of the Court to file affidavit-in-reply on behalf of respondent No.1, has filed affidavit-in-reply on being granted leave and by reiterating the contentions raised thereunder, she has raised preliminary objection with regard to the maintainability of this writ petition contending that petitioner has attempted to mislead the Hon'ble Court by suppressing the provisions related to public hearing envisaged in notification dated 14.09.2006 which has since been amended on 09.05.2022, particularly Paragraph 3.0 of the notification dated

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14.09.2006 which pertains to public hearing and the procedural aspect thereunder. She would submit that Paragraph 3.1 prescribes such procedure, whereas Paragraph 3.3 prescribes the procedure relating to exigency when the hearing stands deferred. She would at the first instance contend that present writ petition was filed on 11.10.2022 and affirmed on the same day, and it was registered on 14.10.2022 and even before registration of this petition could take place, petitioners had submitted before the Hon'ble Supreme Court that matter was not being listed which is factually incorrect and as though depicting that petitioner is fair to the Court, they have withdrawn the writ petition filed before Hon'ble Apex Court on 13.10.2022 with liberty to make appropriate mention before this Court and on the score of material suppression of facts, this writ petition is liable to be dismissed. By drawing our attention to Paragraph 3.3, which has been substituted by a notification dated 09.05.2022, she would submit that in the instant case, the public hearing was deferred when it was held on

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06.04.2022 and petitioner had constructive knowledge of the said change of procedural law and despite the same, by suppression of facts this writ petition has been filed. She would further elaborate her submissions by contending that first hearing was notified on 03/04.03.2022 to be held on 06.04.2022 which was in consonance with Paragraph 3.1. Hearing to be held on 06.04.2022 was deferred in the background of then prevalent law and order situation at the venue of public hearing and as opined by the Collector, Kutch, and thereafter the deferred hearing was notified on 13.09.2022 – 01.10.2022 to be held on 17.10.2022 as per Paragraph 3.3(a) of the notification dated 09.05.2022 which prescribes 15 days' notice period. Hence, she would contend that at no stage there was infraction in the procedural law of holding public hearing as is necessary and mandated under the notification dated 14.09.2006 read with 09.05.2022. She would also contend that foundation of the entire case of petitioners is based on notification dated 14.09.2006 and now arguments have

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sprung or canvassed from the petitioners' side assailing the legality of notification dated 09.05.2022 without even seeking amendment of the pleadings and petitioners' counsel has sought to propound his arguments by attacking the notification dated 09.05.2022 without there being iota of plea or foundation being laid in the pleadings. Notwithstanding the absence of plea and in light of the arguments now canvassed, she would contend that procedural aspect has alone been modified under the notification dated 09.05.2022 and post adjourned hearing. She would submit that amended notification dated 09.05.2022 has come into force by virtue of which Paragraph 3.3(a) having been inserted after Paragraph 3.3. She would also submit that there is no infraction of law and public interest does not suffer and in any event the only contention raised by the petitioners relates to reducing the notice period of public hearing. She would also submit that petitioner would not be in position to contend of any prejudice, inasmuch as, the time prescribed under the notification dated 09.05.2022 was

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available and as such there is no merit in this petition and she prays for dismissal of the petition. She would also draw attention of the Court to para 100 of the judgment of the Hon'ble Apex Court in the case of ***Securities Exchange Board of India versus Rajkumar Nagpal and Others (supra)***, to contend that the notification dated 09.05.2022 now sought to be impugned by way of oral arguments is without merit. She would also contend that first public notice was published on 02.03.2022 for public hearing to be held on 06.04.2022, and thereafter rescheduled hearing was notified on 26.09.2022 to be held on 17.10.2022 and as such a sufficient time gap is maintained and therefore petitioners cannot plead there was any lack of opportunity or lack of time to put-forth their views in the public hearing that was being held on 17.10.2022.

10. Mr.Mihir Joshi, learned Senior Counsel appearing for respondent No.5 would support the arguments canvassed by Ms.Manisha Lavkumar Shah,

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learned Senior Advocate and he would contend that only grievance of the petitioners is that there is insufficient time and he would submit that between first public notice till the public hearing scheduled to be held today, 7 months gap is there and it can be easily inferred that petitioners knew 7½ months back itself about the project. Hence, he would contend that grievance of the petitioners with reference to the adjourned hearing of there being time constraint, is baseless and frivolous, particularly when in the first public hearing 30 days has been clearly maintained. Hence he prays for dismissal of the petition.

11. In reply, learned advocate Mr.A.J.Yagnik, would submit that contention of Mr.Mihir Joshi, learned Senior Counsel, about the grounds urged by the petitioners being frivolous is without any basis and he prays for allowing the petition by granting the prayers sought for in the petition and prays for quashing of the notice dated 26.09.2022.

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DISCUSSION AND FINDINGS :

12. Having heard the learned advocates appearing for parties and after bestowing our careful and anxious consideration to the rival contentions raised at the bar, we notice that fifth respondent has proposed to set up a Soda Plant at Bada Village, Mandavi Taluka, Kutch District. The said project falls within the category "A" of the notification dated 14.09.2006 (Annexure 'A'). The said notification mandates public consultation for setting up industries requiring prior Environment Clearance (EC). A mandatory public hearing has to be held for the stakeholders to have necessary information about the project and adequate opportunity to represent and address their environmental concern with regard to the project is the underlying object of the said public hearing. Paragraph 7 of the notification prescribes the stages in the prior Environmental Clearance (EC) process to be adopted for new project and stage 3 of Paragraph 7 indicates the manner in which the process of "public consultation" is to be conducted. Paragraphs 3.0, 3.1 to

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3.4 prescribes the procedure for issuance the notice of public hearing which reads thus :

"APPENDIX IV

(See Paragraph 7)

PROCEDURE FOR CONDUCT OF PUBLIC HEARING

1.0 xxxx

2.1 to 2.4 xxxx

3.0 Notice of Public Hearing

3.1 The Member-Secretary of the concerned SPCB or UTPCC shall finalize the date, time and exact venue for the conduct of public hearing within 7(seven) days of the date of receipt of the draft Environmental Impact Assessment report from the project proponent, and advertise the same in one major National Daily and one Regional vernacular Daily / Official State Language. A minimum notice period of 30 (thirty) days shall be provided to the public for furnishing their responses;

3.2 The advertisement shall also inform the public about the places or offices where the public could access the draft Environmental Impact Assessment report and the Summary Environmental Impact Assessment report before the public hearing. In places where the newspapers do not reach, the Competent Authority

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should arrange to inform the local public about the public hearing by other means such as by way of beating of drums as well as advertisement / announcement on radio / television.

3.3 No postponement of the date, time, venue of the public hearing shall be undertaken, unless some untoward emergency situation occurs and then only on the recommendation of the concerned District Magistrate / District Collector / Deputy Commissioner, the postponement shall be notified to the public through the same National and Regional vernacular dailies and also prominently displayed at all the identified offices by the concerned SPCB or Union Territory Pollution Control Committee;

3.4 In the above exceptional circumstances fresh date, time and venue for the public consultation shall be decided by the Member –Secretary of the concerned SPCB or UTPCC only in consultation with the District Magistrate / District Collector / Deputy Commissioner, and notified afresh as per procedure under 3.1 above."

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13. A plain reading of Paragraph 3.1 would indicate that minimum period of 30 days is to be provided between the date of notice of public hearing and actual date of public hearing. The fifth respondent has submitted a request letter on 15.11.2021 along with

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Environment Impact Assessment Report and compliance for holding public hearing by inviting objections from the general public and upon receiving the said request, respondent No. 1 has instructed its Regional Office to fix the public hearing as requested by respondent No. 5. Accordingly, public advertisement was published on 04.03.2022 in English Daily 'Times of India' and Gujarati Daily 'Divya Bhaskar' on 03.03.2022 (Annexure R-1). The hearing was held as scheduled on 06.04.2022 well after 30 days as prescribed under the Paragraph 3.1 of the notification dated 14.09.2006. On account of law and order situation having stood grim, Collector, Kutch resolved to defer the public hearing as is evident from the proceeding drawn by the Collector on 06.04.2022 (Annexure R-2). By virtue of power vested under Paragraph 3.3, said recourse was taken to by the Collector.

14. Before postponed hearing could be convened, the notification dated 14.09.2006 came to be amended by notification dated 09.05.2022. The reasons and the object

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with which amendment to Paragraph 3.3 of Appendix-IV being brought amongst other amendments, is traceable in the said notification itself which it reads thus :

"MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE NOTIFICATION
New Delhi, the 9th May, 2022

xxxxxx

And whereas, on certain occasions, the public hearings have been postponed due to various reasons often being beyond the control of the Project Proponent and as per the provisions of the EIA Notification 2006, the whole process for the public hearing is to be started afresh resulting in undue delay in completing the EC process;

And whereas, one of the factors which results in delay or postponement of the public hearings is the nonavailability of the District Magistrate or his representative not below the rank of an Additional District Magistrate to preside over the proceedings of the public hearing;

And whereas, the Central Government has been receiving representations to streamline the public hearing process;

And whereas, the Central Government taking into account the public interest involved, deems it necessary to streamline the process of the public hearing by reducing undue delays and facilitating

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public participation without interrupting the access to the information pertaining to the project and also make a provision for the District Magistrate to authorise an officer not below the rank of Sub-Divisional Magistrate to preside over the Public Hearing to avoid such delay;"

15. Pursuant to the same, fresh public notice was issued on 26.09.2022 and on 30.09.2022, the Jurisdictional Talati-cum-Mantri, Village Bada Panchayat was informed by office of 1st respondent by calling upon the said office to publish the "Gujarati Executive Summary" on the notice board of village for attention of the villagers, apart from publishing the same in two newspapers. The procedure prescribed under Paragraph 3.3(a) of the notification dated 09.05.2022 came to be followed or resorted to under public hearing notice dated 26.09.2022. The public hearing was scheduled to be held on 17.10.2022 at 11:00 hrs. According to the respondent No.1, 15 days' period is prescribed under Paragraph 3.3(a) which provides for 15 days notice, which is sought to be contended by the petitioners as being contrary to Paragraph 3.1. It is to be borne in mind that hearing at

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the first instance came to be held on 06.04.2022 as per public hearing notice dated 02.03.2022. However, said public hearing could not take place or in other words the public consultation process did not get fructified and before public hearing could start, there was severe protest against the project and as such the Collector opined that due to huge amount of turbulence by the public and none of them being ready to listen and public who had gathered were coming near the dais with black flags on their arms and despite efforts of the police personnel present at the site not yielding result, Collector was of the opinion that atmosphere was not conducive to conduct public hearing. Hence, public hearing came to be deferred.

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16. It is in this factual scenario, the postponed hearing was required to be held and no doubt under the unamended notification dated 14.09.2016 even for the postponed hearing Paragraph 3.4 or Paragraph 3.1 of the said notification was applicable or could be attracted

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namely 30 days notice was required to be given for public hearing. Whereas, in the instant case, after the first hearing took place on 06.04.2002 which did not culminate in effective public hearing being concluded and same having been postponed, as per the opinion of the Collector resulted in fresh proceedings being initiated. At that point of time, the fresh notice was issued on 26.09.2022 and the hearing date was fixed as 17.10.2022 by giving more than 15 days' time. It would be benefit to note at this juncture itself that the Central Government having felt that on certain occasions, the public hearing having been postponed due to various reasons, often being beyond the control of the project proponent and the whole process of public hearing is to be started afresh was resulting in undue delay in completing the e-environmental clearance process deemed fit to amend the notification dated 14.09.2006. Amongst other reasons which was held as deemed to be necessary to amend the notification of 14.09.2006 and to remove such lacuna to streamline the process of public hearing by reducing

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undue delay and also facilitating public participation without interrupting the access to the information pertaining to the project, the Government of India in exercise of power conferred by Section 1 and clause (v) of sub-section (2) of Section 3 of the Environment (Protection) Act, 1986, read with sub-rule (iv) of Rule 5 of the Environment (Protection) Rules, 1986, brought about amendment to the notification dated 14.9.2006 by incorporating certain amendments. Paragraph 3 of the notification dated 14.9.2006 was also amended as under :

> *"3.3(a) In the event of any such postponement referred to in sub-paragraph 3.3, the time duration for convening the rescheduled public hearing should not be less than forty-five days from the date of first advertisement already published in accordance with para 3.1 for initial date of public hearing and it shall be ensured that a minimum notice period of fifteen days shall be provided to the public before the re-scheduled date of the public hearing, for furnishing the responses in writing: Provided that SPCB or UTPCC along with concerned authorities, as mentioned at para 2.2, shall ensure that all requisite documents are available to public in accordance with sub-paragraphs 2.3 and 2.4 from the date of first advertisement published for the initial date of*

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public hearing till convening of the rescheduled public hearing."

17. In Maxwell Interpretation, 11th Edition, page 216, 'it has been held a change in law of procedure operates retrospectively and unlike the law relating to the vested right is not only prospective'. The Hon'ble Apex Court in the case of **Anant Gopal Sheorey vs. The State of Bombay [AIR 1958 SC 915]** has held 'no person has a vested right in any course of procedure. He has only the right of prosecution or defence in the manner prescribed for the time being by or for the Court in which the case is pending and if by an Act of Parliament the mode of procedure is altered he has no other right than to proceed according to the altered mode'. In the instant case, paragraph 3.1 referred to hereinabove supra of the notification dated 14.9.2006 prescribes for minimum notice period of 30 days for public for furnishing their response from the date of notice. Paragraph 3.3 would indicate that there can be postponement of the date, time and venue of the public hearing if there were to be

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untoward emergency situation occurring and it can only be on the recommendation of the concerned District Magistrate / District Collector / Deputy Commissioner. The unamended paragraph 3.4 of the same notification also indicates that even in respect of postponed public hearing where fresh date, time and venue for public consulting is being undertaken, the procedure as prescribed under paragraph 3.1 requires to be followed. However, Paragraph 3.3 as noticed hereinabove came to be amended by adding 3.3(a). A plain reading of the same would indicate that in the event of any postponement referred to in sub-paragraph 3.3 were to occur, time duration for convening the first rescheduled public hearing has been fixed as not being less than 45 days from the date of first advertisement. In the instant case, the first advertisement for public hearing was issued on 02.03.2022 and the rescheduled public hearing as per the impugned notice dated 26.09.2022 has been fixed as 17.10.2022 and as such, it meets this requirement of 45 days. The amended paragraph also

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prescribes for minimum notice period of 15 days should be provided to the public before the rescheduled date of hearing taken place to enable the stake-holders to furnish their responses in writing. This mandate is also complied in the instant case as evident from the notice dated 26.9.2022, and we say so for the simple reason that if period of 15 days as prescribed under Paragraph 3.3(a) is reckoned from the date of notice to the date of public hearing viz. 17.10.2022, the prescribed 15 days' period is met. It is to be further noticed that Pollution Control Board along with concerned authorities are required to ensure that all requisite documents are available to public in accordance with sub-paragraphs 2.3 and 2.4 of the EC Notification Appendix 4 from the date of first advertisement published for the initial date of public hearing till convening of the rescheduled public hearing. In other words, it would indicate that it would be in retrospective effect. It is this amendment of insertion of Paragraph 3.3(a) which has been brought about is sought to be assailed by Mr. A.J.Yagnik by making a futile

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attempt and we say so for reasons more than one. Firstly, it requires to be noticed that the Constitution Bench of the Hon'ble Apex Court in the case of **Assistant Commissioner of Urban Land Tax vs. Buckingham and Carnatic Co. Ltd. [(1969) 2 SCC 55]** quoted with approval the following procedure:

> *"23. In Harvard Law Review, Vol. 73, p. 692 it was observed that :*
>
> *'It is necessary that the legislature should be able to cure inadvertent defects in statutes or their administration by making what has been aptly called 'small repairs'. Moreover, the individual who claims that a vested right has arisen from the defect is seeking a windfall since had the legislature's or administrator's action had the effect it was intended to and could have had, no such right would have arisen. Thus the interest in the retroactive curing of such a defect in the administration of government outweighs the individual's interest in benefiting from the defect'."*

18. The Hon'ble Apex Court in the case of **State Bank's Staff Union (Madras Circle) vs. Union of India and Others [(2005) 7 SCC 584]** while generally

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explaining the expressions ‘retrospective’, ‘retro active’ and ‘retro activity’, has held to the following effect :

> *“24. Craies on Statute Law (7th Edn.) at p. 396 observes that:*
>
> "*If a statute is passed for the purpose of protecting the public against some evil or abuse, it may be allowed to operate retrospectively, although by such operation it will deprive some person or persons of a vested right.*"
>
> *Thus public interest at large is one of the relevant considerations in determining the constitutional validity of a retrospective legislation.*
>
> *25. The above position was elaborately noted in Virendra Singh Hooda and Ors. v. State of Haryana & Anr. (2004 (12) SCC 588).*
>
> *26. Curative Statutes are by their very nature intended to operate upon and affect past transactions. Curative and validating statutes operate on conditions already existing and are therefore wholly retrospective and can have no retrospective operation.”*

19. In the recent judgment, the Hon’ble Apex Court in the case of **Securities and Exchange Board of India**

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vs. Rajkumar Nagpal and Others [2022 SCC OnLine SC 1119] has held:

> *"100. We are of the opinion that the SEBI Circular has retroactive application. In Principles of Statutory Interpretation by Justice G.P. Singh (14th edition, 2016 at page 583), it is stated that:*
>
> *"The **rule against retrospective construction is not applicable to a statute merely because "a part of the requisites for its action is drawn from a time antecedent to its passing**". If that were not so, every statute will be presumed to apply only to persons born and things which come into existence after its operation and the rule may well result in virtual nullification of most of the statutes."*

20. In this background, when the notification dated 09.05.2022 is examined though not in fact has been challenged in this Special Civil Application by laying foundation in the form of pleadings, yet on account of an argument having been canvassed during the course of oral submissions and the learned advocate appearing for the petitioners having tried to build a new case by assailing this notification, we have considered the

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submissions as of the learned advocate appearing for the petitioners and the rebuttal arguments addressed by the learned advocates appearing for the respondents as noted hereinabove and find the contention raised is without any substance. We also notice that sum and substance of the grievance of the petitioners is lack of time in the postponed hearing being held on 17.10.2022. The said contention is also bereft of merit for the simple reason that original notice of public hearing was published way back on 02.03.2022 whereunder the public hearing was fixed on 06.04.2022 which was held but it did not ripen itself or blossom into a full-fledged public hearing on account of there being commotion and the authorities having anticipated law and order problem resulted in said hearing being postponed. It is this postponement which has led to the issuance of fresh notice under the amended notification under which the time gap of 30 days fixed for the public hearing came to be modified by insertion of paragraph 3.3 (a) by reducing the notice period to 15 days and maintaining 45 days prescribed in

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Paragraph 3.1 from the date of first advertisement already published which the petitioners cannot be heard to contend that even in case of postponing hearing, they are entitled to 30 days' notice period as prescribed under paragraph 3.1. The said contention is without any substance and is liable to be rejected and accordingly, it stands rejected.

REASONS FOR IMPOSING COSTS ON PETITIONERS :

21. Petitioners herein are not rustic villagers or being ignorant of the prevalent law and we say so for the reason that verifying affidavit of the writ petition has been sworn to by petitioner No.4 who is said to be an Environmental Researcher and has been working in Kutch region since long and claims to have contributed in several significant studies and projects concerning environment and sustainable development. We have no reason to disbelieve the said statement and even if it is accepted at its face value, the irresistible conclusion which we are perforced to arrive is that petitioner No.4 is conversant with all

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environmental laws and is attempting to espouse the public cause knowing well the environmental laws. It is in this background the averment made in the petition has been looked into and examined by us. When seen in this background, we cannot lose sight of the fact that petitioner Nos.1, 2 and 3 in general and petitioner No.4 in particular being ignorant or not aware of the amendment brought about to the notification dated 14.09.2006. It is for this precise reason, we posed a specific question to the learned advocate appearing for the petitioners as to the reason for not placing on record the notification dated 09.05.2022 which was placed just before commencement of the arguments, the too, without any pleadings for which he had replied that it had gone unnoticed by the petitioners, which is very hard to be digested in the background of what we have narrated about the background of the petitioners and they having pleaded details of prevalent laws at micro level in their Special Civil Application. In other words, petitioners seem to have adopted a trick and stratagem to obtain

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ad-interim *ex-parte* orders to stall the public hearing which was scheduled to be held on 17.10.2022 and that too pleading in their Special Civil Application about their being violation of conditions stipulated under notification dated 14.09.2006, which notification had been amended by notification dated 09.05.2022 which they were aware and yet had suppressed. Even question posed to the learned counsel as to why petitioners had not placed this amended notification at earlier point of time, his answer was this had gone unnoticed and reason not being petitioners having forgotten or same not being in their knowledge. In other words, they knew about notification dated 09.05.2022 having come into effect even as on date of filing of Special Civil Application on 11.10.2022, yet suppressing this and projecting only 14.09.2006 notification holds the field, they intended to snatch an order from this Court and by this process they intended to stall the entire process of public hearing and proclaim themselves as messiah of public cause which is otherwise. Though we were inclined to dismiss the petition at the

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threshold by nipping at the bud and prevent the misadventure undertaken by the petitioners and also by applying the doctrine of ***suppressio veri and suggestio falsi*** viz. suppressing the truth and suggesting the falsehood, yet, we decided to receive the said notification dated 09.05.2022 on record to examine even the remote public interest does not suffer on account of any technical error. Even after having posed the question to the learned advocate appearing for the petitioners as noticed hereinabove, petitioners did not choose to amend the petition or the prayer sought for in the petition but on the other hand, they insisted for interim prayer also being granted, though they have addressed the arguments on merits of the case.

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22. The Hon'ble Apex Court in the case of **Shri K. Jayaram and others vs. Bangalore Development Authority and others in Civil Appeal No.7550-7553 of 2021** disposed of on 8.12.2021, has observed:

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"12. It is well-settled that the jurisdiction exercised by the High Court under Article 226 of the Constitution of India is extraordinary, equitable and discretionary and it is imperative that the petitioner approaching the writ court must come with clean hands and put forward all facts before the Court without concealing or suppressing anything. A litigant is bound to state all facts which are relevant to the litigation. If he withholds some vital or relevant material in order to gain advantage over the other side then he would be guilty of playing fraud with the court as well as with the opposite parties which cannot be countenanced.

13. This Court in Prestige Lights Ltd. V. State Bank of India has held that a prerogative remedy is not available as a matter of course. In exercising extraordinary power, a writ court would indeed bear in mind the conduct of the party which is invoking such jurisdiction. If the applicant does not disclose full facts or suppresses relevant materials or is otherwise guilty of misleading the court, the court may dismiss the action without adjudicating the matter. It was held thus:

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> *"33. It is thus clear that though the appellant Company had approached the High Court under Article 226 of the Constitution, it had not candidly stated all the facts to the Court. The High Court is exercising discretionary and extraordinary jurisdiction under Article 226 of the Constitution. Over and above, a court of law is also a court of equity. It is, therefore, of utmost necessity that*

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> *when a party approaches a High Court, he must place all the facts before the Court without any reservation. If there is suppression of material facts on the part of the applicant or twisted facts have been placed before the Court, the writ court may refuse to entertain the petition and dismiss it without entering into merits of the matter."*
>
> *14. In Udyami Evam Khadi Gramodyog Welfare Sanstha and Another v. State of Uttar Pradesh and Others2, this Court has reiterated that the writ remedy is an equitable one and a person approaching a superior court must come with a pair of clean hands. Such person should not suppress any material fact but also should not take recourse to legal proceedings over and over again which amounts to abuse of the process of law."*

23. Prerogative writs are issued for doing substantial justice. Hence, petitioners approaching the writ court must exercise due diligence; approach with clean hands by placing all the material facts before the court without concealing or suppressing anything. The courts would be knowing the law and not the facts and if a litigant were to suppress the facts and attempt to snatch an order from the court, cannot go scot-free or in other words, such

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litigant requires to be dealt with deft and iron hands and in such circumstances, the court would be perforced to impose costs on such persons. Though in the normal course, we would have desisted from making any observation in this regard, the facts unfolded in the present case including the conduct of the petitioners would not inspire confidence in us except observing that petitioners cannot be extended the benefit of doubt. The pleas put-forth in the writ petition do not disclose about petitioner Nos.1, 2 and 3 being rustic villagers or illiterate persons or not being well conversant with the procedural law and particularly petitioner No.4 who is said to be an Environmental Researcher who is required to exercise utmost care and caution while espousing a public cause. The Hon'ble Apex Court in the case of **K.D. Sharma vs. Steel Authority of India Limited and Others [(2008) 12 SCC 481]** has observed thus:

> *"39. If the primary object as highlighted in Kensington Income Tax Commissioners is kept in mind, an applicant who does not come with candid facts and `clean breast' cannot hold a*

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> *writ of the Court with `soiled hands'. Suppression or concealment of material facts is not an advocacy. It is a jugglery, manipulation, maneuvering or misrepresentation, which has no place in equitable and prerogative jurisdiction. If the applicant does not disclose all the material facts fairly and truly but states them in a distorted manner and misleads the Court, the Court has inherent power in order to protect itself and to prevent an abuse of its process to discharge the rule nisi and refuse to proceed further with the examination of the case on merits. If the Court does not reject the petition on that ground, the Court would be failing in its duty. In fact, such an applicant requires to be dealt with for contempt of Court for abusing the process of the Court."*

24. The judgment of **Vijay vs. State of Maharashtra** referred to supra would not come to the rescue of the petitioners in view of our opinion expressed with regard to retrospective operation by applying the principles laid down by the Hon'ble Apex Court in the case of **SEBI vs. Rajkumar Nagpal** referred to supra.

25. In the case of **Dnyandeo Sabaji Naik and Another vs. Pradnya Prakash Khadekar and Others [(2017) 5 SCC 496]**, Hon'ble Apex Court has held that where any attempt by litigant to abuse the process of the

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law is made, it must be viewed seriously as sanctity of the judicial process will be seriously eroded if such attempts are not dealt with firmly. It has also been held that a litigant who takes liberties with the truth or with the procedures of the Court should be left in no doubt about the consequences to follow, so that others would not venture along the same path in the hope or on a misplaced expectation of judicial leniency. It has been further held:

> *"14. Courts across the legal system - this Court not being an exception – are choked with litigation. Frivolous and groundless filings constitute a serious menace to the administration of justice. They consume time and clog the infrastructure. Productive resources which should be deployed in the handling of genuine causes are dissipated in attending to cases filed only to benefit from delay, by prolonging dead issues and pursuing worthless causes. No litigant can have a vested interest in delay. Unfortunately, as the present case exemplifies, the process of dispensing justice is misused by the unscrupulous to the detriment of the legitimate. The present case is an illustration of how a simple issue has occupied the time of the courts and of how successive applications have been filed to prolong the inevitable. The person in whose favour the balance of justice lies has in the process been left in the lurch by repeated attempts to revive a stale issue. This tendency can be curbed only if courts across the*

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system adopt an institutional approach which penalizes such behavior. Liberal access to justice does not mean access to chaos and indiscipline. A strong message must be conveyed that courts of justice will not be allowed to be disrupted by litigative strategies designed to profit from the delays of the law. Unless remedial action is taken by all courts here and now our society will breed a legal culture based on evasion instead of abidance. It is the duty of every court to firmly deal with such situations. The imposition of exemplary costs is a necessary instrument which has to be deployed to weed out, as well as to prevent the filing of frivolous cases. It is only then that the courts can set apart time to resolve genuine causes and answer the concerns of those who are in need of justice. Imposition of real time costs is also necessary to ensure that access to courts is available to citizens with genuine grievances. Otherwise, the doors would be shut to legitimate causes simply by the weight of undeserving cases which flood the system. Such a situation cannot be allowed to come to pass. Hence it is not merely a matter of discretion but a duty and obligation cast upon all courts to ensure that the legal system is not exploited by those who use the forms of the law to defeat or delay justice. We commend all courts to deal with frivolous filings in the same manner."

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26. In fact, abuse of process of the court or anything done in oblique motive has been held by the Hon'ble Apex Court as interfering with the administration of justice and the polluters of judicial firmament are required to be well taken care of. It has been held :

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> *"The polluters of judicial firmament are required to be well taken care of to maintain the sublimity of court's environment; so also to enable it to administer justice fairly and to the satisfaction of all concerned. Such persons are required to be properly dealt with, not only to punish them for the wrong done, but also to deter others from indulging in similar acts which shake the faith of people in the system of administration of justice."*

27. For these myriad reasons, we are of the considered view that the petitioners are to be mulcted with costs.

28. For the reasons aforestated, we proceed to pass following

ORDER

(i) Writ petition is hereby dismissed with costs;

(ii) Petitioners are directed to pay a sum of Rs.50,000/- (Rupees Fifty Thousand only) payable to respondent No.1 for being utilised for the welfare of project displaced persons, if any.

(ARAVIND KUMAR, CJ)

(ASHUTOSH J. SHASTRI, J)

GAURAV/BH/AM

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ANNEXURE R/2

ITEM NO.40 COURT NO.8 SECTION III

S U P R E M E C O U R T O F I N D I A
RECORD OF PROCEEDINGS

SPECIAL LEAVE PETITION (CIVIL) Diary No(s). 4709/2023

(Arising out of impugned final judgment and order dated 18-10-2022 in WPPIL No. 85/2022 passed by the High Court of Gujarat at Ahmedabad)

BHARAT GANGJI GALA & ORS. Petitioner(s)

VERSUS

GUJARAT POLLUTION CONTROL BOARD & ORS. Respondent(s)

(FOR ADMISSION and I.R. and IA No.34487/2023-CONDONATION OF DELAY IN FILING and IA No.34491/2023-EXEMPTION FROM FILING C/C OF THE IMPUGNED JUDGMENT)

Date : 27-03-2023 This petition was called on for hearing today.

CORAM :
HON'BLE MR. JUSTICE B.R. GAVAI
HON'BLE MR. JUSTICE VIKRAM NATH

For Petitioner(s) Mr. Abhimanue Shrestha, AOR
Ms. Sridevi Panikkar, Adv.

For Respondent(s)

UPON hearing the counsel the Court made the following
O R D E R

1. Delay condoned.

2. We are not inclined to interfere with the impugned judgment and order passed by the High Court. The special leave petition is, accordingly, dismissed.

3. Pending application(s), if any, shall stand disposed of.

(NARENDRA PRASAD) (ANJU KAPOOR)
ASTT. REGISTRAR-cum-PS COURT MASTER (NSH)

Signature Not Verified
Digitally signed by Narendra Prasad
Date: 2023.03.29 11:11:28 IST
Reason:

તાત્કાલીક ખરી નકલ મેળવવાની અરજી

મામલતદાર સાહેબશ્રી માંડવી-કચ્છ.

પત્ર નં. જમન/વશી ૬૮૭/~~૨૦૨૪~~ 09/2024/, તા.૧૫-૬-૨૦૨૪ થી જી.એચ.સી.એલ કંપની ને બાડા ગામની સરકારી જમીન હે.૭૬.૯૬ ચો.મી કેમીકલ કોમ્પલેક્ષ ના ઓધોગીક હેતુ માટે મળવાની માંગણી સામે વાધાં બાબતે અમો અરજદાર વાંધેદાર હોવાથી આ બાબત અંગેના આપના વિભાગ તરફ થી સાધનીક કાગળો ની નકલ મળવાથી અમો અમારો જવાબ રજુ કરી શકીએ છીએ. જેથી આ અરજી કરી રહયા છીએ,

આ બાબતેના સંદર્ભ પત્ર- મે.શ્રી.પ્રાત અધિકારી સાહેબ મુદરાના પત્રનં.જમન/વશી/૮૦૦/૨૦૨૪ તા.૨૧-૫-૨૦૨૪ ના બિડાણ સહિતની નકલ તાત્કાલીક આપવા પુરી પાડશો, ત્યારબાદ જ અમો આ બાબતે અમો અમારો વાંધો રજુ કરી શકીશુ જેથી ન્યાયના હિતમાં આ સાધનીક કાગળોની નકલ બાદ જ વાંધાઓ રજુ કરવા યોગ્ય મુદત આપવા નમ્ર અરજ છે.

(આ સાથે આપના વિભાગના **પત્રનં.જમન/વશી ૬૮૭/~~૨૦૨૪~~ 09/2024/, તા.૧૫-૬-૨૦૨૪ વાળાની** નકલ સામેલ છે)

આ કામે માંગણી થયેલ થી નિયત ફી ની રકમ અમો ભરી આપવા સહમત છીએ.

તા:૨૮-૬-૨૦૨૪

સ્થળ:માંડવી-કચ્છ.

સામતસિંહ કે. સોઢા

.....દ્વારા.....

વિધરકના નેહ

વાડા

(મો.નં. 98254 22524)

સરનામું:-

મયુર લેબોરેટરી સામે

ગલ્ડ ચોક

માંડવી. કચ્છ.



TO GET TRUE COPY IMMIDIATELY.

BEFORE MAMLATDAR SAHEB SHRI MANDVI – KUTCH

Letter No. Jaman/Vashi 687/062024, dated 15/6/2024, regarding the objection against the demand of GHCL to get government land measuring 76.96 square meters in Bada village for industrial purposes of Chemical Complex, we, the applicant, are the respondents and after receiving a copy of the material papers from our department regarding this matter, we can submit our reply. Therefore, we are making this application,

Please provide a copy of the reference letter in this matter - Mr. Prant Adhikari Saheb Mundra's letter No. Jaman / Vashi / 800 / 2024 dated 21/5/2024 along with the enclosure immediately, only after that we will be able to present our objection in this matter. Therefore, in the interest of justice, it is a humble request to give a suitable time to present objections and adjourn the matter as only after receiving the copy of these instrumental papers.

[A copy of our department's letter No. Jaman/Vashi 687/06/2024, dated 15/6/2024 is enclosed herewith]

We agree to pay the prescribed fee amount as requested for this work.

Date: 28-6-2024 Sd/

Place: Mandvi- Kutch

Samantsinh K Sodha
Trustee
Vipashyana Kendra
Bada
(Mob. No. 9825422524)
Address: Mayur Laboratory & Blood Bank , Aazad Chowk, Mandvi Kutch

An Appeal to protect the Dhamma Sindhu International Vipassana Centre, Kutch and sustainable village economy

Respected Hon'ble …….

We, the members of the Dhamma Sindhu Vipassana Meditation Centre in Bada, Kutch, urgently bring to your kind attention the grave threat posed by Gujarat Heavy Chemicals Limited's (GHCL) proposed soda ash factory in Bada Village. This development endangers not only our center but also the legacy of Vipassana—a profound meditation technique rooted in the teachings of Lord Gautama Buddha and revived in modern India by the revered Padma Bhushan awardee and Principal Teacher Shri S. N. Goenka ji.

Vipassana, an ancient technique taught by Lord Buddha over 2600 years ago, focuses on self-transformation through self-observation. Shri S. N. Goenka ji reintroduced this technique in India about 50 years ago. Under his guidance, Vipassana has spread across the globe, with over 250 centers on every populated continent.

Our Kutch Vipassana Centre, established in 1991, is one of the few centers personally blessed by Shri S. N. Goenka ji. It stands as a beacon of spiritual growth and peace, attracting meditators from around the world. The center's serene environment, nestled on a 19-hectare property near the Arabian Sea, is crucial for deep meditation. This natural setting, rich with wildlife and tranquility, has been carefully cultivated over decades and holds the spiritual vibrations of our Guruji and the lakhs of meditators who have practiced here. Over the past 32 years, it has served as a sanctuary for approximately 1.25 million meditators from India and across the globe, offering transformative residential retreats ranging from 10 to 45 days. The Dhamma Sindhu Centre is irreplaceable.

Our Hon'ble PM Shri Narendra Modi ji has acknowledged the value of Vipassana and its significance in today's world. Shri Modi ji has spoken highly of Shri Goenka ji's contributions in his video message on February 4th, 2024, commemorating the centennial anniversary of the Guruji, noting how Vipassana has positively impacted society. He had also attended Guruji's last rites as a mark of respect.

In this letter, we have highlighted the serious concerns regarding the proposed project by GHCL, detailing the extensive environmental and land-related violations associated with this company. These violations also threaten the lives and livelihoods of thousands in the local communities.

About the GHCL's proposed project

Gujarat Heavy Chemicals Limited alias GHCL is a flagship company of Dalmia Group. The proposed GHCL's plant at Bada plans to produce Soda Ash (11,00,000 TPA), Dense Soda Ash (5,00,000 TPA), Sodium bi-carbonate (2,00,000 TPA), with a power plant (120 MW).

Environmental, Social and Ecological damage

Soda ash production poses significant environmental risks across multiple domains. Air pollution is a major concern, as the process involves burning lignite, which emits harmful pollutants and greenhouse gases. *This not only affects local air quality but also has wider implications for human health, animal life, and agriculture as documented around soda ash factories in Sutrapada, Mithapur(Okha), Kuranga village(Dwarka) in Gujarat*. Additionally, emissions from chemical reactions, material handling, storage, and transportation add to the air pollution, *with wind patterns potentially carrying these pollutants toward nearby villages and meditation centers, disrupting both health and the meditative environment*. The land also suffers from pollution due to waste sludge and soda residue (white mud), which leads to soil contamination, habitat destruction, and degrading agricultural fields into barren lands.

Water and marine ecosystems are similarly at risk. Toxic effluents from heavy chemical soda ash production can accumulate in closed coastal areas like the Gulf of Kutch, where geographical features may trap these pollutants, harming marine life and nearby communities. Increases in recent rainfall patterns in the Kutch region have created vital water bodies that could be threatened by the factory's operations, leading to altered water flow and contamination of local water resources. Additionally, noise and thermal pollution from the plant could disturb the tranquil environment needed for meditation.

The protective sand dunes have long shielded our coastline from rising sea levels, climate change impacts, salinity ingress and natural calamities. During **Cyclone Biparjoy 2023** and **Cyclone Asna 2024**, it was these sand dunes which protected the village by reducing the speed and direct impact of the cyclone else the disaster would have been unimaginable. If the company is permitted to be established along the foot of the sand dunes, the **sand dunes' ecology and stability** will get irreversibly impacted and would be destroyed. It will allow **ingress of saline sea water** towards agricultural fields which will destroy agriculture based sustainable ecosystems of nearby villages.

Vulnerable and Endangered Species: Bada coast is full of lively ecology, having sandy beaches, towering sand dunes, natural seasonal rivers and streams, ponds, fertile farmlands. Bada coastal expanse serves as an ideal hatching and nesting ground for **Schedule 1 Turtles**. *In the last few years the forest department has conserved and protected many green sea turtle and olive ridley turtle nests along with the villagers.* The Gujarat Ecology Commission, Government of Gujarat's ENVIS Newsletter on the Status of sea turtle nesting in Gujarat clearly states that the Bada-Nana Layja beach ranks at rank 1 for the sea turtle nesting[1] marking it as the most ideal beach for nesting. However, to our surprise, the survey undertaken by ZSI Kolkata in 2019 based on which the clearances have been secured by the GHCL states that the beach of Bada coast is not ideal for turtle nesting and even if the nesting takes place, the nesting is sparse and rare. For a reputed institute

[1] The Gujarat Ecology Commission, Government of Gujarat ENVIS Newsletter Volume 7 published for July-Sept 2020 (Issue 2).

like the Zoological Survey of India to not take into consideration all the facts before making such reports in favour of the company raises serious concerns on the status of conservation of endangered species in India.

This area is home to a diverse population of peacocks, chinkaras, hyenas, and a multitude of reptiles, many bird species, and mammals. A safe haven for numerous migratory birds, it is an oasis in disguise. Bird species of the critically endangered bustards are also found in this region.

In addition to the several environmental concerns, we are afraid that allowing this project to be established in the region would increase the risk of total failure of the ***Ecotourism projects*** like M*andavi-Naliya plans for multi-species safari parks and Ecotourism development for Asharmata temple beach and Rawalpir beach* of the Tourism Department, Government of Gujarat proposed along the coast of Mandvi and Nana Layja-Bada. These projects have more potential of creating **job opportunities and inclusive growth** compared to the proposed GHCL's factory.

The geomorphology, the coastal currents and wind patterns of the Bada coast which forms a part of the Gulf of Kutch are such that the toxic effluents released from the soda ash plant will continue to circulate close to the coast. In GHCL Sutrapada as well, the effluents can be seen to have settled in the intertidal region that has caused significant alterations in the coastal ecology of the region. In addition to the effluents, the company proposes to intake and release sea water through submarine pipelines. It is proposed to intake 1600000m3/d (approx. 160 crore liters of water daily) for cooling and for desalination to meet the sweet water requirement. It is also proposed that 1580000 m3/day of water (approx. 158 crore liters of water per daily) will be released back into the sea. The water that will be released back into the sea will be 7 to 10 degrees warmer than the ambient sea temperatures. If such a **high volume of warm water** is released back into the sea and the water would circulate in the intertidal region, the overall temperature of the coastal seawater would increase leading to the death of sensitive marine biodiversity and also reducing the tourism influx in the region as envisioned by the Tourism Department.

Though the company claims in its submission to EAC that through its environmental management plans (EMP), wildlife conservation plans (WCP), CSR and ESR activities they are going to take care of all these ecological concerns. However, the track record of the company can be seen from violations being done in GHCL Sutrapada. All these *false paper promises* are only manipulation techniques to get all clearances from Irrigation department, Revenue department, Forest department, Gujarat Coastal Zone Management Authority and the Expert Appraisal Committee. The existing factory in Sutrapada has violated environmental regulations, releasing toxic substances and heated water into the protected coastal zone. Multiple notices from the Gujarat Pollution Control Board, the GCZMA, and other authorities highlight these infractions. We are sure that the **establishment of this company would only bring pollution and devastation to our cherished lands.**

The glaring violations by GHCL

The open outfall channel of the GHCL Sutrapada plant has been releasing the effluents on the coast and has caused severe damage to marine life in the region. The deposits of limestone and effluents can be seen in the intertidal region during the low tide. As per the report of the Committee formed by the Hon'ble National Green Tribunal published in March 2021, two of the company's mines were found to have operated in violation of law[2]. The report also recommended that the project be fined. Based on the various findings and the committee's recommendations, the Hon'ble Court also levied on M/s GHCL[3].

In the proposed project of the Greenfield Chemical Plant in Bada, Kutch, the company's intentions to not abide by the laws were evident. The company chose not to appoint a QCI-NABET accredited Consultant. They decided to conduct the baseline data study much before they applied for the environmental clearance process. The EIA report prepared by an unaccredited EIA Consultant, was presented during the public hearing that was organized by the Gujarat Pollution Control Board as mandated under the EIA Notification 2006. *The company ensured that the public hearing on such a report was forced on us with brute police force*. The report prepared by an unauthorized consultant was presented in the public hearing and the forced public hearing held on October 17, 2022 was declared complete despite *resolute public opposition which can be seen in the recordings of the public hearing*. The presence of over 350 armed police personnel and restricted discourse was distressing. The coerced hearing concluded without fulfilling fundamental prerequisites of the EIA Notification 2006 that governs the entire process.

The draft EIA report prepared by CSIR-NEERI and CSIR-NIO. Both these esteemed organizations are not authorized EIA Consultants for soda ash studies. CSIR-NEERI faced repercussions with QCI-NABET suspending its accreditation since 23rd December 2022, which till date hasn't been reinstated.

Despite QCI-NABET's action, the company falsely presented the report before the Expert Appraisal Committee to seek clearance. The minutes of the committee mentioned that the CSIR-NEERI consultant had presented the EIA report, whereas *CSIR-NEERI's Director in an email to Quality Council of India – National Accreditation Board of Education and Training clearly stated that none of their representatives had presented the project before the Committee.*

The name of an esteemed and reputed Government Institution CSIR-NEERI was misused by the consultant and the company to seek clearance.

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[2] Report on Damage Assessment Due to Illegal Mining of Limestone in the Districts of Junagadh & Gir-Somnath prepared by Dr. Manish Kumar, Assistant Professor, Discipline of Earth Sciences, Indian Institute of Technology, Gandhinagar submitted to Gujarat Pollution Control Board - https://greentribunal.gov.in/sites/default/files/news_updates/Final%20Project%20Report%20in%20O.A.No_.%2058-2018%20(page%20nos.%201085-1210).pdf

[3] Order of the National Green Tribunal in matter of O.A. 58/2018 Protection of Environment and Public Service Committee Vs Union of India & Ors. https://greentribunal.gov.in/gen_pdf_test.php?filepath=L25ndF9kb2N1bWVudHMvbmd0L2Nhc2Vkb2MvanVkZ2VtZW50cy9QVU5FLzIwMjItMTEtMTQvMTY2ODQxMzYyMTM2MDk0MjY4NjYzNzFmOGI1MTVhYTEucGRm

Modi ji's dream of 'Green Kutch' under threat – Natural water resources under threat

The semi-arid region of Kutch has been known for its numerous droughts and famines. To meet Kutch's need of water and protect our Kutch, Modiji, while being the Hon'ble Chief Minister of Gujarat has made numerous efforts. Due to these efforts, Bada and the surrounding villages witnessed the construction and maintenance of several lakes, dams, check dams, reservoirs, sea protection walls and so on. Today, Shri Narendra Modi ji's constant efforts ensured that Narmada Maa's (Sardar Sarovar dam) waters have flourished in our lands and fields. Due to all these efforts these lands have become *irrigated agricultural lands* resulting in agricultural productivity and increasing farm income hence more *inclusive and equitable growth*.

It is also with God's grace, in the past 4-5 years, the Kutch region has been receiving increasing rainfall. In the past two years the water conditions have also drastically improved ensuring that the lakes, reservoirs and check dams have been able to store sufficient water for supporting farming and cattle rearing in the region. This year, the villagers were able to grow healthy crops and feed their cattle good grass and water. The villagers have also contributed towards the Government's aim of promoting millets and have grown crops like Bajra and other millets.

Bada, Janakpur, Bhinsra and Pachotiya's cattle under threat – our beloved Gau Mata under threat

This company, if established, will destroy our village's Vengadi river, first order seasonal streams and natural drains. Even today, on the occasion of heavy rainfall, the access road to Bada village is completely blocked as Vengadi river floods. If there will be any further disturbance to the natural drainage of the region, floods in Bada and surrounding villages will drastically increase that will put numerous lives and cattle at risk of their lives. The company proposes construction on the first order stream, ponds and check dams.

The water body, the seasonal stream feeding a big lake, Lalira lake will also be diverted. These water bodies not only help in farming but also support the population of thousands of cattle of Bada, Janakpur, Bhinsra and Pachotiya and other migrating grazing animals from nearby villages. Kali Lake and Lalira Lake are important sources of water and grass for these cattle, which does not dry during the harsh summers as well as providing an oasis for the cattle. With farming and animal husbandry being primary sources of income, the local economy supporting thousands of families will suffer tremendously. The company may offer labour and menial work to a few hundred locals, but it cannot provide sustainable livelihood opportunities to the thousands of families that will be affected and displaced, directly and indirectly by the company.

There is Gauchar land adjoining the company's boundary. To reach the Gauchar land, the access road for Bada village passes through the land where the company has proposed construction. The villagers won't be able to sustain a healthy cattle population and their livelihoods will be in danger.

Destruction of Vengadi's river mouth bed and sand dunes may cause salinity ingress

We are surprised to see that the forest department has allowed the company to use the riverbed for transportation. This includes the movement of labour, materials, and heavy machinery for constructing the intake and outfall channels in the sea. This means that the company will be constructing a road on the riverbed. This also includes the construction of a road on the sand dune that naturally protects our villages from the sea water ingress and also prevents the contamination of groundwater due to the salinity ingress in the ground water. The dune also protects our village from cyclones and sea level rise. If the dune on the mouth of the river breaks, the saline water would enter inland and the groundwater and farm lands will be affected by high salinity. The Government of Gujarat has made several efforts to prevent salinity ingress, especially in Kutch where groundwater is severely affected by high salinity and groundwater resources are constantly decreasing.

The Land Scam by the Company

Being proposed on over approximately 1300 acres of land, the company has hidden several facts and misled the authorities into seeking approval. It was only after our complaint and efforts, that we could draw the attention of the Hon'ble Collector and other authorities towards the misleading submissions by the company. Based on our submissions, the officials from the *District Inspector of Land Records* had visited our village lands and conducted a resurvey. Some of the major concerns that we would like to draw your attention towards are –

Non-disclosure of common resources in the application by GHCL

A. Ponds and check dams not disclosed

There are several water bodies, ponds and water reservoirs in the region falling under several survey numbers that the company demands. The company, while making the applications for the Government land, has not disclosed the presence of these water bodies and has taken advantage of the erroneous mapping of the revenue maps.

1. **Kali Talavdi (pond) falling under survey number 459**

The pond serves as an oasis for the wildlife and cattle in the harsh summer of Kutch. Kali talavdi also supports farmlands in the surrounding areas, especially the small farmers who have not been able to develop their own water resources on the farm. The company also does not show the access roads that the villagers use to access the pond.

2. **Lalira Lake - The feeder stream and access road will be lost**

Although the company has not specifically requested the land in survey number 377, which includes Lalira Talav, their demand for nearby land raises concerns. The land demanded by the company consists of a seasonal stream falling in the survey number 406 that feeds the lake during monsoon. If the diversion of the stream and construction is permitted, we may never see Lalira

Lake again in our lifetime. The company proposes to divert the stream into Vengadi river. This diversion will change the entire water balance and drainage of the region. This would also lead to complete drying of the lake.

There are thriving grasslands demarcated as Gauchar lands that are important grazing grounds for our cattle. If the lands demanded by the company are allotted to them, the access to the lake and the grasslands for Bada, Bhinsra and Janakpur will be lost forever.

3. **Checkdams - not disclosed on record by GHCL**

Survey number 406 demanded by the company comprises a natural seasonal stream and two check dams constructed on it by the Government of Gujarat to increase water resources in the region. The stream feeds Lalira lake and the check dam supports farming and recharges groundwater. The presence of the check dam also ensures that the groundwater is continuously recharged and the salinity ingress by seawater is prevented.

B. Public roads handed over to the Company without following due process of law

The Hon'ble Collector decided to hand over the Government Land including several roads **without following due process of law and hearing the people**. The access routes to farm lands, Gauchar lands, temples and water resources were handed over to the company without even hearing the objections of the community following the due process of law. In addition, there was a glaring violation when the main roads connecting two villages like *Bada-Pachotiya road bearing survey no. 371* was also given to the company. Another road connecting the village resources falling on the survey no. 406 was also handed over to the company. The roads that have been handed over to the company were also used by the fishing community and maldhari community to access their places of livelihood. The diversion of these roads would also affect the lives and livelihoods of the communities affecting their Right to Life and Livelihood. *Survey No: 1087 - Kali Talvadi Access road further joining Panjora Pir temple comes inside the proposed factory layout of the company.*

C. Bhailal Amin Krushi Seva Trust Land of about 150 acres declared as government land purchased by GHCL from individual private owners

In 2000, the Bhai Lal Amin Krushi Seva Trust purchased lands in Moje Bada, Ta. Mandvi, but due to incomplete documentation and the lack of a farmers' certificate, the purchase process remained unresolved. Under the Gujarat Tenancy and Agricultural Land Act, 1948, the trust was required to obtain permission from the appropriate authority, but their retrospective application for approval was rejected by the Deputy Collector, who declared the sale invalid and the land as Government property. Despite this, a lower-ranking officer overturned the decision, returning the land to the original owners, who then sold it to the company, GHCL. Following a complaint, the Appellate Authority in Ahmedabad ordered an investigation by the Collector of Kutch District into the improper transfer of public land to a private company.

D. Concerns pertaining to Private lands

1. **Private land under dispute was demarcated as Government Land - Case pending in the Supreme Court of India.**

The land bearing survey number 458, measuring 23.19.35 hectares, was incorrectly classified as Government land in the survey map. However, this area includes survey numbers 1094, 1096, 1098, and 1099, which are privately owned. Notably, survey numbers 1094, 1096, and 1098 are currently under dispute in the Supreme Court of India regarding the rights of the original landowners from Haryana. Despite the Supreme Court's stay order, which prohibits the sale, transfer, mortgage, or change in ownership of the land and mandates maintaining the status quo, the Collector handed this parcel over to the company.

Survey number 1099, which belongs to a private farmer whose family has cultivated the land for generations, was also included in the common survey number 458 and transferred to the company without correcting the revenue maps or resolving the rights of the original landowners.

2. **Private land transferred to the Company without following the Principle of Natural Justice**

The land, identified by survey numbers 277, 282, 372, 408, and 410 originally belonged to local farmers. Despite the original owners' unsettled claims, the land has been transferred to the company. We would also like to draw your attention to the rights of farm workers, or Ganotiyas, as recognized under Gujarat Revenue laws, which grant them specific rights to the land. In this case, survey numbers 248, 249, 250, and 419 had Ganotiyas marked in the land records, but the original owners sold the land without settling the Ganotiya rights. The Ganotiyas have now appealed the sale before the Collector, and the matter is still pending. Despite this, ownership in the revenue records has already been transferred to the company.

Concerns pertaining to the various soda ash industries along the coast of Gujarat -

We would like to bring to your attention that our concerns regarding the proposed soda ash plant in Bada are based on *the experiences of those affected by other soda ash industries in Gujarat*. The three major soda ash plants, including GHCL Sutrapada, established along the Gujarat coast, have demonstrated the extensive damage this industry has caused to local communities, agriculture, livelihoods, water bodies and the environment.

The Tata Chemical Complex at Mithapur, Okha, Gujarat

The chemical complex has devastated the surrounding region, with its impacts extending up to 10 kilometers. The industry's effluents, including salt reject, fly ash, and white mud, have been dumped near the southern part of India's first Marine Wildlife Sanctuary, an ecologically sensitive area. The release of these effluents into the sea via open channels has caused salinity ingress in

coastal areas, resulting in the loss of farming lands. Groundwater in the region has also been severely affected, with salinity levels rising dramatically, rendering wells, ponds, and other water bodies unusable. Despite years of appeals by the local communities to the Gujarat Pollution Control Board, GPCB and other authorities for relief from the Tata Chemical project, their pleas have been ignored.

The RSPL Soda ash industry in Kuranga village, Dwarka, Gujarat

Established around 2015, the youngest soda ash plant along the coast of Gujarat, despite using more advanced technologies, has severely impacted the region's environment in a short time. Farmers, whose lands were destroyed by pollution, repeatedly raised concerns with the Gujarat Pollution Control Board (GPCB) and other authorities, but their appeals were ignored. Frustrated by this inaction, the farmers affected by RSPL Industry filed a case in the Gujarat High Court. The court, recognizing the GPCB's failure to act, imposed a fine of twenty lakhs on the officials and ordered the Collector to form a committee to investigate the matter. The three-member committee conducted a detailed investigation, resulting in an inquiry against 17 GPCB officials for inaction. Additionally, the company was required to pay Rs. 1.57 crores for remediation work. Despite these measures, local communities continue to fight for protection against the company's pollution.

……

We urgently plead for your intervention to take decisive action in protecting the lives and livelihoods of local communities from the devastating impacts of this proposed factory.

We respectfully urge you to intervene and prevent the establishment of the GHCL factory. Preserving the Dhamma Sindhu Vipassana Centre is not just about protecting a piece of land; it is about safeguarding a spiritual legacy that has the power to transform lives and contribute to making India a ‘Spiritual Vishwa Guru.’ The loss of this center would be a blow not only to us but to the countless individuals who seek peace, love, and compassion through the practice of Vipassana. We appeal to you with folded hands to protect this sacred space for the benefit of all humanity.

- TRUE COPY-

ANNEXURE R/5

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QR CODE

E-CHALLAN
INSPECTOR GENERAL OF REGISTRATION
REVENUE DEPARTMENT
GOVERNMENT OF GUJARATI

Application Number	**20241100972662**	Printed On dated	**12/06/2024 12:57:54**

Transaction Number	Account Head	Amount (Rs.)	Bank CIN	Date	Bank Branch
20240912273061017	Registration Fee (0030-03-104-00)	**26900.00**	**5700001355100301209 2452149**	**12-09-2024**	SBIEPAY
Page Fee	**(45)900**	Other	0	Postage	0.00
Registration Fee	**26000.00**	Fee Exemption	No	Consideration Amount	2600000.00
Total Amount	**26900.00**	In Words	**Rupees Twenty Six Thousand Nine Hundred Only**		

(Particulars of the payye)			
Name	**Mahendra Maghji Gala**	(Office District)	Ahmedabad
Address	**301, Gimar Tower, Ram Tekdi, Nr. Tata Tower Severy, Mumbai City (Mumbai City) Mumbai City (Mumbai City) Maharashtra (Maharashtra) 400015**	Name of the office	**S.R.O.- Mandvi**
(Mobile Number)	**9879233437**	E-mail	Lakhanibrothers5@gmail.com
PAN Number	**AADPG2793H**	Year	**2024-2025 One time**

Seal of Sub-registrar Mandvi-

(Particulars of the property)	**Bada Ta. Mandvi Survey Number 426 (Old Survey Number 347), Total Hector 8-57-56 Are.**

(Remark)	

M Sd/- Mahendra in English V Sd/- illegible in Gujarati B Sd/- Bharat Gangji in English H Sd/- illegible in English J Sd/- Javerben Kishanji Chhadva in Gujarati

Sd/- illegible in English Sd/- illegible in English Sd/- R.H. Shah in English

Sd/- illegible
Sub-registrar Mandvi
09 DEC 2024

Remark:

(1) E-challan of registration fee shall be deemed valid for four months only according to the Rule 4(7) of the Gujarat Registration Fee E-payment & Refund Rules, 2020.
(2) Time limit of the stamp duty paid by E-challan is up to 6 month from the date of duty paid by the E-challan according to the Section 52 of the Gujarat Stamp Act 1958.
(3) To temper in the E-challan or prepare false Challan is becomes criminal offense.

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Absolute Sale Deed of Rs.26,00,000/- Only

.....

Irrigation address of old tenure situated in the center of the village Shri Bada of Taluka Sub-district Mandavi, District Kutchh, which is registered in joint name of us the seller by Account No. 225 at the records of revenue record. Revenue Survey No. 426 (Old Survey No. 347) thereof, Hector 8-57056 Are thereof, land revenue Rs.22.40 Paisa, address namely “Shiyawalo” is situated. Absolute sale deed of the address like that of Rs.26,00,000/-...

Seal of Sub-registrar Mandvi-

Sd/- illegible in English Sd/- illegible in English

Sd/- illegible in English Sd/- R.H. Shah in English

This absolute sale deed has been executed between the below parties on dated 13th September 2024 on Bhadarva Sud-10 of Vikram Samvat 2080 on below particulars.

The party of the first Part:- Purchasers

(1) Mahendra Maghji Gala, age 70 years, Occupation-agriculture, Religion-Jain, Gimar

Tower, Room No. 301, Ram Tekdi Road, Nr. Tata Tower Sevari, Mumbai-400015

Basis of identity:- PAN Card No.AADPG2793H

(2) Bharat Gangaji Gala, age 59 years, Occupation-agriculture, Religion-Jain, Res. 501/502, Haveli C.H.S., Chandavarkar Road, Opp. Avishkar Tower, Borivali West, Mumbai-Mahrashtra- 400092

Basis of identity:- PAN Card No.AACPG0614J

(3) Vasant Keshavji Savla, age 70 years, Occupation-agriculture, Religion-Jain, Res. Room No. 602, Plot No. 345, Milan Laxmi Apartment, Chandavarkar Road, Matunga, Mumbai-400019

Basis of Identity:- PAN Card No. AAFPS1379F

(4) Hasmukh Ratilal Hariya, age 65 years, Occupation-agriculture, Religion-Jain, Res. 379/14, Vashudha Co. Op. Hos. Society, Shankar Matham Road, Opp. Jain Clinic, Matunga, Mumbai 400019

Basis of Identity:- PAN Card No. AAAPH4115P

Hereinafter, shall be referred or known as “You the purchasers” in this absolute sale deed. In the context of meaning thereof, said “Purchasers” and their heirs,

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successors, inheritors, executors, administrators etc. all are included.

The party of the second part:- Seller

(1) Sha Javerbai Vishanji Chhadva, age 91 years, Occupation-retired, Religion-Jain, Res. 103, Balaji Sadan, K.A. Subramaniyam Road, S.I.E.S. High School, Matunga, Mumbai-400019

Basis of identity:- PAN Card No.AACPC7624C

(2) Sha Nayan Vishanji Chhadva, age 51 years, Occupation-agriculture, Religion-Jain, Res. 103, Balaji Sadan, K.A. Subramaniyam Road, S.I.E.S. High School, Matunga, Mumbai-400019

Basis of identity:- PAN Card No. ACVPC6857G

(3) Priti Vishanji W/O Hemant Shah, age 58 years, Occupation-housewife, Religion-Jain, Res. 16, Third Floor, Sunder Villa, Premnagar, J.N. Road, Nr. Apna Bazar, Mulund West, Mumbai, Maharashtra-400080

Basis of identity:- PAN Card No.ACVPC6857G

(4) Sonal Vishanji W/O Nilesh Dodhiya, age 54 years, Occupation-housewife, Religion-Jain, Res. Flat No. 602, Prachi Residency, Phase-2, Baner, Pune City, Pune-411045

Basis of identity:- PAN Card No.ABAPD0946M

Seal of Sub-registrar Mandvi-

Sd/- illegible in English Sd/- illegible in English
Sd/- R.H. Shah in English

Hereinafter, shall be referred or known as “We the sellers” in this absolute sale deed. In the context of meaning thereof, said “Sellers” and their heirs, successors, inheritors, executors, administrators etc. all are included.

(1) Irrigation address of old tenure situated in the center of the village Shri Bada of Taluka Sub-district Mandavi, District Kutchh, which is registered in joint name of us the seller by Account No. 225 at the records of revenue record. Revenue Survey No. 426 (Old Survey No. 347) thereof, Hector 8-57056 Are thereof, land revenue Rs.22.40 Paisa, address namely “Shiyawalo” is situated. Said address like that of absolute, joint ownership and possession, enjoyment, address free from encumbrance of us the seller is there. Address like that is absolutely sold in present reasonable price Rs.26,00,000/- in words Rupees Twenty-Six Lakhs Only with our ownership-possession and enjoyment all right-share till the sun-moon endure. Rs.26,00,000/- in words Rupees Twenty-Six Lakhs Only the consideration

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thereof is received to us the sellers from you the purchasers only below particulars.

Rs.6,50,000/- only is received to Sha Javerbai Vishanji Chhadva for the said sold address as under.

Seal of Sub-registrar Mandvi-

- **Detail of the amount received from the Mahendra Maghji Gala:-**

Sr. No.	Bank & Branch	Nature	Cheque/Ref. No.	Amount	Date
1	Bank of Baroda Lalbaug, Mumbai	Cheque	000205	1,62,500/-	14/06/2024

- **Detail of the amount received from the Hasmukh Ratilal Hariya:-**

Sr. No.	Bank & Branch	Nature	Cheque/Ref. No.	Amount	Date
1	Bank of India Maheshwari Udhan Mumbai	NEFT	BKIDN241668352 21	1,62,500/-	14/06/2024

Rs.6,50,000/- only is received to Sha Nayan Vishanji Chhadva for the said sold address as under.

- **Detail of the amount received from the Bharat Gangji Gala:-**

Sr. No.	Bank & Branch	Nature	Cheque/Ref. No.	Amount	Date
1	The Sareswat Co. Op. Bank Ltd.	NEFT	SRCBO24166606456	1,62,500/-	14/06/2024

Sd/- illegible in English Sd/- illegible in English
Sd/- R.H. Shah in English

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	Borivali, Mumbai				

Nature of the deed: Deed of Absolute Sale Consideration: Rs.26,00,000/-
Village: Mandvi, Ta. Mandvi Rev. S. No.:- 426 (Old Survey No.347), Ar. 85756.00 Sq. Mt.

M Sd/- Mahendra in English V Sd/- illegible in Gujarati B Sd/- Bharat Gangji in English
H Sd/- illegible in English J Sd/- Javerben Kishanji Chhadva in Gujarati

Sr. No.	Bank & Branch	Nature	Cheque/Ref. No.	Amount	Date
1	Yes Bank, Matunga, Mumbai	NEFT	YESOB41661798935	1,62,500/-	14/06/2024

Seal of Sub-registrar Mandvi-

- **Detail of the amount received from the Hasmukh Ratilal Hariya:-**

Sr. No.	Bank & Branch	Nature	Cheque/Ref. No.	Amount	Date
1	Bank of India Maheshwari Udhan Mumbai	NEFT	BKIDN24166834778	1,62,500/-	14/06/2024

Rs.6,50,000/- only is received to Priti Vishanji W/O Hemant Shah for the said sold address as under.

- **Detail of the amount received from the Mahendra Maghji Gala:-**

Sr. No.	Bank & Branch	Nature	Cheque/Ref. No.	Amount	Date
1	Bank of Baroda, Lalbaug, Mumbai	Cheque	000206	1,62,500/-	14/06/2024

- **Detail of the amount received from the Bharat Gangji Gala:-**

Sd/- illegible in English Sd/- illegible in English
Sd/- R.H. Shah in English

Nature of the deed: Deed of Absolute Sale Consideration: Rs.26,00,000/-
Village: Mandvi, Ta. Mandvi Rev. S. No.:- 426 (Old Survey No.347), Ar. 85756.00 Sq. Mt.

Sr. No.	Bank & Branch	Nature	Cheque/Ref. No.	Amount	Date
1	The Saraswat Co. Op. Bank Ltd, Borivali, Mumbai	NEFT	SRCB024166606456	1,62,500/-	14/06/2024

- **Detail of the amount received from the Vasant Keshavji Savala:-**

Sr. No.	Bank & Branch	Nature	Cheque/Ref. No.	Amount	Date
1	Yes Bank, Matunga, Mumbai	NEFT	YESOB41661798008	1,62,500/-	14/06/2024

- **Detail of the amount received from the Hasmukh Ratilal Hariya:-**

Sr. No.	Bank & Branch	Nature	Cheque/Ref. No.	Amount	Date
1	Bank of India Maheshwari Udhan Mumbai	NEFT	BKIDN241668331916	1,62,500/-	14/06/2024

Rs.6,50,000/- only is received to Sonal Vishanji W/O Nilesh Dodhiya for the said sold address as under.

- **Detail of the amount received from the Mahendra Maghji Gala:-**

Sr. No.	Bank & Branch	Nature	Cheque/Ref. No.	Amount	Date
1	Bank of Baroda,	NEFT	BARBR24166334228	1,62,500/-	14/06/2024

	Lalbaug, Mumbai				

- **Detail of the amount received from the Bharat Gangji Gala:-**

Sr. No.	Bank & Branch	Nature	Cheque/Ref. No.	Amount	Date
1	The Saraswat Co. Op. Bank Ltd, Borivali, Mumbai	NEFT	SRCB024166605261	1,62,500/-	14/06/2024

- **Detail of the amount received from the Vasant Keshavji Savala:-**

Sr. No.	Bank & Branch	Nature	Cheque/Ref. No.	Amount	Date
1	Yes Bank, Matunga, Mumbai	NEFT	YESOB41661799107	1,62,500/-	14/06/2024

- **Detail of the amount received from the Hasmukh Ratilal Hariya:-**

Sr. No.	Bank & Branch	Nature	Cheque/Ref. No.	Amount	Date
1	Bank of India Maheshwari Udhan Mumbai	NEFT	BKIDN24166834134	1,62,500/-	14/06/2024

Such as, total amount Rs.26,00,000/- in words Rupees Twenty Six Lakhs Only is received to us the sellers from you the purchasers. We the sellers are

acknowledging the receipt thereof and by selling above address to you the purchasers with all trees, leaves, grassland, fencing, clods, debris and rights acquired by easement and all kinds of right, share, wealth, usage etc. of said address in consi

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the sellers have handed over pe clear possession on ownership right by this absolute sale deed.

(2) Four boundaries of said selling address are as under.

Towards North:- Addresses of Survey No. 427, 428, 434 and 435 are situated.

Towards South:- Addresses of Survey No. 424 and 425 are situated.

Towards East:- Chhelo of Langai and Check dam is situated, Survey No. thereof is 406.

Towards West:- Address of Survey No. 436 is situated.

Seal of Sub-registrar Mandvi-

Way and flow of water:-

Way of said address is situated from the center of the addresses of Survey No. 427 and 434 situated at north side. And, flow of rain water is situated as per natural slope from ancient time from old time.

Sd/- illegible in English Sd/- illegible in English
Sd/- R.H. Shah in English

(3) Except us the sellers, any kind of right share of any other is not there in the address being sold with description, measurement and in detail. We the seller have not created any kind of encumbrance, charge, debt, oral consideration on said sold address and not done or get done any kind of such act so that,

Nature of the deed: Deed of Absolute Sale Consideration: Rs.26,00,000/-
Village: Mandvi, Ta. Mandvi Rev. S. No.:- 426 (Old Survey No.347), Ar. 85756.00 Sq. Mt.

e

M Sd/- Mahendra in English V Sd/- illegible in Gujarati B Sd/- Bharat Gangji in English H Sd/- illegible in English J Sd/- Javerben Kishanji Chhadva in Gujarati

ıe, we the sellers are giving such assurance and reliance. Said address of clear ownership right of us the sellers. However, debt-oral consideration, right-share, charge lien, etc. may be created or rate-claim, promise-objection, Chum-chocho, cry –quarrel may be created by any person in future related to said address or related the right of us the seller to sale the same then, we the sellers shall be bound to give reply thereof.

(4) We the sellers are hereby giving further assurance and undertaking that, our titles of said address are absolute clear and marketable and said address is absolute free from encumbrance and without risk and except us

the sellers, any kind of right, claim or wealth of any other is not there about that and by giving such firm trust and faith to you the purchasers, by taking fully paid money of said consideration, we the sellers have sold said address to you the purchase

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sale deed and handed ove[illegible] and clear possession thereof to you the purchasers.

Seal of Sub-registrar Mandvi-

(5) Whenever and wherever, whatever legal deeds, papers, assurances, signatures, things, affidavits, bonds etc. may be required time to time to you the purchasers or their attorneys, workers advocates etc. to prove the rights titles of said selling address, then and there sellers shall have to executed such deeds, papers, assurance, signatures, things, affidavits, bonds etc. by request of the purchasers.

(6) Hereinafter, you the purchasers are entitled to enjoy, to live, allow to live, sale, exchange, mortgage, gift or to do as you please to do with the selling address from sky up to deep abyss of the earth till the sun-moon endures. And, whatever wealth may be available from said

illegible in English Sd/- illegible in English
Sd/- R.H. Shah in English

address that is belong to the destiny of you the purchasers and any kind of share as relatives right, interest, part or interest relation of us the sellers or our heirs, successors etc. are not existed therein. You are entitled to use or enjoy said address as you feel like doing. We the sellers or our heirs, successors, etc. any other has nothing to do with that. All entitlements related to that are belong to you the purchasers.

(7) We the seller have paid all kinds of taxes-government or semi government of said selling address till date such as, government tax, panchayat tax, special cess, education cess etc. all and however, if that is found outstanding then, we the seller is responsible to pay the same. You the purchasers shall pay such all kinds of future taxes etc. (of after the date of absolute sale deed).

(8) Whatever signature, testimony, agreement, reply, affidavit, bond of us the seller may be required to transfer said address in the name of you the purchasers, we the sellers are bound

to execute signature, testimony, agreement, reply, affidavit, bond there.

(9) We the sellers have hereby not executed deal or exchange agreement with any person previously related to said selling address and we the sellers have not taken any kind of loan from any government, semi-government offices, from any person or establishment, from bank of firm, from any government society or from any other places on said address or on any part thereof till date or not given in security. And, we have not mortgaged said address or put under lien or charge with anyone. By giving such trust and assurance, we the sellers have sold said address to you the purchasers.

(10) We the sellers have handed over following grounds pertaining to the said selling address to you the purchasers.

1. Extract copies of computerized revenue record and manual record.

(11) Sp. Power of attorney registered by D. Serial No. 5078/24 of dt.01-03-2024 at Joint Sub-

registrar, Mumbai City 3 office has been issued for the same to Sha Nayan Vishanji Chhadva of Serial No. 2 out of the sellers from Serial No. 1 out of the sellers to register this deed at Mandvi Sub-registrar office and any kind of procedure which may be required to complete incidental in reference of above work. Power, right and attorney has been issued to the power of attorney holder so that, this power of attorney holder can complete the procedure about sale by presenting on behalf of Serial No. 1 out of the sellers. Hereby giving such assurance and faith to the power or attorney holder.

(12) Reasonable present market price of said address can be deemed as much as Rs.26,00,000/- and this deed thereof has been written on the e-stamping stamp paper of Rs.1,27,400/-as per the government rule.

(13) We the sellers have sold the address selling like that to you the purchasers with condition, limit-permit thereof with all the rights of easements of us the sellers today in Rs.26,00,000/-. We the sellers have get written

this deed thereof with our willingness, good faith and with sense cleverness and without any influence, pressure or temptation voluntarily at Mandvi-Kut admitted, agreed and boun and our heirs, inheritors-successors, assignees etc.

MND	
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Place: Mandvi-Kutchh

Date: 13-09-2024

Here----------Sign Here----------Witness

Seal of Sub-registrar Mandvi-

1.Sd/- Javerben Kishanji Chhadva In Gujarati

(Javerbai Vishanji Sha)

1.Sd/- illegible in English

(Nilesh Kunvarji Dedhiya)

2.Sd/- illegible in English

(Nayan Vishanji Shah)

Sd/- illegible in English

(Monal Nayan Chhadva)

3.Sd/- illegible in English

(Priti Vishanji W/O Hemant Shah)

4.Sd/- illegible in English

(Sonal Vishanji W/O Nilesh Dedhiya)

Sd/- illegible in English Sd/- illegible in English
Sd/- R.H. Shah in English

Sd/- illegible in English Sd/- illegible in English
Sd/- R.H. Shah in English

MND	
5248	10-44
2024	

Photograph of the property's identity

Affixed photograph of the sold property

Seal of Sub-registrar Mandvi-

Postal address of the property: Address of Survey No. 426 (Old Survey No. 347), Hector 8-57-56 Are thereof, Land revenue Rs.22.40 Paisa, address namely "Shiyawalo" is situated.

Sd/- illegible in English Sd/- illegible in English Sd/- R.H. Shah in English

M Sd/- Mahendra in English V Sd/- illegible in Gujarati B Sd/- Bharat Gangji in English H Sd/- illegible in English J Sd/- Javerben Kishanji Chhadva in Gujarati

MND	
5248	11-44
2024	

Schedule as per Section-32-a of the Registration Act 1908

We are doing following brief description of the particulars mentioned in the deed.

1		Nature of the deed under the Gujarat Stamp Act.	Conveyance/Sale Conveyance/Sale		
2		Consideration	2600000.00		
3		Market Price	0.00		
4	1	Description of the property to be transferred	Bada, Ta. Mandvi-Kutchh, Survey Number 426 (Old Survey Number 347) total Hector 8-57-56 Are		
		Description of the found boundaries of the immoveable property North West --- | --- East South	North	Addresses of Survey No. 427, 428, 434 and 435 are situated.	
			East	Chhelo of Langai and Check dam is situated, Survey No. thereof is 406.	
			South	Address of Survey No. 424 and 425 is situated	
			West	Address of Survey No. 4365 is situated.	
5		By doing calculation in accordance with all the matters affecting the stamp duty as per Section-28 of the Gujarat Stamp Act 1958, have used apt stamp duty.			
6		Executor of the deed is entitled to execute said deed, we the executor of the deed is given assurance thereof. We have provided above true information. If any false information is given then, can institute procedure of penalty and criminal before us under Registration Act 1908 and Stamp Act 1958. Putting signature hereunder after reading understanding the same.			
7		➢ Imprisonment up to seven (7) years or punishment of penalty or both can be done for making false averments before sub-registrar under Section-82 and 83 of the Registration Act-1908. ➢ Eligibility of paying stamp duty in accordance with Section-62 and Sectio-28 of the Gujarat Stamp Act-1958 and face affecting and offence of not mentioning the circumstance is punishable under this section. Vendor of the deed and vendee of the deed both are eligible for punishment, such provision is not under our knowledge.			

Seal of Sub-registrar Mandvi-

Vendor of the deed				
	Name	Photograph	Thumb impression	Signature
1	Sha Javerbai Vishanji Chhadva	Affixed photograph of the Sha Javerbai Vishanji Chhadva	Thumb impression of Sha Javerbai Vishanji Chhadva	Sd/- Javerben Vishanji Chhadva in Gujarati
2	Sha Nayan Vishanji Chhadva	Affixed photograph of the Sha Nayan Vishanji Chhadva	Thumb impression of Sha Nayan Vishanji Chhadva	Sd/- illegible in English

MND	
5248	12-44
2024	

Schedule as per Section-32-a of the Registration Act 1908

We are doing following brief description of the particulars mentioned in the deed.

3	Priti Vishanji Chhadva W/O Hemant Shah	Affixed photograph of the Priti Vishanji Chhadva W/O Hemant Shah	Thumb impression of Priti Vishanji Chhadva W/O Hemant Shah	Sd/- illegible in English
4	Sonal Vishanji Chhadva W/O Nilesh Dedhiya	Affixed photograph of the Sonal Vishanji Chhadva W/O Nilesh Dedhiya	Thumb impression of Sonal Vishanji Chhadva W/O Nilesh Dedhiya	Sd/- illegible in English
Vendee of the deed				
	Name	Photograph	Thumb impression	Signature
1	Mahendra Maghji Gala	Affixed photograph of the Mahendra Maghji Gala	Thumb impression of Mahendra Maghji Gala	Sd/- illegible in English
2	Bharat Gangji Gala	Affixed photograph of the Bharat Gangji Gala	Thumb impression of Bharat Gangji Gala	Sd/-Bharat Gangji in English
3	Vasant Keshavji Savla	Affixed photograph of the Vasant Keshavji Savla	Thumb impression of Vasant Keshavji Savla	Sd/- illegible in English

Seal of Sub-registrar Mandvi-

Application Number: 20241101520478	Print Date:12/09/2024 18:51:20	Page 1 of 3

MND	
5248	13-44
2024	

Schedule as per Section-32-a of the Registration Act 1908

We are doing following brief description of the particulars mentioned in the deed.

4	Hasmukh Ratilal Hariya	Affixed photograph of the Hasmukh Ratilal Hariya	Thumb impression of Hasmukh Ratilal Hariya	Sd/- illegible in English

Seal of Sub-registrar Mandvi-

Application Number: 20241101520478	Print Date:12/09/2024 18:51:20	Page 1 of 3

VILLAGE FORM NUMBER 7

(Promulgation Entry No.3155 dt.27-05-2017)

723

District : **Kutch**
Taluka : **Mandvi**
Village: **Bada**
Block/Survey Number: **723**
Nature of tenure: **Old Tenure (O.T.)**
Usage of the land: **Agriculture usage**
Name of the field: **Tukri**
Other particulars :
Old block/Survey Number: **474**
Entry numbers pertaining to old survey number:
237, 562, 1908, 1916, 1940, 2251, 2561, 2603*, 2666, 2696 I***
Entry numbers of other rights and encumbrances pertaining to old survey numbers:
237 I***

Proper Land	Area Hec.Are. Sq.Mtr.	Account Number	Area Hec.Are. Sq.Mtrs.	Land Revenue	Entry Numbers and Name of Occupiers
Non-irrigated	**1-15-61**				**3155, 3446,**
Total Area **Shape Rs.** **Judi & Special Cess Rs.** **Water Part Rs.**	**1-15-61** **2.40** **0.00** **0.00**	**1080**	**1-15-61**	**2.40**	**Sha. Mahendra Maghji Gala(3446)**
Details of Tenant		**Details of Other rights and encumbrances** **3155,**			

MND	
No.5248	30-44
2024	

Code
1010824122529268

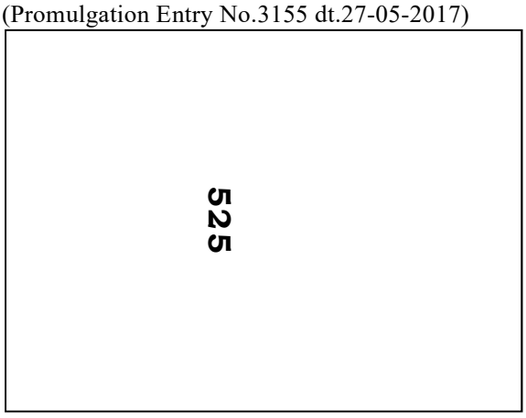
Round Rubber Seal of Mamlatdar Office Mandvi (Kuchchh)

Digitally Signed by:
DS Revenue department 9
Government of Gujarat
Date: 09-12-2024 11:34:07 IST
Mamlatdar office, Mandvi

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VILLAGE FORM NUMBER 7

(Promulgation Entry No.3155 dt.27-05-2017)



District : **Kutch**
Taluka : **Mandvi**
Village: **Bada**
Block/Survey Number: **525**
Nature of tenure: **Old Tenure (O.T.)**
Usage of the land: **Agriculture usage**
Name of the field: **Vada**
Other particulars :
Old block/Survey Number: **359/2**
Entry numbers pertaining to old survey number:
359/2 I***
Entry numbers of other rights and encumbrances pertaining to old survey numbers:
131, 1273, 2138, 2538 I***

Proper Land	Area Hec.Are. Sq.Mtr.	Account Number	Area Hec.Are. Sq.Mtrs.	Land Revenue	Entry Numbers and Name of Occupiers
Non-irrigated	**0-86-06**				**3155,**
Total Area **Shape Rs.** **Judi & Special Cess Rs.** **Water Part Rs.**	**0-86-06** **3.55** **0.00** **0.00**	**900**	**0-86-06**	**3.55**	**Bharat Gangaji Gala (2538)**
Details of Tenant		**Details of Other rights and encumbrances** **3155,**			

MND	
No.5248	31-44
2024	

Code
1010824122529343

Round Rubber Seal of Mamlatdar Office Mandvi (Kuchchh)

Digitally Signed by:
DS Revenue department 9
Government of Gujarat
Date: 09-12-2024 11:36:31 IST
Mamlatdar office, Mandvi

MND	
5248	32-44
2024	

VILLAGE FORM NUMBER 7

(Promulgation Entry No.3155 dt.27-05-2017)

604

District : **Kutch**
Taluka : **Mandvi**
Village: **Bada**
Block/Survey Number: **604**
Nature of tenure: **Old Tenure (O.T.)**
Usage of the land: **Agriculture usage**
Name of the field: **Vadi**
Other particulars :
Old block/Survey Number: **428/2**
Entry numbers pertaining to old survey number:
428/2 I***
Entry numbers of other rights and encumbrances pertaining to old survey numbers:
8*, 37, 2335, 2854, 2855, 2856, 2857 I***

Proper Land	Area Hec.Are. Sq.Mtr.	Account Number	Area Hec.Are. Sq.Mtrs.	Land Revenue	Entry Numbers and Name of Occupiers
Non-irrigated **Non-cultivated Well**	**0-85-00** **0-01-01**				**3155,**
Total Area **Shape Rs.** **Judi & Special Cess Rs.** **Water Part Rs.**	**0-86-01** **3.00** **0.00** **0.00**	**138**	**0-86-01**	**3.00**	**Sha Kantilal Keshavji Savla(2335)** **Sha Vasant Keshavji Savla(2355)** **Sha Ramesh Keshavji Savla(2335)** **Sha Kirtikumar Keshavji Savla(2335)** **Vasanti Kirtii Savla(2854)** **Hiral Kirti Savla(2854)** **Twinkle Kirti Savla W/O Bhavin Keniya(2854)** **Gunvantiben Ramesh Savla(2855)** **Paras Ramesh Savla(2855)** **Vaishali Ramesh Savla W/O Chetan Dand (2855)** **Vasanti Vasant Savla(2856)** **Heman Vasant Savla(2856)** **Kashmira Vasant Savla W/O Mehul Bheda(2856)** **Jasmita Vasant Savla W/O Viral Shah(2856)** **Ramila Kantilal Savla(2857)** **Sanjay Kantilal Savla(2857)** **Sandeep Kantilal Savla(2857)** **Sachin Kantilal Savla(2857)**
Details of Tenant		**Details of Other rights and encumbrances** **3155,**			

Code
1010824122529646

Round Rubber Seal of Mamlatdar Office Mandvi (Kuchchh)

Digitally Signed by:
DS Revenue department 9
Government of Gujarat
Date: 09-12-2024 11:15:58 IST
Mamlatdar office, Mandvi

#Rejected & Disputed *- Cancelled
Status on dt.27-05-2017 12:45:26 effect of last entry given
Courtesy: National Informatics - Science Center, Gujarat State

Copy of Sale/ Received Rs. 5.00/- (in word Rupees Five Only)

MND	
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2024	

VILLAGE FORM NUMBER 7

(Promulgation Entry No.3155 dt.27-05-2017)

243

District : **Kutch**
Taluka : **Mandvi**
Village: **Bada**
Block/Survey Number: **243**
Nature of tenure: **Old Tenure (O.T.)**
Usage of the land: **Agriculture usage**
Name of the field: **Kandhodo**
Other particulars :
Old block/Survey Number: **284/p 2/p 1**
Entry numbers pertaining to old survey number:
176, 500, 706, 707, 2039 I***
Entry numbers of other rights and encumbrances pertaining to old survey numbers:
1065 I***

Proper Land	Area Hec.Are. Sq.Mtr.	Account Number	Area Hec.Are. Sq.Mtrs.	Land Revenue	Entry Numbers and Name of Occupiers
Non-irrigated	**0-89-08**				**3155,**
Total Area **Shape Rs.** **Judi & Special Cess Rs.** **Water Part Rs.**	**0-89-08** **3.40** **0.00** **0.00**	**686**	**0-89-08**	**3.40**	**Hariya Hasmukh Ratilal(1711)**
Details of Tenant		**Details of Other rights and encumbrances** **3155,**			

Code
1010824122529707

Round Rubber Seal of Mamlatdar Office Mandvi (Kuchchh)

Digitally Signed by:
DS Revenue department 9
Government of Gujarat
Date: 09-12-2024 11:47:39 IST
Mamlatdar office, Mandvi



#Rejected & Disputed *- Cancelled
Status on dt.27-05-2017 12:45:05 effect of last entry given
Courtesy: National Informatics - Science Center, Gujarat State

Copy of Sale/ Received Rs. 5.00/- (in word Rupees Five Only)

MND	
5248	34-44
2024	

VILLAGE FORM NUMBER 7

(Promulgation Entry No.3155 dt.27-05-2017)

426

District : **Kutch**
Taluka : **Mandvi**
Village: **Bada**
Block/Survey Number: **426**
Nature of tenure: **Old Tenure (O.T.)**
Usage of the land: **Agriculture usage**
Name of the field: **Shiyawalo**
Other particulars :
Old block/Survey Number: **347**
Entry numbers pertaining to old survey number:
192, 250, 1044, 1045, 2402 I***

Proper Land	Area Hec.Are. Sq.Mtr.	Account Number	Area Hec.Are. Sq.Mtrs.	Land Revenue	Entry Numbers and Name of Occupiers
Non-irrigated	**8-57-56**				**3155, 3688,**
Total Area **Shape Rs.** **Judi & Special Cess Rs.** **Water Part Rs.**	**8-57-56** **2240** **0.00** **0.00**	**225**	**8-57-56**	**22.40**	**Sha Javerbai Vishanji(2402)** **Shah Nayan Vishanji(2402)** **Priti Vishanji W/O Hemant Shah(3688)** **Sonal Vishanji W/O Nilesh Dedhiya(3688)**
Details of Tenant		**Details of Other rights and encumbrances** **3155,**			

Seal of Sub-registrar Mandvi-

Code
1010824122529142

Round Rubber Seal of Mamlatdar Office Mandvi (Kuchchh)

Digitally Signed by:
DS Revenue department 9
Government of Gujarat
Date: 09-12-2024 11:30:48 IST
Mamlatdar office, Mandvi

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#Rejected & Disputed *- Cancelled
Status on dt.17-10-2021 01:05:28 effect of last entry given
Courtesy: National Informatics - Science Center, Gujarat State

Copy of Sale/ Received Rs. 5.00/- (in word Rupees Five Only)

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Deed Number **5248** dt.**09-12-2024**
Check List as per Sub-Section-3 of Section-34 of the Registration Act-1908

Sr.No.	Question	Reply (Yes or No)
Questions to be asked to the vendor, consenting person or their Power of Attorney.:-		
1	Is deed of property transfer/sale (sale) of the agriculture/non-agriculture property of (Survey Number/Block Number/T.P. Number/F.P. Number etc.) **347, 426** of revenue village **Bada** as mentioned in the deed executed?	**Yes**
2	Is deed for **85756** Sq. Mt. agriculture/non-agriculture property as mentioned in the deed get done?	**Yes**
3	Is an amount of consideration on details as mentioned in the deed received?	**Yes**
4	Whether we have get executed any kind of agreement, sale, gift of this property to any other previously or not?	**No**
5	Any loan may be taken on said property and is encumbrance thereof is pending at present?	**No**
6	After reading, read over, understanding, details mentioned in the deed thoughtfully, you yourself have put signature/thumb impression on your own, are you accepting the same?	**Yes**
7	Is person issuing power of attorney alive on the date of deed?	**Yes**
8	Whether power of attorney executants have put signature/ thumb impression in the deed of P.O.A. or not?	**Yes**
9	Whether agreement of power of attorney is under execution on the date of deed or not?	**Yes**
10	Have you brought such persons with you who know you to give introduction?	**Yes**
(Questions to be asked to the introductory)		
1	Person(s) writing the deed, who has given agreement, do you know them personally?	**Yes**
2	Name written in the deed and person agreed, are they only one person?	**Yes**
3	Any person has not given agreement by holding false name, are you giving confirmation about that?	**Yes**

Seal of Sub-registrar Mandvi-

Signature of writing person /consenting person/P.A.

1	Sd/- illegible in English	1	Sd/- illegible in English

Signature of introductory

2	Sd/- illegible in English	2	Sd/- illegible in English
3	Sd/- illegible in English		
4			Sd/- illegible S.R.O.- Mandvi Sub-registrar
5			
6			

MND	
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Deed Number **5248** dt.**09-12-2024**
Check List as per Sub-Section-3 of Section-34 of the Registration Act-1908

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8	---

Seal of Sub-registrar Mandvi-

(G2.0) 09/12/2024 1:28 PM

Submitted in Sub-registrar office of **Mandvi** between **13** to **14** o'clock on dated **9th** month **December** of year **2024** by Serial Number **5248**.	Receipt Number:202404600011984 Received Fee: Rs. Paisa Registration Fee: 26000.00 Photo Fee Side/folio(45): 900 Other Fee: 0.00 Total Aggregate Rs. 26900.00

Seal of Sub-registrar Mandvi-

Affixed Photograph of with Thumb Impression

Sha Nayan Vishanji Chhadva

Sd/- illegible in English

Sha Nayan Vishanji Chhadva

Nature of the deed: Conveyance/Sale: Conveyance/Sale
20240912273061017

Sd/- illegible in English
Suthar Maheshbhai Madevbhai
Sub-registrar
Mandvi

Sd/- illegible in English
Suthar Maheshbhai Madevbhai
Sub-registrar
Mandvi

Sr. No.	Name of the deed executor	Address of the deed executor	Name of the power of attorney holder	Address of the power of attorney holder
1	Sha Javerbai Vishanji Chhadva	103, Balaji Sadan, K.A. Subramaniyam Road, S.I.E.S. High School, Matunga, Mumbai 400019	Sha Nayan Vishanji Chhadva	103, Balaji Sadan, K.A. Subramaniyam Road, S.I.E.S. High School, Matunga, Mumbai City (Mumbai City), Mumbai City (Mumbai City, Maharashtra (Mahrastra),400019

Power of attorney holder of the deed executor as above is accepting that, vendors have given in writing this deed.

Sd/- illegible
Suthar Maheshbhai Madevbhai
Sub-registrar
Mandvi

MND
2024

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2024	

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Sr. No.	Name & address of party	Age	Photograph	Impression of L.H.T.	Sign
Seller 1	Sha Nayan Vishanji Chhadva a power of attorney holder (Section 33) of Sha Javerbhai Vishanji Chhadva 103, Balaji Sadan, K.A. Subramaniyam Road, S.I.E.S. High School, Matunga, Mumbai City (Mumbai City), Mumbai City (Mumbai City, Maharashtra (Mahrastra),400019 PAN NO.ACVPC6857G	51	Computer Photograph print of Sha Nayan Vishanji Chhadva	Computer print of thumb impression of Sha Nayan Vishanji Chhadva	Sd/- illegible in English
Seller 2	Sha Nayan Vishanji Chhadva 103, Balaji Sadan, K.A. Subramaniyam Road, S.I.E.S. High School, Matunga, Mumbai City (Mumbai City), Mumbai City (Mumbai City, Maharashtra (Mahrastra),400019 PAN NO.ACVPC6857G	51	Computer Photograph print of Sha Nayan Vishanji Chhadva	Computer print of thumb impression of Sha Nayan Vishanji Chhadva	Sd/- illegible in English
Seller 3	Priti Vishanji Chhadva W/O Hemant Shah 16, Third Floor, Sunder Villa, Premnagar, J.N. Road, Nr. Apna Bazar, Mulund West, Mumbai City (Mumbai City), Mumbai City (Mumbai City, Maharashtra (Mahrastra),400080 PAN NO.ACVPC6857G	58	Computer Photograph print of Priti Vishanji Chhadva W/O Hemant Shah	Computer print of thumb impression of Priti Vishanji Chhadva W/O Hemant Shah	Sd/- illegible in English
Seller 4	Sonal Vishanji Chhadva W/O Nilesh Dedhiya 602, Parchi Residency, Phase-2, Baner, Pune City, Pune, Pune (Pune), Pune (Pune), Maharashtra (Mahrastra),411045 PAN NO.ABAPD0946M	54	Computer Photograph print of Sonal Vishanji Chhadva W/O Nilesh Dedhiya	Computer print of thumb impression of Sonal Vishanji Chhadva W/O Nilesh Dedhiya	Sd/- illegible in English

Seal of Sub-registrar Mandvi-

Deed writer is admitting to given in writing this deed

MND
2024

MND	
5248	42-44
2024	

(G2.0) 09/12/2024 1:28 PM

1.	Shahbaz Hasan Bholim Mota Salaya, Mandvi-Kutch, Mandvi (Mandvi), Kachchh (Kutch), Gujarat (Gujarat), 370465	Computer Photograph print of Shahbaz Hasan Bholim	Thumb Impression of Shahbaz Hasan Bholim
2.	Juned Abdulla Chaki Machhipith, Mandvi-Kutch, Mandvi (Mandvi), Kachchh (Kutch), Gujarat (Gujarat), 370465	Computer Photograph print of Juned Abdulla Chaki	Thumb Impression of Juned Abdulla Chaki

They are saying that, the personally knows the seller and giving their introduction.

Seal of Sub-registrar Mandvi-

1. Sd/- illegible in English
2. Sd/-illegible in English

Date: 9th Month December-2024

Sd/- illegible in English
SUTHAR MAHESHBHAI MADEVBHAI
Sub-registrar
Mandvi

Circular Number:ILR/VHT/347/2014/13001 to 13364

Procedure completed under Section-34, 35, 58 and 59 of Registration Act-1908 since, introducers have given assurance to their introduction and explained on the details of the deeds to Vendor No. **1 to 4** as per Circular Number: ILR/VHT/347/2014/13001 to 13364 of dt.22-05-2015 and Circular Number: ILR/VHT/347/2014/32392 to 32757 of dt.11-11-2011 of Registration Sir Inspector, Guj. St. Gandhinagar **3-3-2020**

Sd/- illegible in English
SUTHAR MAHESHBHAI MADEVBHAI
Sub-registrar
Mandvi

MND
2024

MND	
5248	43-44
2024	

(G2.0) 09/12/2024 1:28 PM

Form No.1 about deciding market price is submitted
Dt.09-12-2024

Sd/- illegible in English
SUTHAR MAHESHBHAI MADEVBHAI
Sub-registrar
Mandvi

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(1) PAN No./I.G.R. Number is mentioned as per provision of Income Tax Act 1962. Verification thereof has been made.

Seal of Sub-registrar Mandvi-

Seller Number: **1,2,3,4**

Purchaser Number: **1,2,3,4**

Consented person:---

Date: 09-12-2024

Sd/- illegible in English
SUTHAR MAHESHBHAI MADEVBHAI
Sub-registrar
Mandvi

Certified/self-attested evidences about identification of seller, purchaser and introductory are submitted herewith.
Date.09-12-2024

Sd/- illegible in English
SUTHAR MAHESHBHAI MADEVBHAI
Sub-registrar
Mandvi

MND	
5248	44-44
2024	

(G2.0) 09/12/2024 4:46 PM

Original and certified copy of the power of attorney

is submitted.

Date: 09-12-2024

Sd/- illegible in English
SUTHAR MAHESHBHAI MADEVBHAI
Sub-registrar
Mandvi

Seal of Sub-registrar Mandvi-

Registered vide Number **5248** on Book Number 1

Date: 09-12-2024

Sd/- illegible in English
SUTHAR MAHESHBHAI MADEVBHAI
Sub-registrar
Mandvi

Seal of Sub-registrar Mandvi-

change.org

Start a petition

Petition details Comments



Save Dhamma Sindhu Vipassana Meditation Centre from massive chemical plant by GHCL in Bada

Started 12 March 2025

8,877
Signatures

10,000
Next Goal

258 people signed today

Sign this petition

Why this petition matters

Started by **Save Bada**

732
154

The Dhamma Sindhu Vipassana Meditation Centre in Bada, Kutch, and its surrounding environment is under imminent danger due to the planned construction of a soda ash factory by Gujarat Heavy Chemicals Limited (GHCL) just 0.5km distance from the center. **Project Details**

WE WILL LOSE DHAMMA SINDHU FOREVER IF THIS PROJECT GOES AHEAD.

GHCL has received ALL environment clearance and project has been given the go ahead by the government. In the meantime, there is a petition filed in National Green Tribunal. First hearing is scheduled on 25.03 2025. **Petition Copy**

We are urgently calling all vipassana meditators across the world to come forward and support in this endeavor to fight this case.

This proposal threatens our cherished center where people practicing vipassana since more than 30 years, a profound meditation technique restored in contemporary India by the respected Padma Bhushan laureate, Shri S. N. Goenka ji.

Soda ash production poses significant environmental risks across multiple domains air pollution, water pollution, soil pollution, noise and thermal pollution.

There's ample evidence of the negative impact of soda ash factories on the environment and local communities globally (World Health Organisation report, 2011).

We need your support in imploring our lawmakers and GHCL to reconsider the planned industrial activity and explore alternatives that fulfil economic interests without compromising the integrity of Dhamma Sindhu vipassana centre and nearby Bada village in Mandhvi Kutch Gujarat.

We need your support in preserving the tradition of Vipassana and the health of our environment.

We have created a Google form for ALL Vipassana meditators who would like to give Dhamma services to protect dhamma Sindhu.

We urgently need experts who can help us in this campaign in relation to

- Water Pollution

258 people signed today

Sign this petition

- Soil Pollution

- Noise Pollution
- Lawyers specifically with interest in public litigation matters and environmental matters OR any kind of service you can give.
  Please fill this form and we will connect with you.

Google Form for Dhamma Seva to Protect Dhamma Sindhu

Please sign the petition and share with others.

"धम्म सिंधु" विपश्यना केंद्र ,कच्छ और टिकाऊ ग्रामीण अर्थव्यवस्था की रक्षा करें।

कच्छ के मांडवी के बाड़ा में धम्म सिंधु विपश्यना ध्यान केंद्र और इसके आसपास का वातावरण गुजरात हेवी केमिकल्स लिमिटेड (GHCL) द्वारा केंद्र से सिर्फ 0.5 किमी की दूरी पर सोडा ऐश फैक्ट्री के नियोजित निर्माण के कारण खतरे में है।

(परियोजना विवरण संलग्न)

अगर यह परियोजना आगे बढ़ती है तो हम "धम्म सिंधु" को हमेशा के लिए खो देंगे।

GHCL को कई पर्यावरण मंजूरी मिल चुकी हैं और सरकार ने परियोजना को आगे बढ़ाने की अनुमति दे दी है।

हालांकि, इस बीच, राष्ट्रीय हरित अधिकरण (NGT) में एक याचिका दायर की गई है। पहली सुनवाई 25.03 2025 को निर्धारित है।

(याचिका की प्रति संलग्न)

*हम दुनिया भर के सभी विपश्यना साधकों से आग्रह कर रहे हैं कि वे आगे आएं और इस मामले को लड़ने के इस प्रयास में अपना समर्थन दें। यह "सेवा" इस विपश्यना केंद्र को संरक्षित करने के लिए है, जहाँ पिछले 34+ वर्षों में, कुछ लाख साधक (दुनिया भर से) विपश्यना का अभ्यास करके लाभान्वित हुए हैं, जो कि समकालीन भारत में पद्म भूषण पुरस्कार विजेता, "श्री एस. एन. गोयनका जी"; पू. गुरुजी द्वारा 55 साल पहले पुनर्स्थापित की गई एक गहन ध्यान तकनीक है।

सोडा ऐश उत्पादन कई क्षेत्रों में महत्वपूर्ण पर्यावरणीय जोखिम पैदा करता है जैसे कि
* वायु प्रदूषण,
* जल प्रदूषण,
* मृदा प्रदूषण,
* शोर और
* तापीय प्रदूषण।

*सोडा ऐश उत्पादकों के पर्यावरण और सामाजिक प्रभावों पर वैश्विक ध्यान [illegible] के पर्याप्त सबूत हैं (जिन

✊ 258 people signed today

खोज करने के लिए आग्रह करने में आपके समर्थन की आवश्यकता है जो धम्म सिंधु विपश्यना केंद्र और मांडवी, कच्छ गुजरात में निकटवर्ती बाडा गांव की अखंडता से समझौता किए बिना आर्थिक हितों को पूरा करते हैं।

धम्म सिंधु विपश्यना केंद्र और हमारे पर्यावरण के स्वास्थ्य को संरक्षित करने में आपकी सेवा की आवश्यकता है।

हमने सभी विपश्यना साधकों के लिए एक Google फ़ॉर्म बनाया है जो धम्म सिंधु की रक्षा के लिए धम्म सेवाएँ देना चाहते हैं।

*कृपया इस फ़ॉर्म को भरें और हम आपसे संपर्क करेंगे।

*हमें तत्काल ऐसे विशेषज्ञों की भी आवश्यकता है जो GHCL के विरुद्ध निम्न मामलों में साक्ष्य प्रस्तुत कर सकें

* जल प्रदूषण
* तटीय भू-आकृति विज्ञान
* वायु प्रदूषण
* मृदा प्रदूषण
* ध्वनि प्रदूषण
*विशेष रूप से सार्वजनिक मुकदमेबाजी मामलों और पर्यावरण मामलों में रुचि रखने वाले वकील या कोई भी सेवा जो आप दे सकते हैं।

- कृपया इस याचिका पर हस्ताक्षर करें और अन्य समूहों में साझा करें।

"ધમ્મ સિંધુ" વિપશ્યના કેન્દ્ર ,કચ્છ અને ટકાઉ ગ્રામ્ય અર્થતંત્ર નું રક્ષણ કરો.

બાડા, માંડવી, કચ્છમાં આવેલ ધમ્મ સિંધુ વિપશ્યના ધ્યાન કેન્દ્ર અને તેની આસપાસનું વાતાવરણ કેન્દ્રથી માત્ર 0.5 કિમીના અંતરે ગુજરાત હેવી કેમિકલ્સ લિમિટેડ (GHCL) દ્વારા સોડા એશ ફેક્ટરીના આયોજિત બાંધકામને કારણે નિકટવર્તી જોખમમાં છે.

(પ્રોજેક્ટ વિગતો જોડાયેલ છે)

જો આ પ્રોજેક્ટ આગળ વધશે તો અમે "ધમ્મા સિંધુ"ને હંમેશ માટે ગુમાવી દઈશું.

જીએચસીએલને વિવિધ પર્યાવરણીય મંજૂરી મળી છે અને સરકાર દ્વારા પ્રોજેક્ટને આગળ વધવાની મંજૂરી આપવામાં આવી છે.

જો કે, તે દરમિયાન, નેશનલ ગ્રીન ટ્રિબ્યુનલ (NGT)માં એક પિટિશન દાખલ કરવામાં આવે છે.
પ્રથમ સુનાવણી 25.03 2025 ના રોજ સુનિશ્ચિત થયેલ છે.
(પીટીશન કોપી - જોડાયેલ)

*અમે વિશ્વભરના તમામ વિપશ્યના ધ્યાન કરનારાઓને આ કેસ લડવાના આ પ્રયાસમાં આગળ આવવા અને સમર્થન આપવા તાકીદે બોલાવીએ છીએ. આ "સેવા" માટે છે. આ વિપશ્યના કેન્દ્રને સાચવીને, જ્યાં છેલ્લા 34+ વર્ષોમાં, વિપશ્યનાની પ્રેક્ટિસ કરીને (વિશ્વભરમાંથી) લાખો ધ્યાન કરનારા લાભ મેળવ્યો છે,

✊ 258 people signed today

* વાયુ પ્રદૂષણ,

* જળ પ્રદૂષણ,
* જમીનનું પ્રદૂષણ,
* અવાજ અને
* થર્મલ પ્રદૂષણ.

* વૈશ્વિક સ્તરે પર્યાવરણ અને સ્થાનિક સમુદાયો પર સોડા એશ ફેક્ટરીઓની નકારાત્મક અસરના પૂરતા પુરાવા છે (વર્લ્ડ હેલ્થ ઓર્ગેનાઈઝેશન રિપોર્ટ, 2011).

*આયોજિત ઔદ્યોગિક પ્રવૃત્તિ પર પુનર્વિચાર કરવા અને ધમ્મ સિંધુ વિપશ્યના કેન્દ્ર અને કચ્છ ગુજરાતના માંડવીમાં નજીકના બાડા ગામની અખંડિતતા સાથે સમાધાન કર્યા વિના આર્થિક હિતોને પરિપૂર્ણ કરતા વિકલ્પોની શોધ કરવા અમારા નેતાઓ, ધારાશાસ્ત્રીઓ અને GHCLને વિનંતી કરવા માટે અમને તમારા સમર્થનની જરૂર છે.

વિપશ્યના કેન્દ્ર અને આપણા પર્યાવરણના સ્વાસ્થ્યને બચાવવા માટે અમને તમારી સેવાની જરૂર છે.

અમે તમામ વિપશ્યના ધ્યાન કરનારાઓ માટે એક Google ફોર્મ બનાવ્યું છે જેઓ ધમ્મ સિંધુના રક્ષણ માટે ધમ્મ સેવાઓ આપવા માંગે છે.

*કૃપા કરીને આ ફોર્મ ભરો અને અમે તમારી સાથે જોડાઈશું.

*અમને તાત્કાલિક એવા નિષ્ણાતોની પણ જરૂર છે જેઓ GHCL વિરુદ્ધના સંબંધમાં પુરાવા આપી શકે

* જળ પ્રદૂષણ
* કોસ્ટલ જીઓમોર્ફોલોજી
* વાયુ પ્રદૂષણ
* જમીનનું પ્રદૂષણ
* ધ્વનિ પ્રદૂષણ
*વકીલો ખાસ કરીને પબ્લિક લિટીગેશન બાબતો અને પર્યાવરણીય બાબતોમાં રસ ધરાવતા હોય અથવા કોઈપણ પ્રકારની સેવા તમે આપી શકો.

- કૃપા કરીને આ અરજી પર સહી કરો અને અન્ય જૂથોમાં શેર કરો.

"धम्म सिंधू" विपश्यना केंद्र ,कच्छ आणि शाश्वत ग्राम अर्थव्यवस्थाचे रक्षण करा.

बाडा, मांडवी, कच्छ येथील धम्म सिंधू विपश्यना ध्यान केंद्र आणि त्याच्या सभोवतालचे वातावरण केंद्रापासून अवघ्या ०.५ किमी अंतरावर गुजरात हेवी केमिकल्स लिमिटेड (GHCL) द्वारे सोडा ॲश कारखान्याच्या नियोजित बांधकामामुळे धोक्यात आले आहे.

(प्रकल्प तपशील संलग्न)

✊ 258 people signed today

स्थगिती, या दरम्यान, राष्ट्रीय हरित न्यायाधिकरण (NGT) मध्ये याचिका दाखल केली आहे.
पहिली सुनावणी २५.०३.२०२५ रोजी होणार आहे.

(याचिकेची प्रत - संलग्न)

*आम्ही जगभरातील सर्व विपश्यना साधकांना तातडीनं आवाहन करत आहोत की त्यांनी या खटल्याचा सामना करण्याच्या या प्रयत्नात पुढे येऊन पाठिंबा द्यावा. ही "सेवा" साठी आहे.
या विपश्यना केंद्राचे जतन करून, जिथे गेल्या ३४+ वर्षांत, काही लाख (जगभरातील) ध्यानकर्ते विपश्यना करून लाभले आहेत,
आदरणीय पद्मभूषण पुरस्कार विजेते "श्री एस एन गोयंका जी" ;पु.गुरुजी यांनी समकालीन भारतात 55 वर्षांपूर्वी हे गहन ध्यान पद्धत पुनर्संचयित केलेले .

सोडा राख उत्पादनामुळे अनेक क्षेत्रांमध्ये महत्त्वपूर्ण पर्यावरणीय धोके निर्माण होतात उदा.
* वायू प्रदूषण,
* जल प्रदूषण,
* माती प्रदूषण,
* आवाज आणि
* थर्मल प्रदूषण.

*जागतिक स्तरावर सोडा राख कारखान्यांच्या पर्यावरणावर आणि स्थानिक समुदायांवर होणाऱ्या नकारात्मक प्रभावाचे भरपूर पुरावे आहेत (जागतिक आरोग्य संघटनेचा अहवाल, 2011).

*आम्हाला आमचे नेते, खासदार आणि GHCL यांना नियोजित औद्योगिक क्रियाकलापांचा पुनर्विचार करण्यासाठी आणि धम्म सिंधू विपश्यना केंद्र आणि कच्छ गुजरातमधील मांडवी येथील जवळील बाडा गावाच्या अखंडतेशी तडजोड न करता आर्थिक हितसंबंधांची पूर्तता करणारे पर्याय शोधण्यासाठी तुमच्या पाठिंब्याची गरज आहे.

विपश्यना केंद्र आणि पर्यावरणाचे आरोग्य जपण्यासाठी आम्हाला तुमची सेवा आवश्यक आहे.

आम्ही सर्व विपश्यना ध्यान करणाऱ्यांसाठी एक Google फॉर्म तयार केला आहे जे धम्म सिंधूचे रक्षण करण्यासाठी धम्म सेवा देऊ इच्छितात.

***कृपया हा फॉर्म भरा आणि आम्ही तुमच्याशी संपर्क साधू.**

*आम्हाला तातडीने तज्ञांची गरज आहे जे जीएचसीएलच्या विरोधात पुरावे देऊ शकतात

* जल प्रदूषण
* कोस्टल जिओमॉर्फोलॉजी
* वायू प्रदूषण

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ANNEXURE R/7

COASTAL REGULATION ZONE NOTIFICATION
MINISTRY OF ENVIRONMENT AND FORESTS
(Department of Environment, Forests and Wildlife)

New Delhi, the 6th January 2011 **(As amended upto 22.03.2016)**

S.O.19(E).- WHEREAS a draft notification under sub-section (1) of section and clause (V) of sub-section (2) of section 3 of the Environment (Protection) Act, 1986 was issued inviting objections and suggestions for the declaration of coastal stretches as Coastal Regulation Zone and imposing restrictions on industries, operations and processes in the CRZ was published vide S.O.No.2291 (E), dated 15th September, 2010.;

AND WHEREAS, copies of the said Gazette were made available to the public on 15th September, 2010.;

AND WHEREAS, the suggestions and objections received from the public have been considered by the Central Government.;

Now, therefore, in exercise of the powers conferred by sub-section (1) and clause (v) of sub-section (2) of section 3 of the Environment (Protection) Act, 1986 (29 of 1986), the Central Government, with a view to ensure livelihood security to the fisher communities and other local communities, living in the coastal areas, to conserve and protect coastal stretches, its unique environment and its marine area and to promote development through sustainable manner based on scientific principles taking into account the dangers of natural hazards in the coastal areas, sea level rise due to global warming, does hereby, declare the coastal stretches of the country and the water area upto its territorial water limit, excluding the islands of Andaman and Nicobar and Lakshadweep and the marine areas surrounding these islands upto its territorial limit, as Coastal Regulation Zone (hereinafter referred to as the CRZ) and restricts the setting up and expansion of any industry, operations or processes and manufacture or handling or storage or disposal of hazardous substances as specified in the Hazardous Substances (Handling, Management and Transboundary Movement) Rules, 2009 in the aforesaid CRZ.; and

In exercise of powers also conferred by clause (d) and sub rule (3) of rule 5 of Environment (Protection) Act, 1986 and in supersession of the notification of the Government of India in the Ministry of Environment and Forests, number S.O.114(E), dated the 19th February, 1991 except as respects things done or omitted to be done before such supercession, the Central Government hereby declares the following areas as CRZ and imposes with effect from the date of the notification the following restrictions on the setting up and expansion of industries, operations or processes and the like in the CRZ,-

(i) the land area from High Tide Line (hereinafter referred to as the HTL) to 500mts on the landward side along the sea front.

(ii) CRZ shall apply to the land area between HTL to 100 mts or width of the creek whichever is less on the landward side along the tidal influenced water bodies that are connected to the sea and the distance upto which development along such tidal influenced water bodies is to be regulated shall be governed by the distance upto which the tidal effects are experienced which shall be determined based on salinity concentration of 5 parts per thousand (ppt) measured during the driest period of the year and distance upto which tidal effects are experienced shall be clearly identified and demarcated accordingly in the Coastal Zone Management Plans (hereinafter referred to as the CZMPs).

Explanation.- For the purposes of this sub-paragraph the expression tidal influenced water bodies means the water bodies influenced by tidal effects from sea, in the bays, estuaries, rivers, creeks, backwaters, lagoons, ponds connected to the sea or creeks and the like.

(iii) the land area falling between the hazard line and 500mts from HTL on the landward side, in case of seafront and between the hazard line and 100mts line in case of tidal influenced water body the word 'hazard line' denotes the line demarcated by Ministry of Environment and Forests (hereinafter referred to as the MoEF) through the Survey of India (hereinafter referred to as the SoI) taking into account tides, waves, sea level rise and shoreline changes.

(iv) land area between HTL and Low Tide Line (hereinafter referred to as the LTL) which will be termed as the intertidal zone.

(v) the water and the bed area between the LTL to the territorial water limit (12 Nm) in case of sea and the water and the bed area between LTL at the bank to the LTL on the opposite side of the bank, of tidal influenced water bodies.

2. For the purposes of this notification, the HTL means the line on the land upto which the highest water line reaches during the spring tide and shall be demarcated uniformly in all parts of the country by the demarcating authority(s) so authorized by the MoEF in accordance with the general guidelines issued at Annexure-I. HTL shall be demarcated within one year from the date of issue of this notification.

3. Prohibited activities within CRZ,- The following are declared as prohibited activities within the CRZ,-

(i) Setting up of new industries and expansion of existing industries except,-

(a) those directly related to waterfront or directly needing foreshore facilities;

Explanation: The expression "foreshore facilities" means those activities permissible under this notification and they require waterfront for their operations such as ports and harbours, jetties, quays, wharves, erosion control measures, breakwaters, pipelines, lighthouses, navigational safety facilities, coastal police stations and the like.;

(b) projects of Department of Atomic Energy;

(c) facilities for generating power by non-conventional energy sources and setting up of desalination plants in the areas not classified as CRZ-I(i) based on an impact assessment study including social impacts.;

(d) development of green field Airport already permitted only at Navi Mumbai;

(e) reconstruction, repair works of dwelling units of local communities [**especially]*[1]** [**fisher folk]*[2]** in accordance with local town and country planning regulations.

(ii) manufacture or handling oil storage or disposal of hazardous substance as specified in the notification of Ministry of Environment and Forests, No. S.O.594 (E), dated the 28th July 1989, S.O.No.966(E), dated the 27th November, 1989 and GSR 1037 (E), dated the 5th

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*1 and *2 - Substituted vide Corrigendum S.O.651(E) dated 29.03.2011.

December ,1989 except,-

(a) transfer of hazardous substances from ships to ports, terminals and refineries and vice versa;

(b) facilities for receipt and storage of petroleum products and liquefied natural gas as specified in Annexure-II appended to this notification and facilities for regasification of Liquefied Natural Gas (hereinafter referred to as the LNG) in the areas not classified as [**CRZ- I (A)]*[3]** subject to implementation of safety regulations including guidelines issued by the Oil Industry Safety Directorate in the Ministry of Petroleum and Natural Gas and guidelines issued by MoEF and subject to further terms and conditions for implementation of ameliorative and restorative measures in relation to environment as may be stipulated by in MoEF.

Provided that facilities for receipt and storage of fertilizers and raw materials required for manufacture of fertilizers like ammonia, phosphoric acid, sulphur, sulphuric acid, nitric acid and the like, shall be permitted within the said zone in the areas not classified as **[CRZ-I (A)]*[4].**

(iii) Setting up and expansion of fish processing units including warehousing except hatchery and natural fish drying in permitted areas:

(iv) Land reclamation, bunding or disturbing the natural course of seawater except those,-

(a) required for setting up, construction or modernisation or expansion of foreshore facilities like ports, harbours, jetties, wharves, quays, slipways, bridges, sealink, road on stilts, and such as meant for defence and security purpose and for other facilities that are essential for activities permissible under the notification;

(b) measures for control of erosion, based on scientific including Environmental Impact Assessment (hereinafter referred to as the EIA) studies

(c) maintenance or clearing of waterways, channels and ports, based on EIA studies;

(d) measures to prevent sand bars, installation of tidal regulators, laying of storm water drains or for structures for prevention of salinity ingress and freshwater recharge based on carried out by any agency to be specified by MoEF.

(v) Setting up and expansion of units or mechanism for disposal of wastes and effluents except facilities required for,-

(a) discharging treated effluents into the water course with approval under the Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974);

(b) storm water drains and ancillary structures for pumping;

(c) treatment of waste and effluents arising from hotels, beach resorts and human settlements located in CRZ areas other than CRZ-I and disposal of treated wastes and effluents;

(vi) Discharge of untreated waste and effluents from industries, cities or towns and other human settlements. The concerned authorities shall implement schemes for phasing out existing discharge of this nature, if any, within a time period not exceeding two years from the date of issue of this notification.

(vii) Dumping of city or town wastes including construction debris, industrial solid wastes, fly

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*3 and *4 - Substituted vide Corrigendum S.O.651(E) dated 29.03.2011.

ash for the purpose of land filling and the like and the concerned authority shall implement schemes for phasing out any existing practice, **[within a period of one year]*[5]** from date of commencement of this notification.

Note:-The MoEF will issue a separate instruction to the State Governments and Union territory Administration in respect of preparation of Action Plans and their implementation as also monitoring including the time schedule thereof, in respect of paras (v), (vi) and (vii).

(viii) Port and harbour projects in high eroding stretches of the coast, except those projects classified as strategic and defence related in terms of EIA notification, 2006 identified by MoEF based on scientific studies and in consultation with the State Government or the Union territory Administration.

(ix) Reclamation for commercial purposes such as shopping and housing complexes, hotels and entertainment activities **[except for construction of memorials/ monuments and allied facilities, only in CRZ-IV (A) areas in exceptional cases, by the concerned State Government, on case to case basis;]*[41]**

(x) Mining of sand, rocks and other sub-strata materials except,-

(a) those **(rare)*[6 deleted]** minerals not available outside the CRZ area [**and collection of dead shells by the traditional communities for poultry and animal feed supplements]*[7]**.

(b) exploration and exploitation of Oil and Natural Gas.

(xi) Drawl of groundwater and construction related thereto, within 200mts of HTL; except the following:-

(a) in the areas which are inhabited by the local communities and only for their use.

(b) In the area between 200mts-500mts zone the drawl of groundwater shall be permitted only when done manually through ordinary wells for drinking, horticulture, agriculture and fisheries and where no other source of water is available.

Note:-Restrictions for such drawl may be imposed by the Authority designated by the State Government and Union territory Administration in the areas affected by sea water intrusion.

(xii) Construction activities in CRZ-I except those specified in para 8 of this notification.

(xiii) Dressing or altering the sand dunes, hills, natural features including landscape changes for beautification, recreation and other such purpose **[except utilizing the rocks / hills/ natural features, only in CRZ-IV (A) areas, for development of memorials / monuments and allied facilities, by the concerned State Government]*[42]**

(xiv) **[Except]*[8]** Facilities required for patrolling and vigilance activities of marine/coastal police stations. ;

4. Regulation of permissible activities in CRZ area.- The following activities shall be regulated except those prohibited in para 3 above,-

(i)(a) clearance shall be given for any activity within the CRZ only if it requires waterfront and foreshore facilities;

(b) for those projects which are listed under this notification and also attract EIA notification, 2006 (S.O.1533 (E), dated the 14th September, 2006), for such projects clearance under EIA notification only shall be required subject to being recommended by the concerned State or Union territory Coastal Zone Management Authority (hereinafter referred to as the CZMA).

(c) Housing schemes in CRZ as specified in paragraph 8 of this notification;

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*5 and *7 - Substituted vide Corrigendum S.O.651(E) dated 29.03.2011.

*6 – deleted vide Corrigendum S.O.651(E) dated 29.03.2011.

*8 – inserted vide Corrigendum S.O.651(E) dated 29.03.2011.

*41, *42 – inserted vide notification S.O. 556 (E) dated 17.02.2015.

(d) Construction involving more than 20,000sq mts built-up area in CRZ-II shall be considered **[for approval]*[35]** in accordance with EIA notification, 2006 [**however, for]*[9]** projects less than 20,000sq mts built-up area shall be approved by the concerned State or Union territory Planning authorities in accordance with this notification after obtaining recommendations from the concerned CZMA and prior recommendations of the concern CZMA shall be essential for considering the grant of environmental clearance under EIA notification, 2006 or grant of approval by the relevant planning authority.

(e) MoEF may under a specific or general order specify projects which require prior public hearing of project affected people.

(f) construction and operation for ports and harbours, jetties, wharves, quays, slipways, ship construction yards, breakwaters, groynes, erosion control measures **[and salt works]*[36]**;

(ii) the following activities shall require clearance from MoEF, **[after being recommended by the concerned CZMA]* [37]** namely:-

(a) **[those activities listed under category 'A' in the EIA notification, 2006 and permissible under the notification:]*[38]**

(b) construction activities relating to projects of Department of Atomic Energy or Defence requirements for which foreshore facilities are essential such as, slipways, jetties, wharves, quays; except for classified operational component of defence projects. Residential buildings, office buildings, hospital complexes, workshops of strategic and defence projects in terms of EIA notification, 2006.;

(c) construction, operation of lighthouses;

(d) laying of pipelines, conveying systems, transmission line;

(e) exploration and extraction of oil and natural gas and all associated activities and facilities thereto;

(f) Foreshore requiring facilities for transport of raw materials, facilities for intake of cooling water and outfall for discharge of treated wastewater or cooling water from thermal power plants. MoEF may specify for category of projects such as at (f), (g) and (h) of para 4;

(g) Mining of rare minerals as listed by the Department of Atomic Energy;

(h) Facilities for generating power by non-conventional energy resources, desalination plants and weather radars;

(i) Demolition and reconstruction of (a) buildings of archaeological and historical importance, **[(b)]*[10]** heritage buildings; and buildings under public use which means buildings such as for the purposes of worship, education, medical care and cultural activities;

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*9 and *10 - Substituted vide Corrigendum S.O.651(E) dated 29.03.2011.
*35, *36 and *37 – inserted vide notification S.O. 3085 (E) dated 28th November, 2014.
*38 – substituted vide notification S.O. 3085 (E) dated 28th November, 2014.

(j) [**construction of memorials/ monuments and allied facilities by the concerned State Government in CRZ-IV (A) areas in exceptional cases, with adequate environmental safeguards, subject to the following, namely:-**

(A) The concerned State Government shall submit justification for locating the project in CRZ area along with details of alternate sites considered and weightage matrix on various parameters including environmental parameters to State CZMA who will examine the project and make recommendation to the Central Government (MoEF) for grant of Terms of Reference (ToRs) for preparation of an environmental impact assessment report by the State Government;

(B) on grant of ToRs by the Central Government, the concerned State Government shall submit the draft Environmental Impact Assessment report (EIA) with Environmental Management Plan (EMP), draft Risk Assessment Report with Disaster Management Plan (DMP) including on-site and off-site emergency plan and evacuation plan during emergency, to the State Pollution Board for conduct of public hearing for the proposed project in accordance with the procedure laid down under the Environment Impact Assessment notification;

(C) (C)The concerned State Government shall submit final EIA, EMP, Risk Assessment and DMP after addressing the relevant issues raised by the public during the public hearing, to State CZMA for their examination and recommendation to MoEF.

Note: Construction of memorials / monuments would generally discouraged in CRZ-IV areas and the same would be allowed only in exceptional cases with adequate environmental safeguards.]*[43]
]

4.2 Procedure for clearance of permissible activities.- All projects attracting this notification shall be considered for CRZ clearance as per the following procedure, namely:-

(i) The project proponents shall apply with the following documents seeking prior clearance under CRZ notification to the concerned State or the Union territory Coastal Zone Management Authority,-

(a) Form-1 (Annexure-IV of the notification);

(b) Rapid EIA Report including marine and terrestrial component except for construction projects listed under 4(c) and (d)

(c) Comprehensive EIA with cumulative studies for projects in the stretches classified as low and medium eroding by MoEF based on scientific studies and in consultation with the State Governments and Union territory Administration;

(d) Disaster Management Report, Risk Assessment Report and Management Plan;

(e) CRZ map indicating HTL and LTL demarcated by one of the authorized agency (as indicated in para 2) in 1:4000 scale;

(f) Project layout superimposed on the above map indicated at (e) above;

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*43 – inserted vide notification S.O. 556 (E) dated 17.02.2015.

(g) The CRZ map normally covering 7km radius around the project site.

(h) The CRZ map indicating the CRZ-I, II, III and IV areas including other notified ecologically sensitive areas;

(i) No Objection Certificate from the concerned State Pollution Control Boards or Union territory Pollution Control Committees for the projects involving discharge of effluents, solid wastes, sewage and the like.;

(ii) The concerned CZMA shall examine the above documents in accordance with the approved CZMP and in compliance with CRZ notification and make recommendations within a period of sixty days from date of receipt of complete application,-

(a) MoEF or State Environmental Impact Assessment Authority (hereinafter referred to as the SEIAA) as the case may be for the project attracting EIA notification, 2006;

(b) MoEF for the projects not covered in the EIA notification, 2006 but attracting para 4(ii) of the CRZ notification;

[(c) SEIAA, for the projects specified under paragraph 4 (i) (except with respect to item (d) thereof relating to building projects with less than 20,000 sq.mts of built up area) and for the projects not attracting EIA Notification 2006"]* [39]

(iii) MoEF or SEIAA shall consider such projects for clearance based on the recommendations of the concerned CZMA within a period of sixty days.

[(iv)]*[11] The clearance accorded to the projects under the CRZ notification shall be valid for the period of five years from the date of issue of the clearance for commencement of construction and operation.

(v) For Post clearance monitoring – (a) it shall be mandatory for the project proponent to submit half-yearly compliance reports in respect of the stipulated terms and conditions of the environmental clearance in hard and soft copies to the regulatory authority(s) concerned, on 1st June and 31st December of each calendar year and all such compliance reports submitted by the project proponent shall be published in public domain and its copies shall be given to any person on application to the concerned CZMA.

(b) the compliance report shall also be displayed on the website of the concerned regulatory authority.

(vi) To maintain transparency in the working of the CZMAs it shall be the responsibility of the CZMA to create a dedicated website and post the agenda, minutes, decisions taken, clearance letters, violations, action taken on the violations and court matters including the Orders of the Hon'ble Court as also the approved CZMPs of the respective State Government or Union territory.

5. Preparation of Coastal Zone Management Plans.

(i) The MoEF may obtain the CZMPs prepared through the respective State Government or Union territory;

(ii) The CZMPs may be prepared by the coastal State Government or Union territory by engaging reputed and experienced scientific institution(s) or the agencies including the National Centre for Sustainable Coastal Management (hereinafter referred to as the NCSCM) of MoEF and in consultation with the concerned stakeholders;

(iii)The hazard line shall be mapped by MoEF through SoI all along the coastline of the country and the hazard line shall be demarcated taking into account, tide, waves, sea level

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*11 - Substituted vide Corrigendum S.O.651(E) dated 29.03.2011.

*39 - substituted vide notification S.O. 3085 (E) dated 28th November, 2014.

rise and shoreline changes;

(iv) For the purpose of depicting the flooding due to tides, waves and sea level rise in the next fifty and hundred years, the contour mapping of the coastline shall be carried out at 0.5m interval normally upto 7km from HTL on the landward side, and the shoreline changes shall be demarcated based on historical data by comparing the previous satellite imageries with the recent satellite imageries;

(v) Mapping of the hazard line shall be carried out in 1:25,000 scale for macro level planning and 1:10,000 scale or cadastral scale for micro level mapping and the hazard line shall be taken into consideration while preparing the land use plan of the coastal areas;

(vi) The coastal States and Union Territory will prepare within a period of twenty four months from the date of issue this notification, draft CZMPs in 1:25,000 scale map identifying and classifying the CRZ areas within the respective territories in accordance with the guidelines given in Annexure-I of the notification, which involve public consultation;

(vii) The draft CZMPs shall be submitted by the State Government or Union territory to the concerned CZMA for appraisal, including appropriate consultations, and recommendations in accordance with the procedure(s) laid down in the Environment (Protection) Act, 1986;

(viii) **[The Coastal Zone Management Authority of a State or of a Union Territory shall submit the draft Coastal Zone Management Plan along with its recommendations to the Ministry of Environment, Forest and Climate Change, after incorporating the suggestions and objections received from the stakeholders] *[44]**

(ix) MoEF shall thereafter consider and approve the CZMPs within a period of four months from the date of receipt of the CZMPs complete in all respects;

(x) All developmental activities listed in this notification shall be regulated by the State Government, Union Territory Administration, the local authority or the concerned CZMA within the framework of such approved CZMPs as the case may be in accordance with provisions of this notification;

(xi) The CZMPs shall not normally be revised before a period of five years after which, the concerned State Government or the Union territory may consider undertaking revision of the maps following the above procedures;

(xii) **[The Coastal Zone Management Plans as already approved by the Ministry of Environment and Forests shall be valid up to the 31st day of January, 2017 or till such time as the approval is given by that Ministry to the fresh Coastal Zone Management Plans made under the said notification, whichever is earlier.]*[45]**

6. Enforcement of the CRZ, notification, 2011-

(a) For the purpose of implementation and enforcement of the provisions **[of]*[12]** this notification and compliance with conditions stipulated thereunder, the powers either original or delegated are available under Environment (Protection) Act, 1986 with the MoEF, State Government**[s]*[13]** or the Union territory Administration**[s]*[14]** NCZMA and SCZMAs;

(b) The composition, tenure and mandate of NCZMA and State Government or the Union territory CZMAs have already been notified by MoEF in terms of Orders of Hon'ble

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*12, *13 and *14 - Inserted vide Corrigendum S.O.651(E) dated 29.03.2011.

*44 and *45*46 - Substituted vide Corrigendum S.O. 938(E) dated 31.03.2015 & 1212 (E) dated 22.03.2016.

Supreme Court in Writ Petition 664 of 1993;

(c) the State Government or the Union territory CZMAs shall primarily be responsible for enforcing and monitoring of this notification and to assist in this task, the State Government and the Union territory shall constitute district level Committees under the Chairmanship of the District Magistrate concerned containing atleast three representatives of local traditional coastal communities [**especially]*[15]** from fisherfolk;

(d) The dwelling units of the traditional coastal communities [**especially]*[16]** fisherfolk, tribals as were permissible under the provisions of the CRZ notification, 1991, but which have not obtained formal approval from concerned authorities under the aforesaid notification shall be considered by the respective Union territory CZMAs and the dwelling units shall be regularized subject to the following condition, namely-

(i) these are not used for any commercial activity

(ii) these are not sold or transferred to non-traditional coastal community.

7. Classification of the CRZ – For the purpose of conserving and protecting the coastal areas and marine waters, the CRZ area shall be classified as follows, namely:-

(i) CRZ-I,–

A. The areas that are ecologically sensitive and the geomorphological features which play a role in the maintaining the integrity of the coast,-

(a) Mangroves, in case mangrove area is more than 1000 sq mts, a buffer of 50meters along the mangroves shall be provided;
(b) Corals and coral reefs and associated biodiversity;
(c) Sand Dunes;
(d) Mudflats which are biologically active;
(e) National parks, marine parks, sanctuaries, reserve forests, wildlife habitats and other protected areas under the provisions of Wild Life (Protection) Act, 1972 (53 of 1972), the Forest (Conservation) Act, 1980 (69 of 1980) or Environment (Protection) Act, 1986 (29 of 1986); including Biosphere Reserve [**as enumerated in para V(4)(b)]*[17]**
(f) Salt Marshes;
(g) Turtle nesting grounds;
(h) Horse shoe crabs habitats;
(i) Sea grass beds;
(j) Nesting grounds of birds;
(k) Areas or structures of archaeological importance and heritage sites.

B. The area between Low Tide Line and High Tide Line;

(ii) CRZ-II,-

The areas that have been developed upto or close to the shoreline.

Explanation.- [**For the purposes of the]*[18 deleted]** expression "developed area" is referred to as that area within the existing municipal limits or in other existing legally designated urban areas which are substantially built-up and has been provided with drainage and approach roads and other infrastructural facilities, such as water supply and sewerage mains;

*15 and *16 - substituted vide Corrigendum S.O.651(E) dated 29.03.2011.
*17 - Inserted vide Corrigendum S.O.651(E) dated 29.03.2011.
*18 – deleted vide Corrigendum S.O.651(E) dated 29.03.2011.

(iii) CRZ-III,-

Areas that are relatively undisturbed and those do not belong to either CRZ-I or II which include coastal zone in the rural areas (developed and undeveloped) and also areas within municipal limits or in other legally designated urban areas, which are not substantially built up.

(iv.) *CRZ-IV*,-

A. the water area from the Low Tide Line to twelve nautical miles on the seaward side;

B. shall include the water area of the tidal influenced water body from the mouth of the water body at the sea upto the influence of tide which is measured as five parts per thousand during the driest season of the year.

(v) Areas requiring special consideration for the purpose of protecting the critical coastal environment and difficulties faced by local communities,-

A. (i) CRZ area falling within municipal limits of Greater Mumbai;
(ii) the CRZ areas of Kerala including the backwaters and backwater islands;
(iii) CRZ areas of Goa.

B. Critically Vulnerable Coastal Areas (CVCA) such as Sunderbans region of West Bengal and other ecologically sensitive areas identified as under Environment (Protection) Act, 1986 and managed with the involvement of coastal communities including fisherfolk.

8. Norms for regulation of activities permissible under this notification,-

(i) The development or construction activities in different categories of CRZ shall be regulated by the concerned CZMA in accordance with the following norms, namely:-

Note:- {**The word [existing, used]*[19] hereinafter in relation to existence of various features or existence of regularisation or norms shall mean existence of these features or regularisation or norms as on 19.2.1991 [when the CRZ notification, 1991]*[20] was notified.**}*[46] **{deleted}**

I. CRZ-I,-

(i) no new construction shall be permitted in CRZ-I except,-

(a) projects relating to Department of Atomic Energy;
(b) pipelines, conveying systems including transmission lines;
(c) facilities that are essential for activities permissible under CRZ-I;
(d) installation of weather radar for monitoring of cyclones movement and prediction by Indian Meteorological Department;
(e) construction of trans harbour sea link and without affecting the tidal flow of water, between LTL and HTL.
(f) development of green field airport already approved at only Navi Mumbai;

(ii) Areas between LTL and HTL which are not ecologically sensitive, necessary safety measures will be incorporated while permitting the following, namely:-

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*19 and *20 – substituted vide Corrigendum S.O.651(E) dated 29.03.2011.
*46 – deleted vide notification S.O. 1599 (E) dated 16th June 2015.

(a) exploration and extraction of natural gas;

(b) construction of dispensaries, schools, public rainshelter, community toilets, bridges, roads, jetties, **[erosion control measures]*[40]** water supply, drainage, sewerage which are required for traditional inhabitants living within the biosphere reserves after obtaining approval from concerned CZMA.

(c) necessary safety measure shall be incorporated while permitting such developmental activities in the area falling in the hazard zone;

(d) salt harvesting by solar evaporation of seawater; (e) desalination plants;

(f) storage of non-hazardous cargo such as edible oil, fertilizers and food grain within notified ports;

(g) construction of trans harbour sea links, roads on stilts or pillars without affecting the tidal flow of water.

II. CRZ-II,-

(i) buildings shall be permitted only on the landward side of the existing road, or on the landward side of existing authorized structures;

(ii) [**buildings permitted on the landward side of the existing and proposed roads or existing authorised structures shall be subject to the existing local town and country planning regulations as modified from time to time, except the Floor Space Index or Floor Area Ratio, which shall be as per 1991 level :**

Provided that no permission for construction of buildings shall be given on landward side of any new roads which are constructed on the seaward side of an existing road :

Provided further that the construction in CRZ-II area of Goa, Kerala and Mumbai shall be governed by the provisions of Clause V of paragraph 8.")]*[47]

(iii) reconstruction of authorized building to be permitted subject with the existing FloorSpace Index or Floor Area Ratio Norms and without change in present use;

(iv) facilities for receipt and storage of petroleum products and liquefied natural gas as specified in Annexure-II appended to this notification and facilities for regasification of Liquefied Natural Gas subject to the conditions as mentioned in sub-paragraph (ii) of paragraph 3;

(v) desalination plants and associated facilities;

(vi) storage of non-hazardous cargo, such as edible oil, fertilizers and food grain in notified ports;

(vii) facilities for generating power by non-conventional power sources and associated facilities;

III. CRZ-III,-

A. Area upto 200mts from HTL on the landward side in case of seafront and 100mts along tidal influenced water bodies or width of the creek whichever is less is to be earmarked as "No Development Zone (NDZ)",-

(i) the NDZ shall not be applicable in such area falling within any notified port limits;

(ii) No construction shall be permitted within NDZ except for repairs or reconstruction of existing authorized structure not exceeding existing Floor Space Index, existing plinth area and existing density and for permissible activities under the notification **[especially]*[21]** facilities essential for activities; Construction/reconstruction of dwelling units of traditional coastal communities including fisherfolk may be permitted between 100 and 200 metres from the HTL along the seafront in accordance with a comprehensive plan prepared by the State Government or the Union territory in consultation with the traditional coastal communities **[especially]*[22]** fisherfolk and

*21 and *22 – substituted vide Corrigendum S.O.651(E) dated 29.03.2011.

*40 – inserted vide notification S.O. 3085 (E) dated 28th November, 2014.

*47 – substituted vide notification S.O. 1599 (E) dated 16th June 2015.

incorporating the necessary disaster management provision, sanitation and recommended by the concerned State or the Union territory CZMA to NCZMA for approval by MoEF;

(iii) however, the following activities may be permitted in NDZ –

(a) agriculture, horticulture, gardens, pasture, parks, play field, and forestry;
(b) projects relating to Department of Atomic Energy;
(c) mining of rare minerals;
(d) salt manufacture from seawater;
(e) facilities for receipt and storage of petroleum products and liquefied natural gas as specified in Annexure-II;
(f) facilities for regasification of liquefied natural gas subject to conditions as mentioned in subparagraph (ii) of paragraph 3;
(g) facilities for generating power by non conventional energy sources;
(h) Foreshore facilities for desalination plants and associated facilities;
(i) weather radars;
(j) construction of dispensaries, schools, public rain shelter, community toilets, bridges, roads, provision of facilities for water supply, drainage, sewerage, crematoria, cemeteries and electric sub-station which are required for the local inhabitants may be permitted on a case to case basis by CZMA;
(k) construction of units or auxiliary thereto for domestic sewage, treatment and disposal with the prior approval of the concerned Pollution Control Board or Committee;
(l) facilities required for local fishing communities such as fish drying yards, auction halls, net mending yards, traditional boat building yards, ice plant, ice crushing units, fish curing facilities and the like;
(m) development of green field airport already permitted only at Navi Mumbai.

B. Area between 200mts to 500mts,-

The following activities shall be permissible in the above areas;

(i) development of vacant plot in designated areas for construction of hotels or beach resorts for tourists or visitors subject to the conditions as specified in the guidelines at Annexure-III ;
(ii) facilities for receipt and storage of petroleum products and liquefied natural gas as specified in Annexure-II;
(iii) facilities for regasification of liquefied natural gas subject to conditions as mentioned in sub-paragraph (ii) of paragraph 3;
(iv) storage of non-hazardous cargo such as, edible oil, fertilizers, food grain in notified ports;
(v) foreshore facilities for desalination plants and associated facilities;
(vi) facilities for generating power by non-conventional energy sources;
(vii) construction or reconstruction of dwelling units so long it is within the ambit of traditional rights and customary uses such as existing fishing villages and goathans. Building permission for such construction or reconstruction will be subject to local town and country planning rules with overall height of construction not exceeding 9mts with two floors (ground + one floor);
(viii) Construction of public rain shelters, community toilets, water supply drainage, sewerage, roads and bridges by CZMA who may also permit construction of

schools and dispensaries for local inhabitants of the area for those panchayats, the major part of which falls within CRZ if no other area is available for construction of such facilities;

(ix) reconstruction or alteration of existing authorised building subject to sub-paragraph (vii), (viii);

(x) development of green field airport already permitted only at Navi Mumbai.

(IV) In CRZ-IV areas,-

The activities **[impinging]*[23]** on the sea and tidal influenced water bodies will be regulated except for traditional fishing and related activities undertaken by local communities as follows:-

(a)No untreated sewage, effluents, ballast water, ship washes, fly ash or solid waste from all activities including from aquaculture operations shall be let off or dumped. A comprehensive plan for treatment of sewage generating from the coastal towns and cities shall be formulated within a period of one year in consultation with stakeholders including traditional coastal communities, traditional fisherfolk and implemented;

(b) Pollution from oil and gas exploration and drilling, mining, boat house and shipping;

(c) There shall be no restriction on the traditional fishing and allied activities undertaken by local communities.

V. Areas requiring special consideration,-

1. CRZ areas falling within municipal limits of the Greater Mumbai.

(i) Developmental activities in the CRZ area of the Greater Mumbai because of the environmental issues, relating to degradation of mangroves, pollution of creeks and coastal waters, due to discharge of untreated effluents and disposal of solid waste, the need to provide decent housing to the poor section of society and lack of suitable alternatives in the inter connected islands of Greater Mumbai shall be regulated as follows, namely:-

A. Construction of roads - In CRZ-I areas indicated at sub-paragraph (i) of paragraph 7 of the notification the following activities only can be taken up:-

(a) Construction of roads, approach roads and missing link roads approved in the Developmental Plan of Greater Mumbai on stilts ensuring that the free flow of tidal water is not affected, without any benefit of CRZ-II accruing on the landward side of such constructed roads or approach roads subject to the following conditions:-

(i) All mangrove areas shall be mapped and notified as protected forest and necessary protection and conservation measures for the identified mangrove areas shall be initiated.

(ii) Five times the number of mangroves destroyed/cut during the construction process shall be replanted.

B. Solid waste disposal sites shall be identified outside the CRZ area and thereafter within two years the existing conventional solid waste sites shall be relocated outside the CRZ area.

[(ii)]*[24] In CRZ-II areas-

(a) The development or redevelopment shall continue to be undertaken in accordance with the norms laid down in the Town and Country Planning Regulations as they existed on the date of issue of the notification dated the 19th February, 1991, unless specified

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*23 and *24 – substituted vide Corrigendum S.O.651(E) dated 29.03.2011.

D. M. Thaker
Director (Environment) &
Member Secretary (GCZMA)

Government of Gujarat
Forest & Environment Department
Block No-14/8th Floor,
Sachivalaya, Gandhinagar

Phone:079- 23255854
E-mail: direnv@gujarat.gov.in

File no. ENV/10/2021/184/T-cell Date: 26 DEC 2023

To,
Dr. H. Kharkwal
Director (CRZ)
Ministry of Environment, Forest and Climate Change,
Government of India,
Room No. 215, 2nd Floor, Agni Block
Indira Paryavaran Bhavan, Jor Baugh,
Aliganj Road, New Delhi – 110 003.

Subject: CRZ Clearance for Proposed Greenfield Chemical Complex seawater intake and effluent disposal facilities at village Bada, Ta –Mandvi, Dist-Kutchh by M/s.Gujarat Heavy Chemicals Limited(GHCL).

Reference: CRZ application dated.11.10.2021

Dear Sir,

M/s. Gujarat Heavy Chemicals Limited (GHCL)vide application dated. 11-10-2021 submitted an application seeking recommendation from Gujarat Coastal Zone Management Authority (GCZMA) for obtaining CRZ Clearance from the Ministry of Environment, Forests and Climate Change, Government of India for Greenfield Chemical Complex seawater intake and effluent disposal facilities at village Bada, Taluka Mandvi, Dist-Kutchh.

M/s. GHCL has submitted the following documents along with their application and processing fees:

1. Form -1 as per CRZ Notification 2011,

2. CRZ Maps in 1:4000 scale, prepared by Institute of Remote sensing, Anna University, Chennai,
3. EIA report prepared by Council of Scientific & Industrial Research (CSIR) and NEERI.
4. Marine EIA prepared by CSIR- National Institute of Oceanography.
5. Feasibility study report by STUP Consultant Private Limited, Ahmedabad.
6. Consent to Establish from Gujarat Pollution Control Board issued on 09.09.2011.
7. NOC from GMB issued on 10.02.2022.
8. Various Undertaking Submitted by Project Proponent for CRZ Clearance.

M/s. Gujarat Heavy Chemicals Limited (GHCL) submitted EIA report including introduction and project overview (chapter – 1), Project Description (Chapter - 2), Description Environment (chapter – 3), Anticipated impacts & Mitigation Measures (chapter – 4), Analysis of Alternatives (chapter – 5), Environmental Monitoring Program (chapter – 6), Additional Studies (chapter – 7), Project Benefits (chapter – 8), Environmental Cost Benefit Anlysis (chapter – 9), Environmental Management Plan (chapter – 10), Summary and Conclusions (chapter – 11) and Disclosure of Consultant Engaged (chapter – 12). Council of Scientific & Industrial Research (CSIR) and NEERI consultant carried out EIA.

The Proposal of GHCL was discussed in the GCZMA committee during 67th meeting held on 4th August 2023.

The Member Secretary, GCZMA apprised the Authority that M/s. GHCL presented their case in GCZMA meeting held on 17.01.2022. Additional detail sought (ADS) by GCZMA via mail on 01.02.22. PP replied on 29.11.22 & 26.12.22 and requested for conducting site-visit. GCZMA constituted a sub- committee and got visited the site on 27.04.23.

PP submitted details sought by the committee vide its letter dated 29.04.23. PP submitted final EIA report and public hearing details submitted on 29.11.22 to GCZMA. As forestland involved in the proposed project, they got Stage-1 approval on

18.07.23 and submitted Olive Riddly Turtle conservation plan approved on 24.04.23 from Forest Department along with Sand dunes conservation plan on 29.11.22.

The representative of M/s GHCL Ltd made a detailed presentation before the Authority and submitted that GHCL is a diversified company with footprint in Chemicals, Textiles and Consumer product segment. In Chemical sector, the company is mainly in the business of manufacturing Soda Ash (i.e. Anhydrous Sodium Carbonate) and Sodium Bicarbonate. It is one of the leading producers of Soda Ash in the country since 1988.

- The site is in proximity to Sea, which is the only source available for uninterrupted water supply to manufacturing plant. Seawater is required for meeting requirements for RO-DM plant, process cooling, dilution requirements, domestic use etc.

- A huge and increasing focus on renewable energy with government and private sector investment in such sources is strongly driving global demand for soda ash. This project will also support the demand of Soda Ash as it is a key raw material in the processing of lithium, a key component of lithium-ion batteries which is used in electric vehicles. Another key downstream product manufactured from Soda Ash, is emerging as a solution of choice for emission control applications.

- GHCL had signed an M.O.U in Jan-2017 during Vibrant Gujarat Summit, 2017 for establishment of Greenfield Chemical complex in district Kutch, Gujarat. GHCL proposes to set up a Greenfield Chemical complex having
  - ✓ Light Soda Ash (11,00,000 TPA),
  - ✓ Dense Soda Ash (5,00,000 TPA) and
  - ✓ Sodium bicarbonate (2, 00,000 TPA) manufacturing plants
  - ✓ supported by utilities like solid fuel based captive Co-generation power plant (120 MW),
  - ✓ seawater intake (16,00,000 m3/day) and
  - ✓ effluent outfall system (15, 80,000 m3/day),
  - ✓ RO-DM system and associated infrastructure.

- As per the proposal, M/s GHCL will withdraw 16,00,000 m^3/day of water from two intake locations and the disposal of 15,80,000 m^3/day of effluent at two out fall locations and its co-ordination are as follows,

Label	Latitude	
Intake Point 1	22^0 52' 1.070'' N	69^0 7' 28.900'' E
Intake Point 2	22^0 51' 57.440'' N	69^0 7' 32.440'' E
Outfall Point 1	22^0 52' 15.790'' N	69^0 6' 14.350'' E
Outfall Point 2	22^0 52' 6.650'' N	69^0 5' 59.080'' E

- Total length of sea water intake and out fall effluent disposal pipeline falls in various CRZ area are as follows,

Pipeline	CRZ- Classification	Length in m
Intake Pipeline 1	CRZ IA	267.17
	CRZ IB	60.25
	CRZ III (200 m to 500 m from HTL)	105.81
	CRZ IVA	948.76
	Total	**1381.99**
Intake Pipeline 2	CRZ IA	270.37
	CRZ IB	57.44
	CRZ III (200 m to 500 m from HTL)	98.57
	CRZ IVA	962.26
	Total	**1388.64**
Outfall Pipeline 1	CRZ IA	380.92
	CRZ IB	81.78
	CRZ III (No Development Zone)	17.88
	CRZ III (200 m to 500 m from HTL)	66.4
	CRZ IVA	2101.48
	Outside CRZ	121.71
	Total	**2770.17**
Outfall Pipeline 2	CRZ IA	379.67
	CRZ IB	83.36
	CRZ III (No Development Zone)	17.88
	CRZ III (200 m to 500 m from HTL)	67.66
	CRZ IVA	2623.88
	Outside CRZ	110.03
	Total	**3281.88**

As per the CRZ map prepared by the Institute of Remote Sensing, Anna University, Chennai. Proposed project activities are permissible under the clauses no. 3 (I) (a) , 4 (II) (d), 8 I (i)-b, (ii)- b, 8 III A(iii) j, k , 8 (IV) a of CRZ notification, 2011. Activity wise details of CRZ zone are as under:

Activities	Zone
Construction of process plant and utilities etc.	outside CRZ area
Effluent collection	outside CRZ area
Seawater Intake system i.e. sump and pump house	CRZ III
Intake Pipeline	CRZ IA, CRZ IB and CRZ IV
Outfall Pipeline	CRZ IA, CRZ IB and CRZ IV

Following Studies have been conducted by Project Proponent:

- Baseline Marine Environmental assessment, Effluent Dispersion Modeling, Sand dune Morphology by CSIR NIO (Goa, Mumbai). As per the findings, Suitable Corridor for laying seawater intake and outfall identified. Coast near site is Stable based on satellite image analysis and Sand dunes are found to be stable and suitable for tunneling activity.
- Conservation plan of Schedule - 1 Species by Gujarat Institute of Desert Ecology, Gujarat
- Status Survey and Conservation by Zoological Survey of India, Kolkata: Finding of the study stated that during monitoring period any turtle, fresh /old nests or crawl marks were not found. Due to narrow beach width, vegetation cover, slope, presence of pebbles and rubbles and presence of predators at project site which are unfavorable for sea turtle nesting.
- Gujarat Sea Turtle: Status Survey and Conservation by Gujarat Institute of Desert Ecology,
- Seawater Intake & Effluent Disposal Feasibility Consultancy by STUP Consultancy, Ahmedabad.

As the study on Biodiversity and Wild life, No notified protected area within Study area, Presence of critically endangered plant species Commiphora wightii in

buffer area, Conservation plan suggested for Schedule I Flora and Fauna & approved by forest department and No important wetland or bird areas are located within project vicinity.

Design and detailed construction methodology:

- Micro tunneling are done using the pipe jacking method. The pipelines for seawater intake and effluent disposal are required to be laid in a safe manner so that the sand dunes stretch between the plant boundary and respective land fall points (LFP) are protected without any disturbance to their natural appearance and stability.
- In such sensitive and difficult terrains tunneling offers a reliable technological solution. The treated effluent will be discharged at a suitable location off Bada coast through buried pipeline up to shore and submarine pipeline up to disposal location in sea.
- Minor change of alignment of pipeline may be required as per required depth for intake well construction & hydraulics requirement without changing landfall point and CRZ corridor. Reputed agency M/s RHDHV is engaged .
- For sand dune stretch the effluent disposal pipeline will be laid through tunneling. There will be no disturbance to stable sand dunes along the coast, as pipeline will be laid underground through micro tunneling method.
- The predicted max. water temperature in a small area around diffuser 33°Which is lower than threshold of 35°C. Incremental increase of SS in a limited area around diffuser is unlikely to negatively influence the biota even in the vicinity of diffuser. Fine SS particles would remain in suspension for longer duration and impart a milky hue around diffuser, as SS in effluent is non toxic this will not impact the water quality. Estimated benthic loss due to seawater intake is about 141.6 kg. and 331 kg. For outfall. Such loss is unlikely to be reflected on overall bio potential of Bada coast. This loss would be temporary and benthos will recolonize in due course after construction phase gets completed. The new structures will provide additional surface area for sub-tidal benthos to colonies.
- As the study on Biodiversity and Wild life, No notified protected area within Study area, Presence of critically endangered plan species Commiphora wightii

in buffer area, Conservation plan suggested for Schedule I Flora and Fauna & approved by forest department and No important wetland or bird areas are located within project vicinity.

- It was further submitted by the representative of GHCL that there is no existence of mangrove in proposed project areas for lying of intake and outfall pipelines and there would not be any impact on mangroves due to proposed activities.

Diffuser details:

Installation depth of water at the outfall location-OF2_1	: 9.4 m CD
Installation depth of water at the outfall location-OF2_2	: 10.7 m CD
Outfall Pipe Diameter (ID)	: 2.0 m
Number of outfall pipelines	: 2 Nos.
Length of the pipelines(L)	: 2185 & 2686 m
Design outfall flow rate (Q)	: 1580 MLD
HDPE Inner Diameter of Pipe	: 2000 mm
Pipe friction factor	: 0.001
Density of sea water	: 1025 kg/m^3
Effective depth for dilution	: 9.4 to 10.7m
No. of ports provided	: 20 in each diffuser
Diameter of port	: 440 mm
Length of Diffuser Block	: 100m each
Height of vertical riser	: 1.0m
Ports space	:@ 6000 mm c/c
The main diffuser pipe is buried	:2.0 m below the sea bed
Initial dilution estimated as	30 to 40 times.
Diffuser Port Velocity	: 3.01 m/sec

The port configuration consists of a riser pipe of 440 mm diameter at 15 degrees to the main diffuser pipe segment with a height of 1500 mm below the sea bed and 500 mm above the sea bed. From the model results, it is found that the average dilutions of 30 to 40 times would be achieved along with the tidal variation in the case of 1580000 m^3/day discharge. To get this dilution time, the diffuser system should

contain 40 ports having a 0.44 m diameter. The diffusers should be separated at a distance of 6 m. The elevation of ports from the sea bed should be 0.5 m. The velocity of release of effluent should be maintained at 3.01 m/s.

Details of Environment Protection Measures:

- It was submitted that as per the numerical flow model run for seawater intake of 1600 MLD and dispersion model for effluent disposal of 1580 MLD, Model run for post monsoon and pre monsoon for various tidal conditions. No significant changes in flow regime are observed due to continuous withdrawal from recommended seawater intake locations.
- CSIR NIO has recommended effluent disposal points after evaluating 03 alternative options.
- Ambient conditions for temperature, SS, Ammonical nitrogen will be attained within 300 m distance from the diffuser.
- CSIR NIO Goa study suggested that sand dunes along the coast are stable and recommended suitable Landfall points and tunneling method for pipelines.
- From the model results, it is found that the average dilutions of 30 to 40 times would be achieved along with the tidal variation in the case of 1580000 m^3/day discharge. To get this dilution time, the diffuser system should contain 40 ports having a 0.44 m diameter. The diffusers should be separated at a distance of 6 m.
- The elevation of ports from the sea bed should be 0.5 m. The velocity of release of effluent should be maintained at 3.01 m/s.

MS, GCZMA appraised the authority that, GCZMA constituted a sub- committee and got visited the site on 27.04.23. As per the report of the sub-committee, GHCL submitted final EIA, public hearing details, copy of approved conservation plan for significant species, conservation management plan for sand dunes. As included in the report there will no impact on sand dunes due to underground construction of tunnel for the sea water suction and disposal of treated water into sea. As informed by PP, they will use highest technology to underground tunnel construction and due to which no major impacts will be on the sand dunes.

After the detailed discussion and deliberation on the presentation, it was decided by the GCZMA to recommend the project of M/s Gujarat Heavy Chemicals Limited located

at village Bada, ta - Mandvi, District -Kutch for Proposed Greenfield Chemical Complex seawater intake and effluent disposal facilities to the Ministry of Environment, Forest and Climate Change, Government of India for granting CRZ clearance with specific condition.

In view of the above the State Government hereby recommend to the Ministry of Environment, Forests and Climate Change, Government of India grant CRZ clearance for Proposed Greenfield Chemical Complex seawater intake and effluent disposal facilities of M/s. Gujarat Heavy Chemicals Limited with following conditions:

1. The effluent not meeting with the GPCB norms shall not be discharged and shall be stored in the Guard Ponds and recycled back into the Effluent Treatment Plant for further treatment to achieve the GPCB norms. M/s GHCL shall install necessary facilities for this purpose and shall strictly ensure the compliance with the GPCB norms, round the clock.
2. The pipelines for seawater intake and effluent disposal shall be laid in a safe manner so that the sand dunes stretch between the plant boundary and respective land fall points (LFP) are protected without any disturbance to their natural appearance and stability.
3. The pipeline shall be monitored regularly by the company and it shall be ensured that there is no leak from the pipeline. In case of any such eventualities, the company shall immediately stop disposal through the said pipeline and take the corrective measures in consultation with the GPCB and the District Collector.
4. There shall not be any blockage of creek/river etc. due to laying of pipeline and free flow of water shall be maintained.
5. M/s. GHCL shall carry out mangrove plantation in 50 ha area in consultation with Forest Department/Gujarat Ecology Commission (GEC). The amount for the same shall be deposited within 06 months to Forest Department/GEC.
6. All the recommendations and mitigation measures suggested for sea turtle conservation plan shall be complied with by the GHCL.
7. The GHCL shall ensure that there will not disturbance to nearby Ecologically Sensitive area for their proposed project.

8. The pipeline shall be monitored regularly by the company and it shall be ensured that there is no leak from the pipeline. In case of any such eventualities, the company shall take immediate corrective measures.
9. Project proponent (PP) shall have to carry out marine water quality environment monitoring regularly on quarterly basis and submit the report to GCZMA, GPCB, IRO & MOEF & CC, GoI.
10. PP shall contribute through its CER fund for environmental infrastructure up-gradation, awareness programs etc.
11. PP shall obtain all necessary clearances from competent authorities/ departments before construction and commissioning of the activities.
12. No groundwater shall be taped to meet with the water requirements during the construction and/or operation phases.
13. There shall no discharge of any kind of wastewater / sewage / effluent/ wastes into the creek or sea or in CRZ areas except allowed by this permission.
14. PP shall implement all the suggestions / recommendations given by their consultants in their EIA report.
15. PP shall develop 33% greenbelt within premises and shall maintain greenbelt.
16. PP shall prepare and execute Disaster Management Plan and submit to the concerned offices including the District Authorities.
17. PP shall ensure that the labour construction camps are kept outside the CRZ areas and the construction labour are provided with adequate amenities like drinking water, fuel, sanitation, etc. to ensure that the existing environmental condition is not deteriorated by them.
18. PP shall bear the cost of the external agency that may be appointed by this Department for supervision / monitoring of proposed activities.
19. PP shall take up socio-economic upliftment activities in consultation with the District Collector / DDO. A separate budget shall be provided for this purpose.
20. PP shall regularly submit the half-yearly compliance report on the conditions stipulated by this Department/GCZMA/ MoEFCC.
21. The provisions of the CRZ notification, 2011 and as amended from time to time shall be strictly adhered to by the PP.
22. PP shall obtain consents/ authorisation/ permission of the Gujarat Pollution Control Board under applicable Water (Prevention and Control of Pollution) Act, 1974, Air (Prevention and Control of Pollution) Act'1981 and Rules made

under Environment (Protection) Act' 1986. Discharge of pollutants shall not exceed the limits prescribed under the Environmental Acts/ Rules.

23. PP shall adopt the necessary soil conservation measures to prevent any exposed soil from being eroded or blown over.
24. A Disaster Management Plan to meet with any eventualities that may arise during construction and/or operation phase shall be prepared and implemented.
25. A separate Environmental Cell with qualified personnel shall be created to implement the Environmental Management Plan and a separate budget shall be provided for this purpose.
26. Any additional conditions that may be imposed by MoEF&CC, this Department/GCZMA shall be complied by the PP

Thanking you,

D. M. Thaker 26/12/2013

(D. M. Thaker)

Copy to:
Chief Operating Officer,
M/s. Gujarat Heavy Chemical Limited,
GHCL House, Swastik Society, opp Punjabi Hall, Navarangpura ,
Ahmedabad-380009---------- For Your kind information

-TRUE COPY-

ANNEXURE R/9

सत्यमेव जयते

Vibrant GUJARAT 10-13 Jan 2017
Connecting India to the World | 8th Global Summit

MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding is entered on 12th January 2017 at Mahatma Mandir, in Gandhinagar (Gujarat) as part of Investment Promotion Activity for Vibrant Gujarat Summit 2017

between

GHCL Limited a company incorporated under the companies Act, 1956, having its Corporate Office at GHCL house, Opposite Punjabi hall, Near Navrangpura bus stand, Navrangpura, Ahmedabad, Gujarat

and

Gujarat Industrial Development Corporation (GIDC)

GHCL Limited wishes to establish the following project in Gujarat.

Sr. No.	Project	Location	Proposed Inv. (Rs. in Cr.)	Employment	Proposed Year of Commencement
1	Project Proposal for Greenfield Soda Ash Plant along with Salt Plant	Kachcch	4000	30000	2021

Government of Gujarat would facilitate **GHCL Limited** to obtain necessary permissions / registrations / approvals /clearances etc. from the concerned departments of the State, as per the existing policies / rules and regulations of the State Government.

सत्यमेव जयते

Vibrant GUJARAT 10-13 Jan 2017
Connecting India to the World | 8th Global Summit

This Memorandum of Understanding is made to facilitate **GHCL Limited** for establishment of the aforesaid Project(s) in Gujarat in a time bound manner.

For and on behalf of
Government of Gujarat

(AUTHORISED SIGNATORY)

Name: Shri G H Solanki

Designation : Executive Director

Contact no.: 079-23243571

E mail: ed@gidcgujarat.org

Contact address: GIDC, Udyog Bhavan Block no.4, 2nd Floor, Sector 11, Gandhinagar-382017

For and on behalf of **GHCL Ltd**

(AUTHORISED SIGNATORY)

Name: Shri Nishit N Radia

Designation: Chief Operating Officer

Contact no.: 02876-305412, 263401-2, 9327571402

Email: nradia@ghcl.co.in

Contact address: GHCL house, Opposite Punjabi hall, Near Navrangpura bus stand, Navrangpura, Ahmedabad, Gujarat

Department: Gujarat Industrial Development Corporation (GIDC)

-TRUE COPY-

GHCL Limited

GHCL/AHD/ENV/MOEF/VND/17-18/07 23rd November 2017

Member Secretary Industries 2
Ministry of Environment, Forest and Climate Change.
Indira Paryavaran Bhavan. Jorbagh Road
Aliganj, Lodhi Colony
New Delhi - 110 003
Ph: 011 24365199
E-mail: aksmree@yahoo.com/ sk.smree66@nic.in

Kind Attn: **Mr S K Srivastava.**

Sub: **Approved consultant for EIA/EMP Studies for Green Field Soda Ash Project.**

Dear Sir,

M/s GHCL Ltd is a reputed Soda Ash Manufacturing Heavy Chemical Unit incorporated in 1983 is located at Sutrapada, Gujarat. This is India's first integrated soda Ash Plant based on Akzo's Dry Liming Technology. Plant was commissioned in the year 1988 with 4,20,000 TPA capacity. Over the time capacity expanded to 11,00,000 TPA. This plant is the most energy efficient soda ash plant of the country.

GHCL is now planning for setting up a Green Field Chemical Complex in the Taluka of Mandvi, District of Kutch, State of Gujarat. For this project, M.O.U with Govt. Of Gujarat was signed during Vibrant Gujarat 2017 event. We have ambitious plans for Soda Ash Plant, Caustic Soda Plant, and Edible Salt etc. However to start with planning to set up a Green Field 5.00 Lac TPA Soda Ash Plant along with 60 MW C.P.P i.e solid fuel based Captive Power Plant. In future capacity expansion to take pace. The Captive Power Plant is a necessary as uninterrupted power and process steam at various operating pressures is the requirement. The Plant process being exothermic large quantity of sea water needs to be drawn from the sea. The entire plant treated effluent confirming to the laid down standards will be discharged in the sea at a recommended point. Further to meet process water requirement R.O./D.M will be installed. To draw water sea water, intake facilities will be set up.

Soda Ash integrated project being a mega project classified as category 4 (E) and 1 (D) by Project sector NABET/CIA, environment clearance for such project from M.O.E.F is mandatory .As per our understanding there is not a single environmental consultant of India registered/approved by quality council of India for soda Ash sector. For undertaking terrestrial / on shore environmental studies i.e EIA/EMP studies, we propose to engage the India's most reputed non controversial organizations like M/s NEERI/ M/s NIO / M/S I.R.S (if they agree to undertake the studies). We hope this will have your approval. In case if you have on approved list any other reputed consultant kindly share with us.

Thanking you,

Yours faithfully
For GHCL Ltd

V N Desai
Authorized Signatory

CC : Mr K C Mistry, Principal Secretary
G.P.C.B, Gandhinagar, Gujarat

-TRUE COPY-

List 'A' – Accredited EIA Consultant Organizations complying with Version 3 of the Scheme - as on August 08, 2017 (#)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
1	**Aadhi Boomi Mining and Enviro Tech Private Limited** (formerly known as Suriya Mining Services) **Address:**3/216, K.S.V.Nagar, Narasothipatti, Salem-636004 **Email:**suriyakumarsemban@gmail.com **Tel.:**09842729655, 09443290855 *Conditions apply*	1	Mining of minerals – opencast only	A	1 (a) (i)
			Mining of minerals – underground only	B	
		38	Building and construction projects	B	8(a)
2	**Aakhivi Consultants** **Address:**57 C, Block E5, Shatabdi Vihar, Sector 52, Noida, UP - 201 308 **Email:**aakhivi.2016@gmail.com	4	Thermal power plants	A**	1 (d)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Tel.:08409580043; 07210434847 *** Though the EIA Coordinator for this sector was found suitable for Cat. A, the organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment. They can take up projects in this sector only for Cat. B as an organization.* *Conditions apply*				
3	**Aarvee Associates Architects Engineers & Consultants Pvt. Ltd.** **Address:** 8-2-5, Ravula Residency Srinagar Colony, Hyderabad **E.mail:** aarvee@aarvee.net, kprasad@aarvee.net, water@aarvee.net **Tel.:** 040-23737633	1	Mining of minerals including opencast/ underground mining	A	1 (a) (i)
		3	River Valley projects	A	1 (c)
		4	Thermal power plants	A	1 (d)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2 & 3 of	B	6 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Conditions apply		MSIHC Rules 1989 amended 2000)		
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes	B	7 (c)
		34	Highway	A	7 (f)
4	**ABC Techno Labs India Private Limited** (formerly known as ABC Environ Solutions Pvt. Ltd.) **Address:** # 400, 13th Street, SIDCO Industrial Estate (North Phase), Ambattur, Chennai - 600098 **E-mail:**abc@abctechnolab.com, info@abctechnolab.com **Tel.:** 044-26161123/24/25/26 91 95660 55555 and 91 95660 67777 *Conditions apply*	1	Mining of minerals - Opencast only	A	1 (a) (i)
			Mining of minerals – Underground only	B	
		2	Offshore and onshore oil and gas exploration, development & productions	A	1 (b)
		3	River Valley projects - Irrigation projects only	A	1 (c)
		4	Thermal power plant	A	1 (d)
		7	Mineral beneficiation	B	2 (b)
		8	Metallurgical industries (secondary ferrous only)	B	3 (a)
		10	Petroleum refining industry	A	4 (a)
		15	Leather/skin/hide processing industry	A	4 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		16	Chemical Fertilizers	A	5 (a)
		18	Petro-chemical complexes (industries based on processing of petroleum fractions & natural gas and /or reforming to aromatics)	A	5 (c)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		22	Distilleries	A	5 (g)
		25	Sugar Industry	B	5 (j)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/sanctuaries/ coral reefs/ecologically sensitive areas including LNG terminal	A	6 (a)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		29	Air ports	A	7 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes	B	7 (c)
		33	Ports, harbours, jetties, marine terminals, break waters and dredging	A	7(e)
		34	Highways	A	7 (f)
		36	Common effluent treatment plants (CETPs)	B	7 (h)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
5	**Aditya Environmental Services Pvt. Ltd.** **Address:** 107, Hiren Light Industrial Estate, Mogul Lane, Mahim, Mumbai – 400016 **Email:**rajiv@aespl.co.in **Tel:** 022- 24456473/ 42127500, 09821513367	1	Mining of minerals including opencast/ underground mining	A	1 (a) (i)
		4	Thermal power plants	A	1 (d)
		9	Cement Plants	A	3(b)
		17	Pesticides industry and pesticide specific intermediates (excluding formulations)	A	5 (b)
		20	Petrochemical based processing (processes other than cracking &	A	5 (e)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Conditions apply		reformation and not covered under the complexes)		
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		31	Industrial estates/ parks/ complexes/ Areas, export processing Zones (EPZs), Special economic zones (SEZs), Biotech Parks, Leather Complexes	A	7 (c)
		32	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	A	7 (d)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		34	Highways	A	7 (f)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
6	**AECOM India Pvt. Ltd.**	1	Mining of minerals including Open	A	1 (a) (i)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Address: 9/F, Infinity Tower – 'C', DLF Cyber City, DLF Phase – II, Gurgaon – 122002 **E-mail:** Somnath.Mukherjee@aecom.com **Tel.:** 0124-2816000/36, 09810502990 *Conditions apply*		cast/ Underground mining		
		2	Offshore and onshore oil and gas exploration, development & productions	A	1 (b)
		3	River Valley projects	A	1 (c)
		4	Thermal power plants	A	1 (d)
		9	Cement plants	A	3 (b)
		16	Chemical Fertilizers	A	5 (a)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		29	Air ports	A	7 (a)
		31	Industrial estates/ parks/ complexes/ Areas, export processing Zones (EPZs), Special economic zones (SEZs), Biotech Parks, Leather Complexes	A	7 (c)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		34	Highways	A	7 (f)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
7	**Allied Engineering and Consultancy Services** **Address:** 95/S, Kankulia Road, Kolkata-700029 **E-mail:** spsengupta13@gmail.com **Tel.:** 94333-48858	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		6	Coal Washeries	A	2 (a)
		7	Mineral beneficiation including pelletisation	A	2 (b)
8	**Amaltas Enviro Industrial Consultants Ltd.** **Address:** B-1/1244, Vasant Kunj, New Delhi-110 070 **E-mail:** amaltascon@gmail.com , dev.env81@gmail.com	1	Mining of minerals including Open cast/ Underground mining	B	1 (a) (i)
		4	Thermal power plants	B	1 (d)
		9	Cement plants	B	3 (b)
		34	Highways	A	7 (f)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Tel.: 011-41848475/4188476/+919873991919 *Conditions apply*				
9	**Anacon Laboratories Pvt. Ltd.** **Address:** 60, Bajiprabhu Nagar, Nagpur – 440033 **E-mail:** anaconngp@gmail.com **Tel.:** 0712 – 2242077, 09373104416 *Conditions apply*	1	Mining of minerals - Open cast only	A	1 (a) (i)
		3	River Valley projects	B	1 (c)
		4	Thermal power plants	A	1 (d)
		6	Coal Washeries	A	2 (a)
		8	Metallurgical industries (ferrous only)- both primary & secondary	A	3 (a)
		9	Cement plants	A	3 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		22	Distilleries	B	5 (g)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		29	Air ports	A	7 (a)
		34	Highways	A	7 (f)
		36	Common effluent treatment plants (CETPs)	B	7 (h)
		38	Building and construction projects	B	8 (a)
10	**Anand Consultants** **Address:** 16, Everest Tower, B/h Jain Temple, Nr. Ankur Society, Ahmedabad – 380013 **E-mail:** environment@dataone.in pollutioncontrol@dataone.in	4	Thermal power plants	A	1 (d)
		9	Cement Plant	A	3(b)
		17	Pesticides industry and pesticide specific intermediates (excluding formulations)	A	5 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding	A	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Tel.: 09825011748 *Conditions apply*		drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)		
		38	Building and construction projects	B	8 (a)
11	**Apex Mintech Consultants** **Address:** 21, Ravindra Nagar Opp. Working Women Old Hostel, 'C' – Class, Pratapnagar, Udaipur **E-mail:** rkminerals_udr@yahoo.com **Tel.:** 0294- 2490760/ 2490803 09829161803, 09352995558 *Conditions apply*	1	Mining of minerals (Open cast only)	A	1 (a) (i)
12	**Aplinka Solutions & Technologies Private Limited** **Address** -A-48, Ground Floor, Sector-64, Noida -201301	1	Mining of minerals (opencast only)	A	1 (a) (i)
		31	Industrial estates/ parks/ complexes/areas, export processing Zones (EPZs), Special Economic Zones	B	7 (c)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	E-mail: director@aplinka.in info.aplinkasolutions@gmail.com **Tel.:** 0120-4540584 Mobile: +91-8375955991 *Conditions apply*		(SEZs), Biotech Parks, Leather Complexes		
		34	Highways	A	7 (f)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
13	**Aracadis India Pvt limited** (Formerly known as Senes Consultants India Pvt. Ltd.) **Address:** 1st Floor Tower B, Logix Techno Park, Plot No. 5, Sector 127, Noida **e. mail:** mhazra@senesindia.com **Tel.:** 0120 – 4368400 09810881710	2	Offshore and onshore oil and gas exploration, development & production	A	1 (b)
		3	River Valley Projects	A	1 (c)
		4	Thermal power plants	A	1 (d)
		9	Cement plants	A	3 (b)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/ coral reefs/ ecologically sensitive Areas including LNG terminal	A	6 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Conditions apply	31	Industrial estates/ parks/ complexes/Areas, export processing Zones(EPZs), Special economic zones(SEZs), Biotech Parks, Leather Complexes	A	7 (c)
		33	Ports, harbors, break waters and dredging	A	7(e)
		34	Highways	A	7 (f)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
14	**Ascenso Enviro Private Limited** (Earlier known as Ascenso Management & Consulting Services Pvt. Ltd.) **Address:**D-79, 2nd Floor, Sector - 6, Noida - 201 301 **E-mail:** purushottam@amcgroup.co.in	1	Mining of minerals - Open cast only	A	1 (a) (i)
		6	Coal washeries	B	2 (a)
		7	Mineral beneficiation including pelletisation	B	2 (b)
		9	Cement Plants	A	3 (b)
		22	Distilleries	A	5 (g)
		34	Highways	A	7 (f)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Tel.: 99581 49985 *Conditions apply*	38	Building and construction projects	B	8 (a)
		39	Townships and Area Development projects	B	8 (b)
15	**Asian Consulting Engineers (Pvt.) Ltd.** **Address:** 66, Hemkunt Colony, 2nd Floor, New Delhi – 110048 **e. mail:** amahajan@asianconsulting.org **Tel.:** 011- 41634926 09312693905 *Conditions apply*	2	Offshore and onshore oil and gas exploration, development & production	A	1 (b)
		3	River valley projects	A	1 (c)
		7	Mineral beneficiation including pelletisation	A	2 (b)
		8	Metallurgical industries - (ferrous & nonferrous) - both primary & secondary	A	3 (a)
		16	Chemical Fertilizers	A	5 (a)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		34	Highways	A	7 (f)
		38	Building and construction projects	B	8 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
16	**Aqura Enviro Projects Pvt. Ltd** (formerly Known as Aqura Labs Pvt. Ltd.) **Address:** Suit 414, 4th Floor, North Block Tower-1,World Trade Park, J.L.N. Marg, Malviya Nagar, Jaipur-302017 Tel::0141-2728123, 2728051 **E. mail**:prashant.wagh@aquralabs.com *Conditions apply*	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		3	Irrigation projects only	B	1 (c)
		4	Thermal Power Plant	B	1 (d)
		8	Metallurgical industries (ferrous & nonferrous)- both primary & secondary	B	3 (a)
		9	Cement Plants	A	3 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	B	5 (f)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		33	Ports, harbours, break waters and dredging	A	7(e)
		34	Highways	A	7 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
17	**B. S. Envi – Tech (P) Ltd.** **Address:**12-13-1270/71/73, 'Amity Ville', 4th Floor, St. Ann's Road, Tarnaka, Secunderabad – 500017 **e. mail:** bsenvitech@gmail.com **website:**www.bsenvitech.com **Tel.:** 040-49783062/27016806 **Fax :**040-49783063 *Conditions apply*	1	Mining of minerals including Open cast & Underground mining	A	1 (a) (i)
		4	Thermal power plants	A	1 (d)
		7	Mineral Beneficiation including pelletisation	A	2 (b)
		8	Metallurgical industries (ferrous & non-ferrous) - both primary and secondary	A	3 (a)
		9	Cement plants	A	3 (b)
		11	Coke oven plants	B	4 (b)
		12	Asbestos milling and asbestos based products	A	4 (c)
		22	Distilleries	A	5 (g)
		25	Sugar Industry	B	5 (j)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
18	**Bhagavathi Ana Labs Pvt. Limited**	1	Mining of minerals including Open cast/ Underground mining	A	1 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Address: Plot No. 7-2-C14, Industrial Estate, Sanath Nagar, Hyderabad-500018, Telangana **e.mail:** shyam.sundar@in.bureauveritas.com bhavna.polimera@in.bureauveritas.com **Tel.:** 91-40-23803800, +91-40-23803808, +91-40-23803813; 09391116139 *Conditions apply*	2	Offshore and Onshore oil and gas exploration, development & production	A	1 (b)
		4	Thermal power plants	A	1 (d)
		6	Coal washeries	B	2 (a)
		7	Mineral beneficiation including pelletisation	A	2 (b)
		8	Metallurgical industries (ferrous & non ferrous) - both primary and secondary	A	3 (a)
		9	Cement plants	A	3 (b)
		10	Petroleum refining industry	A	4 (a)
		11	Coke oven plants	B	4 (b)
		16	Chemical fertilizers	A	-
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including	A	6 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			LNG terminal		
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes	A	7 (c)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
19	**Bhagwati Enviro Care Pvt. Ltd.** **Address:** 28, 29, 30, Parmeshwar Estate – II, Phase I, GIDC Estate, Vatva, Ahmedabad – 382445 **E-mail:** bhagwatienvirotech5@gmail.com bhagwatienviro@yahoo.com **Tel.:** 079- 40083051/ 25834567 09824051541 *Conditions apply*	1	Mining of Minerals- Open Cast only	B	1 (a) (i)
		8	Metallurgical industries (ferrous & non-ferrous)	B	3 (a)
		17	Pesticides industry and pesticide specific intermediates (excluding formulations)	A	5 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		38	Building and construction projects	B	8 (a)
20	**Building Environment (India) Pvt. Ltd.** **Address:** Office no. 401, 4th Floor, Dakshana Building, Near Raigad Bhavan, Sector 15, CBD Belapur, Navi Mumbai 400 614. **E-mail:** hkolatkar@buildingenvironmentindia.com **Tel.:** 022-27578554 09820522779 *Conditions apply*	2	Offshore and Onshore oil and gas exploration, development & production	A	1 (b)
		4	Thermal power plants	A	1 (d)
		9	Cement plants	B	3 (b)
		10	Petroleum refining industry	A	4 (a)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	B	5 (f)
		24	Pulp & paper industry excluding manufacturing	A	5(i)
		25	Sugar Industry	B	5(j)
		31	Industrial estates/ parks/ complexes/ Areas, export processing Zones (EPZs), Special economic zones (SEZs), Biotech Parks, leather Complexes	A	7 (c)
		33	Ports, harbours, break waters and dredging	A	7(e)
		34	Highways	A	7 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
21	**Center for Environment, Health and Safety** **Address:** Department of Civil Engineering Faculty of Engineering and Technology Annamalai University, Annamalai Nagar – 608002 **E-mail:** centreforehs@gmail.com nehrukumar.v.158@annamalaiuniversity.ac.in **Tel:** 04144-238731, 09443223091 *Conditions apply*	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		3	River Valley Projects	A	1 (c)
		9	Cement plants	A	3 (b)
		22	Distilleries	A	5 (g)
		31	Industrial Estates/ parks/ complexes/ Areas, export processing Zones (EPZs), Special economic zones (SEZs), Biotech Parks, Leather Complexes	A	7 (c)
		32	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	A	7 (d)
		33	Ports, harbours, break waters and dredging	B	7 (e)
		36	Common effluent treatment plants (CETPs)	B	7 (h)
22	**Central Institute of Mining and Fuel Research**	1	Mining of minerals including Open	A	1 (a) (i)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			cast/ Underground mining		
	Address: Barwa Road, Dhanbad, Jharkhand- 826015 **E.mail:** kbsingh.cimfr@gmail.com **Tel.:** 0326-2296023, 2296021 09431910845 *Conditions apply*	6	Coal Washeries	A	2 (a)
23	**Central Mine Planning & Design Institute Limited** **Address:** Gondwana Place, Kanke Road, Ranchi, Jharkhand – 834031 **E-mail:** gmenv.cmpdi@yahoo.co.in **Tel.:** 0651- 2230055/ 2792339 09934010057 *Conditions apply*	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		4	Thermal Power Plants	A	1(d)
		6	Coal Washeries	A	2 (a)
24	**Centre for Envotech and Management Consultancy Private Limited**	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
			Mining of minerals- open cast only	A	1 (a) (i)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Address: Plot No-N5/305, IRC Village, Nayapalli, Bhubaneswar – 751015 **E-mail:** cemc_consultancy@yahoo.co.in **Tel.:** 0674-2556444 09861032826 *Conditions apply*	3	Irrigation projects only	A	1 (c)
		4	Thermal power plants	A	1 (d)
		6	Coal Washeries	A	2 (a)
		7	Mineral beneficiation including pelletisation	A	2 (b)
		8	Metallurgical industries (ferrous & nonferrous) – both primary and secondary	A	3 (a)
		9	Cement plants	A	3 (b)
		33	Ports, harbours, break waters and dredging	B	7 (e)
		34	Highways	A	7 (f)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
25	**Chandigarh Pollution Testing Laboratory –EIA Division** **Address:** E-126, Phase VII, Industrial Area, Mohali (Punjab), Pin- 160055 **E-mail:** cptleia@gmail.com cptle126@gmail.com	8	Metallurgical industries (ferrous only)	B	3 (a)
		9	Cement plants	B	3 (b)
		16	Chemical fertilizers	A**	5 (a)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates **excluding** drug formulations; synthetic rubbers; basic organic chemicals, other	B	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Tel.: (+91) 0172 – 4669295, 5090312; Mobile: 99885-77295/99881-27295 *Conditions apply* *** Though the EIA Coordinator for these sectors were found suitable for Cat. A, the organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment. They can take up projects in these sectors only for Cat. B as an organization.*		synthetic organic chemicals and chemical intermediates)		
		22	Distilleries	A**	5 (g)
		24	Pulp & paper industry excluding manufacturing of paper from wastepaper and manufacture of paper from ready pulp without bleaching	A**	5 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8(b)
26	**Cholamandalam MS Risk Services** **Address:** Dare House, IInd Floor, 2-NSC Bose Road, Chennai- 600001 **e.mail:**subbaraoNV@cholams.murugappa.com **Tel.:** 044-30445620 09840018455	1	Mining of minerals Open cast mining only	B	1 (a) (i)
		4	Thermal power plants	A	1 (d)
		9	Cement plants	A	3 (b)
		10	Petroleum refining industry	A	4 (a)
		16	Chemical Fertilizers	A	5 (a)
		18*	Petro-chemical complexes (industries based on processing of petroleum fractions & natural gas and/or reforming to aromatics)	A	5 (c)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Conditions apply	21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		24	Pulp & paper industry excluding manufacturing of paper from waste paper and manufacture of paper from ready pulp without bleaching	A	5 (i)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		38	Building and construction projects	B	8 (a)
27	**Cognizance Research India Pvt. Ltd.** **Address:** GT – 20, Sector-117, Noida **E-mail**: criplindia@gmail.com **Tel.:** 9958486431,9953843815 *Conditions apply* *** Though the EIA Coordinator for these sectors*	1**	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		6**	Coal washeries	A	2 (a)
		7**	Mineral Beneficiation	A	2 (b)
		34	Highways	B	7 (f)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	were found suitable for Cat. A, the organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment. They can take up projects in these sectors only for Cat. B as an organization.				
28	**Consulting Engineers Group Ltd.** **Address:** B-11(G), Malviya Industrial Area, Jaipur-302 017 **E-mail**: ceg@cegindia.com **Tel.:** 0141-2751801, 2751802 *Conditions apply*	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		3	River Valley, Hydel, Drainage and Irrigation projects	A	1 (c)
		8	Metallurgical industries (non-ferrous) – both primary and secondary	B	3 (a)
		34	Highways	A	7 (f)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
29	**Creative Engineers & Consultants** **Address:** 9 B/4, Bharathwajar Street, East Tambaram, Chennai – 600059 **E-mail:** cecgiri@yahoo.com	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		4	Thermal power plants	A	1 (d)
		7	Mineral beneficiation including pelletisation	A	2 (b)
		9	Cement plants	A	3 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Tel.: 044- 22395170 09444133619 *Conditions apply*				
30	**Creative Enviro Services** **Address:** SR – 4, Shri Ram Kunj, E – 8 Bharat Nagar, Shahpura, Bhopal (MP) – 462039 **E-mail:** creative5@rediffmail.com creative.bpl@gmail.com umeshmishra70@rediffmail.com **Tel.:** 0755 – 4299319, 4243510 09425009319 *Conditions apply*	1	Mining of minerals Underground mining	A	1 (a) (i)
		4	Thermal power plants	B	1 (d)
		7	Mineral Beneficiation	B	2 (b)
		8	Metallurgical industries (ferrous & nonferrous) – both primary and secondary	A	3 (a)
		9	Cement plants	A	3 (b)
		16	Chemical Fertilizers	B	5 (a)
		22	Distilleries	A	5 (g)
		38	Building and construction projects	B	8 (a)
31	**Crystal Consultants** **Address:** Kshitij, Kashyap Vihar, Opp. Ashok Nagar, Road No. 3, Ranchi-834002 **E-mail:**shishirkumar18@gmail.com;	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		34	Highways	A	7 (f)
		36	Common Effluent Treatment Plants (CETPs)	B	7 (h)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	crystalconsultants2006@gmail.com Tel.: 09661806121 *Conditions apply*	37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
32	**Desein Private Limited** **Address:** Consulting Engineers, Desein House, Greater Kailash – II, New Delhi - 110048 **E-mail:** pjha@deseinindure.com **Tel.:** 011 – 41891456 09810218464 *Conditions apply*	4	Thermal power plants	A	1 (d)
33	**Detox Corporation Pvt. Ltd.** **Address:** 3rd Floor, K. G. Chamber, Opp. Gujarat Samachar Press, Udhana Darwaja, Ring Road, Surat – 395002	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		2	Offshore & Onshore Oil and gas exploration, development & production	A	1 (b)
		4	Thermal power plants	A	(d)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	e. mail: info@detoxcorp.com **Tel.:** 0261 – 2351248 09824102866 *Conditions apply*	8	Metallurgical industries (Ferrous only) – both primary & secondary	A	3 (a)
		18	Petro-chemical complexes (industries based on processing of petroleum fractions & natural gas and/or reforming to aromatics)	A	5 (c)
		19	Manmade fibers manufacturing	A	5 (d)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	B	5 (f)
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes	A	7 (c)
		32	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	A	7 (d)
		33	Jetties and dredging	A	7 (e)
		36	Common effluent treatment plants (CETPs)	B	7 (h)
		38	Building and construction projects	B	8 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		39	Townships and Area development projects	B	8 (b)
34	**Development Consultants Private limited** **Address:** 24 Park Street, Kolkata – 700016 **E-mail:**swapanc@in.dclgroup.com; arindas@in.dclgroup.com **Tel.:** 033-4012-5448, 09830558701 *Conditions apply*	1	Mining of minerals - Open cast only	A	1 (a) (i)
		4	Thermal power plants	A	1 (d)
		8	Metallurgical industries (ferrous and non-ferrous) - both primary & secondary	B	3 (a)
		9	Cement plants	B	3 (b)
		18	Petro-chemical complexes (industries based on processing of petroleum fractions & natural gas and/or reforming to aromatics)	A	5 (c)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		38	Building and construction projects	B	8 (a)
35	**Dr. Subbarao's Environment Centre** (formerly Known as Water and waste water research Centre) **Address:** "Arundhati", MSEB Rd, Opp., Sahyognagar, Vishrambag, Sangli- 416415	21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other	A	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	E-mail: bssubbarao@yahoo.com **Tel.:** 02332301857,09372109522 *Conditions apply*		synthetic organic chemicals and chemical intermediates)		
		22	Distilleries	A	5 (g)
		24	Pulp & paper industry excluding manufacturing of paper from wastepaper and manufacture of paper from ready pulp without bleaching	A	5 (i)
		25	Sugar Industry	B	5 (j)
36	**Earthcare Labs Private Limited** **Address:** "Nisarg", First Floor, Plot No. 16, Prashant Nagar, Near Ajni Square, Wardha Road, Nagpur – 440015 **E-mail:**earthcarelabs@rediffmail.com **Tel.:** 0712- 2251470 09822203750 *Conditions apply*	1	Mining of minerals	B	1 (a) (i)
		3	River Valley projects	B	1 (c)
		4	Thermal power plants	B	1 (d)
		8	Metallurgical industry (Ferrous only)	B	3 (a)
		9	Cement plants	B	3 (b)
		36	Common Effluent Treatment Plants (CETPs)	B	7 (h)
		39	Townships and Area development projects	B	8 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
37	**Earth Protection Group Environmental Consultants Pvt Ltd.** **Address:** 4-D/620 B, Sector 4, Gomti Nagar Extension, Lucknow- 226010 **E-mail:** epgec@yahoo.co.in; epgec1@gmail.com **Tel.:** 09415011152 *Conditions apply*	15	Leather/ skin/ hide processing industry	A	4 (f)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		38	Building and construction projects	B	8 (a)
		40 (i)	Automobile and Auto Components	-	-
38	**Eco Chem Sales & Services** **Address:** Office Floor, Ashoka Pavillion-A, Opp. Kapadia Health Club, New Civil Road, Surat – 395001 **E-mail**: eco@ecoshripad.com **Tel.:** 0261 – 2231630, 2236223 09227934111	1	Mining of minerals (Open Cast only)	A	1 (a) (i)
		2	Offshore and onshore oil and gas exploration, development & production	A	1 (b)
		4	Thermal power plants	A	1 (d)
		8	Metallurgical industries (ferrous & nonferrous)	A	3 (a)
		9	Cement plants	B	3 (b)
		13	Chlor-alkali industry	A	4 (d)
		16	Chemical Fertilizers	A	5 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Conditions apply	17	Pesticides industry and pesticide specific intermediates (excluding formulations)	A	5 (b)
		19	Manmade fibers manufacturing	A	5 (d)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		22	Distilleries	A	5 (g)
		23	Integrated paint industry	A	5 (h)
		24	Pulp & paper industry excluding manufacturing of paper from wastepaper and manufacture of paper from ready pulp without bleaching	A	5 (i)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/ coral reefs/ ecologically sensitive Areas including LNG terminal	A	6 (a)
		28	Isolated storage & handling of hazardous chemicals (As per	B	6 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			threshold planning quantity indicated in column 3 of Schedule 2 & 3 of MSIHC Rules 1989 amended 2000)		
		32	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	A	7 (d)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		34	Highways	A	7 (f)
		36	Common Effluent Treatment Plants (CETPs)	B	7 (h)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
39	**Eco Foot Forward Environmental Consultancy & Engineers Pvt. Ltd**	1	Mining of minerals including opencast/ underground mining	B	1 (a) (i)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk	A	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Address: D/318, Neelkanth Business Park, Ramdev Nagar, Vidyavihar (W), Mumbai – 400086 **E-mail:** amey@ecofootforward.com **Tel.:** 022-25144129; +91-9892814129 *Conditions apply*		drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)		
		33	Ports, harbours, break waters and dredging	B	7 (e)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
40	**Eco Services India Private Limited** **Address:** 1/134, Dhanakotiraja Street, Sundar Nagar, Ekkaduthangal, Guindy, Chennai – 600032 **E-mail:**	21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	B	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	kalaiselvan@ecoservices.in **Tel.:** 044- 30683067/ 43102232 09383999109 *Conditions apply*	31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes	B	7 (c)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development Projects	B	8 (b)
41	**Eco Tech Labs Pvt. Ltd.** **Address:** No.4, Manjolai 1st Main Road, Ekkaduthangal, Guindy, Chennai-600032 **E-mail:** dhamo@ecotechlabs.in **Tel**.: 044 – 22251228/43534036 09789906200/9600661191	4	Thermal power plants	B	1 (d)
		9	Cement plants	B	3 (b)
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes	B	7 (c)
		38	Building and construction projects	B	8 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	*** The organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment.* *Conditions apply*	39	Townships and Area development Projects	B	8 (b)
42	**Ecomen Laboratories Pvt. Ltd.** **Address:** Flat No. 8, 2nd Floor, Arif Chamber – V,Sector –H, Aliganj, Lucknow – 226024 **E-mail:** ravi.bhargava@gmail.com **Tel**.: 0522 – 2761885 09335205453 *Conditions apply*	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		4	Thermal power plants	B	1 (d)
		6	Coal washeries	A	2 (a)
		7	Mineral beneficiation including pelletisation	A	2 (b)
		9	Cement plants	B	3 (b)
		12	Asbestos milling and asbestos based products	A	4 (c)
		38	Building and construction projects	B	8 (a)
43	**EIA Project, Gauhati University** **Address:** C/o Department of Chemistry Gauhati University, Guwahati -781014	10	Petroleum refining industry	A	4 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	E-mail:bijoysgoswami@gmail.com **Tel.:** 0361-2570599/535, +919435368473 *Conditions apply*				
44	**Engineers India Limited** **Address:** Research & Development Complex, Sector – 16, Gurgaon - 122001 **e. mail:** rb.bhutda@eil.co.in **Tel.:** 0124 – 2391416 *Conditions apply*	1	Mining of minerals – Opencast only	A	1 (a) (i)
		2	Offshore and onshore oil and gas exploration, development & production	A	1 (b)
		4	Thermal power plants	A	1 (d)
		8	Metallurgical industries (non - ferrous only) - both primary & secondary	A	3 (a)
		10	Petroleum refining industry	A	4 (a)
		16	Chemical Fertilizers	A	5 (a)
		18	Petro-chemical complexes (industries based on processing of petroleum fractions & natural gas and/or reforming to aromatics)	A	5 (c)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		28	Isolated storage & handling of	B	6 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2& 3 of MSIHC Rules 1989 amended 2000)		
		29	Air ports	A	7 (a)
		32	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	A	7 (d)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		39	Townships and Area development projects	B	8 (b)
45	**Enkay Enviro Services Pvt. Ltd.** (formerly known as Enkay Enviro Services) **Address:** # 24-B, Dadu Marg, Gopal Bari, Jaipur – 302001 **e.mail:** info@enkayenviro.com **Tel.:** 0141 – 4023996 09314363996	1	Mining of minerals - Open cast only	A	1 (a) (i)
			Mining of minerals - Underground mining	B	
		3	Irrigation and drainage projects only	A	1 (c)
		4	Thermal power plants	B	1 (d)
		7	Mineral beneficiation	A	2 (b)
		8	Metallurgical industries (ferrous & nonferrous) – both primary and secondary	A	3 (a)
		9	Cement Plants	A	3 (b)
		12	Asbestos milling and asbestos based products	A	4 (c)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Conditions apply	16	Chemical Fertilizers	A	5 (a)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2 & 3 of MSIHC Rules 1989 amended 2000) storage & handling of hazardous chemicals	B	6 (b)
46	**Enpro Envirotech & Engineers Pvt. Ltd.** **Address:** 306, Royal Park, Near Deepa Complex, Adajan Road, Surat-395009 **E-mail:** pareshmevawala@enpro.co.in **Tel.:** 0261-3295244 *Conditions apply*	8	Metallurgical Industries (ferrous & nonferrous)	A	3(a)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		32	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	A	7(d)
		36	Common Effluent Treatment Plants (CETPs)	A	7 (h)
		37	Common Municipal Solid Waste Management Facility (CMSWMF)	B	7 (i)
47	**ENV Developmental Assistance Systems (India) Pvt. Ltd.** **Address:** D-2247 Indira Nagar, Lucknow-226006 **E-mail:** admin@dasindia.org business@dasindia.org **Tel.:**0522 4007470/4107624 *Conditions apply*	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		3	Irrigation Projects only	A	1 (c)
		9	Cement plants (Grinding units only)	B	3 (b)
		22	Distilleries	A	5 (g)
		24	Pulp & paper industry excluding manufacturing of paper from wastepaper and manufacture of paper from ready pulp without bleaching	A	5 (i)
		34	Highways	A	7 (f)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
48	**Enviro Infra Solutions Pvt. Ltd.** **Address:** 301-302 & 305 – SRBC Complex, Plot No. INS-12, Sector – 9, Vasundhra, Ghaziabad - 201012 **E-mail:** eis.enviroinfra@gmail.com **Tel.:** 0120-4151183; 09654793036 *Conditions apply*	1	Mining of minerals - Open cast only	B	1 (a) (i)
		2	Onshore oil and gas exploration, development & production	A	1 (b)
		3	River Valley projects	A	1 (c)
		4	Thermal power plants	A	1 (d)
		8	Metallurgical industries (ferrous only)	B	3 (a)
			Metallurgical industries (Non-ferrous only)	A	3 (a)
		9	Cement Plants	A	3 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		22	Distilleries	A	5 (g)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		33	Ports, harbours, break waters and dredging	B	7 (e)
		34	Highways	A	7 (f)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
49	**Enviro Techno Consult Pvt. Ltd.** **Address:** 68, Mahakali Nagar – 2, Near Manewada Square, Nagpur – 440024 **E.mail**: etcpl@envirotechnoconsult.in **Tel.:** 09595220277, 09326466633 *Conditions apply*	4	Thermal Power Plants	A	1 (d)
		9	Cement Plants	A	3 (b)
		19	Textile- cotton and manmade fibres	B	5 (d)
50	**Enviro Analysts & Engineers Pvt. Ltd.** **Address:**B-1003, Enviro House	21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding	B	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Western Edge II, Behind Metro Mall Western Express Highway Borivali (E),Mumbai – 400066 **E-mail:** info@eaepl.com, consent@eaepl.com, hkdesai5@gmail.com **Tel. No.:** 022- 28541647-49/67/68, 09820280155, 9324430071 *Conditions apply*		drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)		
		24	Pulp & paper industry excluding manufacturing of paper from wastepaper and manufacture of paper from ready pulp without bleaching	A	5 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development Projects	B	8 (b)
51	**Envirocare Technocrats Pvt. Ltd.** (formerly known as Enviro Care Engineers & Consultant) **Address:**201, New Opera house, Nr. Gurdev Petrol Pump & Harish Digg., Khatodara, Surat – 395002 **E.mail:** env_consultant@yahoo.co.in, info@envirocare.net.in **Tel.:** 0261-2630781/82, 09825125122 *Conditions apply*	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		2	Offshore & Onshore Oil and gas exploration, development & production	A	1 (b)
		7	Mineral beneficiation	A	2 (b)
		19	Manmade fibers manufacturing	A	5 (d)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and	A	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			chemical intermediates)		
		38	Building and construction projects	B	8 (a)
52	**Enviro Care India Private Limited** **Address:**43, 2nd street, First floor Harvey nagar, Madurai 625016 **E.mail:** eci@envirocareindia.com **Tel.:** 9843052103 *Conditions apply*	4	Thermal power plants	B	1 (d)
		8	Metallurgical industries (ferrous & nonferrous) – both primary and secondary	B	3 (a)
		22	Distilleries	B	5 (g)
		38	Building and construction projects	B	8 (a)
53	**Envirotech East Pvt. Ltd.** **Address:** Bengal Ambuja Coml. Complex, UN-F-13, 1050/1, Survey Park, Kolkata -700075 e. mail: eeplkol@gmail.com eeplkol2@gmail.com **Tel. :** 033-24188127/ 24188128 09331026867	7	Mineral beneficiation including pelletisation	A	2 (b)
		4	Thermal power plants	A	1 (d)
		8	Metallurgical industries (ferrous & nonferrous) - both primary & secondary	A	3(a)
		9	Cement plants	A	3 (b)
		10	Petroleum refining industry	A	4 (a)
		11	Coke oven plants	A	4 (b)
		20	Petrochemical based processing (processes other than cracking &	A	5 (e)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Conditions apply		reformation and not covered under the complexes)		
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	B	5 (f)
		22	Distilleries	A	5 (g)
		24	Pulp & paper industry excluding manufacturing of paper from waste paper and manufacture of paper from ready pulp without bleaching	A	5 (i)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		38	Building and Construction Projects	B	8 (a)
		39	Townships and Area development Projects	B	8 (b)
54	**Environment Protection & Training Research Institute** **Address:** Sy. No. 91/4, Gachibowli, Hyderabad - 500032	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		3	River Valley projects	A	1 (c)
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones	A	7 (c)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	E-mail: sudhakargifs@yahoo.com **Tel.:** 040 – 23005628 09701420086 *Conditions apply*		(SEZs), Biotech parks, Leather complexes		
		38	Building and construction projects	B	8 (a)
55	**Environmental Health and Safety Consultants Private Limited** **Address:** # 13/2, 1st Main Road, Near Fire Station, Industrial Town, Rajajinagar, Bangalore – 560010 **E.mail:** ehscblr@yahoo.com ehscblr1974@gmail.com **Tel.:** 080-23012100/01, 09448094164 *Conditions apply*	3	River Valley, Hydel, Drainage and Irrigation projects	A	1 (c)
		8	Metallurgical industries - Secondary ferrous only	B	3 (a)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		22	Distilleries	A	5 (g)
		25	Sugar Industry	B	5 (j)
		34	Highways	A	7 (f)
		38	Building and construction projects	B	8 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		39	Townships and Area development projects	B	8 (b)
56	**Environmental Engineers & Consultants Pvt. Ltd.** **Address:** A1-198, Janak Puri, New Delhi – 110058 Branch Office Address: - M/s Environmental Engineers & Consultants Pvt. Ltd. Apartment No. 306, Kanchanjunga Apartments, Palarivattom, Kochi, Ernakulam, Kerala-682025. **E-mail:** eecnewdelhi@yahoo.in eecnewdelhi@gmail.com **Tel.:** 011 - 25507190 09350873385 09811080469 *Conditions apply*	1	Mining of minerals – Opencast only	B	1 (a) (i)
		4	Thermal Power Plants	B	1 (d)
		17	Pesticides industry and pesticide specific intermediates (excluding formulations)	B	5 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	B	5 (f)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		38	Building and construction projects	B	8 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		39	Townships and Area development Projects	B	8 (b)
57	**Environmental Research & Analysis** **Address:** 315, First Floor, Sahara Shopping Center, Near Lekhraj Crossing, Faizabad Road, Lucknow – 226016 **E-mail:**eraenvcle@gmail.com; info@eraconsultancy.in **Tel.:** 0522-4078000, 8423500351 **The organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment.* *Conditions apply*	1	Mining of minerals – opencast only	B	1 (a) (i)
58	**Environmental System Consultants & Ambiente Lab Solutions Pvt. Ltd.** **Address:** New No 14/Old No 7, Shanmuga Naicker Street, K.K.Nagar West, Chennai – 600 078	1	Mining of minerals (Open cast only)	A	1 (a) (i)
			Mining of minerals including Open cast/ Underground mining	B	1 (a) (i)
		4	Thermal power plants	A	1 (d)
		9	Cement plants	A	3 (b)
		31	Industrial Estates/ parks/ complexes/	A	7 (c)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	E-mail: ensyscon@gmail.com ambientelab@gmail.com **Tel.:** 044-23643663, 09444990516 *Conditions apply*		Areas, export processing Zones (EPZs), Special economic zones (SEZs), Biotech Parks, Leather Complexes		
		33	Ports, harbours, break waters and dredging	A	7 (e)
		38	Building and construction projects	B	8 (a)
59	**Envirogreen Consultants (India) Pvt. Ltd** **Address:** 1-B, Macchla Marg, New Patel Circle, Hiren Magri, Udaipur- 313002 **Email:** egcipl@yahoo.co.in, **Tel.:**9352239829 *** Though the EIA Coordinator for this sector was found suitable for Cat. A, however, the organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment. They can take up projects in this sector only for Cat. B as an organization.*	1**	Mining of minerals - Open cast only	B	1 (a) (i)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
60	**Envisafe Environmental Consultants** **Address:**3rd floor, Akash Ganga Complex, Near Parimal Railway Underpass, Beside Suvidha Shopping Center, Paldi, Ahmedabad-380007. **Email:**envisafe@gmail.com , pushpinshah@gmail.com **Tel.:** 9825125278,9328961241 *Conditions apply*	1	Mining of minerals including Open cast/ Underground mining	B	1 (a) (i)
		4	Thermal power plants	B	1 (d)
		8	Metallurgical industries (ferrous & non-ferrous)	B	3 (a)
		9	Cement plants	A	3 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		34	Highways	B	7 (f)
		38	Building and construction projects	B	8 (a)
61	**En-vision Environmental Service** **Address:** 201 & 301, Union Trade Center (UTC), Nr. Apple Hospital, Udhana Darwaja Surat 395 002	19	Manmade fibers manufacturing	B	5 (d)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other	A	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Tel .: 0261-2344773, 2344774,9428001862 **Email:** shah.kunal@gmail.com , info@en-vision.co.in *Conditions apply*		synthetic organic chemicals and chemical intermediates)		
		32	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	A	7 (d)
		36	Common effluent treatment plants (CETPs)	B	7 (h)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development Projects	B	8 (b)
62	**Envision Enviro Technologies Pvt. Ltd.** **Address:** 2nd Floor, Shree Ram Complex, Above Bank of India, Near Kargil Chowk, Surat Dumas Road, Piplod, Surat- 395007 **Tel. No.:** +91 2612223003,2224004 **Email:** envision.surat@gmail.com *Conditions apply*	2	Offshore and onshore oil and gas exploration, development & productions	A	1 (b)
		8	Metallurgical industries (ferrous only)- both primary & secondary	A	3(a)
		9	Cement Plants	B	3 (b)
		17	Pesticides industry and pesticide specific intermediates (excluding formulations)	A	5 (b)
		18	Petro-chemical complexes (industries based on processing of petroleum fractions & natural gas and/or reforming to aromatics)	A	5 (c)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		20	Petrochemical based processing (processes other than cracking & reformation and not covered under the complexes)	A	5 (e)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		22	Distilleries	A	5 (g)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		32	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	A	7 (d)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		36	Common effluent treatment plants (CETPs)	B	7 (h)
		38	Building and construction projects	B	8 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		39	Townships and Area development Projects	B	8 (b)
63	**EQMS India Pvt. Ltd.** **Address:** 304-305, III Floor, Rishabh Towers, Plot No. 16, Community Centre, Karkardooma, Delhi – 110092 **e. mail:** eqms@eqmsindia.org skjain@eqmsindia.org **Tel.:** 011- 30003200/ 30003219 09810297612 *Conditions apply*	1	Mining of minerals – Open cast only	A	1 (a) (i)
		3	River Valley projects	A	1 (c)
		4	Thermal power plants	A	1 (d)
		8	Metallurgical industries(ferrous & nonferrous) - both primary & secondary	B	3 (a)
		9	Cement plants	A	3 (b)
		16	Chemical Fertilizers	A	5 (a)
		17	Pesticides industry and pesticide specific intermediates (excluding formulations)	A	5 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates **excluding** drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2 & 3 of	B	6 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			MSIHC Rules 1989 amended 2000)		
		31	Industrial estates/ parks/ complexes/Areas, export processing Zones(EPZs), Special economic zones(SEZs), Biotech Parks, Leather Complexes	A	7 (c)
		33	Ports, harbours, break waters and dredging	B	7 (e)
		34	Highways	A	7 (f)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
64	**Equinox Environments (India) Private Limited** **Address:** F-11, Namdev Nest, 1160- B, "E" Ward, Skyes Extension, Opp. Kamala College, Kolhapur-416001 **e.mail:**projects@equinoxenvi.com, eia@equinoxenvi.com, eeipltd@equinoxenvi.com, **Tel.:** 0231-2531231/ 2526337 09822045083, 09881121522	1	Mining of minerals including opencast / underground mining	A	1 (a) (i)
		4	Thermal power plants	B	1 (d)
		8	Metallurgical industries(ferrous only) - both primary & secondary	B	3 (a)
		12	Asbestos milling and asbestos based products	B	4 (c)
		13	Chlor-alkali industry	A	4 (d)
		20	Petrochemical based processing (processes other than cracking &reformation and not covered under the complexes)	A	5 (e)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Conditions apply	21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates **excluding** drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		22	Distilleries	A	5 (g)
		25	Sugar Industry	B	5 (j)
		32	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	B	7 (d)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
65	**ERM India Private Limited** **Address:** Building No. 10,Tower A, Fourth Floor, DLF Cyber City, Gurgaon - 122002 **e. mail:** subir.gupta@erm.com **Tel.:** 0124-4170300	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		2	Off shore and on-shore oil and gas exploration, development & production	A	1 (b)
		3	River valley Projects	A	1 (c)
		4	Thermal power plants	A	1 (d)
		8	Secondary Steel only	B	3 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	09810068161 *Conditions apply*	9	Cement plants	A	3 (b)
		13	Chlor-alkali industry	A	4 (d)
		16	Chemical Fertilizers	A	5 (a)
		17	Pesticides industry and pesticide specific intermediates (excluding formulations)	A	5 (b)
		18	Petro-chemical complexes (industries based on processing of petroleum fractions & natural gas and/or reforming to aromatics)	A	5 (c)
		20	Petrochemical based processing (processes other than cracking &reformation and not covered under the complexes)	A	5 (e)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates	A	5 (f)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including	A	6 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			LNG terminal		
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		29	Air ports	A	7 (a)
		31	Industrial estates/ parks/ complexes/Areas, export processing Zones(EPZs), Special economic zones(SEZs), Biotech Parks, Leather Complexes	A	7 (c)
		32	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	A	7 (d)
		34	Highways	A	7 (f)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
		40 (i)	Automobile and Auto Components	-	-
66	**Excel Enviro Tech**	1	Mining of minerals- Open Cast only	B	1 (a) (i)
		4	Thermal Power Plant	B	1 (d)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Address: TF-2, Sun House, Nr. Old High Court, Off. Ashram Road, Ahmedabad -380009 **Email:** excelenviro@yahoo.co.in **Tel.:**9825588910/9428592837 *Conditions apply*	6	Coal Washeries	B	2 (a)
		8	Metallurgical industries (ferrous)-secondary only	B	3 (a)
		9	Cement plants	B	3 (b)
		11	Coke oven plants	B	4 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates	B	5 (f)
		38	Building and construction projects including	B	8 (a)
67	**Feedback Infra Pvt. Ltd.** **(Formerly known as Feedback Infrastructure Services Private Limited)** **Address:** 15th Floor, Tower 9B, DLF Cyber City, Phase-III, Gurgaon 122 002 **Email:** rajeev.bhatnagar@feedbackinfra.com	4	Thermal Power Plants	B	1 (d)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Tel. 0124- 4316100, 0124- 4316693 *Conditions apply*	28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		34	Highways	A	7 (f)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
68	**Fulgro Environmental & Engineering Services India Pvt. Ltd.** **Address-** 27,Ashok Vatika, Khatipura Road, Jhotwara, Jaipur, 302012, Rajasthan	1	Mining of minerals including Open cast/ Underground mining	A**	1 (a) (i)
		4	Thermal Power Plants	B	1 (d)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Email: fulgro.manish@gmail.com, ceo@fulgro.in **Mob.-** 094144 06025 *Conditions apply* ***Though the EIA Coordinator for this sector was approved for Cat. A. The organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment. They can take up projects in this sector only for Cat. B as an organization.*	9	Cement Plants	B	3 (b)
		34	Highways	A**	7(f)
		38	Building and construction projects	B	8(a)
69	**Gaurang Environmental Solutions** **Address-** 501, Soni's Paris Point, Collectorate Circle, Bani Park, Jaipur, Pin- 302016 E-mail: gaurangenviro@gmail.com; vipul.environ@gmail.com **Tel.:** 0141-4029115; 09782074776	1	Mining of minerals including Open cast/ underground mining	A	1 (a) (i)
		4	Thermal power plants	B	1 (d)
		8	Metallurgical industries(ferrous & nonferrous) - both primary & secondary	B	3 (a)
		9	Cement plants	B	3 (b)
		22	Distilleries	B	5 (g)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated	B	6 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Conditions apply		in column 3 of Schedule 2 & 3 of MSIHC Rules 1989 amended 2000)		
		29	Air ports	A	7 (a)
		32	Common hazardous waste treatment, storage and disposal facilities	B	7 (d)
		34	Highways	B	7(f)
		36	Common Effluent Treatment Plants (CETPs)	B	7 (h)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8(a)
		39	Townships and Area development projects	B	8 (b)
70	**Geological Exploration & Mining Solutions** **Address:** 95/1, Brindavan Road, 4th Cross East, Fairlands, Salem – 636 016. Tamilnadu. **E. mail:** ifthiahmed@gmail.com	1	Mining of minerals - Open cast only	A**	1 (a) (i)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Tel.: +91 – 427 - 2431989 Mobile: +91 94422 78601 *Conditions apply* ***Though the EIA Coordinator for this sector was approved for Cat. A. The organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment. They can take up projects in this sector only for Cat. B as an organization.*				
71	**Geogreen Enviro House Pvt. Ltd.** **Address:** 403, Aiman Apartments 29 Chandralok Colony, Aliganj, Lucknow, U.P.226024 **e. mail:** vkm.geo@gmail.com **Tel.:** 05222 339000; 09415215163 *Conditions apply*	1	Mining of minerals - Open cast only	A	1 (a) (i)
		38	Building and construction projects	B	8(a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
72	**Ghosh, Bose & Associates (P) Ltd.** **Address:** 8, Harrington Mansion, 8, Ho Chi Minh Sarani, Kolkata – 700071 **e. mail:** ghoshbos@cal.vsnl.net.in **Tel.:** 033- 22827152/ 22827036 09831072110 *Conditions apply* ***Though the EIA Coordinators for these sectors were approved for Cat. A. The organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment. They can take up projects in this sector only for Cat. B as an organization.*	1**	Mining of minerals including Open cast/ underground mining	B	1 (a) (i)
		4**	Thermal power plants	B	1 (d)
		8**	Metallurgical industries(ferrous & nonferrous) - both primary & secondary	B	3 (a)
		31**	Industrial estates/ parks/ complexes/Areas, export processing Zones(EPZs), Special economic zones(SEZs), Biotech Parks, Leather Complexes	B	7 (c)
		33**	Ports, harbours, break waters and dredging	B	7 (e)
		34**	Highways	B	7 (f)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
73	**GreenCIndia Consulting Private Limited** (formerly known as GIS Enabled Environment & Neo-graphic Centre)	1	Mining of minerals including opencast/ underground mining	A	1 (a) (i)
		3	River valley, Hydel, Drainage and Irrigation Projects	A	1 (c)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Address: 905, 908, Devika Appartment, Sector – 4, Vaishali, NCR, Ghaziabad – 201012 **e. mail:** greenc.india@gmail.com nandini@greencindia.com **Tel.:** 0120 – 4568731 09891906015 *Conditions apply*	4	Thermal power plants	A	1 (d)
		6	Coal Washeries	A	2 (a)
		8	Metallurgical industries (ferrous & non-ferrous)	A	3 (a)
		9	Cement plants	A	3 (b)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		29	Air ports	A	7 (a)
		31	Industrial estates/ parks/ complexes/areas, export processing Zones(EPZs), Special Economic Zones(SEZs), Biotech Parks, Leather Complexes	A	7 (c)
		34	Highways	A	7 (f)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
74	**Green circle Inc.**	1	Mining of minerals – opencast only	B	1 (a) (i)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Address: Green Empire (Anupushpam), Above Axis bank, Near Yash Complex, Gotri Main Road, Vadodara, Gujarat – 390021 **E.mail:** pradeep.joshi@gccipl.net; info@greencircleinc.com **Tel.:** 0265- 2371269	4	Thermal power plants	B	1 (d)
		8	Metallurgical industries (ferrous & non-ferrous)	B	3 (a)
		9	Cement plants	B	3 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		22	Distilleries	B	5 (g)
		25	Sugar Industry	B	5 (j)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development	A	8 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			projects		
75	**GLOBAL Environment & Mining Services** **Address:** "Devakinandan", Opp. PLD Bank, Venkateshwara Talkies Road, Patel Nagar, Hospet Bellary **Email:**gems_hpt@yahoo.com **Tel.:** 09448479433,08394223755 *Conditions apply*	1	Mining of minerals- Open Cast only	A	1 (a) (i)
		7	Mineral beneficiation including pelletisation	A	2 (b)
76	**Global Enviro Labs** **Address:** 2-2-1075/ 14/ A/ 1, Thilaknagar "X" Roads, Baghamberpet, Hyderabad – 500013 **E-mail:**globalelabs@rediffmail.com **Tel.:** 040- 65582886/ 27407969 09849039741 *Conditions apply*	1	Mining of minerals including Open cast/ underground mining	A	1 (a) (i)
		4	Thermal power plants	B	1 (d)
		7	Mineral beneficiation including pelletisation	B	2 (b)
		8	Metallurgical Industry (Ferrous only)	A	3 (a)
		9	Cement plants (Grinding units only)	B	3 (b)
		16	Chemical Fertilizers (SSP only)	B	5 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
77	**Global Management and Engineering Consultants International** **Address:** Saharan Tower, 308, Officers Campus Extension, Sirsi Road, Khatipura (Near Sanskar School), Jaipur – 302012 (Rajasthan) **Email:** info@gmecinternational.com / saharan@gmecinternational.com **Tel.:** 0141-2353241 Mobile: 9928599571 / 9928793002 / 9414071334 *Conditions apply*	1	Mining of minerals including opencast/underground mining	A	1(a) (i)
		2	Offshore and onshore oil and gas exploration, development & production	A	1 (b)
		4	Thermal power plants	B	1 (d)
		8	Metallurgical Industry (ferrous & non- ferrous)	B	3 (a)
		9	Cement plants	A	3 (b)
		12	Asbestos milling and asbestos based products	A	4 (c)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		33	Ports, harbours, break waters and dredging	A	7(e)
		34	Highways	A	7(f)
		36	Common Effluent Treatment Plants (CETPs)	B	7 (h)
		38	Building and construction projects	B	8 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		39	Townships and Area development projects	B	8 (b)
78	**GLOBALTECH Enviro Experts Pvt. Ltd.** **Address:** C- 23, BJB Nagar, Bhubaneshwar – 751014 **E-mail:** manojnayak333@yahoo.com globalexperts@rediffmail.com **Tel.:** 0674 – 2436853 09437033487 09937133487	1	Mining of minerals- Open cast only	A	1 (a) (i)
		4	Thermal power plants	B	1 (d)
		7	Mineral beneficiation including pelletisation	B	2 (b)
		8	Metallurgical industries(ferrous only) - both primary & secondary	A	3 (a)
		9	Cement plants	B	3 (b)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
79	**Goldfinch Engineering Systems Private Limited** (Formerly known as - Waste Encare (India) Pvt. Ltd.) **Address:** Plot no. A- 288, Road No. 16-Z, Thane Industrial Area, MIDC (Wagle Estate), Thane (West)-400604	1	Mining of minerals – open cast only	B	1 (a) (i)
		3	Irrigation projects only	B	1 (c)
		4	Thermal power plants	B	1 (d)
		8	Metallurgical industries (ferrous and non-ferrous)	B	3 (a)
		17	Pesticides industry and pesticide	A	5 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	E-mail: anand.apte@goldfinchengg.com; info@goldfinchengg.com **Tel.:** 022-25801529, 9821812132 *Conditions apply*		specific intermediates (excluding formulations)		
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		22	Distilleries	A	5 (g)
		36	Common effluent treatment plants (CETPs)	B	7 (h)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
80	**Grass Roots Research and Creation India (P) Ltd.** **Address:** F- 375, Sec – 63, Noida – 201301 **e. mail:** md@grc-india.com, info@grc-india.com **Tel.:** 0120 – 4044630, 4044660 09811554031, 09818184005 *Conditions apply*	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		2	Offshore and onshore oil and gas exploration, development & production	A	1 (b)
		3	River Valley projects	A	1 (c)
		4	Thermal power plants	A	1 (d)
		6	Coal Washeries	A	2 (a)
		7	Mineral beneficiation including pelletisation	A	2 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		8	Metallurgical industries(ferrous and non-ferrous) - both primary & secondary	A	3 (a)
		9	Cement plants	A	3 (b)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes	A	7 (c)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
81	**Gujarat Environment Management Institute** **Address:** 3rd floor, Block No. 13 Dr. Jivraj Mehta Bhavan, Old Sachivalaya, Sector 10B, Gandhinagar,	21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other	A	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Gujarat 382010 **E-mail:** paresh.gemi@gmail.com, info@gemi-india.org **Tel.:** 079-23240964 *Conditions apply*		synthetic organic chemicals and chemical intermediates)		
		30	All ship breaking yards including ship breaking units	A	7 (b)
		32	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	A	7(d)
		33	Ports, harbours, break waters and dredging	A	7(e)
		36	Common Effluent Treatment Plants (CETPs)	A	7(h)
82	**Hubert Enviro Care Systems** **Address:** No. 18, 92nd Street, 18th Avenue, Ashok Nagar, Chennai – 600083 **e. mail:** moses@hecs.in ceo.hecs@gmail.com **Tel.:**044 – 42985511, 09884390811 *Conditions apply*	1	Mining of minerals including Opencast/ Underground mining	A	1 (a) (i)
		2	Offshore and onshore oil and gas exploration, development & production	A	1 (b)
		4	Thermal power plants	A	1 (d)
		8	Metallurgical industries (ferrous & non-ferrous)	B	3 (a)
		9	Cement plants	B	3 (b)
		10	Petroleum refining industry	A	4 (a)
		18	Petro-chemical complexes (industries based on processing of petroleum fractions & natural gas and/or	A	5 (c)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			reforming to aromatics)		
		20	Petrochemical based processing	A	5 (e)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes	B	7 (c)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
83	**Idma Laboratories Limited** **Address:** 391, Industrial Phase 1 , Panchkula-	1	Mining of minerals including Open cast/ Underground mining	B	1 (a) (i)
		22	Distilleries	B	5 (g)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	134113, Haryana **E-mail:** testing@idmagroup.co.in **Tel.:** 0172- 5064827 09888002605 **Though the EIA Coordinator for this sector was approved for Cat. A. The organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment. They can take up projects in this sector only for Cat. B as an organization.* *Conditions apply*	27*	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		36	Common effluent treatment plants (CETPs)	B	7 (h)
		38	Building and construction projects	B	8 (a)
84	**Indomer Coastal Hydraulics (P) Ltd** **Address:** 63, Gandhi Road Alwar Thirunagar, Chennai 600 087 **Tel**:+91-44-2486 2482 to 84	27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal.	A	6 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	099401 41650 **E mail:** indomercoastalhydraulics@gmail.com *Conditions apply*	33	Ports, harbours, break waters and dredging	A	7 (e)
85	**In Situ Enviro Care** **Address:** 20-B, Zone-II, M.P. Nagar, Bhopal (M.P.) **E-mail:** admin@insituenvirocare.com ajay.mohan@insituenvirocare.com **Tel.:** 07555- 2577143/ 3914807 09425012465, 08878698002 *Conditions apply*	1	Mining of minerals - opencast only	B	1 (a) (i)
		4	Thermal power plants	B	1 (d)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (B)
86	**Ind Tech House Consult** **Address:**G-8/6, Ground Floor, Sector 11, Rohini, Delhi – 110 085 **E-mail:** suman.ithc@gmail.com, ithconsult@hotmail.com **Tel.:** 011-64607252,	1	Mining of minerals including Open cast/ Underground mining	B	1 (a) (i)
		2	Offshore and onshore oil and gas exploration, development & production	A	1 (b)
		3	River valley, hydel, Drainage and Irrigation projects	A	1 (c)
		27	Oil & gas transportation pipeline	A	6 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	09958499554 *Conditions apply*		(crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal		
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes	A	7 (c)
		33	Ports, harbours, break waters and dredging	A	
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (B)
87	**IRG Systems South Asia Pvt. Ltd.** **Address:** E-16, 3rd Floor, Main Market, Hauz Khas, New Delhi – 110 016	3**	River valley projects	B	1 (c)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	E-mail: amit@irgindia.com, ssanjeev@irgssa.com **Tel.:** 011-45974597, 9990418899, 9818518899 *** Though the EIA Coordinator for this sector was found suitable for Cat. A. The organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment. He can take up projects in this sector only for Cat. B as an organization.* *Conditions apply*				
88	**Intercontinental Consultants & Technocrats Pvt. Ltd.** **Address:** A- 8, Green Park, New Delhi **E-mail:** pkapila@ictonline.com **Tel.:** 011 – 40863010 *Conditions apply*	29	Air ports	A	7 (a)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		34	Highways	A	7 (f)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
89	**J. M. Environet Pvt. Ltd.** **Address:** 1st& 2nd Floor, SCO 16, Sector 10-A, Pace City, Gurgaon-122001 **e. mail:** jmenviron@hotmail.com, jmpkdeepa@hotmail.com **Tel.:**0124-4141926/ 3206559 09910494521 *Conditions apply*	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		4	Thermal power plants	A	1 (d)
		6	Coal Washeries	A	2 (a)
		7	Mineral beneficiation including pelletisation	A	2 (b)
		8	Metallurgical Industries (Ferrous & non ferrous)	A	3 (a)
		9	Cement plants	A	3 (b)
		11	Coke oven plants	A	4 (b)
		19	Manmade fibers manufacturing	A	5 (d)
		22	Distilleries	A	5 (g)
		24	Pulp & paper industry excluding manufacturing of paper from wastepaper and manufacture of paper from ready pulp without bleaching	A	5 (i)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones	B	7 (c)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes		
		33	Ports, harbours, break waters and dredging	A	7 (e)
		37	Common Municipal Solid Waste Management Facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development	B	8 (b)
90	**JV Analytical Services** **Address:** Samay Building, Bhau Patil Road, Bopadi, Pune – 20 **E.mail**: jvlabpune@gmail.com; **sales@jvanalyticalservices.com** **Tel.:** 91- 7350658988,9921107215 *** Though the EIA Coordinator for these sectors was found suitable for Cat. A, the organization as a*	1**	Mining of minerals - Open cast only	A	1 (a) (i)
		3**	Irrigation Projects only	A	1 (c)
		4**	Thermal power plants	A	1 (d)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	B	5 (f)
		22**	Distilleries	A	5 (g)
		33**	Ports, harbours, break waters and dredging	A	7 (e)
		38	Building and construction projects	B	8 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment. They can take up projects in these sectors only for Cat. B as an organization. *Conditions apply*	39	Townships and Area development	B	8 (b)
91	**Kadam Environmental Consultants** **Address**: 871/B/3, GIDC Makarpura, Vadodara-390010,Gujarat **e. mail:** sangram@kadamenviro.com kadam@kadamenviro.com **Tel.:** 0265-6131000 09714861611 *Conditions apply*	1	Mining of minerals- Open cast only	A	1 (a) (i)
			Mining of minerals including Open cast/ Underground mining	B	
		2	Offshore and onshore oil and gas exploration, development & production	A	1 (b)
		4	Thermal power plants	A	1 (d)
		8	Metallurgical industries (ferrous only-Secondary metallurgy)	A	3 (a)
		10	Petroleum refining industry	A	4 (a)
		13	Chlor-alkali industry	A	4 (d)
		16	Chemical Fertilizers	A	5 (a)
		17	Pesticides industry and pesticide specific intermediates (excluding formulations)	A	5 (b)
		18	Petro-chemical complexes (industries	A	5 (c)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			based on processing of petroleum fractions & natural gas and/or reforming to aromatics)		
		19	Manmade fibers manufacturing	A	5 (d)
		20	Petrochemical based processing (processes other than cracking & reformation and not covered under the complexes)	A	5 (e)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		22	Distilleries	A	5 (g)
		23	Integrated paint industry	B	5 (h)
		24	Pulp & paper industry excluding manufacturing of paper from wastepaper and manufacture of paper from ready pulp without bleaching	A	5 (i)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs	A	6 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			/ecologically sensitive Areas including LNG terminal		
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		30	All ship breaking yards including ship breaking units	A	7 (b)
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes	B	7 (c)
		32	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	B	7 (d)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		36	Common effluent treatment plants (CETPs)	B	7 (h)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area Development projects	B	8 (b)
92	**Kalyani Laboratories Private Limited**	1	Mining of minerals including Open	B	1 (a) (i)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			cast/ Underground mining		
	Address: Plot no. 1867, Bomikhal, Bhubaneswar **E-mail:** kalyanilab@yahoo.co.in, klaboratories@rediffmail.com **Tel.:** 0674-2585026/0674-2581992,09437306091 *The organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment. They can take up projects in these sectors only for Cat. B as an organization.* *Conditions apply*	4	Thermal power plants	B	1 (d)
		6	Coal Washeries	B	2 (a)
		7	Mineral beneficiation including pelletisation	B	2 (b)
		8	Metallurgical industries (ferrous & non ferrous)	A	3 (a)
		11	Coke oven plants	A	4 (b)
		38	Building and construction projects	B	8 (a)
93	**KITCO Ltd.** **Address:** Femith's PB No. 4407,Puthiya Road, NH Bypass, Vennala, Kochi- 682028 **E-mail:** mail@kitco.in, sindhunt@kitco.in **Tel.:** 0484-4129000/ 2805033	29	Air ports	A	7 (a)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		34	Highways	A	7 (f)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Conditions apply				
94	**KKB Envirocare Consultants Pvt. Ltd.** **Address:** Tarun Plaza, First Floor, 3-5-244, NFC Main Road, Krishna Nagar Colony, Moula Ali, Hyderabad- 500040 **E-mail:** kkbenviro@gmail.com **Tel.:** 040-65547107/ 39127107, 09391013686 *Conditions apply*	1	Mining of minerals- Open cast only	B	1 (a) (i)
		4	Thermal Power Plants	B	1 (d)
		8	Metallurgical industries (non-ferrous only)	B	3 (a)
		17	Pesticides industry and pesticide specific intermediates (excluding formulations)	A	5 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes	A	7 (c)
		37	Common Municipal Solid Waste Management Facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area Development projects	B	8 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		40 (v)	Food Processing	-	-
95	**Kratin Solutions Pvt. Ltd.** **Address:** 47,B 2-1st Floor, Lambent IT Park, Harinagar, Besa Nagpur-440037 **E-mail:** snkatiyar@kratinsolutions.com, infor@kratinsolutions.com **Tel.:** 07103-281291 , Mob. No. 9881727702 *Conditions apply*	1	Mining of minerals including opencast/underground mining	A	1 (a) (i)
		6	Coal washeries	A	2 (a)
		7	Mineral beneficiation including pelletisation	A	2 (b)
96	**L & T Infrastructure Engineering Ltd.** **Address:** House No. 6-3-1192/1/1, 5th Floor, Block No. 3, White House, Kundan Bagh, Begumpet, Hyderabad – 500016 **E-mail:** Intielhyd@lntiel.com; cvs@intiel.com **Tel.:** 040 – 40354444, 040 - 40354431 09491035051	1	Mining of minerals- Open cast only	A	1 (a) (i)
		2	Offshore and onshore oil and gas exploration, development & production	A	1 (b)
		3	River valley, hydel, Drainage and Irrigation projects	A	1 (c)
		4	Thermal power plants	A	1 (d)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding	A	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Conditions apply		drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)		
		29	Air ports	A	7 (a)
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes	A	7 (c)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		34	Highways	A	7 (f)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
97	**Louis Berger Consulting Pvt. Ltd.** **Address:** Plot No. 3, 5th Floor, Tower B, Surinder Jakhar Bhavan (IFFCO), Sector 32, Gurgaon – 122001 **E-mail:** mdave@louisberger.com	29	Air ports	A	7 (a)
		34	Highways	A	7 (f)
		38	Building and construction projects	B	8 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Tel.: 0124-4044755/ 4578200 09717699584 *Conditions apply*				
98	**LEA Associates South Asia Pvt. Ltd.** **Address:** B-1/ E-27, Mohan Cooperative Industrial Estate **E-mail:** Chandra@lasaindia.com **Tel.:** 011 – 41678150 09910060789 *Conditions apply*	1	Mining of minerals - opencast only	A	1 (a) (i)
		3	River Valley projects	A	1 (c)
		34	Highways	A	7 (f)
		38	Building and construction projects	B	8 (a)
		39	Townships and area development projects	B	8(b)
99	**M. N. Dastur and Company (Pvt.) Ltd.** **Address:** P – 17, Mission Row Extension, Kolkata – 700013 **E-mail:** sandip.m@dasturco.in	1	Mining of minerals- Open cast only	A	1 (a) (i)
		4	Thermal power plants	A	1 (d)
		6	Coal Washeries	B	2 (a)
		8	Metallurgical industries (ferrous & non-ferrous)	A	3 (a)
		11	Coke Oven Plants	A	4 (b)
		33	Ports, harbours, break waters and	A	7 (e)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Tel. : 033 – 22250500, 09433341156 *Conditions apply*		dredging		
100	**Mahabal Enviro Engineers Pvt. Ltd.** **Address:** Plot No. F-7, Road No. 21, Wagle Estate Thane-400604, Maharashtra **E-mail:** mahabal_thane@yahoo.in, thane@mahabal.com **Tel.:** 022- 25823154/ 0658/ 1663 09323058368 *Conditions apply*	1	Mining of minerals including opencast/underground mining	A	1(a) (i)
		2	Offshore and onshore oil and gas exploration, development & production	A	1 (b)
		4	Thermal power plants	A	1 (d)
		8	Metallurgical industries (ferrous & non-ferrous)	B	3(a)
		9	Cement plants	B	3(b)
		22	Distilleries	A	5(g)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		31	Industrial estates/ parks/ complexes/areas, export processing Zones(EPZs), Special Economic	A	7 (c)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			Zones(SEZs), Biotech Parks, Leather Complexes		
		32	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	A	7 (d)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		38	Building and construction projects	B	8 (a)
		39	Townships and area development projects	B	8(b)
101	**Mantras Green Resources Ltd.(**formerly known as Mantras Resources) **Address:** Hall No. 1, 1st Floor, NICE Sankul, Plot No. A -9, Opp. Nashik Merchant Co- op Bank Ltd., ITI Signal, MIDC Satpur, Nasik-422007 **E-mail:** info@mantrasresources.com, uksharma@mantrasresources.com **Tel.:** 0253 2355665 / 2355086 *Conditions apply*	1	Mining of minerals including opencast/underground mining	A	1(a) (i)
		3	Irrigation projects only	A	1 (c)
		4	Thermal power plants	B	1 (d)
		6	Coal washeries	A	2(a)
		7	Mineral beneficiation including pelletisation	A	2 (b)
		8	Metallurgical industries(non ferrous only) - both primary & secondary	A	3 (a)
		9	Cement plants	A	3 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers;	B	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			basic organic chemicals, other synthetic organic chemicals and chemical intermediates)		
		22	Distilleries	A	5 (g)
		25	Sugar Industry	B	5 (j)
		37	Common Municipal Solid Waste Management Facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
102	**Mantec Consultants Pvt. Ltd.** **Address:** D- 36, Sector – 6, Noida – 201301 **E-mail:** envmantec@yahoo.co.in, mantec@vsnl.com; **Tel.:** 0120- 4215000, 4215804 09312284682; 07409574441 *Conditions apply*	1	Mining of minerals (Open cast only)	A	1 (a) (i)
		2	Offshore and onshore oil and gas exploration, development & production	A	1 (b)
		3	River valley projects	A	1 (c)
		4	Thermal power plants	A	1 (d)
		13	Chlor-alkali industry	A	4 (d)
		16	Chemical Fertilizers	A	5 (a)
		20	Petrochemical based processing (processes other than cracking & reformation and not covered under the complexes)	A	5 (e)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk	A	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)		
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		34	Highways	B	7 (f)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
103	**Mecon Limited**	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Address: Vivekanand Path, P.O. Ranchi – 834002 **E. mail:** envenggranchi@meconlimited.co.in **Tel.:** 0651- 2481314, 2483382 09470193680 *Conditions apply*	2	Offshore and onshore oil and gas exploration, development & production	A	1 (b)
		3	River valley, hydel, Drainage and Irrigation projects	A	1 (c)
		4	Thermal power plants	A	1 (d)
		5	Nuclear power projects and processing of nuclear fuel	A	1(e)
		6	Coal washeries	A	2 (a)
		7	Mineral beneficiation including pelletisation	A	2 (b)
		8	Metallurgical industries(ferrous and non-ferrous)	A	3 (a)
		11	Coke oven plants	A	4 (b)
		8[#]	Induction/ arc furnaces/ cupola furnaces/ submerged arc furnace/ crucible furnace/ re-heating furnace of capacity more than 5Tonne per heat *[#]Sector 26 has been merged with sector 8 (for projects of induction furnace etc. > 30,000 t/y) vide AC MoM dated December 07, 2011*	B	5 (k)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical	A	6 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal		
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		30	All ship breaking yards including ship breaking units	A	7 (b)
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes	A	7 (c)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		34	Highways	A	7 (f)
		39	Township and Area development projects	B	8 (b)
104	**Metamorphosis[SM] Project Consultants Pvt. Ltd.** (formerly known as Metamorphosis) **Address:** Prakruti Bhavan, # 200, 1st & 2nd Floor, 1st Cross, 40th Main, Behind	1	Mining of minerals (open cast only)	A	1 (a) (i)
		3	River Valley, Hydel, Drainage and Irrigation projects	A	1 (c)
		7	Mineral beneficiation including pelletisation	A	2 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Silk Board, BTM, Layout II Stage, Bengaluru- 560068 **E.mail:** mail@metamorphosis-india.com Dr.shanth@metamorphosis-india.com **Tel.:** 080-26783006 09845027475 *Conditions apply*	8	Metallurgical industries (ferrous only)- both primary and secondary	A	3 (a)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
105	**Mineral Engineering Services** **Address:** 25/ XXV, Club Road, Bellary – 583103 **E-mail:** sachinraju2000@yahoo.com **Tel.:** 080 – 25432968, 25432969 09448024304 *Conditions apply*	1	Mining of minerals including Opencast / Underground mining	A	1 (a) (i)
106	**MITCON Consultancy Services Ltd.** **Address:** Agriculture College Campus, Next to DIC Office, Shivajinagar, Pune – 411005 **E-mail:** eme@mitconindia.com mitconenviro@gmail.com **Tel.:** 020-66289400/ 66289406 09822451150, 09850724177 *Conditions apply*	1	Mining of Minerals including Open cast/ Underground mining	B	1 (a) (i)
		3	River linking & Irrigation projects only	A	1 (c)
		4	Thermal power plants	A	1 (d)
		7	Mineral beneficiation including pelletisation	B	2 (b)
		8	Metallurgical industries (ferrous only)	B	3 (a)
		9	Cement plants	B	3 (b)
		21	Synthetic organic chemicals industry	A	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			(dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)		
		22	Distilleries	A	5 (g)
		24	Pulp & paper industry excluding manufacturing of paper from wastepaper and manufacture of paper from ready pulp without bleaching	A	5 (i)
		25	Sugar Industry	B	5 (j)
		31	Industrial estates/ parks/ complexes/areas, export processing Zones(EPZs), Special Economic Zones(SEZs), Biotech Parks, Leather Complexes	B	7 (c)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		34	Highways	A	7 (f)
		36	Common Effluent Treatment Plants (CETPs)	B	7 (h)
		37	Common Municipal Solid Waste Management Facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		39	Townships and Area development projects	B	8 (b)
107	**National Environmental Engineering Research Institute** **Address:** Nehru Marg, Nagpur – 440020 **E-mail:** director@neeri.res.in; rj_krupadam@neeri.res.in **Tel.:** 0712-2249885, 07758079540 *Conditions apply*	1	Mining of minerals (Open cast only)	A	1 (a) (i)
		2	Offshore & Onshore Oil and gas exploration, development & production	A	1 (b)
		3	River valley, hydel, Drainage and Irrigation projects	A	1 (c)
		4	Thermal power plants	A	1 (d)
		10	Petroleum refining industry	A	4 (a)
		13	Chlor-alkali industry	B	4 (d)
		16	Chemical fertilizers	B	5 (a)
		18	Petro-chemical complexes (industries based on processing of petroleum fractions & natural gas and/or reforming to aromatics)	A	5 (c)
		19	Textile – cotton and manmade fibers	B	5 (d)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		31	Industrial estates/ parks/	A	7 (c)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			complexes/areas, export processing Zones (EPZs), Special Economic Zones(SEZs), Biotech Parks, Leather Complexes.		
		32	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	A	7 (d)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		36	Common Effluent Treatment Plants (CETPs)	B	7(h)
		37	Common Municipal Solid Waste Management Facility (CMSWMF)	B	7 (i)
108	**National Institute for Interdisciplinary Science and Technology** **Address:** Council of Scientific & Industrial Research, Industrial Estate (PO), Pappanamcode, Thiruvanthapuram- 695019 **E-mail:** director@niist.res.in **Tel.:** 0471-2515226, 0471-2490324, 09447706202	1	Mining of minerals (Open cast only)	A	1 (a) (i)
		33	Ports, harbours, break waters and dredging	B	7 (e)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Conditions apply				
109	**N.S. envirotech Laboratories & Consultants** **Address:** A-8, Neha Medical Building, Opp. ESI Hospital, Hasanpura Road, Sodala, Jaipur – 302006, Rajasthan **E-mail:** nsenvirotech@gmail.com **Tel.:** 0141-2451959 *** The organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment.* *Conditions apply*	1	Mining of minerals including Open cast/ Underground mining	B	1 (a) (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
110	**Oasis Environmental Foundation** **Address:**6, Kartik Apartments, Plot no. 75 + 76B, Shanti Sheela Society, Off Law College Road, Erandwane, Pune- 411004	8	Metallurgical industries (ferrous & nonferrous) - both primary & secondary	A	3 (a)
		21	Synthetic organic chemicals industry (dyes and dye intermediates; bulk drugs and intermediates excluding	A	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	E-mail: oasisenv@vsnl.com **Tel.:** 020-25435691, 9822009923 *Conditions apply*		drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)		
		37	Common Municipal Solid Waste Management Facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
111	**Oil and Natural Gas Corporation** **Address:**8th Floor, Core- 4, Scope minar, laxmi Nagar, Delhi -92 **E-mail:** sharmajswarup@hotmail.com **Tel.:** 011-22406031, 9868282044, 9868282230 *Conditions apply*	2	Offshore and onshore oil and gas exploration, development & production	A	1 (b)
112	**Overseas Min-Tech Consultants Pvt. Ltd.**	1	Mining of minerals - Open cast only	A	1 (a) (i)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Address: 5th Floor, Apex Tower, Tonk Road, P.O. Jaipur, Rajasthan – 302015 **E-mail**:arun.omtc@gmail.com **Tel.:** 09460221084 Conditions apply	3	Irrigation projects only	B	1 (c)
		4	Thermal power plants	B	1 (d)
		7	Mineral beneficiation	A	2 (b)
		34	Highways	A	7 (f)
		38	Building and construction projects	B	8 (a)
113	**Paramarsh (Servicing Environment and Development** **Address:** 4/97, Viram Khand, Gomti Nagar, Lucknow – 226010, Uttar Pradesh **Email:** paramarsh.env@hotmail.com **Tel. No.** (0522) 4114250 Mobile: 09336348520 *** Though the EIA Coordinator for these sectors*	9	Cement plants (grinding units only)	B	3 (b)
		22**	Distilleries	B	5 (g)
		24**	Pulp & paper industry excluding manufacturing of paper from wastepaper and manufacture of paper from ready pulp without bleaching	B	5 (i)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	was found suitable for Cat. A, the organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment. They can take up projects in these sectors only for Cat. B as an organization. *Conditions apply*	38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
114	**Perfact Enviro Solutions Pvt. Ltd.** **Address:** 5th Floor, NN Mall, Sector – 3, Rohini, New Delhi - 110085 **E-mail:** info@perfactgroup.in; **Tel.:** 011 – 49281360 09871591330 *Conditions apply*	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		7	Mineral beneficiation including pelletisation	A	2 (b)
		15	Leather/skin/hide processing industry	A	4 (f)
		21	Synthetic organic chemicals industry (dyes and dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		22	Distilleries	A	5 (g)
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather	A	7 (c)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			complexes		
		32 A	Bio-Medical waste treatment Facilities	B	7(da)
		35	Aerial ropeways	A	7 (g)
		37	Common Municipal Solid Waste Management Facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
115	**Pioneer Enviro Laboratories & Consultants Pvt. Ltd.** **Address:** 6-3-652, Flat # 7-3, Dhruvatara Apartments, Amrutha Estates, Erramanjil, Somajiguda, Hyderabad- 500082 **E-mail:**pelcpl@yahoo.co.in, pelcpl@gmail.com **Tel.:**040-23314270, 9440677333	1	Mining of minerals- Open Cast only	A	1 (a) (i)
		3	River Valley projects	A	1 (c)
		4	Thermal power plants	A	1 (d)
		6	Coal Washeries	A	2 (a)
		7	Mineral beneficiation including pelletisation	B	2 (b)
		8	Metallurgical industries (ferrous & non-ferrous)	A	3 (b)
		9	Cements plants	A	3 (b)
		12	Asbestos milling and asbestos based products	A	4 (c)
		13	Chlor-alkali industry	A	4 (d)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Conditions apply	16	Chemical Fertilizers- SSP only	B	5 (a)
		21	Synthetic organic chemicals industry (dyes and dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		22	Distilleries	A	5 (g)
		25	Sugar Industry	B	5 (j)
		31	Industrial estates/ parks/ complexes/areas, export processing Zones(EPZs), Special Economic Zones(SEZs), Biotech Parks, Leather Complexes	A	7 (c)
		37	Common Municipal Solid Waste Management Facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
116	**Pollution Control Research Institute** **Address:** Bharat Heavy Electricals Limited (BHEL)Ranipur, Haridwar – 249403, Uttarakhand	4	Thermal power plants	A	1 (d)
		16	Chemical Fertilizers	A	5 (a)
		24	Pulp & paper industry excluding manufacturing of paper from waste paper and manufacture of paper	A	5 (i)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	E-mail: ambrish@bhelhwr.co.in **Tel.:** 01334- 281872 09410395764 *Conditions apply*		from ready pulp without bleaching		
		40 (v)	Food processing	-	-
117	**Pollution and Ecology Control Services** **Address:** Near Dhantoli Police Station, Dhantoli, Nagpur – 440012 **E-mail:** pecs_nagpur@rediffmail.com **Tel.:** 0712-6504146, 09423683728, 09373128182 *Conditions apply*	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		3	River Valley projects	A	1 (c)
		4	Thermal power plants	A	1 (d)
		6	Coal Washeries	A	2 (a)
		7	Mineral beneficiation	A	2 (b)
		8	Metallurgical industries (Ferrous & nonferrous)- both primary and secondary (including Induction &other furnaces > 30000 TPA)	A	3 (a)
		9	Cement plants	B	3 (b)
		11	Coke oven plants	A	4 (b)
		36	Common effluent treatment plants (CETPs)	B	7 (h)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
118	**Pragathi Labs & Consultants Pvt. Ltd.** **Address:** Plot No. 8, Temple Rock Enclave, Lane Opp. Linkwell Building, Tarbund 'X' roads, Secunderabad – 500009 **E-mail:**madala_r@yahoo.com **Tel.:** 040- 27897213; 09515121956 09849872272 *Conditions apply*	1	Mining of minerals including opencast/underground mining	A	1(a) (i)
		3	River Valley projects(Irrigation only)	A	1 (c)
		4	Thermal power plants	A	1 (d)
		8	Metallurgical industries(Ferrous only)	A	3 (a)
		21	Synthetic organic chemicals industry	A	5 (f)
		27	Oil & Gas transportation pipeline	A	6 (a)
		32	Common hazardous waste treatment, storage and disposal facilities(TSDFs)	B	7 (d)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		34	Highways	A	7 (f)
		37	Common Municipal Solid Waste Management Facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
		40(v)	Food Processing	A	-
119	**Precitech Laboratories Private Limited** (formerly known as Precitech Laboratories)	4	Thermal power plants	B	1 (d)
		9	Cement plants	B	3 (b)
		17	Pesticides industry and pesticide specific intermediates (excluding	A	5 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			formulations)		
	Address: 1st Floor Bhanujyot Complex, Plot No. C5/27, Opp Oriental Ins. Co. Ltd., Nr. GIDC Char Rasta Vapi - 396195 **E-mail:**vapi@precitechlab.com, dr.hmbhatt@precitechlab.com, rujul.h.bhatt@gmail.com **Tel.:** 0260-2425542, 2420995, 2424901, 3298985 09825121185, 9925008673 *Conditions apply*	19	Manmade fibers manufacturing	A	5 (d)
		20	Petrochemical based processing (processes other than cracking & reformation and not covered under the complexes)	A	5 (e)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		33	Ports, harbours, break waters and dredging	B	7 (e)
		38	Building and construction projects	B	8 (a)
120	**Pridhvi Envirotech (P) Ltd.** **Address:** 184/c,Lawn House, 4th floor, Vengalraonagar, Hyderabad - 500 038 **E-mail:** pvr@pridhvienviro.com **Tel.:** 040-40179770, 9849023662	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		4	Thermal power plants	B	1 (d)
		8	Metallurgical industries (ferrous & non-ferrous)	B	3 (a)
		9	Cement plants	B	3 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding	A	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Conditions apply		drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)		
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes	A	7 (c)
		37	Common Municipal Solid Waste Management Facility (CMSWMF)	B	7(i)
		38	Building and construction projects	B	8(a)
		39	Townships and Area development projects	B	8(b)
121	**Project & Development India Limited** **Address:** CIFT Building, PDIL, Sindri, Dhanbad, Jharkhand-828122 **E-mail:** Dhn_envpdil@bsnl.in , ajay15b@gmail.com **Tel.:** 03262350801, 09431777483 *Conditions apply*	10	Petroleum refining industry	A	4 (a)
		16	Chemical Fertilizers	A	5 (a)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quality indicated	B	6 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			in column 3 of schedule 2 & 3 of MSIHC Rules 1989 amended 2000)		
		29	Air ports	A	7 (a)
122	**R. K. Consultants** **Address:**17-E/ 403, C. H.B, Jodhpur- 342008 **E.mail:**rpurohit2226@gmail.com, rkconsultants@sify.com **Tel.:**0291- 2706098, 09829021098 *Conditions apply*	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		38	Building and construction projects	B	8 (a)
123	**R. S. Envirolinks Technologies Pvt. Ltd.** **Address:** 402, Radisson Suites Commercial Plaza, B Block, Sushant Lok 1, Gurgaon – 122009 **e. mail:** ravi@rstechnologies.co.in **Tel.:** 0124 – 4295383 09810136853	27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		33	Jetties only	B	7 (e)
		34	Highways	A	7 (f)
		40 (i)	Automobile and Auto Components	-	-

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Conditions apply				
124	**Ramans Enviro Services Pvt. Ltd.** **Address:** SF 23 & 24, Camps Corner, Nr. AUDA Garden, Prahladnagar, Ahmedabad – 380015 **e. mail:** ramans_consultancy@rediffmail.com samirchoksi88@yahoo.com **Tel.:** 079 – 26937472, 26937411 09824034495 *Conditions apply*	4	Thermal power plants	B	1 (d)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quality indicated in column 3 of schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		32	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	B	7 (d)
		36	Common effluent treatment plants (CETPs)	B	7 (h)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area Development projects	B	8 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
125	**Ramky Enviro Services Private Limited** **Address:** 2nd Floor, Ramky Grandiose, Ramky Towers Complex, Gachibowli, Hyderabd- 500032, Telangana **e. mail:** drchakradhar@ramky.com consultancy@ramky.com vvijaykumar@ramky.com **Tel.:** 0*40 2331 0091,* 09849597458 *Conditions apply*	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		2	Offshore and onshore oil and gas exploration, development & productions	A	1 (b)
		3	River Valley projects	A	1 (c)
		4	Thermal power plants	A	1 (d)
		20	Petrochemical based processing (processes other than cracking & reformation and not covered under the complexes)	A	5 (e)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes	A	7 (c)
		32	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	A	7 (d)
		33	Ports, harbours, break waters and	B	7 (e)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			dredging		
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area Development projects	B	8 (b)
126	**Ramji Mine Envirotech** **Address:** Plot No.-21,I Floor, Aarna 2 Tower, Kartarpura, Industrial Area, 22 Godam Jaipur-302006 **E-mail:** rme.envirotech@gmail.com, mkguptarqp@gmail.com, **Tel.:** 0140-4036199, 9799744347 *Conditions apply* *** Though the EIA Coordinator for this sector was found suitable for Cat. A, the organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment. They can take up projects in these sectors only for Cat. B as an organization.*	1**	Mining of minerals including Open cast	A	1 (a) (i)
			Mining of minerals - Underground mining	B	
		6	Coal washeries	B	2 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
127	**Right Source Industrial Solutions Pvt. Ltd.** **Address:** Plot No.203, H.No.5-36/203, Prashanthi Nagar, Kukatpally, Hyderabad- 500072 **E.mail:** prasad@rightsource.co.in info@rightsource.co.in **Tel.:**04023070602/23075699/40126589/65873137, 09885560011 *Conditions apply*	1	Mining of minerals including opencast/underground mining	B	1(a) (i)
		17	Pesticides industry and pesticide specific intermediates(excluding formulation)	A	5 (b)
		21	Synthetic organic chemicals industry(dyes & dye intermediates bulk drug, and intermediates excluding drug formulation, synthetic rubbers, basic organic chemicals, other synthetic organic chemicals and chemical intermediates.	A	5 (f)
		38	Building and construction project	B	8 (a)
128	**Rites Limited** **Address:** RITES Bhawan, Plot no. 1, Sector 29,Gurgaon- 122001	3	River Valley projects	B	1 (c)
		29	Air ports	A	7 (a)
		34	Highways	A	7 (f)
		35	Aerial ropeways	A	7 (g)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	E-mail: ue.rites@gmail.com, **Tel.:** 9810404276 *Conditions apply*	37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
129	**SBA Enviro Systems Pvt Ltd.** **Address**: 201, DDA Local Shopping Centre, E Block, Vikaspuri, New Delhi 110018 **E.mail:** sbaenvirosystems@ymail.com **Tel.:** 91 11 45118929 *** Though the EIA Coordinators for these sectors were found suitable for Cat. A, the organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment. They can take up projects in these sectors only for Cat. B as an organization.* *Conditions apply*	8	Metallurgical industries - (ferrous & nonferrous)	B	3 (a)
		15	Leather/ skin/ hide processing industry	A**	4 (f)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	B	5 (f)
		34	Highways	A**	7 (f)
		38	Building and Construction projects	B	8(a)
		39	Townships and Area development projects	B	8(b)
130	**SD Engineering Services Pvt. Ltd.**	3	River Valley, Hydel, Drainage and	A	1 (c)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Address: 14, Age Arcade, New Osmanpura, Near Sant Eknath Rang Mandir, Aurangabad - 431 005 **E-mail:**sdesplinida@gmail.com, deepak.sanghai@gmail.com **Tel.:** 0240-2333622, 2333064 *Conditions apply*		Irrigation projects		
		4	Thermal power plants	A	1 (d)
		8	Metallurgical industries - (ferrous & nonferrous)	A	3 (a)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		22	Distilleries	A	5 (g)
		25	Sugar Industry	B	5 (j)
		36	Common effluent treatment plants (CETPs)	B	7 (h)
		38	Building and Construction projects	B	8(a)
		39	Townships and Area development projects	B	8(b)
131	**Sadekar Enviro Engineers Pvt. Ltd.** **Address:** 310, Dempo Towers, EDC Patto, Panaji-403001	1	Mining of minerals (Open cast only)	A	1 (a) (i)
		2	Offshore and onshore oil and gas exploration, development & production	A	1 (b)
		17	Pesticide industry and pesticide	A	5(b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	E.mail: sadekarenviro@rediffmail.com psadekar@yahoo.com prs@sadekarenviro.com **Tel.:** 02437048, 09423055718, 09423318140 09820144125/09423055718 *Conditions apply*		specific intermediates (excluding formulations)		
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates	A	5 (f)
		25	Sugar industry	B	5(j)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/ coral reefs/ ecologically sensitive Areas including LNG terminal	A	6 (a)
		3	Industrial estates/ parks/ complexes/Areas, export processing Zones(EPZs), Special economic zones(SEZs), Biotech Parks, Leather Complexes	A	7 (c)
		33	Ports, Harbours, break waters and dredging	A	7 (e)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		39	Township and area development projects	B	8 (b)
132	**San Envirotech Pvt. Ltd.** **Address:**401/402/423/424/324, Medicine Market, Opposite Shefali Centre, Paldi, Cross road, Ahmedabad, Gujarat- 380007 **Email:**Mahendra.sepl@gmail.com **Tel.:** 07926583077, 09825007201, 09327637201 *Conditions apply*	1	Mining of minerals (Open cast only)	B	1 (a) (i)
		4	Thermal power plants	A	1 (d)
		8	Metallurgical industries (ferrous only) -both primary & secondary	B	3 (a)
		9	Cement plants	B	3 (b)
		13	Chlor-alkali industry	B	4 (d)
		16	Chemical Fertilizers	A	5 (a)
		17	Pesticides industry and pesticide specific intermediates (excluding formulations)	A	5 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates	A	5 (f)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quality indicated in column 3 of schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		38	Building and construction projects	B	8 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
133	**SGM Corporate Consultants Pvt. Ltd.** **Address**: Sahil Apartment, 1102/A/4B, Lakaki Road,Opp. Kirloskar Banglow, Model Colony, Shivaji Nagar , Pune -411016 **E-mail:** sgm_pune@yahoo.com, sgmcorporate@gmail.com **Tel.:** 020- 25822900 09822180803 *Conditions apply*	1	Mining of minerals - Open cast only	B	1 (a) (i)
		4	Thermal Power Plants	B	1 (d)
		9	Cement plants	A	3 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	B	5 (f)
		22	Distilleries	A	5 (g)
		25	Sugar Industry	B	5 (j)
		38	Building and construction projects	B	8 (a)
134	**SAWEN Consultancy Services Pvt. Ltd.** **Address:** 409-A, 426-B, 417-A & B, Sahara Shopping Centre, Faizabad Road, Lucknow – 226016	7	Mineral Beneficiation	B	2(b)
		25	Sugar Industry	B	5 (j)
		38	Building and construction projects	B	8 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	E-mail: consultancy_sawens@yahoo.co.in, **Tel.:** 0522- 7379444471-74 09450738044 *Conditions apply*	39	Townships and Area development projects	B	8 (b)
135	**SGS India Pvt. Ltd.** **Address:** 250, Udyog Vihar, Phase IV, Gurgaon - 122015 **E-mail:** sanjeev.kumar@sgs.com **Tel.:** 0124 – 2399990, 2399998 09871794706 *Conditions apply*	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		2	Offshore and onshore oil and gas exploration, development & production	A	1 (b)
		3	River Valley	B	1 (c)
		4	Thermal power plants	A	1 (d)
		9	Cement plants	A	3 (b)
		10	Petroleum refining industry	A	4 (a)
		12	Asbestos milling and asbestos based products	A	4 (c)
		18	Petro-chemical complexes (industries based on processing of petroleum fractions & natural gas and/or reforming to aromatics)	A	5 (c)
		20	Petrochemical based processing (processes other than cracking & reformation and not covered under the complexes)	A	5 (e)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		22	Distilleries	A	5 (g)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quality indicated in column 3 of schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		29	Air ports	A	7 (a)
		33	Ports, Harbours, Jetties, marine terminals, break waters and dredging	A	7 (e)
		34	Highways	A	7 (f)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development	B	8 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			projects		
136	**Shivalik Solid Waste Management Limited** **Address:** (UPL Enviro Infrastructure Group Co.), 2nd Floor, SCO 20-21, near Hotel Dolphin,Zirakpur,Punjab-140604 **E-mail:** s.brahma@tatvaglobal.com **Tel.:** 08872028131, 08288079363, 09316028131 *Conditions apply*	1	Mining of minerals- Open cast only	A	1 (a) (i)
		3	River Valley projects	A	1 (c)
		4	Thermal power plants	B	1 (d)
		8	Metallurgical industries(ferrous & nonferrous) - both primary & secondary	A	3 (a)
		17	Pesticides industry and pesticide specific intermediates (excluding formulations)	A	5 (b)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	B	6 (a)
		32	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	A	7 (d)
		32 A	Bio-medical waste treatment facilities	B	7 (da)
		36	Common effluent treatment plants (CETPs)	B	7 (h)
		38	Building and construction projects	B	8 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
137	**Shriram Institute for Industrial Research** **Address:** 19, University Road Delhi- 110007 **E-mail:** sridlhi@shriraminstitute.org **Tel.:** 011- 27667267 *Conditions apply*	27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quality indicated in column 3 of schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		31	Industrial estates/ parks/ complexes/Areas, export processing Zones(EPZs), Special economic zones(SEZs), Biotech Parks, Leather Complexes	A	7 (c)
138	**Siddhi Green Excellence Private Limited** **(Earlier known as Siddhi Consultants)** **Address:** "Kamal Arcade", Shop No. 3, Comm. Plot No. C-3/3, Near State Bank of India, G.I.D.C, Ankleshwar – 393002	17	Pesticides industry and pesticide specific intermediates (excluding formulations)	A	5 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other	A	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	E-mail: siddhi_ank@rediffmail.com **Tel.:** 02646- 224805 09824345895 *Conditions apply*		synthetic organic chemicals and chemical intermediates)		
139	**Singareni Collieries Company Limited** **Address:** Kothagudem Collieries Bhadrachalam Road Rly. Station, Khammam District – 507101 **E-mail:**dpp@scclmines.com **Tel.:** 08744242328 09491144455 *Conditions apply*	1	Mining of minerals including Open cast and Underground mining	A	1 (a) (i)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
140	**S.M. Consultants** **Address:** S.M.Tower, Plot No.- 130,Mancheswar Industrial Estate, Rasulgarh, Bhubaneswar-751010, Odisha **E-mail:** qualitycontrol@smcindia.com Tel.: 08908215859 *** Though the EIA Coordinator for this sector was found suitable for Cat. A, the organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment. They can take up projects in these sectors only for Cat. B as an organization.* *Conditions apply*	34**	Highways	B	7 (f)
		38	Building and construction projects	B	8 (a)
141	**SMS Envocare Ltd.** **Address:** 301, Pentagaon, P3, Magarpatta City, Hadapsar, Pune - 411028	3	River Valley projects	B	1 (c)
		4	Thermal power plant	B	1(d)
		19	Man made fibre manufacturing	A	5(d)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk	A	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	E-mail: nilesh.deshmukh@smsl.co.in **Tel.:** 020- 66801111 09922901511 *Conditions apply*		drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)		
		22	Distilleries	A	5 (g)
		25	Sugar Industry	B	5 (j)
		32	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	A	7 (d)
		36	Common Effluent Treatment Plants (CETPs)	B	7 (h)
		37	Common Municipal Solid Waste Management Facility (CMSWMF)	A	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
142	**Sneha Hi-Tech Products** **Address:** No.8 & 28, 4 th Cross, Maruthinagar	1	Mining of minerals - Open cast only	A	1 (a) (i)
		36	Common Effluent Treatment Plants (CETPs)	B	7 (h)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Chandra Layout, 80 feet road, Nagarabhavi, Bangalore-560072 **E-mail:** snehahitechproducts@gmail.com **Tel.:** 080-23180113/23390341 **The organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment.* *Conditions apply*	38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
143	**Srujan Research and Planning foundation** **Address:** Sharada Center, 11/1 Erandawane, Off Karve Road, Pune - 411004 **E-mail:** rahul.nawle@srujanfoundation.com, planning@srujanfoundation.com **Tel.:** 020-65333394/ 09970181813 *Conditions apply*	38	Building and construction projects	B	8 (a)
		39	Townships and Area Development projects	B	8 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
144	**State Forest Research Institute** **Address:** State Forest Research Institute, Polipathar, Narmada Road, Jabalpur - 482008 (M.P) **E-mail:** pandeyrk1@yahoo.com **Tel.:** ***The organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment. They can take up projects in these sectors only for Cat. B as an organization.* *Conditions apply*	1	Mining of minerals including Open cast and Underground mining	B	1 (a) (i)
		3	River valley projects	B	1 (c)
145	**Sri Sai Manasa Nature Tech Pvt. Ltd.** **Address**: Plot No. 74/A, Flat No. 102, Central Bank Building, Kalyan Nagar, Hyderabad – 500038 **E-mail:**ssmntpl@gmail.com	1	Mining of minerals – Open cast only	A	1 (a) (i)
		4	Thermal power plants	A	1 (d)
		6	Coal washeries	A	2 (a)
		8	Metallurgical industries (ferrous & non ferrous)	B	3 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Tel.: 040- 23816333 09010548548 *Conditions apply*	9	Cement plants	A	3 (b)
		22	Distilleries	B	5 (g)
		31	Industrial estates/ parks/ complexes/Areas, export processing Zones(EPZs), Special economic zones(SEZs), Biotech Parks, Leather Complexes	B	7 (c)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
146	**Srushti Sewa** **Address:** Harihar Niwas, Agrasen Marg, Near Adivasi Bhavan, Giri Peth, Nagpur – 440010 (M.S.) **E-mail:** srushtisewa@sancharnet.in srushtisewa@yahoo.com **Tel.:** 0712- 6888545 09422108095, 08237002633 *** Though the EIA Coordinators for these sectors were found suitable for Cat. A, the organization as a*	1	Mining of minerals including underground mining	A**	1 (a) (i)
		3	River Valley Projects	A**	1 (c)
		4	Thermal power plants	A**	1 (d)
		6	Coal washeries	A**	2 (a)
		8	Metallurgical industries (ferrous & non-ferrous)	B	3 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment. They can take up projects in these sectors only for Cat. B as an organization. *Conditions apply*				
147	**SV Enviro Labs & Consultants** **Address:** B1-Block –B, IDA Auto Nagar, Visakhapatnam- 530012 **E-mail:** svenviro_labs@yahoo.co.in **Tel.:** 0891- 2797377 09440338628 *Conditions apply*	1	Mining of minerals (Open cast only)	A	1 (a) (i)
		3	River Valley Projects	A	1 (c)
		16	Chemical Fertilizers (SSP & DAP plants only)	A	5 (a)
		22	Distilleries	A	5 (g)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		33	Ports, Harbours, break waters and dredging	A	7 (e)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		39	Townships and Area development projects	B	8 (b)
148	**TATA Consulting Engineers Limited** **Address:** Matulya Center, A-249, Senapati Bapat Marg, Lower Parel (west), Mumbai – 400013 **E-mail:** vsbapat@tce.co.in; alokk@tce.co.in **Tel.:** 022- 66624743, 66624724 *Conditions apply*	1	Mining of minerals (Open cast only)	B	1 (a) (i)
		4	Thermal power plants	A	1 (d)
		8	Metallurgical industries (ferrous only) – both primary and secondary	A	3 (a)
		11	Coke oven plants	A	4 (b)
		16	Chemical Fertilizers	A	5 (a)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
149	**TEAM Institute of Science & Technology Pvt Ltd.** **Address:** E-65, Chittaranjan Marg, C-Scheme, Jaipur,Rajasthan-3020022 **e. mail:** eia@teamtesthouse.com	1**	Mining of minerals - Open cast only	A	1 (a) (i)
		36	Common effluent treatment plants (CETPs)	B	7(h)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Tel.: 0141-2369980 ***Though the EIA Coordinator for this sector was found suitable for Cat. A, the organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment. They can take up projects in this sector only for Cat. B as an organization.* *Conditions apply*	38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
150	**TEAM Labs and Consultants** **Address:** B- 115 & 509, Annapurna Block, Aditya Enclave, Ameerpet, Hyderabad – 500038 **e. mail:**teamlabs@gmail.com **Tel.:** 040 – 23748666/ 23748616 09866415966 *Conditions apply*	1	Mining of minerals including Open cast / Underground mining	A	1 (a) (i)
		4	Thermal power plants	A	1 (d)
		8	Metallurgical industries (ferrous only) – both primary and secondary	A	3 (a)
		9	Cement plants	A	3 (b)
		13	Chlor-alkali industry	A	4 (d)
		17	Pesticides industry and pesticide specific intermediates (excluding formulations)	A	5 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding	A	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)		
		31	Industrial estates/ parks/ complexes/Areas, export processing Zones(EPZs), Special economic zones(SEZs), Biotech Parks, Leather Complexes	A	7 (c)
		34	Highways	A	7 (f)
		38	Building and construction projects	B	8(a)
		39	Townships and Area development projects	B	8 (b)
151	**Terracon Ecotech Pvt. Ltd.** **Address:** 202, Kingston, Tejpal Road, Vile Parle (E), Mumbai 400057, India **e. mail:** info@terraconindia.com **Tel.:**022-2613939/40/41, 9820828087 *Conditions apply*	1	Mining of minerals- Open cast only	B	1 (a) (i)
		2	Off shore and on shore oil and gas exploration, development and production	A	1(b)
		3	River valley, hydel, drainage and irrigation projects	B	1 (c)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		33	Ports, harbours, break waters and dredging	A	7 (e)
		34	Highways	A	7 (f)
		37	Common municipal solid waste management facility (CMSWMF)	B	7(i)
		38	Building and Construction projects	B	8(a)
152	**T. R. Associates** Address: Ganesh Meridian, Block No - C, Office No - 605a, Opp. Kargil Petrol Pump,Nr. Sola Over Bridge, B/S. Shapath Hexa, S.G. Highway, Ahmedabad 380060 **E-mail:** trassociates@hotmail.com **Tel.:** 98253 71099	4	Thermal power plants	B	1 (d)
		9	Cement plants	B	3 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		38	Building and construction projects	B	8 (a)
153	**Udaipur Min-Tech Pvt. Ltd.** **Address:** 206, "Apeksha Complex", Sector 11, Hiran Magri, Udaipur- 313002 **E-mail:** ssbist@udrmintech.com	1	Mining of minerals - Open cast mining only	A	1 (a) (i)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Tel.: 0294- 2489672 09414167672, 09950998672 *Conditions apply*				
154	**ULTRA-TECH** **Address:** 206, 224-225, Jai Commercial Complex, Eastern Express Highway, Opp. Cadbury, Khopat, Thane West - 400 601 **E-mail:** sawantkishor@ultratech.in **Tel.:** 020-25281338 09322917772 *Conditions apply*	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		2	Offshore & Onshore Oil and gas exploration, development & production	A	1 (b)
		3	River Valley projects	A	1 (c)
		4	Thermal Power Plants	A	1 (d)
		7	Mineral beneficiation	A	2 (b)
		8	Metallurgical industries- (ferrous & nonferrous) - both primary and secondary	A	3 (a)
		9	Cement Plants	A	3 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		22	Distilleries	A	5 (g)
		25	Sugar Industry	B	5 (j)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		34	Highways	A	7 (f)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
155	**Unistar Environment & Research Labs Pvt. Ltd.** **Address:** 215, Royal Arcade, Near GIDC Office, Vapi – 396195 **E-mail:** unistar@uerl.in	8	Metallurgical industries (ferrous only)	B	3 (a)
		19	Manmade fibers manufacturing	A	5 (d)
		20	Petrochemical based processing (processes other than cracking & reformation and not covered under the complexes)	B	5 (e)
		21	Synthetic organic chemicals industry	A	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Tel.: 0260 – 2435610, 2433966 09909946373 *Conditions apply*		(dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)		
		23	Integrated paint industry	B	5 (h)
		38	Building and construction projects	B	8 (a)
156	**Vardan Environet** **Address:** D-142, Sushant-Lok III, Golf Course Extension Road, Sector- 57, Gurgaon, Haryana **E-mail:** vardanenviro165@gmail.com **Tel.:**09953147268, 09971684812 *Conditions apply*	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		7	Mineral beneficiation	A	2 (b)
		8	Metallurgical industries (ferrous & nonferrous)- both primary & secondary	A	3 (a)
		9	Cement Plants	B	3 (b)
		11	Coke oven plants	B	4 (b)
		20	Petrochemical based processing (processes other than cracking & reformation and not covered under the complexes)	B	5 (e)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other	A	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			synthetic organic chemicals and chemical intermediates)		
		22	Distilleries	A	5 (g)
		25	Sugar Industry	B	5 (j)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		34	Highways	A	7 (f)
		36	Common effluent treatment plants (CETPs)	B	7(h)
		37	Common municipal solid waste management facility (CMSWMF)	B	7(i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
157	**Vasantdada Sugar Institute** **Address:** Manjari (BK), Taluka, Haveli, Pune-412307 **E-mail:** ds.nimbalkar@vsisugar.org.in **Tel.:** 020- 26902343 *Conditions apply*	4	Thermal Power Plants – Biomass based projects only	A	1 (d)
		22	Distilleries	A	5 (g)
		25	Sugar Industry	B	5 (j)
		39	Townships and Area development projects	B	8 (b)
158	**Vimta Labs Limited** **Address:** 142, IDA, Phase – II, Cherlapally, Hyderabad – 500051 **E-mail:** janardhan@vimta.com **Tel.:** 040- 27264141 09000711309, *Conditions apply*	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		2	Offshore & Onshore Oil and gas exploration, development & production	A	1 (b)
		4	Thermal power plants	A	1 (d)
		6	Coal Washeries	A	2 (a)
		8	Metallurgical industries- (ferrous & nonferrous) - both primary and secondary	A	3 (a)
		9	Cement plants	A	3 (b)
		12	Asbestos milling and asbestos based products	A	4 (c)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	B	5 (f)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		29	Air ports	A	7 (a)
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes	A	7 (c)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
159	**Vison Labs** **Address:** H.No. 16-11-23/37/A, Plot No. 205, Opp. RTA Office, Sagar Hotel Building, Malakpet, Hyderabad – 500036 **E-mail:** vison_labs@yahoo.co.in vison.labs@gmail.com **Tel.:** 040- 24544320 09849110019 *Conditions apply*	1	Mining of minerals - Opencast mining only	B	1 (a) (i)
		4	Thermal power plants	B	1 (d)
		8	Metallurgical Industries	B	3 (a)
		9	Cement plants	B	3 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		38	Building and construction projects	B	8 (a)
160	**Visiontek Consultancy Services Pvt. Ltd.** **Address:** Plot No.-108, District Center, Chandrasekharpur, Bhubaneswar, Khurda -751016 **e-mail:** p_kumar_ranjan@vcspl.org **Tel.:** 0674-2744594	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		3	River valley projects	A	1 (c)
		4	Thermal power plants	A	1 (d)
		6	Coal washeries	A	2 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	09437179882, 9338770319 *Conditions apply*	7	Mineral beneficiation	A	2 (b)
		8	Metallurgical industries- (ferrous & nonferrous) - both primary and secondary	A	3 (a)
		9	Cement plants	A	3 (b)
		11	Coke oven plants	A	4 (b)
		15	Leather/ skin/ hide processing industry	A	4 (f)
		32	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	A	7 (d)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		34	Highways	B	7(f)
		37	Common Municipal Solid Waste Management Facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
161	**VITYA Consultants Pvt. Ltd.**	31	Industrial estates/ parks/ complexes/ Areas, export processing	A	7 (c)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Address: 4th Floor, Laxmi Plaza, Adj. Shenoy Nursing Home, East Marredpally , Secunderabad - 500 026 (India) **E-mail:**kk@vitya.in ed.vitya@gmail.com **Tel.:** 040 – 66233979 09989211387, 09000611387 *Conditions apply*		zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes		
		34	Highways	A	7 (f)
		36	Common effluent treatment plants (CETPs)	B	7 (h)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
162	**VK:e Environmental** **Address:** 73/2, Bhakti Marg, Off Law college Road, Erand wane Pune-411004 **E-mail:**aparanjape@vke-environmental.com, anaghap@gmail.com **Tel.:** 0120-66268888 Mob. No.9822013405 *Conditions apply*	38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
163	**Voyants Solutions Private Limited** **Address:** 403, 4th Floor, Park Centra Sector -30, NH-8 Gurgoan-122001 **E-mail:** info@voyants.in **Tel.:** 0124-4598200 /9599757300 *Conditions apply*	1	Mining of minerals (Open cast only)	A	1 (a) (i)
		3	River valley projects	A	1 (c)
		4	Thermal power plants	B	1 (d)
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes	B	7 (c)
		33	Ports, harbours break waters and dredging	A	7 (e)
		34	Highways	A	7 (f)
		37	Common Municipal Solid Waste Management Facility (CMSWMF)	B	7(h)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
164	**Wapcos Limited** **Address:** 76 – C, Institutional Area, Sector – 18, Gurgaon - 122015 **E-mail:**wapcos.cfe@gmail.com **Tel.:** 0124 – 2397396, 09811487830 *Conditions apply*	1	Mining of minerals (Open cast only)	A	1 (a) (i)
		3	River valley projects	A	1 (c)
		4	Thermal power plants	A	1 (d)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		38	Building and construction projects	B	8 (a)
165	**Wolkem India Limited** **Address:** Consultancy Division, Post Box No. 21 E – 102 Mewar Industrial Area (Madri), Udaipur – 313003 Email: mahip@wolkem.com **Tel.:** 0294- 6452067 08890836012 *Conditions apply*	1	Mining of minerals including Opencast / Underground mining	A	1 (a) (i)
		7	Mineral beneficiation	A	2 (b)
		8	Metallurgical Industries (Secondary Ferrous)	B	3 (a)
		9	Cement plants	A	3 (b)
		16	Chemical Fertilizers	A	5 (a)
		17	Pesticides industry and pesticide specific intermediates (excluding formulations)	A	5 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk	A	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)		
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
166	**Yes Enviro Solutions** **Address:** G-256, Second Floor, Sec-63, Noida, 201301 **Email:** info@yesenviro.co.in **Tel:** 07838007393 ***Though the EIA Coordinator for this sector was found suitable for Cat. A, the organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment. They can take up projects in this sector only for Cat. B as an organization.* *Condition Apply*	1	Mining of Minerals	B	1 (a) (i)
		3	River valley projects	B	1 (c)
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes	B	7 (c)
		34**	Highways	A	7 (f)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)

Note*:* Revision 56 (August 08, 2017): List of EIA Consultant Organizations

1. ***(#) includes Accredited EIA Consultant Organizations who have submitted requisite details which are under process***
2. **New Accredited EIA Consultant Organizations:** None
3. **Deletion from the list:** Envirochem Laboratories (P) Ltd. and Naik Environment Research Institute Limited
4. **The ACOs who have not taken requisite actions to comply with the requirements of Version 3 are mentioned in List 'B'**
5. **ACOs shifted to List 'B':** None
6. **While preparing this list, due care has been taken. However, any inadvertent error cannot be ruled out. In case any error is noticed, kindly intimate the same to QCI-NABET.**

-TRUE COPY-

ANNEXURE R/12

BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI

Appeal No. 08 of 2014
(M.A. No. 112 of 2014)

IN THE MATTER OF:

Akhil Bhartiya Jeev Raksha Bishnoi Sabha (Regd.) & Ors.
Vs.
Union of India & Ors.

CORAM : HON'BLE MR. JUSTICE ADARSH KUMAR GOEL, CHAIRPERSON
HON'BLE DR. JUSTICE JAWAD RAHIM, JUDICIAL MEMBER
HON'BLE MR. JUSTICE S.P. WANGDI, JUDICIAL MEMBER
HON'BLE DR. NAGIN NANDA, EXPERT MEMBER

Present: **Applicant:** **Mr. M C Mehta, Adv., Ms. Katyayni & Ms. Mehak Rastogi, Advs.**
Respondents: **Kshatrshal Raj, Mr. Tanuj Agarwal, Advs. for Respondent No.5**
Ms. Deepsikha Bharti, Adv. for MoEF&CC

	Date and Remarks	Orders of the Tribunal
	Item No. 39 **September 24, 2018** **PU & DV**	1. This appeal is directed against environmental clearance dated 27th December, 2013 granted by the Ministry of Environment, Forest and Climate Change (MoEF) in favour of Respondent No. 5, Nuclear Power Corporation of India Limited (NPCIL) for setting up a Nuclear Power Plant. The appeal has been filed, *inter alia,* on the following grounds: (i) Gorakhpur, District Fatehabad, Haryana is inhabited by the Bisnoi tribe and is home to a number of wild animals like Chinkara, Russel Viper, Sanda and Common Yellow Bet is also finds mention in EIA report. Black Buck declared as a State animal by Haryana Forests and Wildlife Preservation Department, is also one of the endangered species included in Scheduled-I of the Wild Life (Protection) Act, 1972. No head count of the wild life in region was ever carried out nor efforts made to that end before the Nuclear Power Project was planned. The soil and natural landscape of the region has made it an ideal

	Item No. 39 **September 24, 2018** **PU & DV**	habitat for such animals. (ii) The Environmental Impact Assessment (EIA) for the project had been carried out without determining its effects on the local environment, humans and the wildlife in the region as well as the neighbouring States of Rajasthan and Delhi. (iii) The EIA was conducted in violation of Office Memorandum dated 02.12.2009 issued by the Ministry of Environment, Forest and Climate Change which provides that proposal for environment clearance will not be linked with the clearance from the forestry and wildlife angle even if it involves forest land and/or wildlife habitat as these clearances are independent of each other and, in any case, requires to be obtained being applicable to such projects before starting any activity at site. No such clearance was sought for before the Environmental Clearances was obtained from the Ministry of Environment, Forest and Climate Change. (iv) Despite the fact that reconnaissance report submitted by the Wildlife Institute of India to the Ministry of Environment, Forest and Climate Change, Government of India, in 2013 stipulated that there should be no ancillary development of the Nuclear Power Plant in the area identified for the project and that the present land use should be retained being an integral part of the black buck habitat, a deer park has been proposed in the Environment Impact Assessment (EIA) report in the village Badopal in an area of 40-50 acres of

	Item No. 39 **September 24, 2018** **PU & DV**	land. (v) While granting the Environmental Clearance, the Ministry had overlooked the fact that it was subject to clearance from the wildlife angle and that the State Government of Harayana was to prepare a Conservation Plan of the township area in absence of which no construction activity was permitted. (vi) Notice for Public Hearing issued by the Haryana State Pollution Control Board was in English language and not in Hindi thereby depriving the local people of knowing the actual content of the notice. The EIA Report misrepresented the number of people who had attended the Public Hearing as being only 102 when actually there were 5000 to 7000 people who were strongly protested against the project. No Public Hearing was actually held. (vii) Work on the project taken up in January 2014 even before the Atomic Energy Regulatory Board (AERB) had granted clearance. Requirement of developing a 'Green Belt' of 35% of the area around the project boundary was harmful for the Black Bucks as dense vegetation do not form its habitation. (viii) The AERB which was to examine the project for grant of Siting Consent is not an independent statutory body but is subordinate agency of the Government and, therefore, cannot set or enforce rules for radiation and nuclear safety. 2. Founded on the above, the appellant has sought for

NATIONAL GREEN TRIBUNAL, NEW DELHI

	Item No. 39 **September 24, 2018** **PU & DV**	the following reliefs: *"A. Set aside the Environmental Clearance dated 27.12.2013 as given by the Respondent o. 1.* *B. Set aside the EIA Report prepared by MECON Limited which is not qualified/ eligible and have no authority to do so.* *C. Appoint an internationally recognized agency for purpose of carrying out a survey of the region and take a census of the existing scheduled animals and submit its report to the Hon'ble Tribunal.* *D. Direct the Respondents to take suitable measures for protection of the wild life in the region and for which declare the region as Wild Life Sanctuary or National Park.* *E. Restrain the respondents from using the water from Bhakra Dam for nuclear Power Generation in violation of the Interstate Water agreement between the Punjab, Haryana and Rajasthan.* *F. Direct the National Biodiversity Authority to constitute and Expert Committee to determine Agro-biodiversity of the region and impact of the nuclear hazardous waste, radioactive emissions/ increase in temperature upto 7 C in the water to be discharged from the Nuclear Power Plant.* *G. Direct the National Biodiversity Authority to have bio-survey of the area and its sustainable use of biological diversity keeping in view the precautionary principle, public Trust doctrine and Inter-generational principles for the present and future generation.* *H. Pass such other orders and further orders as may be necessary on the facts and it the circumstances of the case."* 3. In the counter affidavits filed by the respondents, all contentions raised by the appellant have been denied. The respondent no. 1, Ministry of Environment, Forests and Climate Change (MoEF&CC) has stated that the proposal for Environmental Clearance had been considered by the Expert Appraisal Committee (EAC) which comprises of eminent experts on the subject after examining the project documents, additional clarifications furnished in response to its various observations and representations received on the project and only thereafter recommended grant of

	Item No. 39 **September 24, 2018** **PU & DV**	Environmental Clearance for the project. The Office Memorandum dated 02.12.2009 issued by the MoEF&CC has clarified that proposals for Environmental Clearance will not be linked with the clearance from wildlife angle being independent of each other and would be necessary to be obtained before starting any activity at site. The impugned Environmental Clearance was granted by the MoEF&CC after consideration of the recommendations of the EIA which is subject to strict compliance of the provisions of EIA Notification, 2006 and the general and special conditions imposed on respondent no. 5 in the impugned Environmental Clearance (EC). Special conditions contained in the impugned EC cover all aspects requiring prevention and mitigation measures in respect of the project which include obtaining clearance from the wildlife angle due to location of Schedule-II species of the animals in close vicinity of the project area. It also envisages preparation of Conservation Plan of the township site in consultation with all stakeholders, AERB clearance, regular monitoring of conventional gaseous pollutants, radioactive pollutants in the air as well as in the discharge water as per the AERB standards, etc. The respondent MOEF & CC further contends that it is entitled to revoke the impugned EC if the conditions stipulated therein are not complied with to the satisfaction of the Ministry or are violated in any manner by the project proponent. The Ministry is also vested with the right to impose additional conditions or modify the existing ones, if necessary. 4. Contrary to the contention otherwise, the appellant was called in the 19th Meeting of the EAC dated

	Item No. 39 **September 24, 2018** **PU & DV**	19.12.2013 as directed by the Tribunal in its order dated 22.09.2013 in *Application No. 163/2013* in the matter of *Akhil Bhartiya Jeev Raksha Bisnoi Sabha & Ors. Vs. Union of India & Ors*. The meeting had been called to consider the nuclear power projects for grant of Environmental Clearance and the presence of the applicant has been duly recorded in the minutes of the meeting. 5. In a detailed reply, the respondent no. 5, Nuclear Power Corporation of India Limited (NPCIL,) has elaborated on the various aspects raised by the applicant and has reaffirmed the statement of the respondent no. 1 to the effect that the impugned EC was granted strictly in accordance with the EIA Notification, 2006 based upon the EIA carried out by M/s MECON Limited, Ranchi, which is a competent organization having well qualified manpower and the required resources to carryout EIA studies and is also recognized by respondent no. 1, Union of India. A Site Selection Committee (SSC) constituted by the Department of Atomic Energy, Government of India, had surveyed the proposed project site taking into consideration location, general area, land availability, available sources of water for cooling, electrical power evacuation system, metrological, population distribution, land use, seismicity, flood and flood analysis besides solid waste management and radiological burden, proper transportation of heavy and over dimensional equipments and all other environmental aspects. After consideration of the diverse data for further analysis, Government of India and essential inter-ministerial consultations, the Cabinet Committee on Security accorded 'In Principle' approval on 08.10.2009 for setting up of the plant.

	Item No. 39 **September 24, 2018** **PU & DV**	6. Government of Haryana thereafter nominated Haryana Power Generation Corporation Limited (HPGCL) as the Nodal Agency to co-ordinate and support the respondent no. 5 (NPCIL) for pre-project activities. Land acquisition proceedings were thus started by the Haryana Government after detailed survey of the area taking into consideration critical parameters. 7. M/s. MECON Limited, Ranchi was engaged to carryout EIA studies as per the procedure of the MoEF & CC laid down under the EIA Notification, 2006. The project feasibility report prepared by the agency was submitted to the EAC for approval of the Terms of Reference (ToR) and further for carrying out EIA studies. The ToR was approved by the MoEF & CC for EIA as per letter dated 13.10.2010. 8. Writ Petition No. 689/2012 filed by the Project Affected Persons (PAPs) in the Punjab and Haryana High Court against the project was dismissed by order dated 16.05.2013. A revised Environmental Impact Assessment (EIA) Report was also filed in furtherance to the directions of the MoEF & CC which also deals with Site Selection including land requirement for the project, its size and magnitude of operation. The Report also deals with the technical part as well as salient features of the proposed NPP in general with specific observation with respect to safety including radiological protection as well as waste management. The EIA Report also deals with, in details, about the description of the environment, its anticipated environmental impact as well as mitigating measures and techniques, the environment protection measures which have been studied, assessed, considered and reviewed in

	Item No. 39 **September 24, 2018** **PU & DV**	detail by the experts with special reference to the Environment Management Plan (EMP). The report also deals with additional studies covering public consultation and the social impact assessment on the public at large in the surrounding area of the proposed NPP, etc. 9. The draft EIA Report was considered in accordance with the procedure laid down in the EIA Notification, 2006 and after it was discussed in detail by the Experts, it was reviewed, assessed, evaluated and re-evaluated by the EAC consisting of 16 Experts in different areas of expertise. The issues were considered by the EAC in its 8th, 9th, 14th, 15th and 16th meetings held on different dates between 15.06.2010 and 19.11.2013 based upon which the Environmental Clearance was granted after consideration of all relevant factors. The people had actively participated in the public consultation process which would be borne out by the videography and the question and answer sessions held between the public and the representatives of respondent no. 5. The EAC Members had also visited the project site and held meetings with representatives of respondent no. 5. 10. It is thus stated that the Environmental Clearance had been granted based on the in-depth review of the comprehensive EIA Report, other supporting documents and the site visit by the EAC. On the issue relating to wildlife clearance, it is stated that such clearance cannot be linked with the Environmental Clearance in terms of the Notification dated 02.12.2009 which stipulates that Environmental Clearance will not be linked with this clearance from the forestry and wildlife angle even if it involves forest land and/or wildlife habitat and further

	Item No. 39 **September 24, 2018** **PU & DV**	both the issues will have to be dealt with separately and independently. It is contended that the appellant has misconstrued the contents of the EIA Report. The Wildlife Institute of India in its Reconnaissance Report also has opined that the project site is not suitable as Blackbucks habitat for various reasons including the absence of xylophatic highlands essential for lekking and breeding of the blackbucks. It is asserted that there is no National Park/Wildlife Sanctuary within 10 km of the site and, therefore, application for clearance from wildlife angle from the Standing Committee of the National Board of Wildlife is not warranted. 11. In so far as the availability of the water for cooling is concerned, it is stated that the Chief Engineer, BWS irrigation department, Panchkula, Haryana, by his letter dated 23.01.2006 suggested that the canal water can be made available through Sirsa Branch by remodelling of Kacha Lake which has been approved by the Government of Haryana. The Respondent No.5 has taken up the matter with the Central Water Commission (CWC) seeking its concurrence on the proposal by letter dated 03.10.2011 and consequential thereto the CWC conveyed its "No Objection" for use of 320 cusecs of water by the plant subject to the compliance of the conditions laid down by the Bhakra Beas Management Board (BBMB), Chandigarh. 12. The appellant in his rejoinders has not been able to controvert any of the factual aspects put forth by Respondents No. 1 and 5 in their affidavits in reply to the contentions raised in the appeal. 13. We have heard the learned Counsel for the parties
	Item No.	

	39 **September 24, 2018** **PU & DV**	and have also carefully examined the various statements contained in the affidavit and the documents on record. 14. We find the principal contention raised by the appellant regarding the apprehended threat to the endangered wild life species, more particularly, the black bucks, to be unfounded. The reconnaissance report of Wildlife Institute of India relied upon by the appellants indicates that due to features such as salinity in the patch and bounding of the area due to canals in the North and the West sides, major barrier for black buck movement has been caused and also against the utilisation of project site as a habitat. Existence of the black bucks is stated to be quite low due to absence of xylophatic highlands, essential for lekking and breeding of the black bucks. As per the department of Forest and Wild Life, residential colonies forms a part of the two blocks acquired for the project i.e., one for the plant premises admeasuring 1313 acres and the other for the residential colony of 187 acres. The residential colony is located near Badopal village where presence of some wild species have been noticed but the wild life mammals move in the entire region of about 3600 acres. The topography of the land in Badopal is not suitable and does not provide any cover to wild life species. Increase in cultivation activities has transformed the land use of the area which is changing day by day causing shrinkage of the area available to the wild life habitat. Different fencing techniques are being used by the farmers for scaring away wild animals. These features are common to all areas and is not confined to the project site in Badolpal village and other villages inhabited by the Bisnoi communities. Deer park was proposed in the EIA

	Item No. 39 **September 24, 2018** **PU & DV**	report as a measure for protection of the wildlife species but will be reconsidered if advised not to establish such a park. It also appears that in terms of point 6 (a)-ii of the impugned Environmental Clearance, a Conservation Plan is required to be prepared by the forest and wild life department, Government of Haryana, for implementation. It is categorically stated by the Respondent No.5 that it shall relocate the colony if the Conservation Plan requires to do so. 15. M/s Macon Limited, Ranchi, whose credibility has been questioned by the appellant firstly, on the ground that it is not manned by experts and secondly, that the NABET accreditation scheme is yet to grant accreditation to it, in our considered opinion, does not appear to suffer from the vice of incompetence. In the first instance the EIA studies were carried out by the company following all stipulations prescribed in the EIA notification, 2006 and secondly, even though Ministry of Environment, Forest and Climate Change OM dated 02.12.2009 prescribes that the consultation would be confined only to the accreditated sectors and parameters for bringing in more specificity in the EIA document, M/s Macon Limited was accreditated as EIA consultant for conventional sector and for 16 EIA sectors. Furthermore, despite the restriction imposed by the said OM of the Ministry of Environment, Forest and Climate Change, the requirements for accreditation for the nuclear sectors was decided and put up on the website of the Quality Council of India only in December, 2014. During this period the application of M/s Macon Limited filed in the year 2011and of the other consultants were kept pending as the criteria for

	Item No. 39 **September 24, 2018** **PU & DV**	accreditation was not finalised by the Ministry of Environment, Forest and Climate Change. This would be evident from letter dated March, 17, 2015 filed by the Respondent No.5. 16. In so far as the issue raised in respect of the water requirement for the projects is concerned, the apprehension expressed on behalf of the appellant does not appear to hold water in view of the clear stand of the Government of Haryana, the CWC (Central Water Commission) and BBC alluded to above. We also do not find any deficiency in respect of the public hearing in the EIA process as nothing substantial has been pointed out by the appellant to vitiate the proceedings. The site selection for the project also appear to have been done after undertaking meticulous surveys and studies and also taking into consideration all relevant factors pertaining to the safety of the people. The record reveals that the site selection process was multi-layered and had to undergo strict scrutiny before finally culminating in the Cabinet Committee on Security granting "in principle" approval for setting up the plan at the site. We also do not find any inadequacy in the competence of the Atomic Energy Regulatory Board (AERB) as it is the prescribed regulated authority vested with the power to grant clearances as per the laid down procedure for starting work at the Nuclear Power Project from the initial stage of siting to its operation and maintenance. The Atomic Energy Regulatory Board (AERB) has been created by the Central Government in exercise of its power under the provisions of the Atomic Energy Act, 1962. The Board has been prescribing various goals, standards and guidelines

	Item No. 39 **September 24, 2018** **PU & DV**	and has the power to order stoppage of work/plant/operation and/or if deviation in the procedure are observed. 17. In the facts and circumstances set out above, we find that the anxieties expressed by the appellant have been given due consideration in the process of granting the impugned Environment Clearance and are also unfounded. In view of the discussions on the principal objections raised in the appeal and our observations, we do not find any merit in the appeal. Resultantly, the appeal stands dismissed with no order as to cost. ……., CP (Adarsh Kumar Goel) ……., JM (Dr. Jawad Rahim) ……,JM (S.P. Wangdi) ……,EM (Dr. Nagin Nanda) 24.09.2018

NATIONAL GREEN TRIBUNAL, NEW DELHI

Item No. 01 Court No. 1

BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI

Review Application No. 06/2021
IN
Appeal No. 08/2014
(I.A. No. 73/2021 & I.A. No. 74/2021

Akhil Bhartiya Jeev Raksha Bishnoi
Sabha (Regd.) & Ors. Applicant(s)

Versus

Union of India & Ors. Respondent(s)

Date of hearing: 04.03.2021

CORAM: HON'BLE MR. JUSTICE ADARSH KUMAR GOEL, CHAIRPERSON
HON'BLE MR. JUSTICE SHEO KUMAR SINGH, JUDICIAL MEMBER
HON'BLE DR. NAGIN NANDA, EXPERT MEMBER

IN CHAMBER BY CIRCULATION

ORDER

1. This review application seeks review of order dated 24.09.2018 in appeal No. 08/2014 dismissing the appeal of the appellant against Environmental Clearance dated 27.12.2013 granted by the MoEF&CC in favour of Respondent No. 5, Nuclear Power Corporation of India (NPCIL) for setting up a Nuclear Power Unit.

2. The Tribunal held that:-

> *"1to13.xxx……xxx……xxx*
>
> *14. We find the principal contention raised by the appellant regarding the apprehended threat to the endangered wild life species, more particularly, the black bucks, to be unfounded. The reconnaissance report of Wildlife Institute of India relied upon by the appellants indicates that due to features such as salinity in the patch and bounding of the area due to canals in the North and the West sides, major barrier for black buck movement has been caused and also against the utilisation of project site as a habitat. Existence of the black bucks is stated to be quite low due to absence of*

xylophatic highlands, essential for lekking and breeding of the black bucks. As per the department of Forest and Wild Life, residential colonies forms a part of the two blocks acquired for the project i.e., one for the plant premises admeasuring 1313 acres and the other for the residential colony of 187 acres. The residential colony is located near Badopal village where presence of some wild species have been noticed but the wild life mammals move in the entire region of about 3600 acres. The topography of the land in Badopal is not suitable and does not provide any cover to wild life species. Increase in cultivation activities has transformed the land use of the area which is changing day by day causing shrinkage of the area available to the wild life habitat. Different fencing techniques are being used by the farmers for scaring away wild animals. These features are common to all areas and is not confined to the project site in Badolpal village and other villages inhabited by the Bisnoi communities. Deer park was proposed in the EIA report as a measure for protection of the wildlife species but will be reconsidered if advised not to establish such a park. It also appears that in terms of point 6 (a)-ii of the impugned Environmental Clearance, a Conservation Plan is required to be prepared by the forest and wild life department, Government of Haryana, for implementation. It is categorically stated by the Respondent No.5 that it shall relocate the colony if the Conservation Plan requires to do so.

15. M/s Macon Limited, Ranchi, whose credibility has been questioned by the appellant firstly, on the ground that it is not manned by experts and secondly, that the NABET accreditation scheme is yet to grant accreditation to it, in our considered opinion, does not appear to suffer from the vice of incompetence. In the first instance the EIA studies were carried out by the company following all stipulations prescribed in the EIA notification, 2006 and secondly, even though Ministry of Environment, Forest and Climate Change OM dated 02.12.2009 prescribes that the consultation would be confined only to the accreditated sectors and parameters for bringing in more specificity in the EIA document, M/s Macon Limited was accreditated as EIA consultant for conventional sector and for 16 EIA sectors. Furthermore, despite the restriction imposed by the said OM of the Ministry of Environment, Forest and Climate Change, the requirements for accreditation for the nuclear sectors was decided and put up on the website of the Quality Council of India only in December, 2014. During this period the application of M/s Macon Limited filed in the year 2011and of the other consultants were kept pending as the criteria for accreditation was not finalised by the Ministry of Environment, Forest and Climate Change. This would be evident from letter dated March, 17, 2015 filed by the Respondent No.5.

16. In so far as the issue raised in respect of the water requirement for the projects is concerned, the apprehension expressed on behalf of the appellant does not appear to hold water in view of the clear stand of the Government of Haryana, the CWC (Central Water Commission) and BBC alluded to above. We also do not find any deficiency in respect of the public hearing in the EIA process as nothing substantial has been pointed out by the appellant to vitiate the proceedings. The site selection for the project

also appear to have been done after undertaking meticulous surveys and studies and also taking into consideration all relevant factors pertaining to the safety of the people. The record reveals that the site selection process was multi-layered and had to undergo strict scrutiny before finally culminating in the Cabinet Committee on Security granting "in principle" approval for setting up the plan at the site. We also do not find any inadequacy in the competence of the Atomic Energy Regulatory Board (AERB) as it is the prescribed regulated authority vested with the power to grant clearances as per the laid down procedure for starting work at the Nuclear Power Project from the initial stage of siting to its operation and maintenance. The Atomic Energy Regulatory Board (AERB) has been created by the Central Government in exercise of its power under the provisions of the Atomic Energy Act, 1962. The Board has been prescribing various goals, standards and guidelines and has the power to order stoppage of work/plant/operation and/or if deviation in the procedure are observed.

17. In the facts and circumstances set out above, we find that the anxieties expressed by the appellant have been given due consideration in the process of granting the impugned Environment Clearance and are also unfounded. In view of the discussions on the principal objections raised in the appeal and our observations, we do not find any merit in the appeal. Resultantly, the appeal stands dismissed with no order as to cost."

3. In the review application, ground raised is that there is no compliance of the observation in paragraph 14 with regard to preparation of conservation plan, as shown vide letter dated 20.10.2020.

4. We are of view that no case is made out for review by raising such contention. If there is violation of order of this Tribunal, review application is not the remedy. Moreover, the review application is barred by limitation having been filed on 26.02.2021 i.e. after more than two years of the order while the limitation provided is 30 days under Rule 22 of the National Green Tribunal (Practices and Procedure) Rules, 2011.

Accordingly, the review application is dismissed.

In view of order in the main matter, all pending I.A.s also stand disposed of.

Adarsh Kumar Goel, CP

S.K. Singh, JM

Dr. Nagin Nanda, EM

March 04, 2021
R.A. No. 06/2021 in Appeal No. 08/2014
A

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ANNEXURE R/13

IN THE SUPREME COURT OF INDIA
CIVIL APPELLATE JURISDICTION

CIVIL APPEAL NO. OF 2025
(Arising out of SLP(C) Nos. 5033-5034 of 2025)

CHINMAY MISHRA **Appellant(s)**

VERSUS

UNION OF INDIA & ORS. **Respondent(s)**

O R D E R

1. Leave granted.

2. These appeals challenge the orders dated 03.12.2024 and 06.01.2025 passed by the Division Bench of the High Court in W.P.(C) No. 2802 of 2004, vide which the High Court has directed the respondent-State of Madhya Pradesh to take steps for removal of toxic waste material from the Union Carbide India Ltd. (UCIL) factory in Bhopal.

3. The grievance of the appellant is that the transportation and disposal of the toxic waste would be hazardous to the citizens residing in the vicinity of the place where it is proposed to be disposed of.

Signature Not Verified
Digitally signed by
DEEPAK SINGH
Date: 2025.03.04
16:05:16 IST
Reason:

4. An affidavit filed by the State Government

along with the Minutes of Meeting of the Expert Committee held on 19.06.2023, has been placed on record.

5. The said Committee, apart from the other senior officers of the State as well as the Central Government, also consists of the Director of the National Environmental Engineering Research Institute ("NEERI" for short) and the Director of the National Geophysical Research Institute ("NGRI" for short) and the Chairman of the Central Pollution Control Board ("CPCB" for short).

6. NEERI is the most recognized and reputed organization in the country dealing with the environmental matters. Whenever the Court finds difficulty in assessing the questions regarding environmental damage, it always relies on the expertise of NEERI. Similarly, the NGRI is also consulted when there are issues that require an expertise in geophysical matters.

7. The Minutes of Meeting of the Expert Committee would reveal that before taking the decision for transportation and disposal of the toxic waste, the views of the Director of NEERI,

the Director of NGRI and the Chairman of the CPCB have been recorded. It is only, after these experts have approved the proposal that a decision has been taken.

8. Shri Devadatt Kamat, learned senior counsel appearing for the appellant has raised a grievance that some of the recommendations as noted in the Minutes of Meeting, have not been complied with by the State Government.

9. From the perusal of the impugned orders, it is evident that the High Court took a serious view of the lethargic manner in which the State was dealing with the disposal of the waste.

10. It appears that the matter has progressed only after the High Court issued its directions and the High Court is actively monitoring the situation.

11. In that view of the matter, we do not find any reason to interfere with the impugned orders dated 03.12.2024 and 06.01.2025 passed by the learned Division Bench of the High Court.

12. Insofar as the grievance raised by Shri Kamat is concerned, the appellant can very well intervene

before the High Court and raise this grievance, which would be considered by the High Court in accordance with law.

13. Mr. Anand Grover, learned senior counsel appearing for the applicant in application No. 53681 of 2025 submits that though the applicant is not opposed to the transportation and disposal of the toxic waste, according to the applicant, there are better ways of transportation and disposal of the toxic waste than using the traditional method of incineration.

14. We find that since the High Court is seized of the matter, it will be appropriate for the applicant to intervene before the High Court and present his suggestions.

15. Apart from that, the applicant would also be at liberty to give his suggestions to the State of Madhya Pradesh, which would then be placed before the Expert Committee so that the Committee has the advantage of considering the same.

16. The appeals are disposed of in the above terms.

17. Pending application(s), including the application(s) for intervention/impleadment, if any, stand(s) disposed of.

….....J
(B.R. GAVAI)

.....J
(AUGUSTINE GEORGE MASIH)

New Delhi
February 27, 2025

ITEM NO.13 COURT NO.2 SECTION IV-C

S U P R E M E C O U R T O F I N D I A
RECORD OF PROCEEDINGS

Petition(s) for Special Leave to Appeal (C) No(s). 5033-5034/2025

[Arising out of impugned final judgment and order dated 03-12-2024 in WP No. 2802/2004 06-01-2025 in WP No. 2802/2004 passed by the High Court of Madhya Pradesh Principal Seat at Jabalpur]

CHINMAY MISHRA Petitioner(s)

VERSUS

UNION OF INDIA & ORS. Respondent(s)

[IA No. 33193/2025 - PERMISSION TO FILE PETITION (SLP/TP/WP/..)

Date : 27-02-2025 This matter was called on for hearing today.

CORAM :
HON'BLE MR. JUSTICE B.R. GAVAI
HON'BLE MR. JUSTICE AUGUSTINE GEORGE MASIH

For Petitioner(s) :
Mr. Devadatt Kamat, Sr. Adv.
Mr. Sarvam Ritam Khare, AOR
Mr. Kushagra Sharma, Adv.
Mr. Anuj Agarwal, Adv.
Mr. Hruday Bajentri, Adv.
Mr. Ajay Desai, Adv.
Mr. Akarsh Khare, Adv.

For Respondent(s) :
Mr. Nachiketa Joshi, A.A.G.
Mr. D.S. Parmar, A.A.G.
Mr. B.P. Singh, D.A.G.
Mr. Abhimanyu Singh Ga, Adv.
Mr. Sarad Kumar Singhania, AOR

Mr.Raghav Sharma, Adv.
Mr.Salvador Santosh Rebello,AOR
Mr.Pranjal Pandey,Adv.
Mr.Jaskirat Pal Singh, Adv.

Mr. Anand Grover, Sr. Adv.
Ms. Astha Sharma, AOR

Mr.Avi Singh, Sr.Adv.
Mr. Praspnna S., AOR

Mr. Pratik R.Bombardo, Adv.
Mr. Abhishek Kumar, Adv.
Mr. Rohit Verma, Adv.

Ms. M.Jayasree Narasimhan,AOR
Mr. D.Bhanu Pradeep, Adv.

UPON hearing the counsel the Court made the following

O R D E R

1. **Permission to file special leave petition is granted.**

2. **Leave granted.**

3. **The appeals are disposed of in terms of the signed order.**

(DEEPAK SINGH) **(ANJU KAPOOR)**
ASTT. REGISTRAR-cum-PS **COURT MASTER (NSH)**

[Signed order is placed on the file]

ANNEXURE R/14

सत्यमेव जयते

A REPORT ON THE
" STUDY ON STATUS SURVEY AND CONSERVATION PLAN FOR SEA TURTLES ALONG MANDVI TALUKA OF BHUJ, GUJARAT"



Zoological Survey of India
M-Block, New Alipore,
Kolkata – 700 053

April 2019

Published:

Zoological Survey of India
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535, M-Block, New Alipore,
Kolkata – 700 053 (West Bengal)
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Anonymous, 2019. Report of Study on STUDY ON STATUS SURVEY AND CONSERVATION PLAN FOR SEA TURTLES ALONG MANDVI TALUKA OF BHUJ, GUJARAT, Zoological Survey of India, Kolkata.

*Published as Final Report of "*Study on Status Survey and Conservation Plan for Sea Turtles along Mandvi Taluka of Bhuj, Gujarat*" by Zoological Survey of India, Kolkata for the M/s GHCL, Ahmedabad, Gujarat.*

Cover Photo: Beach at the Project Location

Back Cover Photographs: Beach during low tide at Project Location

Photographs © Basudev Tripathy

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DISCLAIMERS

1. The outcome of the STUDY ON STATUS SURVEY AND CONSERVATION PLAN FOR SEA TURTLES ALONG MANDVI TALUKA OF BHUJ, GUJARAT presented is based on the work done by ZSI as per the Scope of the study submitted to M/s. GHCL, Ahmedabad.
2. The Report submitted by ZSI to M/s. GHCL, Ahmedabad on the STUDY ON STATUS SURVEY AND CONSERVATION PLAN FOR SEA TURTLES ALONG MANDVI TALUKA OF BHUJ, GUJARAT is solely on the request of M/s. GHCL, Ahmedabad.
3. The report on the STUDY ON STATUS SURVEY AND CONSERVATION PLAN FOR SEA TURTLES ALONG MANDVI TALUKA OF BHUJ, GUJARAT submitted by ZSI to M/s. GHCL, Ahmedabad is not binding on the part of the State Environmental Impact Assessment Authority of Gujarat/ Gujarat State Coastal Zone Management Authority/National Coastal Zone Management Authority or any concerned agency to issue the NoC/ Environmental Clearance for the said project or any other statutory clearance of central and state government. Also there is no legal binding on the result of the report by ZSI submitted to GHCL, Ahmedabad.
4. All expenses related to the field/ office expenditure for the study were borne by M/s. GHCL, Ahmedabad, for the purpose.
5. There was no financial involvement from Zoological Survey of India, Kolkata for the study and there was no honorarium or otherwise raised by the study team from M/s. GHCL, Ahmedabad, for the study.

Zoological Survey of India,
Kolkata

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1. INTRODUCTION

1.1. Background:

GHCL Limited is a leading company in the manufacturers of chemicals, textiles and edible salt and other consumer products. In chemical sector, the company manufactures Soda Ash (Anhydrous Sodium Carbonate). M/s. GHCL Ltd., Ahmedabad is now proposing for setting up a Green field Chemical Complex near village Bada, Taluka Mandvi, District Kutch, State Gujarat for which site has been identified near the stable coastal stretch along Arabian sea coast near village Bada, about 30 km from Mandvi (22°52'25.38"N, 69° 8'21.15"E - 22°52'57.10"N, 69° 7'33.09"E).



In this context, M/s GHCL, Ahmedabad requested the Director, Zoological Survey of India vide his email 14.08.2018 to undertake a study related to sea turtles (Green Sea Turtles, Olive Ridley Turtle) in the proposed project plot area of approx. 1350 acres and area facing the sea side, so that the suitability of the area from ecological point of view could be assessed and conservation and management plans could be taken up in coordination with the Gujarat State Forest Department.

1.2. Genesis for Sea Turtle Nesting study:

Accordingly, a proposal and scope of the study was sent to M/s GHCL and to undertake the work on sea turtle nesting in the project location and on the basis of the proposal submitted by ZSI to M/s GHCL, a Work Order was released by M/s GHCL for carrying out detailed study on "Status survey and Conservation plan for sea turtle" at the project location.

The above study was carried out in the proposed Green field Chemical Complex project location of M/s GHCL, LTD along the Arabian Sea Coast near village Bada district Kutch Gujarat on the status of sea turtle nesting and suggest conservation and management as part of

the wildlife conservation plan and company's approach to protect and support conservation of wildlife around the project as per below objectives:

2. OBJECTIVES

1. Survey on the status of breeding / nesting ground of sea turtles at the project location.

2. Recommendation for action plan for conservation of sea turtle in the project location.

3. STUDY DURATION:

The olive ridley turtle reported to nest between June and early November on the Gujarat coast while green turtle nesting takes place between July and ends of January. However, the data sources silent on the exact nesting season. Moreover, olive ridley peak nesting occurs between July and November. Sporadic nesting takes place throughout the year along Gujarat coast (Sundarraj *et* al. 2013). Therefore, a rapid survey was done for duration of approx. six months from end of September 2018 to end of March 2019, so that sea turtle nesting activities during the peak breeding season, if any in the study area could be documented effectively.



The coastal stretch from Mota Layja end to the Bada village (upto the creek) beach was surveyed on foot by the field personnel engaged for the purpose for recording any nesting/crawl marks of turtles along the coastal stretch including stretches along which the project is proposed. Field visits to the project location was made by the ZSI team of scientists twice from last week of September 2018 and last week of March 2019. The team also made an assessment of the coastal and marine habitat along with overall biodiversity of the sites in line with the objectives.

The following were the team members for the study on assessment of sea turtle nesting.

1. Dr. Kailash Chandra, Scientist-G Director, ZSI.
2. Dr. Basudev Tripathy, Scientist-D, ZSI HQ, Kolkata
3. Dr. R. Chandran, DST-SERB-NPDF, ZSI

3.1. Description of the Project Location:

3.1.1. Location:

The location details of the project components are as follows:

As per the details submitted by M/s GHCL, the proposed site is recognised to set up a green field chemical complex with Soda Ash, Sodium bi carbonate manufacturing plant supported by utilities like solid fuel based captive co-generation power plant, sea water intake and effluent disposal system, RO system and associated infrastructure near village Bada, taluka Mandvi, District Kutch, Gujarat for which site has been identified near the stable coast off Bada stretch near Mandvi.

The Soda Ash process along with captive co-generation power plant in totality requires huge quantity of cooling water. The seawater requirement for process cooling, RO/DM plant, utilities and process plant effluent dilution etc. would be met by drawing seawater from the Arabian Sea coast in proximity to the project location.



The diluted combined effluent generated from process, brine preparation/purification rejects, RO/DM plant rejects, utility rejects etc. after mixing/diluting with return cooling water/fresh seawater will be released at an appropriate location in the marine coastal zone of Arabian Sea meeting norms specified.

The pipelines for seawater intake and effluent disposal will be passed through the coastal stretch nearby project boundary. The pipeline will be laid underground to avoid any disturbance to sand dunes.



The geographical co-ordinates specified are as below:

Location: 22°52'25.38"N, 69° 8'21.15"E - 22°52'57.10"N, 69° 7'33.09"E



The project location and the adjacent coastal stretch does not fall within any notified eco-sensitive areas (ESAs) declared by state government / government of India. Also, there are no marine Protected Areas.

The plant/ complex will be set up away from the shore and sand dune area. The sand dune and shore area will be used for laying seawater intake and effluent disposal pipelines. The pipelines will be laid through tunneling in sand dune stretch to avoid and disturbance to sand dune area. The laying of pipeline will be one time activity and restricted to construction only. There will be no significant source of illumination for the pipelines.

4. METHODOLOGY

4.1. Coastal geomorphology and vegetation:

Data collections:

Table 1. Data collection on coastal geomorphology and vegetation at Project location

Habitat	Groups	Sampling	Remarks
beach profile	Length and width of beach	Measurement of beach width and height of dune from HTL to the vegetation line/sand dune at every 100 m of the project location buffering 1000 m on east and west	Measurement was taken on a weekly basis with a PVC tape, GPS and Range Finder and average of beach width was calculated
Coastal/sand dune vegetation	Flora on the beach/dune	Visual observation	Identification based on photograph
Background vegetation	Plantation/natural vegetation in the beach background	Visual observation	Identification based on photograph
Fauna (Vertebrates and Invertebrates), other than sea turtle	Coastal and marine animals, intertidal fauna	Direct sighting, evidence from pugmark, dead carcasses	Identified based on taxonomic characters

4.2. Literature review/secondary sources of information



Information on sea turtle nesting along the coastal stretch of Mandvi in Kutch district and especially in the project location was collated from secondary sources *viz.* unpublished and published literature by Gujarat State Forest Department on sea turtle nesting surveys and data on sea turtle hatcheries managed by GSFD and other government and non-government agencies on sea turtle nesting along Gujarat coast including Kutch. Local fisherfolks /villagers/coastal dwellers were interviewed for information if any on sea turtle nesting at the project location and adjacent coastal stretch.

4.3. Site specific survey:

For recording nesting of sea turtles, if any, along the proposed project site coastal stretch, the stretch west of Mota Lyaja, (Bhada) beach to Bada village (including approx. 1.4 km proposed site in the seafront [Sector-1 to 14], buffering 1000 m east and 1000 m west) was monitored on a daily basis by field personnel deployed for the purpose and information was also obtained on beach dynamics on the coastal area. The coastal stretch along proposed site and adjacent coastal areas were also visited during low tide. The beach profile viz. geomorphology, dune height, undulation, approach to HTL, width of the beach etc. were noted at every 300 m with the help of GPS (Garmin Inc.) and Range Finder. The 1.4 km coastal stretch from east to west was physically marked with a red ribbon in the background vegetation for subsequent monitoring and observations. For this the entire beach was divided into 14 sectors (Sector 0-14) (see Table 2). The detail beach profile of the coastal stretch surveyed is given in Table 2. The landuse pattern in the proposed site was assessed through Google earth imagery and by ground truth during field visits.



Table 2. beach profiling and vegetation composition of the project location

Beach Sector (300 m)	Distance from HTL to vegetation (in m)	Sand Dune Height (m)	Remarks
L-0 (Sector-0)	9.3	0.5	Flat beach with beach grass and binders
L-1 (Sector-1)	8.9	0.5	Flat beach with beach grass and binders
L-2 (Sector -2)	9.9	1.5	Dune approximately 1.5 m with beach grass and sand binders *viz.Launea sarmetosa, Cyperus arenarius, Fimbristylis miliacea, Ipomea pes-capre, Spinifex littoreus*
L-3 (Sector -3)	7.4	5	Dune approximately 5 m height with *Prosopis* vegetation mixed with beach grass and binder as above
L-4 (Sector -4)	7.8	10	HTL upto Vegetation (*Prosopis juliflora*)
L-5 (Sector -5)	11.8	3	Dune approximately 3 m with beach grass and sand binders *viz.Launea sarmetosa, Cyperus arenarius, Fimbristylis miliacea, Ipomea pes-capre, Spinifex littoreus*
L-6 (Sector -6)	13.8	1.8	Dune approximately 1.8 m with beach grass and sand binders *viz.Launea sarmetosa, Cyperus arenarius, Fimbristylis miliacea, Ipomea pes-capre, Spinifex littoreus*
L-7 (Sector -7)	9.3	2	Dune approximately 2 m with beach grass and sand binders *viz.Launea sarmetosa, Cyperus arenarius, Fimbristylis miliacea, Ipomea pes-capre, Spinifex littoreus*
L-8 (Sector -8)	14	7	HTL upto Sand dune approx. 7 m height and background vegetation (*Prosopis juliflora*)
L-9 (Sector -9)	15.8	2	Dune approximately 2 m height with *Prosopis* vegetation
L-10 (Sector -10)	14.1	3	Dune approximately 3 m height with *Prosopis* vegetation
L-11 (Sector -11)	8.2	5	HTL upto Vegetation (*Prosopis juliflora*)
L-12 (Sector -12)	12.8	5	HTL upto Vegetation (*Prosopis juliflora*)
L-13 (Sector -13)	16.5	0	HTL upto Vegetation (*Prosopis juliflora*)
L-14 (Sector -14)	25.5	0	Creek mouth towards Bada village



All potential habitats suitable for sea turtle nesting as per the literature published were surveyed and frequent field visits were made (on a fortnight basis by the scientists of ZSI and on a daily basis by the field personnel) and coastal /marine habitats of ecological and conservation importance was gathered during the field works were enumerated and taken into accounts.

Based on the information collated from field as well as from literature, a spatial data was generated with the help of a GPS (Global Position System, Garmin Inc.) and plotted in a map using GIS.

5. OBSERVATIONS

5.1. Sea turtle nesting along Gujarat (Kutch) Coast:

5.1.1. Information from secondary sources:

Four species of sea turtles are known to occur in the coastal waters of Gujarat of which two species are reported to nest along the Kachchh coastal stretches. Along the Kachchh coast, nesting of two species of sea turtle *viz.* olive ridley turtle (*Lepidochelys olivacea*) and Green turtle (*Chelonia mydas*) have been reported of which olive ridley turtle is known to be predominant (Sundarraj *et* al. 2002; based on Gujarat State Forest Department (GSFD) data on egg translocation and Sundarraj *et* al. 2013). Among four coastal districts (Jamnagar, Porbandar, Junagarh and Kutch), number of nests reported along the Kutch coast is less than the other districts. A summary of number of nests reported by studies conducted recently are presented in Table 3.

Table 3. Sea turtle nesting along Gujarat coast (4 districts) based on information from GSFD/GUIDE/GEC/WWF REPORT

District	GSFD/GUIDE/GEC REPORT				WWF REPORT
	Beach length (Potential sites) [in km]	No of Nests Observed			Number of Nests (Km)
		2000-01	2006	2011-12	
Kutch	73	61	17	68*	3 nests (15 km)
Jamnagar	92	250	1398**	91	53 nests (116 km)
Porbundar	83	155	494	53	74 (83 km)
Junagadh	98	124	508	61	104 (86 km)
TOTAL		590	1019	205	

* Based on GSFD data on nest translocation to hatchery at Mandvi/Nalia for 2007-08 to 2010-11.
** 1398 nests recorded in 12 years.

The Kachchh coast has a length of 300 km and average width of 10 m with 3-8 m tidal amplitude and soil type as silt/sandy. Of the nine Talukas in Kutch district, only the Mandvi takula is reported to have maximum sandy beaches and least mangrove area (0.27 sq. km). The Kutch coastline reported to have stabilized dunes especially around Mandvi.



Most of the studies on sea turtle nesting have been carried out along the Saurashtra coast and information available for Kachchh coast is only the data from state Forest Department. Except for one-time survey by Sundarraj et al. (2002), there is no long term data available for the coast. **The nesting of sea turtles along the coastal stretch Mandvi is quite sporadic as well as high nest predation and therefore it is possible that forest department translocated all the nests to the hatchery.**

Ex-situ conservation programme are in operation in Gujarat since 1985-86 and sea turtle hatcheries have been established in Nalia and Mandvi along Kachchh coast. Sea turtle eggs are reported to have been collected by the forest department staff and hired trained personnel. The published information on hatcheries managed by GSFD is presented in Table 4.

Table 4. Collection of sea turtle eggs and hatching success from 1985-2006 at Mandvi and Nalia hatcheries

Year	Site	No. of eggs collected	No. of successful hatchlings			Success Rate (%)
			Olive ridley	Green turtle	Leatherback	
1985-86	Mandvi	-	-	-	-	-
	Nalia	65	43	-	-	66
1986-87	Mandvi	-	-	-	-	-
	Nalia	134	100	-	-	74.62
1990-91	Mandvi	1271	778	-	-	61.25
	Nalia	-	-	-	-	-
1991-92	Mandvi	2038	1230	-	-	60.35
	Nalia	-	-	-	-	-
1992-93	Mandvi	3391	2251	-	-	66.39
	Nalia	-	-	-	-	-
2000-01	Mandvi	4399	1963	110	-	40.00
	Nalia	321	105	-	50	48.00
2001-02	Mandvi	1273	404	-	-	31.73
	Nalia	210	138	-	-	65.00
2004-05	Mandvi	1446	750	-	-	51.00
	Nalia	533	368	-	-	69.00
2005-06	Mandvi	556	416	-	-	75.00
	Nalia	135	-	72	-	53.33
TOTAL		**15637**	**8546**	**182**	**50**	**54.50**

Data source:* Meena *et* al. 2007, *Indian Ocean Turtle Newsletter No. 05, p.19-20.

The olive ridley turtle reported to nest between June and early November on the Gujarat coast while green turtle nesting takes place between July and ends of January. However, the data sources silent on the exact nesting season. Moreover, olive ridley peak nesting occur between July and November. Sporadic nesting takes place throughout the year along Gujarat coast, and therefore the nesting seasonality is not known. Based on the report of Sundarraj *et* al. (2002; 2004), 61 olive ridley turtle nests were reported along the entire coast. The Gujarat State Forest Department – Kachchh circle data of 2004-05 indicates 19 nests of both olive ridley (17) and green turtles (02). Thereafter, between 2007-08 and 2010-11, 68 nests were reported and all were of green turtles (Meena *et* al. 2007). The potential nesting site for sea turtles are reported to be available from Mandvi beach to Gundiyali, beach and from Ashapura Mandir to Pingaleshwar. Nevertheless, among the 10 stretches of Kachchh coast, seven stretches have been identified by Sundarraj *et* al. (2013). The beach between Layja Nana – Mandvi palace reported high threatened value and gained nesting site rank 1.0 and therefore it secured top conservation rank and given high conservation priority (Sundarraj *et* al. 2013). **However, due to the data deficiency and discrepancy, Sundarraj et al. (2013) could not ascertain on species specific nesting for Kachchh coast.**

There are only two reports available for Kachchh coast (Sundarraj et al. 2002; Gujarat State Forest Department). As per the forest department hatchery data available for the period 1985-86 to 2005-06 for 15637 eggs, 8546 successful hatchlings were of olive ridley turtles, 182 were of green turtles and 50 leatherback turtle hatchlings, that have been reared at Mandvi and Nalia (Meena *et* al. 2007). However, there is no separate figure available for Mandvi and Nalia. Also, the 8546 hatchlings of olive ridley reared from the hatcheries at Mandvi and Nalia indicate that olive ridley is predominately nests along the Kachchh (Mandvi-Nalia) coast. During the survey of 2000-2001 (Sundarraj *et* al. 2002) reported a total of 61 nests along Kachchh coast and all belonging to olive ridley turtles. The data of forest department for the year 2004-05 reported 19 nests, of which 17 were olive ridley turtles and 02 were green turtles. However, the nesting data available for the period from 2007-08 to 2011-12 reported 68 nests, and all were green turtles. **Therefore, it seems there is a discrepancy in the data collections in terms of season and there is no systematic long term survey and monitoring of the sea turtle nesting along the Kachchh coast.**



Nevertheless, the secondary information revealed from the data source of Gujarat State Forest Department, Kachchh circle, Sundarraj *et* al. (2013) identified five stretches along Kachchh coast with nesting of 68 green turtles based on the survey of 2000-2001 (Sundarraj *et* al. 2002) and among the stretches, a maximum of 29 nests were reported between Mandvi palace and Mandvi beach followed by Bada and Layja Nana with 27 nests. In contrast, the report of GOI-UNDP Sea Turtle Project on status of the breeding population of sea turtle along the Gujarat coast by Sundarraj *et* al. (2002), reported no nests of green turtle and 61 nests of olive ridley turtles of which highest of 22 nests along the 13 km stretch of Bada – Nana Layja (1.61 nest/km) and 21 nests along 13 km stretch of Layja Nana – Mandvi coastal stretch (1.69 nest/km). Nevertheless, the data is based only on 05 nests, crawl marks and information from local egg

collectors and not actual sighting of nests. Again as per the report of Sundarraj et al. (2013), the Forest Department identified 11.5 km along Bada – Nana Layja coastal stretch as potential for nesting with 27 nests (2.35 nests/km) and 6.0 km coastal stretch between Layja Nana–Mandvi palace with 6 nests (1.0 nest/km). Therefore, **comparison of the data and reporting of nesting of the two species of turtles along the Kachchh coast require corroboration.**



5.2. Status of sea turtle nesting at the proposed Project Location of M/s GHCL:

5.2.1. ZSI Observations:

The olive ridley turtle reported to nest between June and early November on the Gujarat coast while green turtle nesting takes place between July and ends of January although sporadic nesting have been reported to takes place throughout the year along Gujarat coast (Sundarraj *et* al. 2002; 2013). For documentation of nesting of sea turtles, if any, along the coastal stretch of the GHCL, the entire ~ 1.4 km beach surveyed (project location in the seafront (sector 1-14), ~ 1000 m buffer (Sector 1-3) on both east and west end of the project location) was monitored intensively by the field personnel deployed for the purpose and information was also obtained on beach dynamics on the coastal area on a weekly basis.

Data collected on the beach dynamics of proposed GHCL project site and adjacent coastal stretch indicate that average beach width is < 15 m and get inundated during high tide upto the *Prosopis* vegetation/dunes, except at creek mouth which is considerably widen (see Table 2). Therefore, **the entire coastal stretch of beach is narrow, varying in width with the backshore sandy ridge rising abruptly from 5-7 m above and dense *Prosopis juliflora* vegetation touching HTL**. In particular, the proposed project site has narrow width of beach except at the western end of creek mouth (> 10 m) and at middle (Sector 7-9; ~ 10 m). Also, the entire coastal stretch between sectors 4 to 11 **due to its narrow beach width, gets inundated during high tide and are not suitable/not preferred by sea turtle for laying eggs.**

Apart from background dense vegetation of Babul (*Prosopis juliflora*) close to the high tide line (landuse pattern), the predominant floral beach composition are that of beach grass and

beach binding creekers *viz. Launea sarmetosa, Cyperus arenarius, Fimbristylis miliacea, Ipomea pes-capre* and *Spinifex littoreus*. Presence of animals in the coastal stretch of the proposed GHCL project site was assessed by direct sighting and tracks and signs. During the field visit, Feral dogs (*Canis familiaris*) were frequently observed canids on the beach, and common Jackal (*Canis aureus*) was encountered once. This could be due beach due to dense vegetation cover. Also, fecal pallets of Blue Bull (*Boselaphus tragocamelus*) observed on the beach indicating this animal visiting the coast during low tide. **Considering high level of presence of feral animals and carnivores all along the beach, Gujarat State Forest Department translocating all the nests to the turtle hatchery at Mandvi and Nalia.**



The selection of a suitable nesting site is very important at many levels: not only for the female turtle but also for a proper embryo development, and the subsequent hatchling survival (Miller *et* al., 2003). Nesting site selection is governed by a number of clues, depending on both internal physiological factors and external environmental factors. According to Mortimer (1990; 1995), environmental factors of a suitable nesting beach must have: easy accessibility to the beach, nest placement at enough height for avoiding tidal inundations, sand properly cohesive for building a nest and ease gas diffusion, and specific temperatures for a proper maturation of the egg. Wood and Bjorndal (2000), also suggested that the nest placement must avoid being too close (to avoid inundation or erosion). Beach slope, width and length Beach slope not only influences the female trying to ascend to the top of the beach but also the new hatchlings going all the way seawards. According to Wood and Bjorndal (2000), slope is the most important factor influencing the nest site selection in sea turtles. Studies by López-Castro *et* al. (2004), defined that the characteristics of olive ridley nesting sites include smooth-sloped beaches and without vegetation cover and determined an average of width of 17-65 m (López-Castro et al., 2004). Nest elevation is an important factor in order to isolate and protect the nest from tidal inundation. Green turtles tend to place their nests in elevations between 1-3 m (Johannes and Rimmer, 1984). Although no substantial information is available, the presence of beach vegetation seems to affect the choice of a nesting site (Mortimer, 1982) and so, vegetation is a factor that may affect sea turtle nesting also. Green turtles and loggerhead turtles prefer areas where supra-littoral vegetation occurs (Whitmore and Dutton, 1985; Hays and Speakman, 1993; Garmestani et al., 1997). According

to Bilinski et al (2001) thick vegetation or refuse carried by tides (generally logs) can obstruct the nesting areas and thus reduce the hatchling success.



During the nearly six months daily monitoring of the ~ 3 km beach between September 2018 – March 2019 (from Mota Layja side to the Bada village creek), we did not encounter any sea turtle and fresh/old nests or crawl marks of turtles on the beach. Since many of the factor for selection of a suitable nesting site are not conducive (beach width, vegetation cover, rocky substratum and slope in the intertidal and subtidal region, tidal inundation, presence of animals on the beach), nesting, if all, occurring is therefore highly sporadic at the project location of GHCL and on occasionally. However, the ~ 7 km stretch between Rukmawati river mouth and Mandvi palace is sandy, vegetation to HTL is wide and much of the sporadic nesting could be taking along this coastal stretch.

The olive ridley and the green turtles are annual nesters and lay eggs more than once in a single season. The data of Gujarat Forest Department and Sundarraj *et* al. (2013) about 68 nests over five years (2007-08 to 2012-13) along the Mandvi coastal stretch (73 km) averages for 14 nests per year that implies 1 nest/5 km beach, which is highly sporadic and is a scenario of entire coastline of India, so far as sea turtle nesting is concern. Also, the 6 km beach between Mandvi palace and Nana Layja reported to be only 6 nests in five years in this coastal stretch.

The nesting of sea turtles along the coastal stretch Mandvi is highly sporadic as well as high nest predation and therefore it is possible that forest department translocated all the nests to the hatchery (Sundarraj *et* al. 2013). **During the present study, interview with local fisherman/coastal dwellers could not confirm the exact nesting location from which these coastal dwellers bring sea turtle eggs for translocation at hatchery maintained by Gujarat State Forest Department at Mandvi.**



There are smaller fishing hamlets present along the coastline of the study area. Although fishing is not rampant, but fishing is known to be a practice for local consumptions and for local demands. Discussion with them during field visits revealed that most of the nests are brought to Mandvi by fisherfolks/coastal dwellers within the coastal stretch of Madhva, Kathda, Mandvi palace and Mandvi beach as well as from Salaya side (Table 6). Therefore, sea turtle nesting on the coastal stretch of GHCL proposed project site is not observed during survey period, may be seldom, very low and considered to be quite sporadic.

Table 5. Details of sea turtle egg collections done and release of turtle hatchlings by fishermen/coastal dwellers of Mandvi coast (secondary sources of information from villagers through verbal discussion with them)

Place of Collection Location for turtle eggs* (2013 to 2015)	No. of eggs collected	Place of release of sea turtle hatchlings
Near to coast at Bhada-Aashar Mataji Temple	> 100	Windfarm Beach-Mandvi
Near to coast at Layja-Nana	> 80	Windfarm Beach-Mandvi
Near to last wind mill at Mandvi beach	> 100	Windfarm Beach-Mandvi
Near to coast at Mandvi-Ganganaal	> 90	Windfarm Beach-Mandvi
Near to coast between Nana Layja to Kathda	> 120	Windfarm Beach-Mandvi
Near to coast at Pingleshwar temple, Rampar (Gadhwali)	> 110	Windfarm Beach-Mandvi
Near to coast at Panchotiya temple	> 127	Windfarm Beach-Mandvi
Near to coast at Nana Layja	> 130	Windfarm Beach-Mandvi
Near coast at Maska-between Rawalpir to Mandvi	> 100	Windfarm Beach-Mandvi
Near coast at last wind mill at Mandvi beach	> 100	Windfarm Beach-Mandvi
Near coast at Dhabrudi	> 90	Windfarm Beach-Mandvi
Near coast at Mandvi-Ganganaal	> 120	Windfarm Beach-Mandvi

*Data available till 2015 only

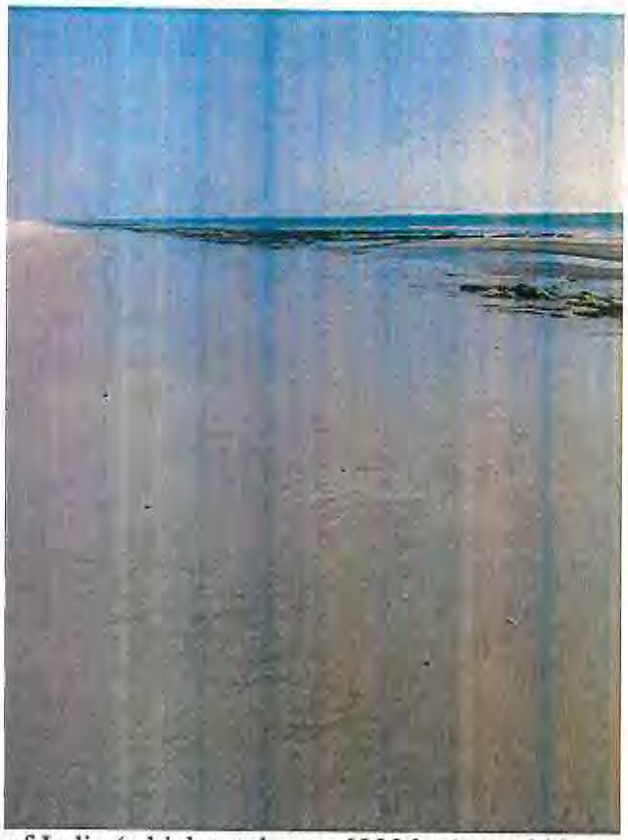
Table 6. Fishermen/coastal dwellers interview and their remarks on sea turtle nesting/egg translocation to Mandvi hatchery

Sl. No.	Name	Address	Response
01.	Abdu Rahman Vagher	Fishermanm Nana Layja	No nesting of sea turtle seen on Nana Layja beach
02.	Jurab Ismail Vagher	Fishermanm Nana Layja	No nesting of sea turtle seen on Nana Layja beach
03.	Abdul Kudan Taijab	Fisherman, Madhva	Nesting seen in Madhva beach, Mandvi Palace beach
04	Ismail Hussain	Fisherman, Madhva	Nesting seen in Madhva beach, Mandvi Palace beach and turtle eggs translocated to Forest Department hatchery at Mandvi, two years back
05	Mamud Hussain Isha	Fisherman, Madhva	Nesting seen in Madhva beach, Mandvi Palace beach and turtle eggs translocated to Forest Department hatchery at Mandvi, long back
06	Abdul Taijab	Fisherman, Madhva	Nesting seen in Madhva beach, Mandvi Palace beach
07	Hussain Taijab	Fisherman, Madhva	Nesting seen in Madhva beach, Mandvi Palace beach
08	Md. Taijab	Fisherman, Madhva	Nesting seen in Madhva beach, Mandvi Palace beach and turtle eggs translocated to Forest Department hatchery at Mandvi, two years back
09	Aubkhan Mubarak	Fisherman, Madhva	Nesting seen in Madhva beach, Mandvi Palace beach and turtle eggs translocated to Forest Department hatchery at Mandvi

Sea turtle nest all along the coast of India and its Bay Islands of Andaman & Nicobar and Lakshadweep archipelago. The olive ridley turtle is considered the most abundant sea turtle in the world, with an estimated 800,000 nesting females annually. Solitary nesting occurs extensively throughout this species' range, and nesting has been documented in approximately 40 countries worldwide. The olive ridley may be the most abundant sea turtle on the planet, but some argue that it is also the most exploited. Some nesting populations are currently stable and/ or increasing. The olive ridley and green turtles are reported share beaches for nesting in Andaman & Nicobar, Lakshadweep and in mainland Gujarat. The olive ridley is very oceanic in the Eastern Pacific and probably elsewhere too (http://seaturtlesofindia.org). Similarly, green turtles are found on large, open beaches to small coves covered with sea grasses, or in areas where seaweeds are found. The species (like the hawksbill turtle) is

also known to prefer nesting on island beaches mainly, the beaches of tropical and subtropical areas near continental coasts and around islands.

For regulating development activities, the coastal stretches within 500 metres of High Tide Line (HTL) on the landward side are classified as Category I (CRZ-I): (i) Areas that are ecologically sensitive and important, such as national parks/marine parks, sanctuaries, reserve forests, wildlife habitats, mangroves, corals/coral reefs, areas close to breeding and spawning grounds of fish and other marine life, areas of outstanding natural beauty/historically/heritage areas, areas rich in genetic diversity, areas likely to be inundated due to rise in sea level consequent upon global warming and such other areas as may be declared by the Central Government or the concerned authorities at the State/Union Territory level from time to time, (ii) Area between Low Tide Line (LTL) and the high Tide Line (HTL). However, using this logic, most sandy beaches on the east and west coasts of India (which total over 6000 km) would have to be designated as CRZ-I, simply by virtue of the low-density ridley nesting that occurs, and this hardly seems practical given human population densities along the Indian coast (Shanker, 2002) and will restricts the setting up and expansion of any industry, operations or processes.



The shoreline protection to be any defensive measures used to protect areas from inundation, the effects of waves on structures, beach erosion, salinity intrusion, and the loss of natural resources (Witham, 1990). Protection methods are often divided into two types: hard stabilization methods and soft stabilization methods. Soft stabilization methods include beach nourishment and dune construction. Beach nourishment is the most often utilized soft stabilization method. An important benefit of beach nourishment is that it can assist with replacing the sand supply along the shoreline, which the stabilization of navigational inlets often disrupts. Due to the popularity of beach nourishment as a shore protection method, it is important

to ensure that differences between the sand used for nourishment and the natural sand do not cause adverse impacts to nesting sea turtles.

Although some sand characteristics are crucial to nest survival (Packard and Packard 1988), females apparently choose nesting sites without control to most of them (i.e. sand grain size, shape, and distribution; hydric properties; pore spacing; and mineral content; Mortimer, 1982; Mortimer, 1990). Therefore, a beach can be attractive to females as a nesting site, but contain sands, which are less than optimal for nest survival (Steinitz *et al.* 1998).

Although, generalizations cannot be made on the effects of nourishment on nesting sea turtles, but nourishment appeared to have an immediate positive effect on turtle nesting success and turtle nesting habitat. Every nesting beach and nourishment project is unique; therefore assessments of nourishment's effect on turtles must be done on a case by case basis until more definitive data are available. Future studies should further evaluate the effects of sand compaction and sand temperature on sea turtle nesting activities.

Loggerheads and Green turtles maintain levels of fidelity to nesting beaches that vary over short timescales in response to beach dynamics (Godley *et al.* 2001). This suggests that when nourished beaches are unfavorable for nesting, sea turtles are capable of re-emerging on adjacent beaches that are favorable. Thus, a mosaic of nourished and non-nourished beach sections or adjacent nourished beach sections applied during different years would have a smaller impact on nesting.

The nourished beach did not significantly affect reproductive success as measured by hatching and emerging success for Loggerheads or Green turtles. These rates were nearly equal and not significantly different from those for the non-nourished area. This indicates that hatchlings did not encounter difficulties extricating themselves from the nourished substrate. The results indicate that the nourished beach provided an incubation microhabitat for Loggerhead and Green turtle reproduction similar to that of adjacent nonnourished areas.

In the present case, the intake and outfall pipeline of the GHCL proposed on the shore where sand/gravel/pebble filling if to be done should be replaced with sand of similar nature (grain size, organic content) to that which was dodged out, thereby maintaining the suitability of the beach for the incubation of sea turtle eggs. Restoration should not be during nesting and

hatching period since heavy equipment and activity can deter nesting, crush eggs, and/or prevent hatchlings from successfully emerging out of the nest from nearly shore.

Migration and movement of sea turtles from Indian coastal waters is not adequately known except for two studies by Wildlife Institute of India on olive ridley migration and movement in the Bay of Bengal based on satellite telemetry on turtles. Based on the study, WII has recommended that (a) inviolate onshore nesting areas that requires special protection, restoration and management approaches and (b) concentrated and diffused offshore breeding congregation zones in the marine habitat that requires different protection, monitoring and management strategies. Also, considering the fact that the olive ridley is Vulnerable and Green turtle is endangered species and included in the Schedule-I of the Wildlife (Protection) Act, 1972 as well as species of international conservation importance due to inclusion in CITES (Convention of International Trade in Wildlife Flora and Fauna) Appendix and CMS (Convention on Migratory Fauna), the following measures are suggested as recommendations.

6. CONCLUSION AND RECOMMENDATIONS

6.1. Conclusion:

1. During approx. six months daily monitoring from September 2018 – March 2019, no sea turtle nest / fresh crawl marks were observed along the shore/beach surveyed. However, secondary sources of information revealed the coastline of Mandvi about 20 km form proposed site as important sea turtle nesting habitat along Kutch.

2. Based on the detailed field survey & monitoring of sea turtle nesting, due to its narrow width, the proposed GHCL site beach gets inundated during high tide and thereby unfavorable for sea turtles for laying eggs. It was observed that due to its narrow beach width, vegetation cover, slope, presence of pebbles and rubbles and presence of predators on the beach sea turtles may not favoring this area for laying eggs.

3. However the 7 km stretch between Rukmavati river mouth (about 20 km from proposed project site) and Mandvi palace (about 16 km from project site) is sandy, vegetation to HTL is wide and much of the sporadic nesting could be taking place along this coastal stretch.

6.2. Recommendations

1. Sandy beach of proposed GHCL site and adjoining areas have sporadic nesting habitats for sea turtles and nesting activities are quite rare. There is less probability of nesting in proposed project coastline considering the beach slope, availability of beach beyond HTL for nesting. Nevertheless, monitoring of sea turtle nesting along the coast is required and adherence to the precautionary principles.
2. Although sea turtle seems to avoid areas such as above being unsuitable for laying eggs, however M/s. GHCL should monitor the surrounding areas and nesting observed/reported if any, the same to be informed to the Forest Department officials and the eggs to be translocated immediately to the nearest hatchery at Mandvi/Naliya or along nearby beaches being maintained by Gujarat Forest Department, since they are as such is subjected to predation.
3. It is observed from the literature review that nesting data/hatchery data available for Kutch coast (Mandvi and Naliya) does not clearly record the exact species of sea turtle nesting (Green sea turtle/Olive Ridley sea turtle). Accurate information is highly important as green sea turtle numbers are declining worldwide and being migratory species, its conservation is of primary importance. The egg collectors may be trained to observe the turtle species while collecting and transporting the eggs to the hatchery. Towards this capacity building training programme on identification of species of sea turtles nesting in the area and hatchery management of sea turtles for stakeholders *viz.* fishermen/coastal dwellers may be organized by Gujarat Forest Department.
4. In-situ protection of nest by fencing or safe translocation of nests to hatchery at Mandvi or close-by areas being maintained by Gujarat State Forest Department be done immediately and further improvement in the hatchery development along Mandvi coast should be done.
5. Periodic monitoring of sea turtle nesting should be carried out by a scientific agency with credibility on coastal and marine faunal study.
6. M/s GHCL should prepare an Environment Management Plan and should support sea turtle conservation and management measures taken up by PCCF & Chief Wildlife Warden of Gujarat State Forest Department.

7. The M/s GHCL upon obtaining permission for the project should prepare a construction schedule taking care of the peak sea turtle nesting season of Kuchchh region for any direct or indirect impact on sea turtle for their breeding and the schedule to be efficiently followed.

8. The M/s GHCL upon obtaining permission for the project should prepared an excavation plan for the beachfront area and require to be kept minimum, so as not to cause direct or indirect impact on sea turtles and other intertidal marinelife. The excavated area to be properly restored as per the standard protocols available.

7. CONSERVATION PLAN FOR SEA TURTLES

Though sea turtle nesting at the project location seems to be rare and low probability, however considering that Mandvi beach seems to be an important sporadic sea turtle nesting site of Kutch, the following conservation plans are recommended:

I. Artificial illumination on the beach can affect the sea turtle nesting and hatchlings. Compared to any other kinds of coastal development, light pollution is probably one of the problems that can be solved with relative easy, if committed for conserving sea turtles. Using a smaller number or lower wattage of lights; repositioning, shielding, redirecting, lowering, or recessing fixtures are some of the available options for reducing illumination to the beach. Sea turtles are less affected by red, yellow, and low-pressure sodium-vapor lights, and therefore can be substituted with ordinary lights.

II. Creation of awareness among villagers and fishermen on the importance of turtle conservation is required. Proper identification of species of sea turtle nesting on a particular beach is important.

III. Monitor of shoreline for sea turtle nesting is required to assess nesting potential of the beach and any possible impact on nesting due to developmental activities.

IV. Any conservation and management plan for sea turtles should be developed in consultation with the Gujarat Forest Department.

* * * * *

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Studies on sand dune mapping and morphological changes of the river mouth at the proposed Greenfield Chemical Complex at District Kutch, Gujarat

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Final report

August 2020

सीएसआईआर – राष्ट्रीय समुद्र विज्ञान संस्थान
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1. Introduction

M/s. GHCL, Ahmedabad, is a diversified company with the business area in heavy chemicals, textiles, and consumer products. The major business is from Soda Ash and Sodium bicarbonate manufacturing at Sutrapda, District Gir Somnath, Gujarat. It is one of the leading producers of Soda ash in the country since 1988.

Soda ash and Sodium bicarbonate is having huge demand and has application in the consumer industry. To meet the growing demand, GHCL proposes to set up a Greenfield chemical Complex near Village Bada, District, Kutch, Gujarat.

The Greenfield chemical complex will comprise of Light and Dense Soda ash manufacturing plants, Sodium bicarbonate manufacturing plant, Captive co-generation power plant, seawater intake, and effluent disposal system and associated infrastructure. In future company at the same complex may go in for Caustic soda and by-products like Chlorine, Hypo, Hydrogen, etc.

The Soda ash manufacturing being an exothermic process, requires a huge quantity of seawater for cooling and sweet water for process requirement. The proposed project site is in proximity to Arabian sea-coast off village Bada.

GHCL engaged CSIR - National Institute Oceanography (NIO), Goa for carrying out the morphological studies of the dunes near project location through which seawater intake and effluent disposal are planned.

CSIR- NIO as a Premier research institute of Oceanography in the Indian Ocean region has carried out many projects of this kind in the past. NIO has got the best talents of the world on various aspects of fundamental as well as applied oceanography fields. The objectives of the project after the discussion in the meeting are as follows.

2. Objectives and study area

a) To map and analyse the morphological changes of the seasonal river 'Vengadi' discharge mouth close to the proposed project site towards southwest for ten years at three seasons based on the archived satellite data.

b) Mapping of the sand dunes if any at the proposed site.

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c) To find out and recommend the suitable passage for seawater intake and effluent outfall pipeline corridor at the proposed location.

d) Observation of Suspended Sediment Concentration (SSC) at the recommended seawater intake points identified by CSIR –NIO, RC, Mumbai.

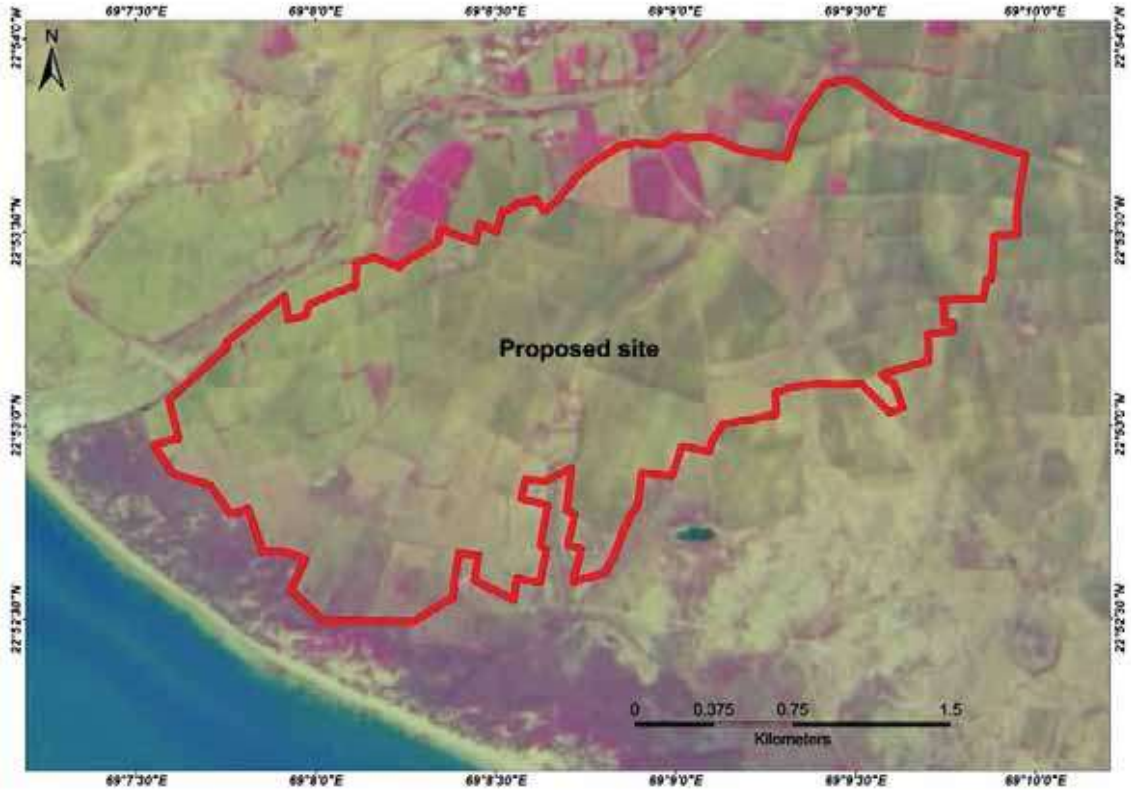


Figure 2.1 Study area

3. Data and Methodology

3.1. Morphological changes of the river mouth and sand dune analysis

The seasonal river Vengadi discharge mouth lies towards the southwest of the proposed complex and sand dune towards the south of the project boundary(Figure 2.1). Archived satellite imagery (Table 3.1) was used for the study area to address morphological changes of the river mouth in the study region. The latest satellite image on 30-09-2018 was used for mapping the present extent of a sand dune. That extent was used further for detailed analysis to find out the suitable passage for intake and outfall pipeline corridor. All data products were

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4.3. Objective 3 - To find out the suitable passage for intake and outfall pipeline corridor

The sand dunes and area adjoining GHCL boundary are considered for the study. As per the environment regulations, sand dunes can not be altered or dressed or flattened. Hence, the optimum solution to lay the intake and outfall pipelines are explored without disturbing the dunes with any of the alternate ways such as tunnelling etc. The selection of suitable corridor for the proposed pipelines over the dunes involved many criteria such as project site, the elevation of the dune(Fig 4.3.1), width of the dune, proximity to the landfall, intake and outfall points, etc. All the said parameters were used to finalise the efficient and optimum pipeline corridor in the dune area. Initially, the entire dune elevation was analysed through the contour map and elevation values provided by GHCL. The dune is having three patches with a maximum height to the tune of 18.5 m which is seen the map in dark brown as isolated patches(Figure 4.3.1). This high elevation regions are highly stabilised and have more stability. The dune has a gradual decrease of the height from the maximum elevation points and shows the gentle slope. Based on the GHCL boundary and dune characteristics, many landfall locations were selected under three categories. The transects are named T01, T02, T1toT8 and their respective landfall points(Table 4.1) are named as L0(1), L0, L1, L2, L3, L4, L5, L6, L7& L8 (Figure 4.3.2). LN is the point explored for the possibility close to Vengadi mouth but discorded due to shallow dune height. The landfall points were decided based on the following:

1. Elevation of dune area which is above 12 m which are supposed to be stable
2. High elevation of dune area with longer dune width
3. Closest landfall points to intake and outfall points in the sea

Regional Center, CSIR-NIO, Mumbai has suggested two intake and two outfall points in the Bada coast. The locations of these offshore points were also considered for arriving the landfall points and subsequent closest corridor for pipelines. Figure 4.3.3 shows the coastal bathymetry used for the study and location of intake, outfall and landfall points. Figure 4.3.4 shows the distance between the suggested landfall points (L1 and L2) and the proposed intake and outfall points (L5 and L6) for the final solutions of the proposed site. It also shows the distance of LFP and OF points from the river mouth.

Sand dune areas are declared as ecologically sensitive regions as per MOEF&CC notification and no development is permitted (MOEF&CC CRZ notification 2019). The whole exercise

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was to find out the natural passage where it can be used as a pipeline corridor. But, throughout the 6.8 km length dune, no natural passage was observed. Dune height was always observed above 1.5 m in the complete stretch. The observed vegetation indicates that the dunes are stable and more than 8000 years old. It is also observed that the dunes of different age formation at the backshore. Hence, the entire dune stretch at the vicinity of the proposed project site will be falling under the CRZ.

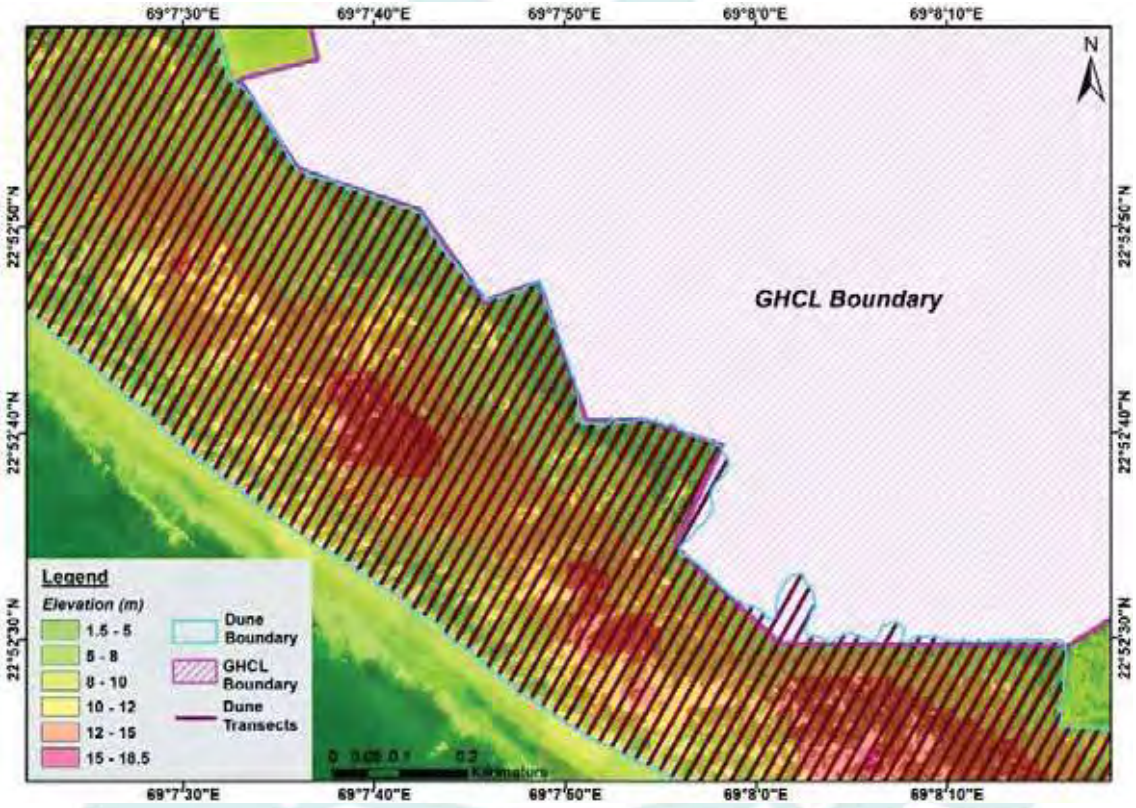


Figure 4.3.1 Elevation of the dune along with the project site boundary

As the sand dunes are within CRZ and no dressing or altering is allowed as per notification, it is suggested to lay the pipelines without disturbing the dune stretch through tunnelling or any other compatible method, etc. Based on the dune characteristics, vicinity of the project site, intake and outfall points, the stability of the coast, ten transects and corresponding landfall points were analysed individually. Based on the detailed analysis, L5 & L6 may be the better landfall points for the suggested intake points as they are at the closest vicinity to the intake points. Dune width and height is analysed for all the proposed transects (*Figure 4.3.6)* L1, L2 and L0 are comparatively better landfall points for the pipeline corridor from the plot

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boundary by considering the dune characteristics. They are lesser by distance to outfall points also. The distance to the outfall locations varies as per the sites of these landfall points. By considering the shortest distance from the coast to intake and outfall points, L5 &L6 is recommended as the first preference for intake point, which is around 1005 m away. But, the L1&L2 is considered as the better preference due to dune characteristics , but little longer by distance to outfall points (2371 and 2865 m). L0 and LO(1) are shorter by distance to outfall locations than L1 &L2 and almost having similar dune characteristics. L0 and LO(1) transects are little higher in dune slope than L1&L2 (*Figure 4.3.5*). However, in this case, the tunneling option at two different places in the dune stretch is enforced so that the distance in pipeline laying in the sea is reduced. The corresponding transects T5 &T6 and T01,T02,T1&T2 may be explored for the tunneling or any other better option. All the recommended options may be exercised after a detailed investigation with geotechnical and tunnelling experts. Depth to the bedrock, tunnelling distance and slope,etc., should be considered in detail. Hence, no damage would happen to surface dunes. It is strictly suggested that the dune stretch should not be disturbed at any cost during the pre and post-project activities.

Vengadi River mouth at the vicinity of the proposed project was also explored as it gives an option of not disturbing the dune complex at all. The stable river mouth was explored for the pipeline laying, and dredging option may be assessed during the pipeline laying time. As evidenced in the past, the pipeline will be covered by the sediments in the near future. As breached in 1988 and 1990, it may be breached, and pipelines may be exposed during a heavy natural disaster. Though the outfall points are closer than the proposed LFPs, because of the mentioned reasons, river mouth point is not considered. The economics of laying longer pipelines and two tunnellings in the dune stretch may be considered, and the optimum decision may be taken. The proposed options are provided by considering only the sensitivity of the environment around the proposed site, and the authorities may view the suggestions and can arrive at the final decision.

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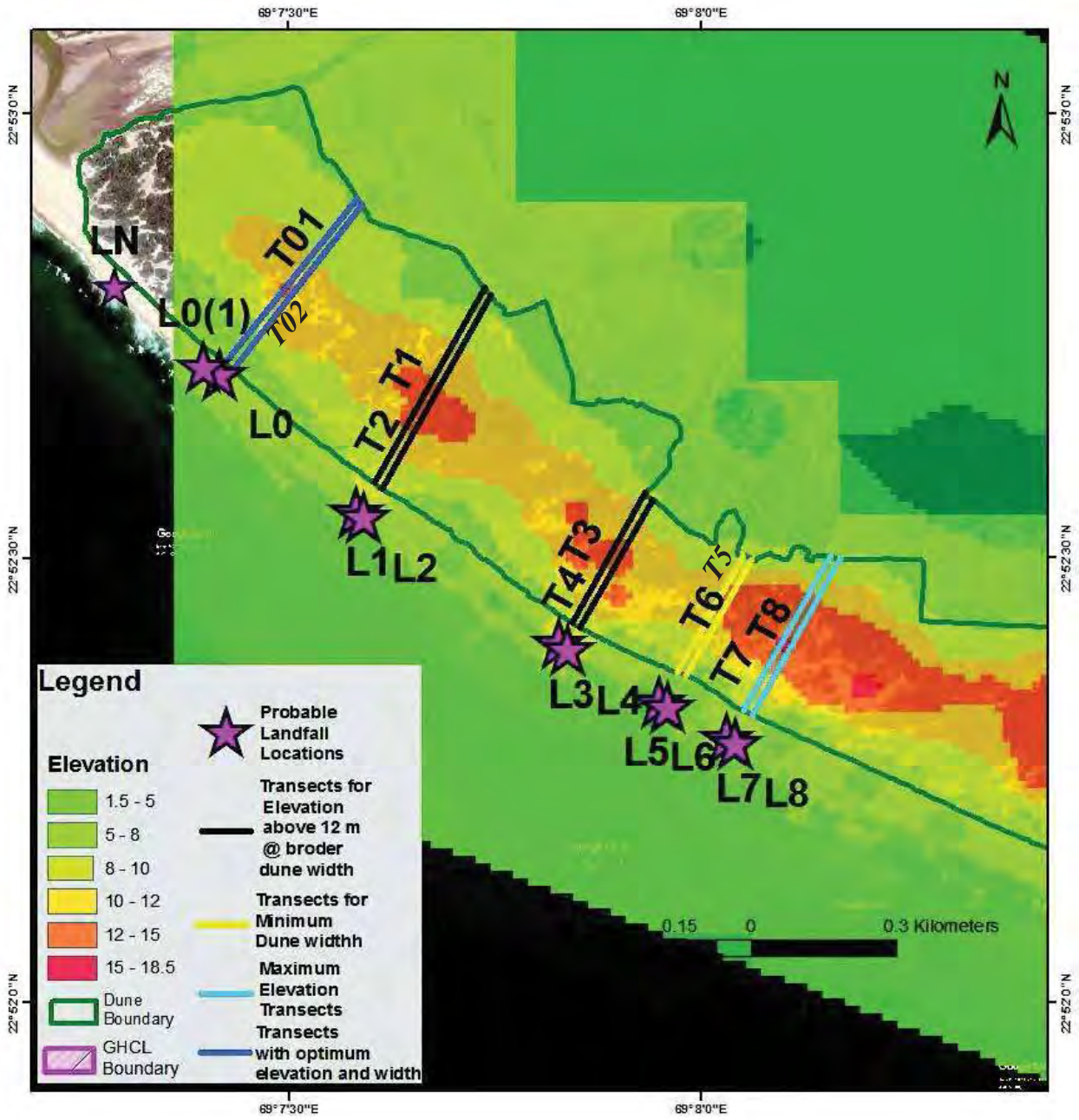


Figure 4.3.2 Landfall points based on dune characteristics

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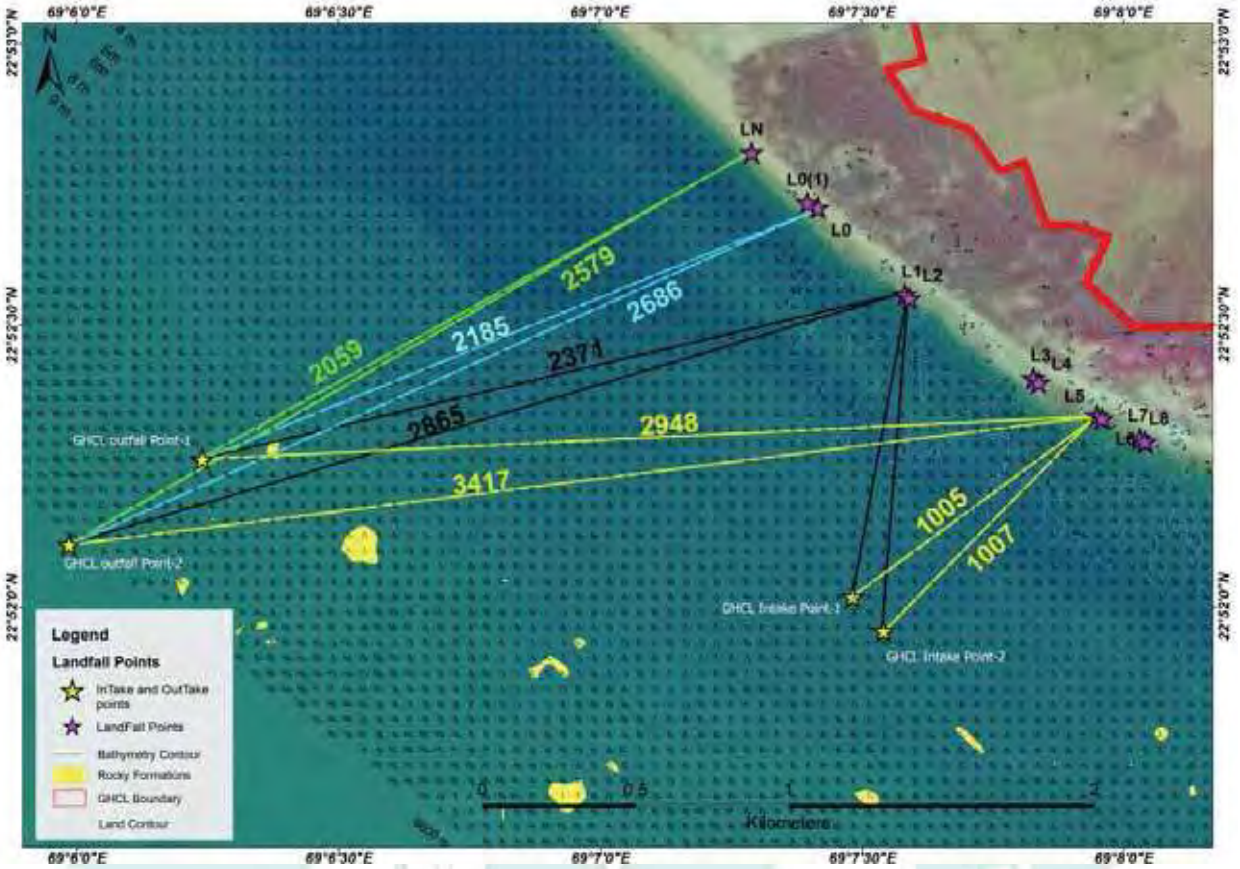


Figure 4.3.3 Coastal bathymetry,landfall, intake,outfall points of the proposed site

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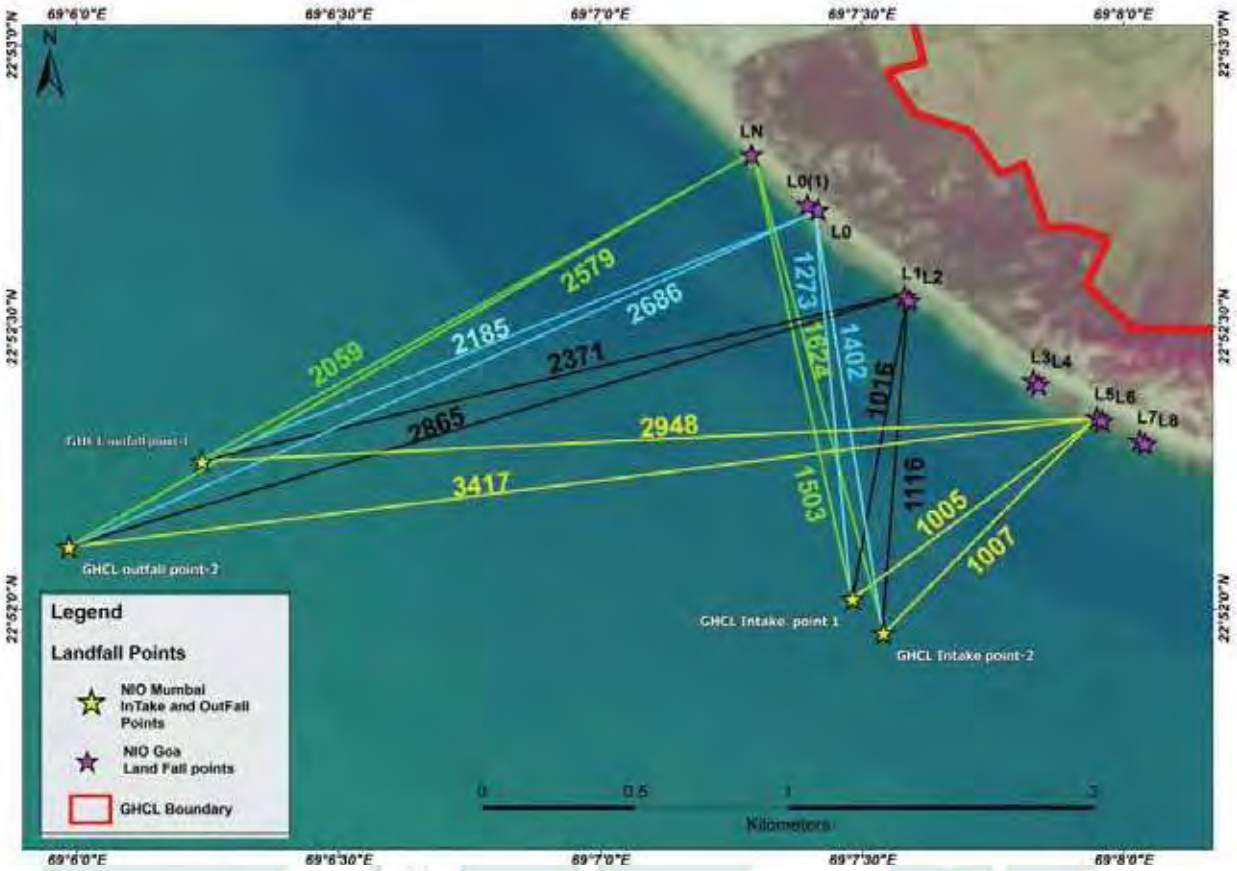


Figure 4.3.4 Distance between intake and outfall points and the suggested landfall points for the proposed site

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Table 4.1 Details of transects in the dune area for the proposed pipeline corridor

Transect	Transect Length / Dune Width (m)	Associated Landfall Point	Co-ordinates at Landfall Point	Reference boundary	Maximum Height along the Transect (m)
TN1 TransID-321	449	LN	69° 7' 19.00"E 22° 52' 49.06"N	69° 7' 33.12"E 22° 52' 56.77"N	8
T01 TransID-314	425	L0(1)	69° 7' 25.53"E 22° 52' 43.52"N	69° 7' 34.96"E 22° 52' 54.31"N	12.5
T02 TransID-313	425	L0	69° 7' 26.05"E 22° 52' 42.99"N	69° 7' 35.31"E 22° 52' 53.80"N	12.5
T1 TransID-300	466	L1	69° 7' 36.14" E 22° 52' 35.10" N	69° 7' 44.16"E 22° 52' 48.23"N	12.5
T2 TransID-299	460	L2	69° 7' 36.70" E 22° 52' 34.68" N	69° 7' 44.63"E 22° 52' 47.63"N	12.5
T3 TransID-275	311	L3	69° 7' 50.60" E 22° 52' 25.66" N	69° 7' 55.82"E 22° 52' 34.27"N	12.5
T4 TransID-274	305	L4	69° 7' 51.19" E 22° 52' 25.27" N	69° 7' 56.41"E 22° 52' 33.84"N	12.5
T5 TransID-263	274	L5	69° 7' 58.16" E 22° 52' 22.26" N	69° 8' 02.91"E 22° 52' 30.01"N	12

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T6 TransID-262	*296*	*L6*	*69° 7′ 58.85″ E 22° 52′ 22.09″ N*	*69° 8′ 03.58″E 22° 52′ 29.80″N*	*13.5*
T7 TransID-255	*366*	*L7*	*69° 8′ 03.06″ E 22° 52′ 19.68″ N*	*69° 8′ 9.34″E 22° 52′ 30″N*	*15.5*
T8 TransID-254	*371*	*L8*	*69° 8′ 03.63″ E 22° 52′ 19.44″ N*	*69° 8′ 10.03″E 22° 52′ 30″N*	*15.5*

Tunnelling in the sand dune complex is a tricky exercise as the sand can collapse at any time. Dunes present in this coast are stabilized dunes with vegetation cover on it. Trench at the project site till the hard bedrock may be planned, and the tunnel may run through in the hard rock so that the sand above may not collapse or any other latest method which will restrict the dune collapse. Transects reaching the landfall points are selected in such a way that dune is having sufficient width and height(Figure 4.3.6) so that it does not collapse so easily (Table 4.1). Detailed geotechnical, engineering and economic analysis are recommended at the proposed transects. After analyzing all the possible options of river mouth point and landfall points to the proposed outfall and intake locations, it is suggested that the L0, L0(1), L1&L2 are favourable for the suggested outfall location and L5&L6 for the intake locations respectively (Figure 4.3.5). These transects are seprerated by 20 m and can be further assessed and finalised based on the ground conditions.

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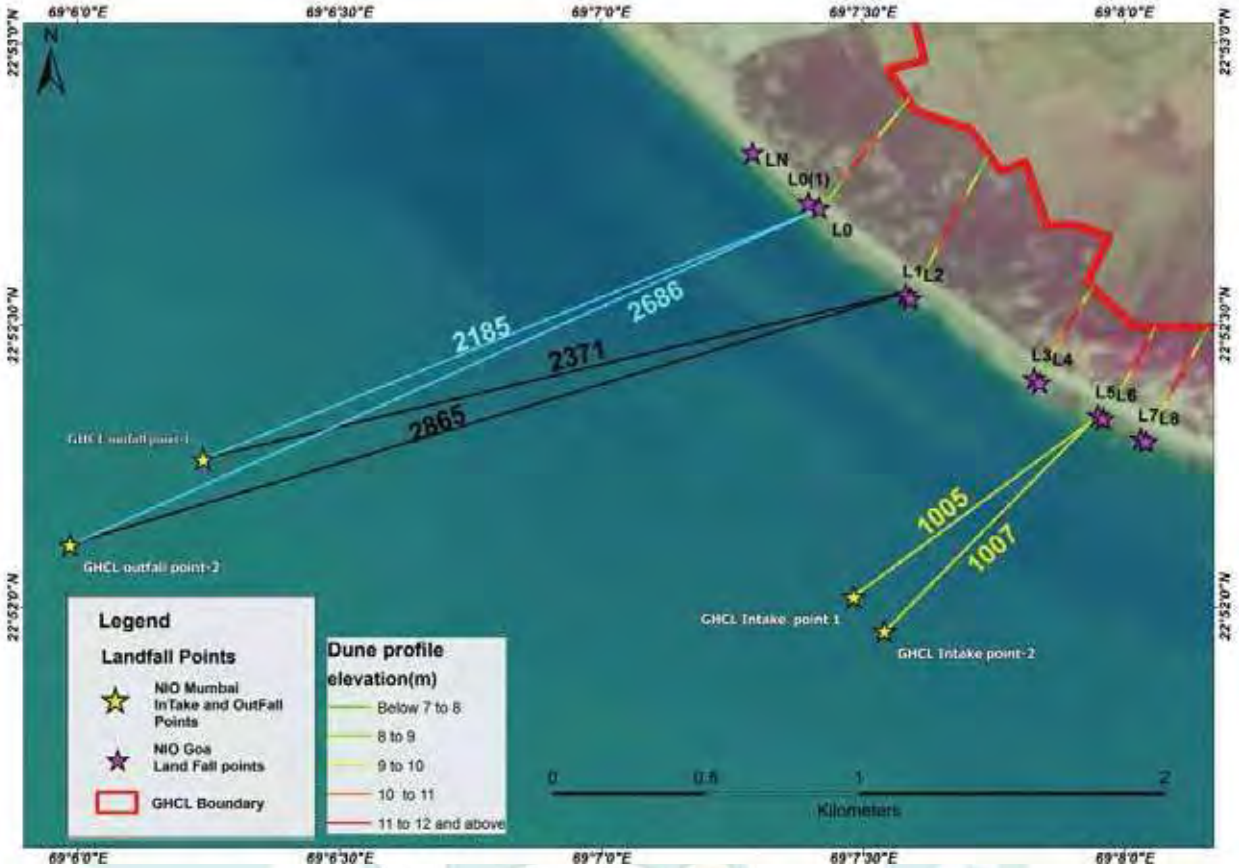


Figure 4.3.5 Dune passage to landfall points and landfall points to suggested Intake and Outfall points passage

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5. Conclusion and recommendations

- The Vengadi river discharge mouth, which was considered for the pipeline corridor, has not undergone significant morphological changes from 2008 to 2018.
- This study exhibits that the river mouth opened up only in the years 1988 and 1990, but the reasons could not be ascertained. After the construction of the tidewater barrier in 2005 across the river, river mouth has not been breached either by river water or by tides.
- Due to this, the river mouth is so stable that there is no inflow or outflow through this mouth observed. Hence, the option of considering this river mouth for laying the buried pipelines may be considered if dredging of the mouth is approved by the concerned authorities during the construction stage. It may refill again, as evidenced in the past. The risk of pipelines exposed may not be ruled out in case of any natural disaster, where appropriate precautionary measures should be taken at the planning stage. In this option, the outfall points are at 2045m and 2568m distance in the sea from the river mouth. But, the problems of bringing the pipelines upto the river mouth need to sort out.

- The economics of laying longer pipelines and two tunnellings in the dune stretch may be considered, and the optimum decision may be taken. As the shorter distance points (L0, L0(1), L1, L2, L5, L6) are available, it is recommended to prefer those points.
- The approximate area of this dune stretch is 302 ha. The dune extends from northwest to southeast for a length of 6.8 km without any break. If there would have been a break, it could have been used as a natural passage. The maximum observed width of the dune was 821 m, and the minimum observed width is 7 m. Dune height extends from 1.5 m to 18.5 m. Three different patches of dune reach up to 18.5 m.

- It is observed through digitization of historic shoreline that no significant erosion has occurred along the entire stretch of the Bada coast. This indicates that this coast has been stable for a long time. The proposed LF points are lying on the stable coast of this region.

- Based on the dune characteristics, vicinity of the project site, intake and outfall points, the stability of the coast, ten transects and corresponding landfall points were

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analysed individually. Based on this, L5 & L6 may be the better landfall points for the suggested intake and L0,L0(1), L1&L2 for outfall points. Intake point is around 1005 &1007 m , outfall is around 2185 & 2686 m from L0 &L0(1), and 2371& 2865 m away from L1&L2 respectively. Dune width is about 275 m from the L5 to the project plot boundary. Dune width is 425m, 425m, 466m and 466m in between the L0(1), L0, L1 &L2 respectively, to the plot boundary. The corresponding transects T01, T02, T1, T2, T5&T6, may be explored in detail for the alternate means of laying the pipeline such as tunnelling, etc.

- The minimum and maximum range of SSC at the intake point was 2.48 mg/l and 27.12 mg/l respectively during 1999-2003. The variations of SSC at intake point is due to various reasons. Values of SSC should be considered while planning the seawater intake and effluent disposal system.
- GHCL may conduct proper EIA study for predicting and mitigating impacts due to project activities and take all necessary environmental approvals from state and central environmental authorities for the project.

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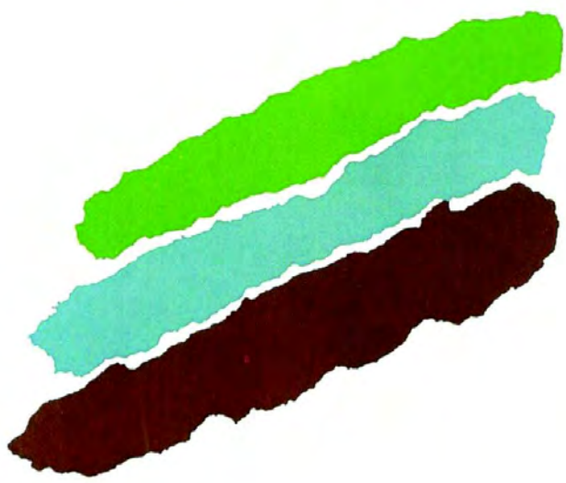
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Marine EIA/EMP for Seawater Intake and Effluent Disposal for Greenfield Chemical Complex off Bada coast, Arabian Sea

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December 2020

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EXECUTIVE SUMMARY

Introduction

M/s. GHCL Limited was incorporated in October, 1983. The company has established itself as a well-diversified group with an ascertained footprint in chemicals, textiles and consumer product segment. In chemicals, the company mainly manufactures Soda Ash (Anhydrous Sodium carbonate) that is major raw material for detergents and glass industries and Sodium bicarbonate (baking soda) which is mainly used in Food industry. To meet growing demand for Soda ash it now proposes Greenfield Chemical Complex with Soda Ash (11,00,000 TPA), Dense Soda Ash (5,00,000 TPA), Sodium bicarbonate (2,00,000 TPA) manufacturing plants supported by utilities like captive co-generation power plant (120 MW), seawater intake and effluent disposal system, RO-DM system and associated infrastructure at Village Bada, Taluka Mandvi, District Kutch, Gujarat. GHCL had signed an M.O.U in January, 2017 during Vibrant Gujarat Summit, 2017 for Greenfield Chemical Complex in the District Kutch of Gujarat state.

The Soda Ash process along with captive co-generation power plant in totality requires huge quantity of cooling water. The seawater requirement of about 16 x 10^5 m^3/day for process cooling, RO/DM plant, domestic use, utilities and dilution requirements etc. would be met from seawater from the Arabian Sea coast in proximity to the project location. The diluted combined effluent of about 15.8 x10^5 m^3/day generated from process, brine preparation/purification rejects, RO/DM plant rejects, utility rejects etc. after dilution with return cooling water/fresh seawater would be released at an appropriate location in the marine coastal zone of Arabian Sea meeting norms specified by Gujarat Pollution Control Board (GPCB)/ and/or Central Pollution Control Board (CPCB).

As per the Ministry of Environment Forests & Climate Change (MoEF&CC), Government of India (EIA), notification dated 14th September 2006 and Coastal Regulation Zone (CRZ) Notifications 2011 and 2019 Marine Environmental Impact Assessment (MEIA) study is required to be carried out for the proposed project. The main purpose of the report will be to establish baseline data, prediction of impacts and

suggests the measures required to minimize adverse impacts likely to be caused by the project activities on marine ecology.

M/s. GHCL limited had approached CSIR-NIO to assess the impacts (if any) of proposed project/activity on marine environment off Bada, Gujarat. Accordingly, baseline oceanographic data were collected during October, 2018 and March, 2019 by CSIR-NIO covering an area of more than 10 km^2 around the waters off Bada, Gujarat to meet the following objectives:

Objectives

a) To evaluate the prevailing hydrodynamics and ecological status off Bada coast.
b) To suggest suitable location for intake and mode for pumping seawater.
c) To suggest suitable location and mode of discharging of effluent.
d) To assess impact of seawater intake and outfall on coastal ecology.
e) To recommend suitable environmental management plan to Minimize any adverse impact on marine biota.

Project description

This section contains information regarding process, seawater intake system, quality and quantity of the effluent, effluent disposal system etc. as provided by M/s GHCL limited. Soda Ash (Na_2CO_3) is classified as a heavy chemical. The major raw materials for Soda Ash are salt and chemical grade limestone. Process requires uninterrupted supply of utilities such as steam at various pressures, electric power, seawater for cooling, freshwater for process etc. The dry liming energy efficient process will be used for manufacturing Soda Ash. To meet power and steam demand an integrated captive cogeneration power plant is proposed. Process being exothermic requires large quantity of water for process cooling requirement, seawater based once through cooling is necessary. Seawater intake system and effluent disposal system are proposed to meet the water requirement and effluent dispersion.

The proposed project site is located near Village Bada in Mandvi Taluka, District Kutch, Gujarat. It is located about 70 km from district headquarter Bhuj, 25 km from Mandvi. It is geographically located at the Arabian Sea coast off Bada village. The nearest broad gauge railway station and airport are at Bhuj. The road connectivity of Bada village is through NH 41 which is connecting Mandvi and Naliya. The nearest sea port is at Mundra about 70 km. The proposed project site is identified after evaluating 5 alternative sites based on various environmental parameters. The Soda ash manufacturing with Captive power generation requires huge quantity of water for cooling; this calls for site selection near to the sea coast.

The market of soda ash in India is anticipated to cross $2.8 billion by the end of 2025. Growing demand for soda ash from numerous industries such as glass, soap & detergents, pulp & paper, etc., is expected to drive the India soda ash market The Greenfield Chemical Complex is proposed to set up Soda ash and Sodium Bicarbonate manufacturing plants to achieve additional capacities. India's glass industry stood at USD3.9 billion in 2015, and the industry is forecast to grow at a CAGR of 13% during 2016-2025. Globally, glass industry accounts for more than 60% of soda ash consumption. However, in India detergent industry is the largest consumer. The detergent market is one of the segment of the FMCG market in India that has high growth potential. Increasing rate of modernization and improving living standards of consumers are positively influencing the demand for soda ash. The Soda Ash per capita consumption in India is 2.8 Kg only. If India has to reach to the level of per capita consumption of a developed nation, which is approximately 17 Kg of Soda Ash then addition of capacity is must.

The Soda ash manufacturing process being exothermic in nature large quantity of seawater which needs to be drawn from the nearby Arabian sea. As no sweet water source is available in project area which support uninterrupted water supply to process plants and utilities it is required to set up RO DM plant for making sweet water from seawater. The effluent from process plants and utilities required to be disposed off at a suitable location where effective dilution is available for dispersion. Thus, to meet the overall water requirement for proposed project seawater intake and effluent disposal is proposed for the Greenfield Chemical Complex.

On implementation of the proposed project, around 1,200 Nos of suitably qualified people direct employment to take place. Further, there will be also indirect jobs and business opportunities to the local people such as daily wage labourers, transporters and raw material suppliers. This may be of the order of 3,000 people. The project would increase and generate opportunities for ancillary and auxiliary business at the local and regional levels too.

Soda Ash: Soda ash (Na_2CO_3) is manufactured by the reaction between sodium chloride and limestone with ammonia as an intermediate carrier. The major steps involved in the process are as follows: (a) Brine purification in which the saturated brine is treated with soda ash and milk of lime to remove residual impurities. (b) Limestone calcination whereby limestone is mixed with coke and charged to lime kilns to produce CO_2 and CaO. Part of CaO is hydrated with sweet water to make milk of lime for treatment of brine. Major part of lime is ground and fed to Prelimer for release of ammonia. (c) Ammonia is absorbed in purified brine in absorber and thereafter CO_2 from compressors is fed in carbonation columns to obtain crude sodium bicarbonate as a solid phase which is filtered and decomposed to Soda Ash (Na_2CO_3) in calciner.

The filtrate containing NH_4Cl is reacted with $Ca(OH)_2$ in prelimer stills to recover NH_3 in ammonia still which is recycled. Ammonia still discharge is the major effluent from soda ash industry. This effluent contains high concentration of inorganic non-toxic solids and liquid is rich in salts with traces of NH_3. About 300 to 500 kg of solids are produced per tonne of soda ash manufactured. The effluent after removal of NH_3 is diluted with return cooling seawater to meet disposal norms of GPCB/CPCB.

Power plant: Circulating fluidized bed combustion (CFBC) technology will be adopted for the proposed captive power plant. A 120MW captive co-generation power plant consisting of Double extraction cum condensing turbo-alternator and required capacity lignite/coal/pet coke based CFBC Boilers; along with captive power plant machineries will be installed in order to meet internal steam and power requirement.

Studies conducted

The oceanographic investigations were conducted at 11 subtidal and 3 intertidal transects during October-November 2018 (postmonsoon) and March 2019 (premonsoon). The analyses were performed as per recommended oceanographic procedures.

Model studies

Predictions on dilution and dispersion of pollutants, SS transport and bed level changes were done on the basis of 2D models.

Prevailing marine environment

The coastal area off Bada in an area of about 180 km^2 was investigated for its environmental characteristics such as physical processes, water quality, sediment quality and biological characteristics. The status was evolved for 2 seasons namely postmonsoon and premonsoon during 2018-19.

Water quality

The average water temperature varied in accordance with the air temperature and was generally below 30°C. The average pH was between 7.9 and 8.4 and was in the range of seawater pH. The average SS varied (25-137 mg/l) as the sea bed is uneven rocky or sandy. Turbidity varied (1.1-53.1 NTU) in accordance with SS. High average salinity (37.5-38.1 ppt) indicated particular characteristic of the area between Okha and Jakhau where evaporation exceeds precipitation. The water was well mixed vertically as well laterally.

DO content, a vital water quality parameter influencing the health of aquatic biota, was in excess of 5 mg/l indicating the area well oxygenated. Consequently, BOD of the coastal water was low (av 0.7 – 2.9 mg/l). The average concentrations of PO_4^{3-}-P (0.1 – 2.5 µmol/l) and NO_3^--N (1.5 – 7.0 µmol/l) were in the range expected for the coastal area. Low levels of NH_4^+-N (av 0.4 – 1.8µmol/l) and NO_2^--N (av ND-0.5 µmol/l) indicated good oxidizing conditions in water.

The average concentrations of PHc (2.4 – 15.6 µg/l) and phenols (17.0 – 48.2 µg/l) were low and in the range commonly encountered in uncontaminated coastal waters.

The prevailing water quality off Bada compared well with that of the coastal waters off Okha and Jakhau which are adjacent to the study are.

Sediment quality

The surface sediment of the study area had variable texture but generally subtidal area dominated by silt. The subtidal as well as the intertidal sediments off Bada indicated considerable variation of trace metals but their values indicate lithogenic origin in the region and there is no indication of build-up of heavy metals in the region.

The Corg (<1 %; dry wt) and phosphorus (448 - 1841 µg/g; dry wt) contents in sediments were low and represented the baseline. The concentrations of PHc (0.1 – 0.3 µg/g; wet wt) in the sediment were also low and revealed uncontaminated status of the sediment with respect to PHc.

The prevailing sediment quality of the nearshore for premonsoon was comparable with that of the coastal waters off Okha and Jakhau.

Flora and fauna

Bacterial count like TVC in water and sediment was low and without any specific trend. Pathogens were rarely noticed suggesting clean and natural coastal system off Bada.

The concentration of chlorophyll a in the coastal water (0.4 – 1.4 mg/m^3) indicated variable and patchy phytoplankton biomass. The concentration of phaeophytin (0.1 – 0.9 mg/m^3) was low. The phytoplankton population was variable in accordance with the trend in phytopigments. Overall, 42 genera were recorded in the region with the common occurrence of Cylindrotheca, Navicula, Pseudo-nitzschia, Thalassiosira etc.

Mangroves were absent along the Bada coast. The intertidal rocky region however sustained marine algal species and well-established sand dunes are bordering the seashore of Bada region. The sand dune flora was dominated by babul and grass vegetation.

The zooplankton standing stock in terms of biomass (0.2 – 20.2 ml/100m^3) and population (1.4 – 193.3 × 10^3 no/100m^3) was indicative of an overall moderate secondary production and varied widely. The composition of zooplankton was fairly diverse and consisted mainly of copepods, decapods larvae, Chaetognaths and lamellibranchs. Overall 24 faunal groups were identified. Fish eggs and fish larvae though at a low percentage, occured in majority of the zooplankton collections. Decapod larvae occured in all zooplankton samples.

The intertidal macrobenthic standing stock in terms of population and biomass varied from 0 to 8150 no/m^2 and from 0 to 182.5 g/m^2; wet wt respectively. The fauna was mainly constituted by polychaetes and amphipods. The faunal group diversity varied between 0 and 15 groups. The subtidal benthic macrofaunal standing stock in terms of population and biomass varied from 0 to 1925 no/m^2 and from 0 to 6.04 g/m^2; wet wt with poor faunal group diversity (0 - 15 no). The faunal composition indicated overall dominance of Amphipods followed by Polychaetes.

The region has no established trawling grounds for fishery operations due to uneven bottom topography associated with rocky zones, hence, the trawlers operated at other areas for fishing. December to May is the peak fishing period while the period from June to August is the lean season. The common fishes in the landings of the Kutch District were Shrimps, Bombay duck, Small scieniedes, Coilia, Other clupeids, cat fish, Ribbon fish and Jew fish.

The Bada region does not sustain reef building corals as the intertidal area is largely sandy though intermittent rock exposures are there. Extensive survey was conducted during October, 2018 and March, 2019 in the intertidal regions of the proposed project area and corals were not sighted in the project area. The area is devoid of mangroves.

Reptiles

In the Gulf, the reptiles are mainly represented by marine turtles *Chelonia mydas* and *Lepidochelys olivacea* which have their breeding and spawning ground on the sandy beaches along the coast as well as on the islands particularly along the southern Gulf. No turtle however was sighted off Bada during `the study period.

Mammals

The mammals are chiefly represented by dolphin (*Delphinus delphis*), whale (*Balaenoptera* spp) and Dugong (Dugong dugon) in the Gulf especially along the Jamnagar coast. Whales and Dugong were not sighted in the study area during the study period. However, Dolphins were found sighted during field study in offshore regions.

Avifauna

The Bada coast offers different marine habitats like rocky and sandy intertidal areas for a variety of resident and migratory birds. The birds use these habitats as their active feeding ground especially during low tide. A total of 28 bird varieties were spotted during the field work from the study area. The most common birds recorded are herons, crows, cormorants, Plover, egrets, etc from the project vicinity.

Physical processes

During post monsoon season, the maximum tide was 4.06 m with an average of 2.4 m and during pre-monsoon season maximum tide was 3.5 m with an average tide of 2.46 m.

During the observation, the maximum current speed was 117 cm/s with an average of 62 cm/s in October 2018. Similarly, the maximum current speed was 35 cm/s with an average of 18 cm/s observed during March 2019 campaign. Most of the time, the current direction during flood phase was around 100^0 while that was around 300^0 during ebb phase in October 2018 as well as March 2019. The

direction varied between 100 to 300° which shows that the effluent possibly moves along the coast.

Modeling studies for marine facilities

GHCL proposes to establish marine facilities namely seawater intake and effluent disposal in the coastal waters off Bada. The suitability of these sites has been studied by using the numerical models. They are described below.

Hydrodynamic modeling

Numerical modeling was done using Hydrodyn-FLOSOFT, HydrodynPOLSOFT and Hydrodyn-SEDSOFT software for prediction of tides and currents; dilution and dispersion processes in marine areas; and sediment transport in tidally driven zones. The model runs were made for a period of 15 d for different seasons. The comparison of the observed and the computed tides as well as current components indicated good agreement between the two.

Seawater intake

It is proposed to withdraw seawater from the Arabian Sea by gravity through a submarine pipeline.

a) Locations of intake: It is proposed to establish the seawater intake site at one of the two sites given below.

IT1: 22°52'01.07"N; 69°07' 28.9" E (depth 3.3 m below CD). IT2: 22°51'57.44"N; 69°07' 32.44" E (depth 3.63 m below CD).

b) Behaviour at intake: From the model studies, it can be concluded that no significant changes in flow regime are expected due to continuous with-drawl of seawater at intake IT1 and IT2.

Effluent release

It is proposed to release the effluent at the bottom in the Arabian Sea through a submarine pipeline.

a) Locations of release: It is proposed to release the effluent into the sea at two sites given below.

OF2_1: 22°52'15.79"N; 69°06'14.35"E (depth 9.47 m below CD),

OF2_2: 22°52'6.65" N; 69°05' 59.08"E (depth 10.71 m below CD)

b) Behaviour of effluent: The effluent if released at OF2_1 and OF2_2, the levels of critical parameters in the effluent around the location and small central patch namely temperature: 5° C above ambient, SS: 1000 mg/l and ammoniacal Nitrogen as N: 50 mg/l attain the ambient levels of temperature: 28°C, SS: 93 mg/l and ammonia: 0.047 mg/l at 300 m (max) distance from the outfall.

Free form of ammonia is toxic to some marine organisms at low concentrations. The concentrations of ammonia predicted at OF2_1 and OF2_2 would be higher than the natural levels in a very narrow distance of disposal. However, at the ambient pH of seawater much of this ammonia is expected to be converted to NH_4^+-N, the form in which it is non-toxic to marine organisms.

Based on the results of numerical modelling it can be concluded that the water quality of the coastal area off Bada would not deteriorate with respect to temperature, SS and ammonia beyond 300 m distance from the outfall except in the immediate vicinity of the outfall where the temperature, SS and ammonia would be relatively higher but in the range considered tolerable to marine biota.

The bed level changes due to release of SS of 1000 mg/l from the effluent would be 0.002 - 0.028 m (max) at the outfall with no significant variation in the rate of erosion/deposition for both the locations. The deposited SS in the vicinity of the outfall would be advected to settle over a large area as the fine-grained SS erodes. This would reduce in time as the seabed gets re-established itself to a new hydraulic regime. In short term however there is a possibility of siltation due to continuous discharge of the effluent.

The output clearly shows that behaviour of the effluent released at OF2_1 and OF2_2 was similar. Also, the ambient condition would attain within 300 m (max) in both the cases. Presence of soft mud at OF2_1 and OF2_2 negates the

possibility of presence of subtidal corals. Hence both the locations are recommended suitable for the effluent release.

C) Near-field dilution: Based on the results of the Buoyant / Forced-Jet Model, it is suggested that the effluent should be released with a minimum initial jet velocity of 3.01 m/s through a 20 port diffuser at 9.47 m and 10.71 m below CD depth above 0.5 m from the bottom. As the effluent plume descends through the water column, it would attain initial dilution by 30-40 times.

Potential marine environmental impacts

Seawater intake

a) Scheme: The alignment for IT1 and is selected on the basis of lesser area and volume of excavation required to lay the pipeline and consequent reduction in benthic losses due to shorter length. Since the alignment corridor is devoid of mangroves and corals, their destruction due to the development is unlikely. The gradient of the buried pipeline will be so maintained that the seawater flows at a constant rate under gravity.

b) Potential marine environmental impacts: Major potential negative marine environmental impacts due to the proposed activities would be largely associated with (a) construction phase of laying of the intake pipelines and b) operational phase due to circulation pattern, changes in erosion-deposition processes, as well as impingement and entrainment of biota.

i) Construction phase: Adverse impacts of the proposed project on the marine environment during the construction phase could be due to modifications in the hydrodynamic characteristics of the area, degradation in water and sediment qualities and consequent impact on biota depending on the construction methodology selected and duration.

Hydrodynamic characteristics: As the trenching and burial of the pipeline would be across the intertidal zone with a sandy beach and subtidal zone with hard substratum, the construction if not conducted in a stipulated time and planning, there can be minor and local erosion both sides of the trench due to non-

compacted sand moving into the trench. However, due to the limited length of the trench and shallow excavation, this would not be significant. Apart from this, the coastal dynamics are unlikely to be influenced by the construction activities.

Water quality: The bed sediment disturbed at the excavation site would generate SS which may remain in suspension for some time at the construction site. However, considering the sandy nature of the sediment it is expected to settle fairly quickly. The impact would be localized, temporary and confined only to the construction phase of trenching, pipe laying and trench filling.

Sediment quality: Since the area that would be disturbed is small, the excavated sediment volume is unlikely to cause change in the sediment texture on a wider area of the seabed excepting in the close vicinity. Such impact would be negligible.

Flora and fauna: Construction activities in the corridor areas would influence the local biotic communities, particularly the macrobenthos along the corridors selected for laying the pipeline. As the sediment is not enriched in C_{org}, its suspension in the water column is unlikely to deplete DO in this dynamic marine area and DO availability would not constrain the biotic processes. The danger of biota getting exposed to pollutants released from the sediment interstitial water when the bed is disturbed, is low. The nearby zone are devoid of mangrove vegetation and corals. Hence, there would be no impact on these habitats.

The impact of turbidity due to enhanced levels of SS if any, would be local and temporary with the phytoplankton community structure remaining more or less unaltered as the enhancement in turbidity during the activity is expected to be low.

Since the pipe line through Sand duneswill be through tunnelling, the loss of sand dunes is not envisaged.

Miscellaneous: The aesthetics of the coastal zone off Bada would deteriorate temporarily due to the presence of construction machinery, materials and leftover solid waste.

c) Flora and fauna: Biological characteristics should be assessed based on primary productivity, phytopigments, phytoplankton populations and their generic diversity; biomass, population and group diversity of zooplankton; biomass, population and group diversity of benthos; seaweeds and fish quality.

Costs for Implementation of EMP

A provision of Rs. 10.0 million to be earmarked for the biodiversity management plan to be implemented in the project area during construction phase and operation phase.

For periodic monitoring of the marine area environment during project construction phase (considering 2 years), a provision of Rs. 5.0 million to earmarked. For operation phase, Rs. 3.0 million per year to be kept provision for the monitoring.

MARINE BIODIVERSITY CONSERVATION AND MANAGEMENT PLAN

Although maintenance of biodiversity cannot be the only goal for ecosystem-based management, it could provide a common currency for evaluating the impacts of different human activities on ecosystem functioning and can act as a critical indicator of ecosystem status. A management regime based on social acceptance, with the power of moral persuasion from within the group of participants, is the only way to manage widely dispersed resources which are shared by a multitude of small and large users.

Mitigation Measures

Mitigation measures are most successful when they are considered from the outset of the project rather than as a later stage solution to an identified problem. This can allow the design of the facility to include solutions to potential environmental problems rather than finding a solution, which fits with the design. Mitigation measures should therefore be considered from the outset of the project and discussions on the appropriate mitigation measures will likely to continue after submission of the Environmental studies as planning conditions are agreed upon. An appropriate specialist who has assessed the impacts usually suggests mitigation measures.

Mitigation can take varying forms including, in order of Best Practice, first:

A. **Avoidance –**This would require the project to be designed or the site selected to avoid any environmental impacts.

B. Reduction –This can be achieved by the addition of mitigation measures such as bunding, screening, or applying abatement technology;

C. Compensation – Where impacts have been unavoidable this method can be used and can involve the improvement of a related environmental issue for example replanting of a deforested area in an alternative location.

D. Remediation –This option would involve the cleanup and restoration of an area where the environmental impact is unavoidable; and

E. Enhancement –This method involves the improvement of the site beyond the existing baseline.

A management regime based on social acceptance, with the power of moral persuasion from within the group of participants, is the only way to manage widely dispersed resources which are shared by a multitude of small and large users. A national approach to address broad-scale threats to marine biodiversity requires effective management regimes that engender industry and community support.

Development of Plan

Improvement of baseline information

Methods and systems for the effective and efficient collection and utilization of information will be considered for a systematic accumulation of information and knowledge regarding marine biodiversity. Marine areas of particular importance for conserving biodiversity will be identified based on scientific knowledge.

Implementation of measures

Measures for conservation and sustainability of marine biodiversity will be implemented in accordance with the characteristics of the existing ecosystems and other significant influencing factors present in the nearshore coastal water.

Identification of factors and implementation of measures

To promote conservation of marine biodiversity and its sustainable use appropriately, causes of the problems and those responsible for actions to reduce their impacts will be identified. Measures will be conducted with methods and procedures suitable to solve these problems, under cooperation among relevant parties.

Enhancement of pristine areas

Designation of conservation zones in the area will be promoted appropriately using the existing systems to improve the local marine biodiversity in the region. For conservation and sustainable use of marine biodiversity, a concept of effective networking will be considered, and if required, an independent system will be considered as well.

Stakeholder's involvement

Scientific information and knowledge regarding the current status of marine biodiversity and its importance to humankind will be educated to the public. To establish a network for cooperation and coordination among various agencies, and awareness of conservation and sustainable use of marine biodiversity through social activities will be increased.

Significance of managing and conserving marine biodiversity:

Marine biodiversity broadly promotes the provision of marine ecosystem functions, including those critical to human survival and well-being.

Conservation of marine biodiversity increases the likelihood that marine ecosystems can continue to provide various services and serves as a hedge

against environmental change, increasing the chance that ecosystems can adapt and recover following disturbance.

Conserving marine biodiversity should become a common aim of marine as well as coastal ecosystem-based management for all agencies involved in regulating the marine environment.

Management for marine biodiversity may have to rely on, in part, on the management of surrogates, such as habitat types, population size, and related biodiversity characteristics.

Fishery management

The goal of this fishery management plan is to guide and manage fishing vessels inland waters in accordance with the principles of ecologically sustainable development. This includes maintaining fishing at sustainable levels, protecting habitats and aquatic environments on which fisheries resources depend and maintaining and where possible improving the social and economic benefits to all fishing community.

Biodiversity monitoring plan

The plan aims to create an enabling integrated coastal and marine biodiversity management and protection, and to mainstream marine and coastal biodiversity into national plans and coastal zone management plans, with particular focus on biodiversity. As such, it provides an opportunity to coordinate with past and new initiatives in the region to address gaps in assessments, and seek sustainable and economically viable policy and technological options for the protection of key marine and coastal biodiversity to be included in coastal zone management plans and integrated into national plans. General monitoring is needed to prevent the loss of existing biodiversity of the region.

Marine Biodiversity Conservation Plan

The conservation and restoration measures can be taken up individually by the project proponent and also can be carried out by constructing a consortium with all the adjoining industries. These measures should be executed in

collaboration and consultation with the experts in the field and authorities responsible as per the jurisdiction. The national and regional conservations efforts can also be supported as far the buffer zone is concerned. Several international bodies also carry out many conservation and restoration programs as well as the local and regional organization that are well versed with the present study area.

Environmental management cell (EMC)

Apart from having an Environmental Management Plan, it is so also necessary to have a permanent organizational set up charged with the task of ensuring its effective implementation of mitigation measures and to conduct environmental monitoring. Identify and list out environmental aspects due to the operation of the proposed project

The EMC's responsibility for implementing the EMP requires regular interaction with the environment regulatory authorities such as GPCB, GCZMA, MoEF & CC and the Indian Coast Guard.

Audits and inspections

EMC will be responsible for implementing Compliance Assurance activities, namely environmental audits. Internal audits and reviews of environmental procedures shall be conducted annually. Third party audits of environmental procedures shall be conducted periodically.

Project benefits

The Indian Subcontinent is one of the world's fastest growing Soda Ash markets, driven by India's booming economy. The Soda Ash per capita consumption in India is 2.8 kg only. If India has to reach the per capita consumption as of developed nations, which is approximately 17 Kg of Soda Ash then addition of capacity is must. The proposed project will cater to the growing demand of Soda ash and Sodium bicarbonate which is used in diversified sectors and industries ranging from chemicals, construction and FMCG. It will create direct and indirect employment generation during, planning, construction and operation phase of the project. This will lead to employment and uplifment of scio economic

activities and status in the region. It will also create supporting industries/businesses related to logistics, supply chain, manpower supply, construction equipments, hotels etc.

Recommendations

It is recommended that M/s GHCL can withdraw 16,00,000 M^3/day of water from two intake locations (IT1: 22º 52’ 1.07’’N; 69º 07’ 28.96’’E and IT2: 22°51’57.44” N; 69°07’32.44” E).

The disposal of 15,80,000 M^3/day of effluent at two out fall locations OF2_1: 22°52'15.79"N; 69°06'14.35"E (depth 9.47 m below CD), OF2_2: 22°52'6.65" N; 69°05' 59.08"E (depth 10.71 m below CD) will not impact the marine environment. The GHCL has to take approval from concerned authorities before commencement of the work.

3.3 FIELD INVESTIGATION

A total of 12 sub-tidal stations selected for marine environmental investigations during October-November 2018 (post monsoon) and March 2019 (pre monsoon) periods are listed below and shown in Figure 3.3.1 (a & b). Intertidal sediment was sampled along 3 transects at High Water Level (HWL), Mid Water Level (MWL) and Low Water Level (LWL) in the area. The details are given in Table 3.3.

Table 3.3 Geographical positions of the sampling stations around Bada.

Station	Latitude	Longitude	Area
1	22°52’33.97’’ N	69°5’28.13” E	Nearshore
2A	22°51’55.28’’ N	69°6’33.04” E	
4A	22°51’12.35’’ N	69°7’17.72” E	
4	22°51’0.39’’ N	69°8’25.90” E	
7	22°50’25.74’’ N	69°9’48.55” E	
2	22°51’33.44’’ N	69°4’15.46” E	Towards Offshore
3	22°50’21.06’’ N	69°2’48.15” E	
5	22°50’17.05’’ N	69°6’41.14” E	
6	22°49’21.77’’ N	69°4’40.86” E	
8	22°49’13.44’’ N	69°8’20.54” E	
9	22°47’55.60’’ N	69°7’23.38” E	
10	22°47’23.84’’ N	69°4’0.14” E	Offshore
TR 1A	22°52’57.70’’ N	69°7’12.70” E	Intertidal
TR I	22°49’13.44’’ N	69°8’20.54” E	
TR II	22°49’13.44’’ N	69°8’20.54” E	
TR III	22°49’13.44’’ N	69°8’20.54” E	

& (b)). Samples were collected in both the tides (high tide and low tide) with bottom trawl net having a wingspread area of 8 m and cod end mesh size of 10 mm in 1 transect. The duration of fishing was 60 min, timed from the completion of wrap-out to the start of hauling.

The results of experimental trawling conducted at the study area indicated very poor catch rate (av.1.3 kg/h) and species composition (av. 5 species). Major species encountered during the study are *Rastrelligar kanagurta, Harpadon nehereus, Arius sp., Trichiurus lepturus, Thryssa mystax, Parapenaeopsis stylifera* and *Solenocera crassicornis*. The details of the fish catch and species composition during the post monsoon seasons of 2018 is given in the table below:

Period	Catch rate (kg/h)	Species (no)	Species composition
November 2018	1-1.6 (1.3) *	4-6 (5) *	*Rastrelligar kanagurta, Harpadon nehereus, Arius sp., Trichiurus lepturus, Thryssa mystax, Parapenaeopsis stylifera, Solenocera crassicornis*

*Average value

Overall, the above results revealed a poor catch and species diversity from the study area.

3.6.6 Corals and associated biota

The inter tidal area of Bada is sandy in nature. There are some patches of rocky substratum, mainly of sandstone origin were found in the study region, which is extending from the intertidal area to subtidal region. No live reef building hermatypic and non-reef building ahermatypic corals and other types of corals were not observed from the study area. Extensive survey was conducted during October, 2018 and March, 2019 in the intertidal regions and observed some dead coral species, washed ashore. The washed ashore dead coral specimens observed in the beach are dirty and eroded in nature and hence not treated as a fresh coral community. Rocks and exposed sandy beach during October 2018 and March 2019 are presented in Plate 6.

4.5 Discharge of Effluents

The cumulative discharge from the proposed Chemical Complex – Soda Ash effluents will be higher in SS, NH_4^+-N and Temperature as compared with the ambient values as per CPCB/GPCB norms. The critical water quality parameters considered for the modelling study are SS, NH_4^+-N and Temperature for total effluent discharge of 15,80,000 m³/day. The ambient value of SS, NH_4^+-N and Temperature are considered as 93.0 mg/l, 0.047 mg/l and 28˚C respectively.

The details of proposed optional outfall locations and landfall points are furnished in the Table 4.5.1, 4.5.2 and 4.5.3:

Land Fall Point (L0): 22°52' 33.23"N, 69° 07' 34.92" E
(UTM:512936.07 E 2529787.29 N)
Land Fall Point (L6): 22°52' 20.36"N, 69° 07'56.93" E
(UTM: 513589.55 E 2529392.09 N)

However, CSIR-NIO Goa has carried out morphology studies and recommended following LFP corridors L0, L1 L2 for outfall and L5 L6 for intake locations.

After the detailed hydrodynamic modelling studies, three alternative optional outfall locations were identified and to be tested for suitability based on near field and far field dispersion modelling studies. Figures 4.0.1 (a), (b) & (c) show the selected optional outfall locations based on hydrodynamic modelling studies.

In option-1, two locations i.e. OF1_1 & OF1_2 were selected for discharge of effluents 1580000 m³/day continuously. The details of selected locations including the water depth at intake & outfall locations and distance from Land Fall Points are furnished in Table-4.5.1. The distance between OF1_1 and OF1_2 is around 470m and the distance between IT1 and IT2 is around 150m. The distance between intake and outfall locations is more than 2000 m.

The effluent quantity of 1580000 m³/day disposal will be tested with two locations i.e. OF2_1 & OF2_2, which are selected at little deeper than Option-1 locations. The intake locations IT1 & IT2 are selected more than 2000 m. away

from outfall locations. The details of selected locations including the water depth at intake & outfall locations and distance from Land Fall Points are furnished in Table-4.5.2. The distance between OF2_1 and OF2_2 is around 520 m and the distance between IT1 and IT2 is around 150m. The distance between intake and outfall locations is more than 2000 m.

In Option-3, two locations i.e. OF3_1 & OF3_2 were selected for discharge effluents quantity of 1580000 m³/day continuously. The details of selected locations including the water depth at intake & outfall locations and distance from Land Fall Points are furnished in Table-4.5.3. The distance between OF3_1 and OF3_2 is around 201m and the distance between IT1 and IT2 is around 150m. The distance between intake and outfall locations is more than 2000 m.

4.6 Water quality Dispersion Studies

Model study was carried out for predicting dispersion at the Bada to release the treated effluent of 1580000 m³/day generated by M/s GHCL Ltd.

Basic Governing Equation

The basic governing equation effluent transport is solved numerically in predicting the effluent variation at different locations. This equation is coupled with flow equations and solved numerically. The basic governing equations of effluent transport can be written as follows:

$$\frac{\partial}{\partial t}(HC_i)+\frac{\partial}{\partial x}(UHC_i)+\frac{\partial}{\partial y}(VHC_i)=\frac{\partial}{\partial x}\left(D_x H\frac{\partial C_i}{\partial x}\right)+\frac{\partial}{\partial y}\left(D_y H\frac{\partial C_i}{\partial y}\right)$$

where, t = time; C_i = Water Quality Parameter; x, y are Cartesian co-ordinates; u and v are depth averaged velocity components in the x and y directions, respectively; D_x, D_y diffusion coefficients in the x and y directions, respectively; H-total depth of water.

concentration in sea water beyond 300m. The shoreline is not impacted significantly due to the proposed outfall locations for various hydrological and metrological conditions.

4.7.3 Morphological changes

The model has been run continuously for 15 days taking account of neap and spring tide conditions and the morphological changes due to erosion and deposition of the proposed intake and outfall discharges during October 2018 and march 2019. The variation of bed morphology was calculated based on result of sediment rate of erosion and deposition for entire simulation period of neap and spring tide conditions in the study domain during October 2018 and march 2019 for outfall discharge (effluent having 1000 mg/l suspended solids concentration) of 790000m³/day at each outfall point locations OF2_1 & OF2_2 as shown in Figures 4.7.2 and 4.7.3 respectively. From the figure, it can be seen that the variation of bed morphology in the study domain is in the range of 0.002m to 0.028m and also noted that the deposition does not happens at the outfall point location and negligible level of bed level increment around the outfall location OF2_1 and OF2_2. From the model results, it can be concluded that there is no significant impact on sea water due to continuous effluent outfall discharge.

From the above figures, it can be said that the sediment subsequently is not deposited in the vicinity of outfall location and may not result in significant changes in bed morphology. These predictions are in response to the change in the tidal currents and would reduce in time as the seabed gets re-established itself to the new hydraulic regime. In the short-term, however, it should be noted that the possibility of siltation is less due to discharge of continuous outfall discharges at OF2_1 and OF2_2 locations and no significant changes in the shoreline due to the proposed intake and outfall system.

7 MITIGATION MEASURES

The marine segments through which the proposed intake and effluent disposal pipelines would pass is a typical segment of the Arabian Sea coast of Bada, consisting of a sandy pocket beach with an underlying rocky substratum. Northern boundary of Arabian Sea is protected with well-established sand dune with different variety of vegetation. Hence, adequate precautions are required to prevent deterioration in marine environmental quality beyond the pipeline corridor.

7.1 Construction phase

As discussed under Section 3.6 the area is free from corals and mangroves. However, seaweeds and macrobenthos along the corridors would be destroyed due to excavation/trenching. Adequate precaution is necessary to minimize this damage. Therefore, the construction activities should be confined to the pre-determined corridors taking care to avoid use of intertidal area beyond the width of the corridors.

The impact on marine and terrestrial ecology during the construction phase would be largely confined to the duration over which the activities are spread. Hence, the key factor in minimising the adverse impacts would be reduction in the construction period at the site and avoidance of spillage of activities beyond the specified geographical area which should be kept to a minimum. Sometimes different contractors are engaged for jobs such as fabrication and supply of pipeline, installation etc. Lack of proper understanding and coordination among contractors often leads to time overruns. This should be avoided by taking up the scheme as a single integrated project with proper coordination among contractors as well as the GHCL personnel.

The soil side-cast during trenching should not be left on the intertidal zone to avoid being washed away and settling on nearby areas. It should be removed and temporarily stored above the high tide level and used for backfilling later.

There is a distinct advantage of reduction in time of marine construction operations, by prefabricating the components wherever possible and transporting

them to the site. However, the fabrication yard should be located sufficiently away from the shore and transport of pipes, machinery etc to the site should be through a pre-decided corridor.

To prevent the misuse of the intertidal and supra littoral areas, the makeshift facilities for workers should be established beyond the CRZ zone on the landward side and proper sanitation should be provided to them.

The northern boundary of the sea off Bada near project site has stable and more than 8000 years old sand dune. Sand dunes come under CRZ-IA (MoEF & CC 2019) and no activities are allowed in this area. Hence care is to be taken not to disturb sand dunes. Area between sand dune and GHCL is forest land, hence special permission to carry any activities to be taken from Department of Forest.

The noise level during transport and construction of marine facilities should be kept to a minimum.

The intertidal, subtidal and nearshore areas should be restored to their original contours once the marine construction activities are completed. General clean-up along the corridor areas, and intertidal segments etc should be undertaken and discarded materials including left-over excavated soil should be removed to restore the aesthetic quality of the surroundings on completion of the construction phase.

7.2 Operational phase

7.2.1 Seawater intake

For well-designed and constructed gravity seawater intake systems, only a few mitigation measures listed below are required.

Appropriate screens and bars should be provided in the intake to avoid the large marine organisms entering the intake system.

The efficiency of the intake system might decrease over a period of time due to the settlement of bio-fouler such as barnacles, at and inside the pipe openings, entry of sediment into the sump etc. Periodic removal of these materials

will be required. The cleared material should not be dumped to sea or intertidal areas.

As a navigational safeguard, the seawater intake location should be adequately protected and identified with a marker buoy.

7.2.2 Effluent disposal

Predictions of impacts of release of the effluent on the marine ecology are made based on the assumption that the effluent meets the GPCB /CPCB norms. Hence, it should be ensured that the effluent released to the sea meets the prescribed GPCB /CPCB norms at all times.

It is predicted that the effluent would attain 30-40 times initial dilution when released through a multiport diffuser (Chapter 4). Such calculations are based on average environmental conditions and some assumptions which cannot be easily verified. Hence, the actual dilution attained should be measured through tracer studies after the outfall becomes operational. The effluent release scheme can then be adequately modified to ascertain necessary dilution, if required.

The efficiency of diffuser might decrease over a period time due to the settlement of biofoulers at the port openings, entry of sediment in the diffuser etc. Hence, the efficiency of the diffuser must be checked periodically (once in 2 y or so) and if necessary, it should be cleaned to revert back to the dilution ascertained through initial tracer studies.

As a navigational safeguard, the effluent release location should be adequately protected and identified with a marker buoy.

8 MARINE BIODIVERSITY CONSERVATION AND MANAGEMENT PLAN

The Indian subcontinent is bordered by the tropical seas which include an extensive coastal zone and the deep seas. Within the coastal zone there are a number of sensitive habitats including the estuaries, mangroves, coral reefs, sea-grass beds, rocky intertidal and oceanic islands. These habitats support a wide spectrum of biota whose abundance varies both spatially and temporally. These habitats have been exploited for food and aesthetic purposes with no apparent ill effects till large scale mechanization began to be introduced. Increasing human population coupled with the greater need for development has led to intensive exploitation of coastal areas and various fisheries resources and has caused considerable stress to many habitats.

Several of the Indian estuaries and coastal waters have become danger-prone zones. Stress due to damming the rivers, fishing pressure and pollution is the principle cause of biodiversity degradation and ecosystem deterioration. Coastal areas are veritable nurseries for many marine animals, but their fisheries have declined considerably due to overexploitation.

Managing a complex ecosystem to balance delivery of all of its services is at the heart of ecosystem-based management. But how can this balance be accomplished amidst the conflicting demands of stakeholders, managers, and policy makers? In marine ecosystems, several common ecological mechanisms link biodiversity to ecosystem functioning and to a complex of essential services. As a result, the effects of preserving diversity can be broadly beneficial to a wide spectrum of important ecosystem processes and services, including fisheries, water quality, recreation, and shoreline protection. A management system that conserves diversity will help to accrue more “ecoservice capital” for human use and will maintain a hedge against unanticipated ecosystem changes from natural or anthropogenic causes. Although maintenance of biodiversity cannot be the only goal for ecosystem-based management, it could provide a common currency for evaluating the impacts of different human activities on ecosystem functioning and can act as a critical indicator of ecosystem status (Palumbi et al, 2009).

8.4 Marine Biodiversity Conservation Plan

The conservation and restoration measures can be taken up individually by the project proponent and also can be carried out by constructing a consortium with all the adjoining industries. These measures should be executed in collaboration and consultation with the experts in the field and authorities responsible as per the jurisdiction. The national and regional conservations efforts can also be supported as far the buffer zone is concerned. Several international bodies also carry out many conservation and restoration programs as well as the local and regional organisation that are well versed with the present study area.

Conservation and Restoration Plan	• Alternative livelihood measures for the foot fishers, so as to reduce the pressure on the natural resources and give recovery time for the slow growing species. • Creation of bunds and embankments wherever shoreline changes have occurred or saltwater intrusion has occurred. • All care such as full-time observation and monitoring for sand dune should take place during construction specially tunnelling of proposed project.

8.5 Stakeholder's / Community involvement

Scientific information and knowledge regarding the current status of marine biodiversity, various values associated with it, and the necessity for its conservation will be distributed for publicity among the public. To establish a network for cooperation and coordination among various relevant actors will be enhanced, and awareness of conservation and sustainable use of marine biodiversity in social activities will be raised.

9. ENVIRONMENT MANAGEMENT PLAN (EMP)

The guiding principle of marine environment management is to ensure that the perturbations due to the proposed coastal activities are within the assimilative capacity of the marine zone. This is best done by integrating into the project itself, a plan of actions for mitigating predicted adverse effects as discussed in Chapter 7.

It is necessary to verify the predicted environmental changes from the pre-project baseline apart from ascertaining and periodically checking the efficiency of the diffuser by post-project monitoring as described below.

9.1 Pre – Project monitoring for baseline quality

In Sections 3.4 to 3.6 baseline settings of relevant environmental components with respect to the marine environment off bada are discussed pertaining to short-term measurements conducted during the field studies. Like all natural ecosystems, the marine environment also undergoes seasonal variations. To understand these variations, it is necessary to conduct periodic investigations, at carefully selected monitoring locations. These should include subtidal as well as intertidal segments. In the present case, the stations 1 to 9 should be adequate to represent the subtidal environment, while, the intertidal transects I to III can be selected for evaluation of the intertidal ecology. Till a proper baseline is established, the data presented in this report can be considered for comparing the results of future monitoring studies. The monitoring however should be confined preferably to the months in which the data are collected.

Many coastal areas which are under profound tidal influence reveal diurnal changes particularly when anthropogenic contaminants are introduced in excess of their assimilative capacity. Hence, selected stations should be sampled diurnally during monitoring programmes. The parameters to be monitored are listed below.

a) Water quality: Water samples obtained from 2 levels in the vertical when the depths exceed 3 m, should be studied for temperature, SS, turbidity, pH, salinity,

DO, BOD, dissolved phosphate, nitrate, nitrite, ammonia, PHc and phenols. For shallower waters, surface samples can be analysed.

b) Sediment quality: Sediment from subtidal and intertidal regions should be analysed for texture, C_{org}, phosphorus, chromium, nickel, copper, zinc, cadmium, lead, mercury and PHc.

c) Flora and fauna: Biological characteristics should be assessed based on primary productivity, phytopigments, phytoplankton populations and their generic diversity; biomass, population and group diversity of zooplankton; biomass, population and group diversity of benthos; seaweeds and fish quality.

9.2 ENVIRONMENTAL MANAGEMENT CELL (EMC)

Apart from having an Environmental Management Plan, it is so also necessary to have a permanent organizational set up charged with the task of ensuring its effective implementation of mitigation measures and to conduct environmental monitoring. Identify and list out environmental aspects due to the operation of the proposed project

- Determine the key operations that have significant environmental impacts
- Identify and track environmental legislations, policies, codes and other relevant requirements
- Establish objectives and targets (Environmental Management Plan)
- Formulate an Environmental Management System.

The EMC is responsible for overall environmental activities of the proposed facility and implementation of the Environmental Management Plan (EMP) and coordination with GHCL in case of any requirements. The EMC's responsibility for implementing the EMP also requires regular interaction with the environment regulatory authorities such as GPCB, GCZMA, MoEF & CC and the Indian Coast Guard.

The major duties and responsibilities of Environment Management Cell are:

- To implement the environmental management plan

- Timely submission of environment compliance reports to statutory authorities.
- Obtain NOC and Consent to oeprate from State Pollution Control Board.
- Risk identification and control of environmental problems
- Evaluating the efficacy of the EIA, mitigation measures, as stipulated in the EMP.
- Coordination with GHCL, MoEF&CC and GPCB for prevention and control of pollution.
- To assure regulatory compliance with all relevant rules and regulations
- To ensure regular operation and maintenance of pollution control devices
- To minimize environmental impacts of operations as by strict adherence to the EMP
- To initiate environmental monitoring as per approved schedule
- Review and interpretation of monitoring as per approved schedule
- Review and interpretation of monitoring results and corrective measures in case of monitored results are above the specified limit
- Maintain documentation of good environmental practices and applicable environmental laws as ready reference
- Maintain environmental related records
- Coordination with regulatory agencies, external consultant, monitoring laboratories
- Maintain log of public complaints regarding environmental issues and the action taken

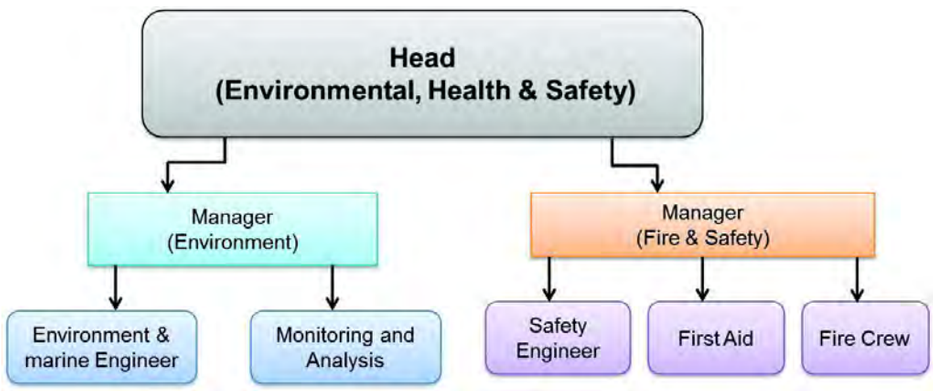
The proposed Environmental Management Cell should have all basic record keeping facilities such as hard ware/software facilities, adequate space, vehicle (transport) and basic furniture and all simple instruments such as GPS, Digital camera, Hand held noise metre etc. The cell should have all basic environmental management data of the project that includes but not limited to the following;

- Environmental Impact Assessment Report (both soft and hard copy)
- All valid and up to date environmental clearances papers

- All latest Environmental legislations, policies, codes and manuals for ready references
- A list of consultants on environmental management need to be kept with yearly revision of the list. This will help to receive proper advice in case of an emergency or a requirement and also to implement day to day environmental management activities. Over a period of time a system to understand and absorb the new revisions and changes in the environmental requirements and practices are to be established.

9.3 AUDITS AND INSPECTIONS

EMC will be responsible for implementing Compliance Assurance activities, namely environmental audits. Internal audits and reviews of environmental procedures shall be conducted annually. Third party audits of environmental procedures shall be conducted periodically. EMC also serves as a resource for GHCL employees regarding environmental compliance issues. The EHS Steering Committee, made up of Management Team members, shall conduct quarterly EHS performance reviews. Inputs to their review process are provided from monitoring programs, audits and inspections conducted by staff and contractors with specialised expertise in operations and EHS.



In addition to internal audits, there shall be external audits conducted by the regional office, Ministry of Environment, Forests &CC (MoEF&CC), Government of India to oversee compliance to conditions laid down by regulatory authorities. Any impact to the environment is identified, same shall be evaluated and corrective actions shall be taken.

9.4 Post-project monitoring for assessment

A comprehensive marine quality monitoring programme with periodic investigations at predetermined locations (These should preferably coincide with those used for baseline quality) by a specialised agency is a practical solution to ensure quality data acquisition. This can be a continuation of the study designed for baseline quality and some parameters listed above should be included in the post-project monitoring programme. The post-project monitoring can be as follows:

a) Just prior to the commencement of operation of marine facilities.

b) After 6 months of commencement of operations.

c) Once a year from the commencement of operation preferably in the premonsoon period or as recommended by MoEF & CC.

The results of each monitoring should be carefully evaluated to identify changes if any, beyond the natural variability identified through baseline studies. Gross deviation from the baseline may require a thorough review of the effluent disposal scheme to identify the causative factors leading to these deviations and accordingly, corrective measures to reverse the trend would be necessary.

9.5 Costs for Implementation of EMP

A provision of Rs. 10.0 million to be earmarked for the biodiversity management plan to be implemented in the project area during construction phase and operation phase.

For periodic monitoring of the marine area environment during project construction phase (considering 2 years), a provision of Rs. 5.0 million to

earmarked. For operation phase, Rs. 3.0 million per year to be kept provision for the monitoring.

10. PROJECT BENEFITS

Soda Ash is having significant importance because of its applications in major sectors i.e. Manufacturing of Glass, Usage in chemical industry, Paper and Detergent manufacturing, whereas baking Soda is mainly used by food industry. However in India Detergent industry is largest consumer of Soda ash. India is one of fastest growing economies in the world. Considering the rising population and growth of urbanisation has increased consumption of industrial products, which has resulted the increase in demand of housing, transportation, consumer product, processed foods, beverages, driving growth in glass, soaps / detergents and various other chemicals directly or indirectly for production of chemicals.

The Indian Subcontinent is one of the world's fastest growing Soda Ash markets, driven by India's booming economy. The Soda Ash per capita consumption in India is 2.8 Kg only. If India has to reach the per capita consumption as of developed nations, which is approximately 17 Kg of Soda Ash then addition of capacity is must. The proposed project will cater to the growing demand of Soda ash and Sodium bicarbonate which is used in diversified sectors and industries ranging from chemicals, construction and FMCG. It will create direct and indirect employment generation during, planning, construction and operation phase of the project. This will lead to employment and uplifment of scio economic avtiviite sand stratus in the region. It will also create supporting industries/businesses related to logistics, supply chain, manpower supply, construction equipments, hotels etc.

11 CONCLUSION and RECOMMENDATION

The entire sea shore boundary of project is well protected by continuous sand dune. Sand dune areas are declared as ecologically sensitive as per CRZ notification and no disturbance is permitted. Based on our survey and report prepared by CSIR-NIO, Goa (Annexure-I), no natural passage to lay the pipeline was observed. On the basis of above findings, it is proposed to lay the pipelines through tunnelling without disturbing sand dune. Two land fall points (LFP, L5: 22° 52' 22.26" N; 69° 07' 58.16" E and L6: 22° 52' 22.09" N; 69° 07' 58.85" E) are considered for intake and discussed accordingly.

For the continuous withdrawal of seawater quantity of 16,00,000 M³/day two intake locations (IT1: 22º 52’ 1.07’’N; 69º 07’ 28.96’’E and IT2: 22°51’57.44” N; 69°07’32.44” E) have been selected on the basis of lesser area and volume of excavation required to lay the pipeline and consequent reduction in benthic losses due to shorter length. Since the alignment corridor is devoid of mangroves and corals, their destruction due to the development is unlikely.

Hydrodynamic Modelling Studies

- Modelling was carried out for 15 days period in neap and spring phases at low water, high water, peak ebb, and peak flood conditions during October 2018 and March 2019 in the coastal water off Bada around the proposed alternative optional outfall locations (OF1_1& OF1_2, OF2_1 & OF2_2 and OF3_1&OF3_2).

Water Quality Modelling studies

- The dispersion of Suspended Solids, NH_4^+-N and Temperature in the treated waste water were studied for the proposed three optional outfall locations for waste water discharge for neap and spring tide conditions.
- The variation of the excess Suspended Solids, NH_4^+-N and Temperature at the **Option-1** outfall locations “OF1_1 & OF1_2” varies in the range of 9.6 mg/l to 13.99 mg/l, and 0.46 mg/l to 0.71 mg/l and 0.077 to 0.1^0C respectively during the different tide conditions for October 2018 and 9.48

mg/l to 13.55 mg/l, and 0.47 to 0.69 mg/l and 0.077 to 0.1^{0}C for month of march 2019. From the above studies, it can be concluded that the Option-1 outfall locations “OF1_1 & OF1_2” are suitable for all tidal conditions in terms of dilutions attained.

- The variation of the excess Suspended Solids, NH_4^+-N and Temperature with twenty ports diffuser ports at the Option-2 outfall locations “OF2_1 & OF2_2” varies in the range of 9.0 to 12.8mg/l, 0.5 to 0.71 mg/l and 0.069 to 0. 1^{0}C respectively during the different tide conditions for October 2018 and 8.51 to 12.45 mg/l, and 0.56 to 0.69 and 0.069 to 0.099^{0}C for month of march 2019. From the above studies, it can be concluded that Option-2 outfall locations “OF2_1 & OF2_2” are also suitable for all tidal conditions in terms of dilutions attained. But, based on dilution analysis Option-2 outfall locations are more suitable as compared to Option-1 outfall locations.
- The variation of the excess Suspended Solids, NH_4^+-N and Temperature at **Option-3** outfall locations “OF3_1 & OF3_2” varies in the range of 8.51 to 12.98 mg/l, 0.46 to 0.71 mg/l and 0.069 to 0.103^{0}C respectively during the different tide conditions for October 2018 and 8.95 to 11.29 mg/l, and 0.48 to 0.66 and 0.076 to 0.098^{0}C for month of march 2019. From the above studies, it can be concluded that Option-3 outfall locations “OF3-1 & OF3_2” are not suitable for all tidal conditions in terms of dilutions attained.
- It has been observed that the treated waste water quantity of 1580000 m³/day (1580 MLD**)** with Suspended Solids, NH_4^+-N and Temperature of 1000 mg/l, 50 mg/l and 33^{0}C respectively at the Option-2 outfall locations OF2_1, OF2_2 attained ambient conditions at 150 m radial distance from the disposal location. Based on dilution zones calculated for various options of outfall locations, Option 2 outfalls are better than Option-1 outfall locations “OF1_1 and OF1_2” even though they are suitable. Option 3 outfall are not suitable since the dilution zones of outfall are overlapped.

Sediment Modelling studies

- Sediment modelling studies were made for the domain with an outfall and intake during October 2018 and March 2019.
- The variation of bed level due to resultant of erosion and deposition over 15 days is found to be around 0.002 to 0.028m for 1000 mg/l suspended sediment concentration of outfall discharge of 1580000 m³/day at OF2_1 & OF2_2
- It can be concluded that there is no impact on intake of sea water for the plant and effluent discharge around the outfall location.
- It can be said that the sediment subsequently is not deposited in the vicinity of outfall location and may not result in significant bed level changes and no significant changes in the shoreline due to the proposed intake and outfall system.

Hence, it is recommended that M/s GHCL can withdraw 16,00,000 M³/day of water from two intake locations (IT1: 22º 52’ 1.07’’N; 69º 07’ 28.96’’E and IT2: 22°51’57.44” N; 69°07’32.44” E).

The disposal of 15,80,000 M³/day at two out fall locations OF2_1: 22°52'15.79"N; 69°06'14.35"E (depth 9.47 m below CD), OF2_2: 22°52'6.65" N; 69°05' 59.08"E (depth 10.71 m below CD) will not impact the marine environment. The GHCL has to take approval from concerned authorotoes before commencement of the work.

12 DISCLOSURES OF CONSULTANTS ENGAGED

CSIR-National Institute of Oceanography; a constituent laboratory of the Council of Scientific & Industrial Research under Ministry of Science and Technology, Government of India; is a premier oceanographic research institute of the country. Institute has the necessary expertise supported by equipment and infrastructural facilities to carry out the marine survey and EIA studies. EIA consultants are the regular staff of CSIR-NIO and are listed below.

Name of consultant	Specialization	Nature of consultancy rendered
Dr. Anirudh Ram S Jaiswar	Chemical Oceanography and Marine Pollution	Project leader and coordinated the work components related to water and sediment quality
Dr. Rakesh P.S	Biological Oceanography, Marine Pollution and Ecotoxicology	Associate project leader, co-ordinated work related to zooplankton parameters
Dr. Udhaba Dora	Physical oceanography and Modeling	Associate project leader and coordinated the work related to Physical oceanographic measurements and modeling
Dr. Umesh Kumar Pradhan	Chemical Oceanography and Marine Pollution	Associate project leader and coordinated the work components related to water and sediment quality
Dr. Soniya Sukumaran	Biological oceanography, Benthic Biodiversity & Ecology	Team Member coordinated the work components related to macro benthic ecology of the area
Dr. Haridevi C.K.	Biological Oceanography, Phytoplankton Ecology	Team member and co-ordinated the work part related to biology & phytoplankton ecology
Dr. Abhay Fulke	Marine Microbiology, & Molecular Biology	Team member, co-ordinated marine microbial biodiversity studies

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Plate 7: A view of seashore of study area showing continuous sand dune and vegetation and no mangrove in the region



Plate 8: A view of coastal region is devoid of mangroves

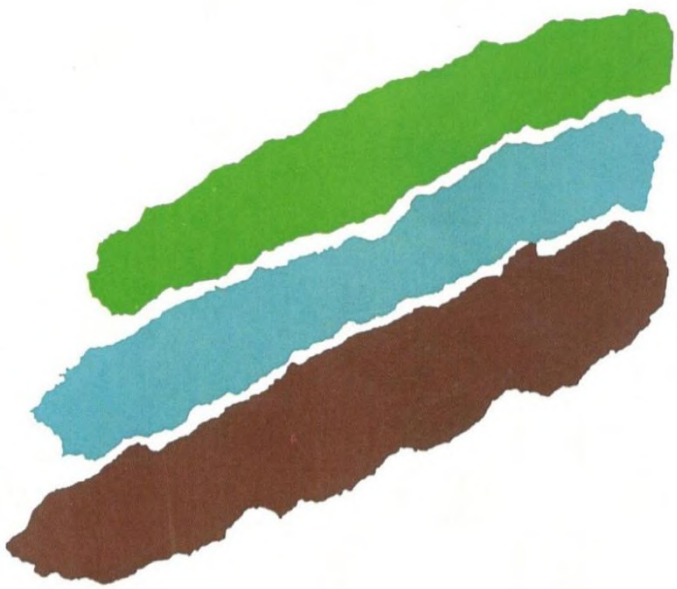
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(SSP3239)

Addendum

Marine EIA/EMP for Seawater Intake and Effluent Disposal for Greenfield Chemical Complex off Bada coast, Arabian Sea

SPONSORED BY
GHCL LIMITED, Ahmedabad



March 2022

सीएसआईआर – राष्ट्रीय समुद्र विज्ञान संस्थान
CSIR-NATIONAL INSTITUTE OF OCEANOGRAPHY
(वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद)
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8.6 Dune Conservation Plan

The physical and biotic factors essentially correspond to the size and shape of the dune forms in any coastal region. The physical characteristics are speed of wind, directions, waves, grain size of sand, etc., whereas the biotic factors are plant succession and grazing pressure. Nevertheless, the coastal dunes are mainly formed by aeolian deposits by onshore wind and supply of hydrodynamically sorted fine-grained sand transport from the beaches. Near the seaward margins, aeolian deposits are intermixed with wave deposited beach sands, but wind action becomes the dominant force as the distance from the shore increases. Sand dunes also provide sand storage and supply for adjacent beaches. They also protect inland areas from storm surges, cyclones, floodwater, wind, and wave action that damage infrastructure. Sand dunes support an array of organisms by providing nesting habitats for coastal bird species, including migratory birds. Sand dunes are also habitats for coastal plants. Without vegetation, wind and waves regularly change the form and location of dunes. The coastal dune habitats are an ecological niche between terrestrial and marine realms and form important nature conservation sites. They are dynamic, complex, and sensitive ecosystems with singular functioning and high environmental/ecological value. Coastal sand dunes serve multiple socioeconomic and environmental functions that often conflict, such as recreation, biodiversity conservation, development, sand mining, freshwater catchment, and coastal protection. The sand dunes are subject to massive erosion by wind and get shifted inland by high monsoon winds and tides when coastal storms strike the coast. Thus, by arresting the storm surges, at least partially, the dunes act as barriers to the impact of the sea on land, thereby reducing the damage to landward developments. This vegetation is closely related to the prevailing sediment dynamics and geomorphological processes and continuously interacts with the associated fauna.

Coastal sand dunes provide an array of essential benefits supported by coastal geomorphic processes and location-specific ecosystems. In addition, coastal sand dunes provide attractive landscapes for recreation and tourism activities. Also, in highly energetic conditions, dunes can act as a moveable last line of defense, an emergency sediment supply against which the waves expend their energy, dragging sediment into the near-shore and enhancing further wave dissipation. Under less energetic conditions, shorter, steeper waves wash onto the more permeable, less saturated beach face forcing sediment back onshore. Consequently, the beach accretes and steepens, becoming more reflective, pushing wave energy back out to sea. A transfer of this sediment back into the dune system occurs when onshore winds combine with the effects of solar drying of the exposed beach face when onshore, an effect enhanced by the occurrence of more extensive tidal excursion.

Mainly due to significant direct and indirect anthropogenic pressure suffered by coastal areas in general and coastal dunes in particular, many of these ecosystems

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and the species they host are currently under threat worldwide, and conservation efforts are required in many countries. The general issues which often draw attention towards the sand dune management in the coastal regions are;

1. Dune vulnerability and degradation
2. Dune encroachment, constructions, and trampling
3. Dumping of solid waste and impacts of new development

The coastal region of the Arabian Sea house numerous sandy beaches backed by dunes, cliffs, promontories, and drowned estuaries. The coastal stretch of Gujarat state along the Arabian sea has the longest coastline exhibiting shore-based tourism, defense installations, salt works, port-led development, industrial establishments, etc. In recent years, the coast has become vulnerable to cyclones, floods, Tsunami, etc. The coast of Kutch has witnessed some severe cyclones in the last few decades. The severe one in 1998 Tropical Cyclone 03A and the recent one in 2021 Extremely Severe Cyclonic Storm Tauktae.

Sand dune forms along the western part of Kutch (from Jakhau to Rawalpir), covering the beach and village Bada, where the proposed project Greenfield Chemical Complex has been planned. The shore region comprises natural supra coastal dunes with a luxuriant Prosopis juliflora shrub. There are clumps of grasses on the shoreward and seaward sides of the dunes. No creepers and other hygrophytes are generally found on the supralittoral zone's upper side. seagrasses were found to be absent from the surveyed area. For the significant role of dunes in maintaining ecological balance and providing protection during natural calamities, it is essential to conserve these dunes in their original morphology.

8.6.1 Site-specific description and conservation plan of sand dune

The proposed Greenfield Chemical Complex development comprises activities related to the construction and establishment of process plants and other facilities along with seawater intake and effluent disposal system.

As the Soda ash manufacturing process requires a large quantity of water for process cooling worldwide, most of the Soda ash plants are established along the coastal areas. The process plants of the proposed project will be set up on the landward side away from the HTL (High Tide Line).

A continuous patch of sand dunes exists along the coast of the proposed development. Natural passage for laying seawater intake and effluent disposal pipeline path is not available. These sand dunes are outside the proposed plant boundary. Sand dunes are located between the Arabian Sea's waterfront and the landward side, where the chemical complex will be established.

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Keeping in view the high ecological and geomorphological importance of sand dunes, these areas have been classified under ecologically sensitive zone as CRZ-I A by the Ministry of Environment Forest & Climate Change (MoEF&CC) through CRZ Notification 2011 and 2019.

Although the coastal sand dune of Bada coast is more than 8000 years old, the sand dune formation is recycling of sand as erosion takes place by wave action and accretion takes place with sand being settled at the top of the sand dune with wind action, as can be seen in Figure 1.



Figure 1. Photographs showing accretion of sand over a dune by wind action around Bada coast.

The marine segment through which proposed Greenfield Chemical Complex–seawater intake and effluent disposal pipelines (through underground tunnels in sand dune stretch) would be laid is a specific segment of the Arabian Sea coast off Bada, consisting of a sandy pocket beach with an underlying rocky substratum. The coastal stretch along the project boundary is stable as understood from the LRR (Linear Regression Rate) data of satellite imagery from 2008-2018 studied by CSIR-NIO. Also, no visible erosion accretion was observed during the field survey. The dunes and adjacent coast were stable and doesn't warrant any restoration work. The sand dunes along the Bada coast were also observed physically during the monitoring program of the marine EIA study and through a morphological analysis by CSIR-NIO, Goa.

To achieve a sustainable and uninterrupted water supply for meeting the plant process and utility requirement, it is required to select a reliable source of water supply in the vicinity of the project. In the project area, the only water body present is the Arabian Sea, from which the required water quantity can be withdrawn on a sustainable basis. GHCL has planned seawater intake by laying pipelines from an appropriate intake point in the Arabian sea to the Plant area on the landward side. Similarly, effluent disposal pipelines must also be laid from the Plant area to the outfall or discharge point in the Arabian Sea. The pipelines will be laid through underground tunnels in the sand dune stretch. Since all pipelines of intake and

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outfall will be buried in the intertidal as well subtidal region, there will not be any alteration of wave action, hence, no effect on dune formations.

To maintain sand dune undisturbed, the following conservation methods are suggested:

- GHCL to honor the environmental regulations i.e., sand dunes cannot be altered or flattened.
- The first and foremost thing for conservation of sand dunes, there should be a selection of pipeline/tunnel laying methodology and understanding the morphology of sand dunes.
- Throughout the approx. 6.8 km dune, no natural passage is available to lay the pipelines without disturbing sand dunes. The seawater intake and effluent disposal pipelines are to be laid underground through sand dunes by tunneling as recommended in the EIA report, thus avoiding the disturbance to existing sand dunes. Underground Tunneling is one of the established construction practices for pipeline laying through such terrains.
- As per the morphological study report, coastal sand dunes present at the Bada coast are well stabilized and are more than 8000 years old. The corridor selection for tunneling needs to occupy a minimum footprint for the entire stretch, i.e., land to the subtidal area. Wherever it passes through sand dunes, it must be laid through the most stable dune section, considering the dune height and width. Hence, no damage would happen to sand dunes. It is strictly suggested that the dune stretch should not be disturbed at any cost during the pre-and post-project activities.
- Tunneling with the best available technique like micro tunneling in consultation with geotechnical and tunneling experts. The suggested LFPs (landfall points) can be further assessed and finalized based on ground conditions to conserve the sand dunes.
- Depth to the bedrock, tunneling distance, slope, etc., should be considered in detail.
- With tunneling procedure to lay the intake and outfall pipes, it is expected that all the engineering work will take place underground of the sand dunes; hence, no disturbance of the sand dune will take place. However, the contractor should be instructed not to create any obstacles to the wave and wind on the seaside during the laying of the pipelines.
- The fabrication yard, storage of construction material are to be constructed in the premises of the proposed industry, and no structure should be raised on sand dune area.
- Since sand dunes cover the entire area of approx. 6.8 km. Hence, the only construction material and equipment route is through the passage available along the seasonal River Vengadi, to prevent the disturbance of sand dunes.

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- While geomorphological characteristics and sand supply determine the role of dunes in wave attenuation and coastal defense, the presence of vegetation is more critical for dunes than any other sandy habitat simply because vegetation aids the accumulation of sediment. The construction should prohibit the removal and destruction of plants, trees, and other types of vegetation and animal species from the dune system. Hence, an effort is to be taken for the plantation of native species. But at the same time, over-expansion of the plantation can be avoided by more indigenous species through scientific research on the plantation to enhance the diversity.
- GHCL should contribute towards efforts in improving the area's biodiversity potential by supporting Forest Department initiatives.
- GHCL shall educate the workforce regarding the importance of sand dunes and measures required during pipeline laying jobs to protect sand dunes.
- GHCL shall provide adequate sanitation facilities for the workforce to prevent any misuse of the sand dune and adjoining intertidal area. No part of vegetation above sand dunes shall be uprooted for firewood etc.
- The aesthetic quality of surroundings to be restored on completion of the construction phase.
- Construction debris not to be heaped on sand dune area and it should be stored within plant boundary and based on characteristics can be utilized for backfilling. Topsoil shall be used for backfilling of trenches.
- No part of waste or any construction debris should be thrown in the sand dune and intertidal area.
- Though no sea turtles were observed during the EIA survey, GHCL shall contribute towards Sea Turtle Conservation efforts through Forest Dept.
- GHCL should develop a mechanism to collect debris such as plastics from the sand dune and beach region along the project area for conserving the sand dune.
- GHCL shall keep the above points in planning while laying pipelines through sand dunes. Apart from the above, GHCL shall comply with conditions given by the CRZ authority and the conditions mentioned in Forest diversion approval.

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ANNEXURE R/17

GHCL Limited

Ref: GHCL/AHD/ENVMOEF&CC/VND/21-22/01 **28th July 2021**

Director and Member Secretary,
(IA Division- Industry Committee-3)
Ministry of Environment, Forest & Climate Change,
3rd Floor, Vayu Wing, Indira Paryavaran Bhavan,
Jor Bagh Road, Ali Ganj,
New Delhi – 110 003

SUBJECT: **Submission of Application for Terms of Reference (TOR) for proposed Green field Chemical complex – Soda Ash Manufacturing and associated utilities.**

REF: **Our letter No. GHCL/AHD/ENV/MOEF/VND/17-18/07 dtd. 23.11.2017**

Dear Sir,

M/s GHCL is a leading company in the manufacturing of chemicals, textiles, edible salt and other consumer products. In chemical sector, the company manufactures Soda Ash (Anhydrous Sodium Carbonate), a major raw material for detergents, glass & ceramics industries and the other product Sodium Bicarbonate (baking soda). The company caters to about 25% of domestic Soda Ash demand in the country.

GHCL has signed an MoU during Vibrant Gujarat, 2017 to set up a Greenfield Chemical Complex in district Kutch, Gujarat. GHCL proposes to set up 11,00,000 TPA Light Soda Ash, 5,00,000 TPA Dense Soda Ash, 2,00,000 TPA Sodium Bicarbonate manufacturing plants, solid fuel based 120 MW Captive Co-generation Power plant, RO-DM plant, other utilities, Seawater intake and effluent disposal facilities near village Bada, Taluka Mandvi, District Kutch, State Gujarat.

The proposed project falls under project activity item no 4 (e) Category 'A' as stated in EIA notification, 2006 and hence the project needs to obtain Environment Clearance from MOEFCC, New Delhi. Keeping this in consideration we had informed MOEFCC regarding appointment of EIA consultants vide letter NO. GHCL/AHD/ENV/MOEF/VND/17-18/07 dtd. 23.11.2017 as at that time no consultant specifically accredited for Soda Ash sector.

We have appointed M/s CSIR- NEERI, Nagpur and M/s CSIR-NIO, Mumbai for carrying out terrestrial and marine environment impact assessment studies. The terrestrial EIA and marine EIA studies have been almost completed and data collected is valid till 2022-2023. We have kept in mind the provisions of Standard TOR prescribed for Soda Ash Industry by MOEFCC. We will also conduct any additional study if suggested by MOEFCC for inclusion in EIA. We had aimed to start site activities by 2020 however due to COVID19 business activities and acquisition process got impacted.

GHCL Limited AHMEDABAD

GHCL House, Swastik Society, Opp. Punjabi Hall, Navrangpura, Ahmedabad, Gujarat-380009, India Ph. : +91-079-26434100
CIN : L24100GJ1983PLC006513, E-mail : ghclinfo@ghcl.co.in, Website : www.ghcl.co.in

Head Office : GHCL House, B - 38, Institutional Area, Sector - 1, Noida, Uttar Pradesh - 201301, India. Ph. : +91-120-2535335, 3358000, Fax : +91-120-2535209

GHCL Limited

:2:

CSIR-NIO, Goa has carried out sand dunes mapping and morphological changes, Zoological Survey of India (ZSI) had conducted Status survey and Conservation plan for Sea turtle, M/s STUP consultants had carried out Pre-feasibility study for seawater intake and effluent disposal, Ecological and wild life Assessment study was conducted by NABET accredited Functional Area Expert.

The area identified for setting up the proposed project is about 1481.48 acres (599.54 Ha.). The proposed site was selected after examining 5 alternative sites along Gujarat coast. We have already applied to District Collector for allotment of Govt. Land and Industries Commissioner for allotment of Private and Govt. Land.

Industries Commissioner, Govt. of Gujarat has grant the approval for Bonafied Industrial Purpose to GHCL Ltd. vide letter UF/Infra/Land/Tr-131/IC Office dtd. 27.07.2021.
We are enclosing herewith Form-I along with Pre-feasibility Report for the proposed project, seeking grant of ToR under EIA Notification, 2006.

We request you to kindly process the application for grant of TOR at the earliest.

Thanking You,

Yours faithfully,
FOR GHCL Ltd.

NISHIT NARBHERAM RADIA
Digitally signed by NISHIT NARBHERAM RADIA
Date: 2021.07.28 12:14:19 +05'30'

N N Radia
Chief Operating Officer

Encl: Form – I, Pre-feasibility Report

GHCL Limited AHMEDABAD

GHCL House, Swastik Society, Opp. Punjabi Hall, Navrangpura, Ahmedabad, Gujarat-380009, India Ph. : +91-079-26434100
CIN : L24100GJ1983PLC006513, E-mail : ghclinfo@ghcl.co.in, Website : www.ghcl.co.in

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GHCL Limited

GHCL/AHD/ENVMOEF/VND/2021-2022/02 **6th August 2021**

The Member Secretary (Industry-III)
Ministry of Environment, Forest & Climate Change
Indira Paryavaran Bhavan
Jor Bagh Road, Ali Ganj
New Delhi – 110003

Sub: Reply to Essential Details Sought (EDS) by the Member Secretary for Proposed Greenfield Chemical Complex at Village Bada, Taluka Mandvi, Gujarat.

Ref: EDS sought by Member Secretary on Proposal No: IA/GJ/IND3/222096/2021 dt. 28.07.2021

Dear Sir,

With reference to above mentioned subject, we hereby submit reply to the EDS by your office, towards the issue of TOR for proposed Greenfield Chemical Complex.

SN	Essential Details Sought	Clarification/Reply
1	It is informed that, complete application is processed online, and hence accurate data needs to be provided in the Form 1/PFR. Please recheck the application accordingly.	Form I and PFR has been further updated for your consideration. Detailing is done at relevant section for better clarity..
2	The PP shall provide correct corresponding address along with valid phone number and email. In the case of new projects, address for correspondence shall not be the proposed site address, as there shall be no facilities available in the site.	Correspondence address with valid phone nos and email address has been updated for ease of reference.
3	Form 1/PFR shall be filled in line with the EIA Notification, 2006 providing all the scientific/technical details.	Form I and PFR has been revisited in line with EIA Notification 2006 with all the scientific and technical details incorporated.
4	Whether light soda ash and Dense soda ash productions are independent activities or dense soda ash production includes light soda ash production.	Dense Soda Ash is a conversion from Light Soda Ash . Thus the total Soda Ash production capacity is 11,00,000 MT per annum and 5,00,000 MTA max can be converted to Dense soda ash.

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GHCL Limited

5	Details of land available with the PP and permission for its industrial use.	The land admeasuring 599.54 Ha is identified for setting up of proposed project. The Industrial Commissioner vide letter No UK/INFRA/JAMIN/TR-131 office dtd. 27.07.2021 has approved proposal based on which company can now aquire land for industrial purpose.
6	Details of habitation within immediate vicinity of the project site along with risk and safety plan.	The village Bada is the nearest habitation (<1 km) from the proposed project boundary. GHCL will comply with the risk mitigation measures suggested in Risk Assessment Studies of EIA by NEERI, Nagpur. For Ammonia storage and handling Industrial practice will be adopted and statutory design considerations will be followed. Based on terms of TOR, CSIR-NEERI will incorporate its assessment study as part of terrestrial EIA. This will also include on site and off site Disaster Management Plan.
7	The proposed project includes activities requiring CRZ clearance, while submission of EIA/EMP report, additional studies for CRZ clearance (Marine EIA/EMP, Map etc) along with SCZMA recommendations shall be provided.	The seawater intake and effluent disposal system and pipelines attracts provision of CRZ due to site proximity to Arabian Sea. CSIR NIO, Mumbai had conducted baseline environment data collection for marine EIA and conducted numerical modelling studies for seawater intake and effluent

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GHCL Limited

		disposal system vide their letter no. NIO/B-2018/GHCL Mandvi/SSP329/1292 dated 05.01.2021 An additional study has been conducted by CSIR NIO Goa for morphology assessment for Sand dunes(which are outside plant boundary) for seawater intake and effluent pipeline corridor vide Report No. NIO/ SSP3268. Refer attached duly signed CRZ map as **Enclosure I**. vide Ref. No. AU/ IRS/SSR/ 221-2021 dated 18.01.2021. On receipt of terms of TOR, GHCL will finalise and submit GCZMA application.
8	Whether the proposed project (project site and/or pipeline) are located in the Forest or Wildlife area?. Status of Forest clearance and wildlife clearance may be provided.	There is a Un Class forest outside project boundary. Seawater intake and effluent pipelines are required to be laid through Unclass forest area for which forest clearance will be sought after obtaining TOR terms. Wild Life Clearance is not applicable as project site and pipeline not falling within 10 km of any notified Protected area.
9	Whether the proposed project falls in coral reef/sea grass/mangrove area? Whether any changes in these landscape proposed?	NO. Project does not fall in coral reef/ sea grass/mangrove areas. As these are absent in proposed site no changes anticipated.
10	Please provide Ecologically Sensitive Areas within 10 km radius of the project site.	As per the available records there are no notified

Chief Operating Officer
N N Kadia

For CHCL Ltd
Yours faithfully

Thanking you,

NISHIT NARBHERAM RADIA

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Date: 2024.08.06 14:08:45 +05'30'

We hope that the above clarifications are in line with requirement and request for consideration of project proposal for issuance of TOR.

		Map given in E which can be re pondahry alon are present on the project site etc. within 10 Reserve, Notifi Sanctuary, National Park, protected area

Executive Summary

Institute of Remote Sensing, Anna University, Chennai has taken up the task of preparing local level Coastal Regulation Zone Map for the Proposed Greenfield Chemical Complex -Soda Ash and associated Seawater Intake and Outfall Pipelines Project in Village Bada, Taluka Mandvi, District Kuchchh, Gujarat by Superimposing on Draft CZMP as per CRZ Notification 2011. The objective of the project is to superimpose the site on approved Coastal Zone Management Plan (CZMP) sheet no. GJ 163,178&179 as per CRZ notification 2011 of MoEF & CC. The satellite imagery of the project area was interpreted for analysis of geomorphic characteristics in the vicinity of proposed project sites. The corner co-ordinates of the project site were identified by the client and were measured on the field using GPS survey.

The client, M/s. GHCL, Ahmedabad, Gujarat was requested to identify the location and other details of the proposed project location along with drawings. The HTL, LTL, Ecologically sensitive areas indicated in draft CZMP with setback lines as per CRZ Notification 2011 were superimposed on to georeferenced cadastral map to prepare a local level CRZ map at 1:4,000 scale. The co-ordinates of the HTL derived from draft CZMP at 1:25,000 scale in WGS84 system are presented in the **Annexure-I**.

The satellite imagery of the project site superimposed is given in **Annexure - II**. The map showing the project site superimposed on draft CZMP as per CRZ 2011 notification is shown in **Annexure – III**. The map showing the CRZ status at 1:4000 scale is also attached in **Annexure - IV**. The photographs taken during the field survey are provided in **Annexure - V**. Various coastal regulation zones in which the project site falls are presented in the conclusion section of this report.

PROJECT DATA SHEET

Title: Preparation of Local Level CRZ Map for the Proposed Greenfield Chemical Complex-Soda Ash and associated Seawater Intake and Outfall Pipelines Project in Village Bada, Taluka Mandvi, District Kuchchh, Gujarat by Superimposing on Draft CZMP as per CRZ Notification 2011

Project Ref No.	: AU/IRS/SSR/221-2021 DT. 18.01.2021
Principal Consultant	: Dr. S.S. Ramakrishnan, Professor
Done for	: M/s. GHCL Ltd., Gujarat
Survey Team	: Mr.S. Inbarasan, MOGB Dr. C.Pradeep, Project Scientist Mr. G.S.N. Moorthy, Field Assistant
Data Processing	: Mr. J. Prem Kumar, Project Technician
Report Preparation	: Dr. S.S. Ramakrishnan, Professor Dr. C.Pradeep, Project Scientist
Quality Assessment Team	: Dr. R. Vidhya, Professor Dr. K. Srinivasa Raju, Associate Professor Ms. N. Navamuniyammal, Asst. Professor

The Quality Assessment Committee for consultancy projects has scrutinized the local level CRZ map and corresponding text report of the above project on 21.01.2021. The principal consultant of the project has presented the approach adopted, findings of the study to the committee. The committee has evaluated the CRZ Map and the report for different parameters against the standards prescribed for the mapping. The positional accuracy, attribute accuracy, completeness, semantic accuracy of the output were assessed and found satisfactory. The committee recommends the approval of the map and associated report.

Dr. S.S. Ramakrishnan
(Principal Consultant)

Dr. R. Vidhya
(QAC member)

Dr. K. Srinivasa Raju
(QAC member)

Ms. N. Navamuniyammal
(QAC member)

DIRECTOR

Director
Institute of Remote Sensing
Anna University,
Chennai - 600 025

3.2 Conclusions

- Based on the CRZ map prepared, the site coordinates of the project site, intake points and outfall points are given in Table 1

Table 1. Coordinates in WGS 84

Label	Latitude	Longitude
Intake Point - 1	22 52' 01.07" N	69 07' 28.9" E
Intake Point - 2	22 51' 57.44" N	69 07' 32.44" E
Outfall Point - 1	22 52' 15.79" N	69 06' 14.35" E
Outfall Point - 2	22 52' 6.65" N	69 05' 59.08" E
A	22° 52' 56.725" N	69° 7' 32.697" E
B	22° 53' 43.672" N	69° 8' 52.165" E
C	22° 53' 53.686" N	69° 9' 28.954" E
D	22° 53' 41.851" N	69° 9' 58.919" E
E	22° 52' 56.195" N	69° 9' 7.677" E
F	22° 52' 29.533" N	69° 8' 16.427" E

- A minor portion of the Proposed Greenfield Chemical Complex-Soda Ash project site boundary falls in CRZ III as per Draft CZMP prepared as per CRZ Notification 2011. (Refer enclosed CRZ Map)
- The proposed Greenfield Chemical Complex and effluent disposal treatment facility falls **"Outside CRZ"**
- The sea water intake facility falls within **"CRZ-III"**
- The project site area falling in different zonation details are shown as per draft CZMP and as per Ground (GPS) Survey in Table 2.

Table.2 Extent of project site in various CRZ area

Sl.No	CRZ - Classification	Area in Sq.m
1	CRZ - III	174735.5
2	Outside CRZ	4809346.0
	Total	**4984081.5**

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Institute of Remote Sensing
Anna University,
Chennai - 600 025

NIO/SP-25-2019

(SSP3268)

DISTRIBUTION RESTRICTED

Studies on sand dune mapping and morphological changes of the river mouth at the proposed Greenfield Chemical Complex at District Kutch, Gujarat

Sponsored by: GHCL, Limited Ahmedabad

GHCL House
Opp. Punjabi Hall
Navrangpura, Ahmedabad
380009

Final report

August 2020

सीएसआईआर – राष्ट्रीय समुद्र विज्ञान संस्थान
CSIR-NATIONAL INSTITUTE OF OCEANOGRAPHY
(वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद)
(COUNCIL OF SCIENTIFIC & INDUSTRIAL RESEARCH)
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http:// www.nio.org

5. Conclusion and recommendations

- The Vengadi river discharge mouth, which was considered for the pipeline corridor, has not undergone significant morphological changes from 2008 to 2018.
- This study exhibits that the river mouth opened up only in the years 1988 and 1990, but the reasons could not be ascertained. After the construction of the tidewater barrier in 2005 across the river, river mouth has not been breached either by river water or by tides.
- Due to this, the river mouth is so stable that there is no inflow or outflow through this mouth observed. Hence, the option of considering this river mouth for laying the buried pipelines may be considered if dredging of the mouth is approved by the concerned authorities during the construction stage. It may refill again, as evidenced in the past. The risk of pipelines exposed may not be ruled out in case of any natural disaster, where appropriate precautionary measures should be taken at the planning stage. In this option, the outfall points are at 2045m and 2568m distance in the sea from the river mouth. But, the problems of bringing the pipelines upto the river mouth need to sort out.

- The economics of laying longer pipelines and two tunnellings in the dune stretch may be considered, and the optimum decision may be taken. As the shorter distance points (L0, L0(1), L1, L2, L5, L6) are available, it is recommended to prefer those points.
- The approximate area of this dune stretch is 302 ha. The dune extends from northwest to southeast for a length of 6.8 km without any break. If there would have been a break, it could have been used as a natural passage. The maximum observed width of the dune was 821 m, and the minimum observed width is 7 m. Dune height extends from 1.5 m to 18.5 m. Three different patches of dune reach up to 18.5 m.

- It is observed through digitization of historic shoreline that no significant erosion has occurred along the entire stretch of the Bada coast. This indicates that this coast has been stable for a long time. The proposed LF points are lying on the stable coast of this region.

- Based on the dune characteristics, vicinity of the project site, intake and outfall points, the stability of the coast, ten transects and corresponding landfall points were

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analysed individually. Based on this, L5 & L6 may be the better landfall points for the suggested intake and L0,L0(1), L1&L2 for outfall points. Intake point is around 1005 &1007 m , outfall is around 2185 & 2686 m from L0 &L0(1), and 2371& 2865 m away from L1&L2 respectively. Dune width is about 275 m from the L5 to the project plot boundary. Dune width is 425m, 425m, 466m and 466m in between the L0(1), L0, L1 &L2 respectively, to the plot boundary. The corresponding transects T01, T02, T1, T2, T5&T6, may be explored in detail for the alternate means of laying the pipeline such as tunnelling, etc.

- The minimum and maximum range of SSC at the intake point was 2.48 mg/l and 27.12 mg/l respectively during 1999-2003. The variations of SSC at intake point is due to various reasons. Values of SSC should be considered while planning the seawater intake and effluent disposal system.
- GHCL may conduct proper EIA study for predicting and mitigating impacts due to project activities and take all necessary environmental approvals from state and central environmental authorities for the project.

----------End of the Document ----------

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GUJARAT POLLUTION CONTROL BOARD
Regional Office –Kutch (West)
Katira Complex-1, Magalam Char Rasta, Sanskar Nagar,
Bhuj- 370001, Phone: (02832) 250620
E- mail: ro-gpcb-kutw@gujarat.gov.in

PUBLIC HEARING PROCEEDING

As per the provision of Notification No. S.O.1533 (E) dated 14/09/2006 and its subsequent amendment thereof, Ministry of Environment, Forest & Climate Change, Government of India, New Delhi, Public Hearing has been conducted for M/s. GHCL Limited for Proposed the Soda Ash Plant (1) Light Soda Ash Plant – 11,00,000 TPA, (2) Dense Soda Ash Plant @ 5,00,000 TPA, (3) Sodium Bicarbonate @ 2,00,000 TPA with solid fuel based Captive Cogeneration Power Plant @ 120 MW capacity at Village: Bada, Taluka: Mandvi, District: Kutch, covered under Project category "A" as mentioned in their request application.

The Public Hearing was scheduled to be held on 06/04/2022 at 11:00 Hrs, Venue: Project Site, Survey No. 432, Village: Bada, Taluka: Mandvi, Dist. Kutch. Public hearing was time being postponed due to unavoidable circumstances and now the Public hearing is scheduled to be held on 17/10/2022 at 11:00 Hrs, Venue: Project Site, Survey No. 432, Village: Bada, Taluka: Mandvi, Dist. Kutch.

A copy of the Draft Environment Impact Assessment report and Executive Summary of Draft Environment Impact Assessment report both in English and Gujarati were sent to the following authorities or offices to make available the draft EIA report for inspection to the public during normal office hours, till the Public Hearing is over.

1. The District Collector Office, Bhuj, Dist. Kutch
2. District Development Office, Bhuj, Dist.: Kutch
3. District Industry Centre, Bhuj, Dist.: Kutch
4. The Taluka Development Office, Ta. Mandvi, Dist. Kutch
5. Regional Officer, Integrated Regional Office, Ministry of Environment, Forests and Climate Change (MoEF & CC), Room No. 407, Aranya Bhavan, Near CH-3 Circle, Sector – 10A, Gandhinagar, Gujarat – 382010.
6. Regional Office, Gujarat Pollution Control Board (Kutch-West), Katira Complex – 1, Near Mangalam Char Rasta, Sanskarnagar, Bhuj, Kutch – 370001.

Also, Executive Summary in Gujarati language was send to Talaticum Mantri of 12 villages for widespread publicity of Public Hearing. Other concerned person having plausible stake in environmental aspects were requested to send their responses in writing to the concern regulatory authorities.

Announcement of Public Hearing was also made through loudspeaker and banners on auto rickshaws and the rickshaw was also rotated in the villages of the study area before the Public Hearing on dated 15/10/2022 & 16/10/2022.

The advertisement was published in earlier Gujarati Newspapers **"Divya Bhaskar"** on dated 03/03/2022 and in English Newspaper **"The Times of India"** on dated 04/03/2022. Re advertisement was published on Gujarati Newspapers **"Divya Bhaskar"** on dated 30/09/2022 and in English Newspaper **"The Times of India"** on dated 01/10/2022.

GUJARAT POLLUTION CONTROL BOARD
Regional Office –Kutch (West)
Katira Complex-1, Magalam Char Rasta, Sanskar Nagar,
Bhuj- 370001, Phone: (02832) 250620
E- mail: ro-gpcb-kutw@gujarat.gov.in

Shri. Chetan Misan (G.A.S), Sub Divisional Magistrate and Deputy Collector, Mundra, Kutch supervised and presided over the entire Public Hearing process.

A statement showing list of participants present during the Public Hearing is enclosed as **Annexure A.**

A statement showing salient points highlighting issues raised by the participants and responded by the representative of the applicant during the Public Hearing in English language is enclosed as **Annexure B** and in Gujarati language is enclosed as **Annexure B1.**

Statement showing responses and comments received in written, with respect to aforesaid public notice before and during the Public Hearing are enclosed as **Annexure C (C-Q-1 to C-Q-1154)** and replies given by project proponent with respect to these response and comments received in writing are enclosed as **Annexure D (D-A-1 to D-A-1154).**

Annexure E (E1 to E4) contains the advertisement published in Gujarati Newspapers **"Divya Bhaskar"** and in English Newspaper **"The Times of India"**. It also contains acknowledgement copies of EIA Report and Executive Summary submitted to authorities and Executive Summary submitted to village panchayat offices and photographs of announcement on microphone in the affected villages falling within 10 km radius of the proposed project area.

Place:
Project site,
Survey No. 432,
Village: Bada,
Taluka: Mandvi,
District: Kutch

Date: 17.10.2022

T. C. Barmeda
Regional Officer
GPCB Kutch (West) as
Representative of the Member
Secretary, GPCB

Chetan Misan (G.A.S)
Sub Divisional Magistrate &
Deputy Collector,
Mundra-Kutch

Encl.:

1. Annexure A, B, B1, C, D & E as above.
2. Video DVD containing videography of Public Hearing.
3. CD containing PDF file of Minutes of Meeting (MOM) of the PH proceeding and Annexures.

Gujarat Pollution Control Board

Regional Office – Kutch(West)

Katira Complex – 1, Mangalam Char Rasta, Sanskar Nagar,

Bhuj -370001. Phone : (02832) 250620

E-mail ID: ro-gpcb-kutw@gujarat.gov.in

ANNEXURE-A

A Statement showing participants present during the public hearing.

As per the Ministry of Environment and Forests & Climate Change, Government of India, New Delhi vide its notification no. S.O.1533 (E) dated 14th September, 2006 as amended; Public hearing is fixed for **M/s GHCL Limited for 11,00,000 TPA Light Soda Ash, 5,00,000 TPA Dense Soda Ash, 2,00,000 TPA Sodium Bicarbonate, 120 Captive Co-generation Power Plant, at Village. Bada, Ta. Mandvi, Dist. Kutch,** project category **'A'** was scheduled to be held on **06/04/2022 at 11:00 Hrs, Venue: GHCL Project Site, Survey No. 432, Village: Bada, Taluka: Mandvi, Dist. Kutch.** Public hearing is time being **postponed** due to unavoidable circumstances and now the Public Hearing is scheduled to be held on **17/10/2022 at 11.00 hrs, Venue: GHCL Project Site, Survey No. 432, Village: Bada, Taluka: Mandvi, Dist. Kutch.**

The List showing name of participants present along with signature during the public hearing are as under:

ભારત સરકારના વન, પર્યાવરણ મંત્રાલય અને જળવાયુ પરીવર્તન મંત્રાલય, નવી દિલ્હીના જાહેરનામા ક્રમાંક એસ.ઓ.1533 (ઇ) તા:14/9/2006 તેમજ વખતોવખત થયેલ સુધારાના અનુસંધાને **મેસર્સ જીએચસીએલ લીમીટેડ, ગામ. બાડા, તા. માંડવી, જી. કચ્છ દ્વારા ૧૧,૦૦,૦૦૦ ટીપીએ લાઇટ સોડા એશ, ૫,૦૦,૦૦૦ ટીપીએ ડેન્સ સોડા એશ, ૨,૦૦,૦૦૦ ટીપીએ સોડીયમ બાયકાર્બોનેટ, ૧૨૦ મેગાવોટ કેપ્ટીવ કો-જનરેશન પાવર પ્લાન્ટ વગેરે માટેની** પરીયોજના પ્રોજેકટ કેટેગરી **"એ"** અન્વયે લોકસુનાવણી **તા. ૦૬/૦૪/૨૦૨૨ ના રોજ ૧૧:૦૦ કલાકે, સ્થળ: જીએચસીએલ પ્રોજેક્ટ સાઇટ, સર્વે નં. ૪૩૨, ગામ. બાડા, તા. માંડવી, જી. કચ્છ** ખાતે આયોજીત કરવામાં આવેલ હતી. પરંતુ, અનિવાર્ય સંજોગોને કારણે આ લોકસુનાવણીનો કાર્યક્રમ મુલત્વી રાખવામાં આવેલ. હવે આ પરિયોજના પ્રોજેક્ટ માટેની લોકસુનાવણી કાર્યક્રમ **તા. ૧૭/૧૦/૨૦૨૨ ના રોજ ૧૧:૦૦ કલાકે, સ્થળ: જીએચસીએલ પ્રોજેક્ટ સાઇટ, સર્વે નં. ૪૩૨, ગામ. બાડા, તા. માંડવી, જી. કચ્છ**ખાતે રાખવામાં આવેલ છે. લોક સુનાવણી દરમ્યાન હાજર રહેલા લોકોના નામ તથા સહીની યાદી નીચે મુજબ છે.

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Gujarat Pollution Control Board

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Bhuj -370001 Phone : (02832) 250620 Email-ro-gpcb-kutw@gujarat.gov.in

Sr.No. અનુ.નં	Name & Address નામ અને સરનામું	SignatureOR Thumb Impression સહી અથવા અંગુઠાનું નિશાન
1	Abdi Harun Abdi	
2	ગોકળી કાર્તુન કુરશા	AKG
3	Murlidhar.	M.
4	Rajesh Suthar	
5	પુનમ મોહનલાલ ગોકળી	પુનમ મોહનલાલ ગોકળી
6	પુકાશ રણમલભાઈ ગોકળી	P. R. Gadhvi
7	ગોકળી મનિષકુમાર મુરલીધર	
8	ગનીરામાવદ ગુરનાગ	ગનીરામાવદ
9	ગોકળી અજુ મોહનલાલ	
10	Hari Gadhvi	
11	કરી મોહિત ગોકળી	મોહિત ગોકળી
12	ગોકળી મોહના મોહનલાલ	
13	ગોકળી નિતિન ચરણોગ	
14	ગોકળી ભાવેશ કરસન	
15	ગોકળી કરી મોહન	Hari Gadhvi

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16	મહેશ્વરી મોહન. Vમાંડણીયા	
17	મહેશ્વરી કનૈયા શાંતિ પાંડણીયા	
18	ગોસ્વામી દશરથ નાથા ઉનડકટ	
19	ગોસ્વામી કનૈયા ધારવ ઉનડકટ	
20	ગોસ્વામી પરશુ મીસણ	
21	ગોસ્વામી રામ મીસરા	
22	ગોસ્વામી કિશના કરશન મીસરા	કિશના કરશન
23	ગોસ્વામી ગદા ગોપાલ પાંડણીયા	
24	ઠક્કર કરસનભાઈ ભાડા	કરસનભાઈ
25	કોસ્વી મોહન લાલા ભાડા	
26	કોસ્વી ગોકળભાઈ ભાડા	ગોકળભાઈ
27	ગોસ્વામી ઉમેશ પ્રવાલ મહારાજ	
28	ગોસ્વામી ગદાધર શિવજી પાંડણીયા	
29	ગોસ્વામી મહેશ ભગવાન પાંડણીયા	
30	ગોસ્વામી લક્ષ્મણગર ભાઈ ધારવા	

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Sr.No. અનુ.નં	Name & Address નામ અને સરનામું	SignatureOR Thumb Impression સહી અથવા અંગુઠાનું નિશાન
31	ગઢવી [illegible]	[illegible]
32	ગઢવી [illegible]	
33	ગઢવી [illegible]	
34	[illegible]	
35	ગઢવી [illegible]	
36	[illegible]	[illegible]
37	[illegible]	
38		
39	[illegible]	
40	[illegible]	
41	[illegible]	
42	ગઢવી [illegible]	[illegible]
43	ગઢવી [illegible]	[illegible]
44	ગઢવી [illegible]	[illegible]
45	ગઢવી [illegible]	

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46	સુથાર કિશ [illegible]	
47	કેનીયા રામજી [illegible]	
48	રમાનંદ ગોરધી [illegible]	
49	રમાનંદ ગોરધી [illegible]	
50	ગોરધી નીલેશ [illegible]	
51	ગોરધી [illegible]	
52	ગોરધી [illegible]	
53	નારાણ [illegible]	
54	ભરત [illegible]	
55	મુકેશ ગોરધી	
56	જીવરાજ [illegible]	

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Sr.No. અનુ.નં	Name & Address નામ અને સરનામું	SignatureOR Thumb Impression સહી અથવા અંગુઠાનું નિશાન
57	કોલી મંગા	ગોધરા
58	દીનશાધર ગોવિંદધર	નાયમા મોરા
59	ઈશ્વરધર ગોવિંદધર	નાયમા મોરા
60	ગઢવી મિલેશા મિલેશાઈ	નાયમા મોરા
61	ગઢવી અશોક જાદવ	પાંચોરીયા
62	ગઢવી પુંજાશી વેલાભા	મોરા નાયમા
63	ગઢવી મોહન ગોવિંદ	મોરા નાયમા
64	ગઢવી મિલેશ માડુ	મોરી ઉનડોડ
65	ગઢવી નાયમોળા	મોરી ઉનડોડ
66	ગઢવી કિંજલ મોહન	મોરા નાયમા
67	ગઢવી તરિલ અરજણ	પાંચોરીયા
68	ગઢવી ગોપાલ અમા	પાંચોરીયા
69	ગઢવી ગોવિંદ રાજ	પાંચોરીયા
70	ગઢવી નયના હરી	પાંચોરીયા
71	ગઢવી જશોદા ગોવિંદ	પાંચોરીયા

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Sr.No. અનુ.નં	Name & Address નામ અને સરનામું	SignatureOR Thumb Impression સહી અથવા અંગુઠાનું નિશાન
72	ગઢવી હિંમતદાન ગાગુ (રાંગાણીયા)	
73	ગઢવી રતન ખેંગાર (રાંગાણીયા)	
74	ગઢવી વાલજી ભીમા	
75	ગઢવી ગોવિંદ રાજા ભીમા	
76	ગઢવી મેહરા વાલાજી ભીમા	
77	ગઢવી પુનાણ ભીમદાન રાણાણીયા	
78	ગઢવી દોમેણ ખેત	
79	ગઢવી કર્ણ ખ	
80	મોઢવાડી ધીરુ	
81	ગઢવી રામ વીરા	
82	ગઢવી મેરામણ	
83	ગઢવી રણમલ	
84	મકવાણી વિજ	
85	વિજ ગોપાલ ગઢવી	
86	ગઢવી ખેત	

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87.	ગઢવી વાલજી ગોવાડ	
88.	ગઢવી ગોવિંદ વાલ	ગોવિંદ
89.	ગઢવી દેવાદ પચુ	D.P.G
100.	ગઢવી ગોવર્ધન કાનજી	
101	ગઢવી જુમાન આમદ	
102.	ગઢવી દાદા કાના	Bhuvad
103	કોમળજુ જી	

104	ઝડજે જુકુમા મદદ્યાજુ	જુકુમા ગડજે
105	ગડજ વકુમા મોમાજુ	વકુમા ગડજ

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Sr.No અનુ.નં	Name & Address નામ અને સરનામું	SignatureOR Thumb Impression સહી અથવા અંગુઠાનું નિશાન
106	[illegible]	[illegible]

GUJARAT POLLUTION CONTROL BOARD
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Annexure - B

A Statement showing issue raised by the participants and responded by the representative of the applicant during the Public Hearing.

As per the Ministry of Environment ,Forests and Climate Change of india , New Delhi vide it's Notification No : S.O.1533(E), dated September 14, 2006 and subsequent amendments covered under Category " A " of **Notification M/s. GHCL Limited, Village : Bada, Taluka : Mandvi, District : Kutch, Gujarat** by 11,00,000 (TPA Capacity Light Soda Ash Plant), 5,00,000 TPA Capacity Dense Soda Ash, 2,00,000 TPA Capacity Solid Fuel Based Captives with Sodium Bicarbonate - Generation Power Plant Environment public hearing regarding the project for 120 MW capacity . On 06/04/2022 at 11:00 hrs at Sthalam Project Site , GHCL Limited , Survey no . 432 was held at Village: Bada, Taluka: Mandvi, District : Kutch, Gujarat. But due to unavoidable circumstances, the program of this public hearing was postponed. Now, the public hearing program for this project is dated. On 17/10/2022 at 11:00 hrs , place Project Site , GHCL Limitted , Survey no . 432, Village : Bada, Taluka : Mandvi, District: Kutch, Gujarat .

Shri. Chetan Misan (GAS) , Sub Divisional Magistrate and Deputy Collector , Mundra - Kutch Supervised and presided over the entire public Hearing proceedings.

Shri T. C. Barmeda, Regional Officer, GPCB, Kutch (West) and the representative of Member Secretary, Gujarat Pollution Control Board welcomed all present at the Environmental Public Hearing. They EIA Various provisions under the notification and the process of public hearing are given in brief. He informed about the action taken by the Gujarat Pollution Control Board regarding the wide publicity of the public hearing and two daily news papers prior to its announcement "Times of India" in English was published on : 04/03/2022. And "Divya Bhaskar" In Gujarati was published on 03/03/2022. Two daily news papers re-advertisement of public hearings; Published in "Times of India" in English on dated 01/10/2022 and in "Divya Bhaskar" in Gujarati on: 30/09/2022. In most cases On 15.10.2022 and 16.10.2022, extensive public awareness has been done about public hearing through vehicle through loud speakers in various villages in the study area. He also said that EIA. As per the notification provision, only local affected people can make oral submissions in this public hearing while other persons having reasonable interest can make their submissions in writing , which will be included in the agenda.

Then, with the permission of the Sub Divisional Magistrate, they asked the representative of the industry to make a presentation on their proposed project in the local Gujarati language .

Then information about the company by industry, project location, project details, layout plan, useful requirements for the project, weather information of the area, satellite tracking activity, baseline data, environmental impacts and its mitigation measures, environmental management cost, project benefits, conclusion etc. in Gujarati language . Presentation was given .

After completion of the presentation by the industry, the Regional Officer, Kutch (West), Gujarat Pollution Control Board, with the approval of the Sub Divisional Magistrate, opened the forum for submissions / objections / suggestions of the local affected people .

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Objections / suggestions / opinions raised by the people present during the environmental public hearing and the responses given by the project representative are as follows :

Sr. No.	Name and address of the person raising the issue	Issues presented	Reply given by the representative of the company
1.	Hariom Aboti Village : Mota Laija	• They asked that they want to know from the company that what is heavy chemical? And what are the regulations to prevent pollution? What is it that company will explain us.	• As you have requested to explain what this heavy chemical is. Heavy chemicals means chemicals that are normally made in bulk are called heavy chemicals. A heavy chemical is not necessarily toxic or non-toxic. But any chemical that is produced in bulk is called heavy chemical.
• Regional Officer said , " Keep calm. Proponent gives answers. Proponent will give answers to your raised questions. Please listen calmly. "			
2.	Shamat Kesav Gadhavi Village : Pachotia	• They ask the company that in the 10 villages around them which are affected , what facilities will the company do for the villages and what will they do for the cows. It is a question for my supporters with public support . In which I am sure that GHCL will fulfill their request and further support the company.	• We have made verbal representations at several places and also given written undertakings that the GHCL foundation of GHCL is engaged in CSR activities, and this activity is reflected in doing various things, the main representation being whether the fodder will be arranged or not. So we have made a commitment that fodder will be arranged as per requirement. Apart from this, work will be done in education and arrangement of animal doctor for animals, work will be done for in in medical field and for skill development.
		• Sir, Now we can ask other questions?	•
• Stated by the chairman , you can ask the questions you want to ask, you can make written submissions, you can make any objections you have, this forum is for that. And we will listen to all your objection suggestions and submissions and also give positive answers to them, but we request you all to submit your questions one by one.			

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3.	Rajeshbhai Dhola Village : Padampur	• They ask the company that give us written answers whether they will employ the youth and sisters who are here or hire them from outside . So that we get the information.	• What we are talking in this public hearing today will be recorded in writing and this written note will be informed in writing to all. The employment you have talked about. Generally we try to provide employment locally as per the qualification and requirement in neighboring villages . Also, if I talk about Sutrapada itself, more than 80 percent local people are employed in Sutrapada.
• Told by the regional officer that tell your name before the next presentation.			
4.	Haribhai Ratanbhai Gadvi Village : Pachotia	• What they have done so far under CSR for scholarships in schools or for health can you inform. • Very goog sir, I want to know that what kind of pollution does the company cause and what equipment do you have for it?	• You are right , we have arranged medical van here even before the company started here for health. In the future we will try to upgrade the medical facilities here and make the existing schools more effective for providing education to the children. We have a CSR activity going on in every anganwadi etc. in the village and in future we are also planning to build an english medium school. • If you have talked about pollution, advanced arrangements will be made for both environment, sound and water pollution .
5.	Vijay Gadhavi	• Officer sirs, you have come to listen to company men only, and don't give us the mic. Is this the gathering for fodder for your cows? We protest. • No, you tell us whether this is a pollution meeting or a cow fodder meeting. • Here a man fell unconscious and had an attack and you are praising company. Thank you for being an officer thank you.	•

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• Chairman said that, now the mic is with you, whatever your presentation is on camera. You have the mic now, introduce your questions, ask your questions. You can submit any questions you have.			
6.		• How cruel of you sir, even if an ambulance arrives for three men, your hearing cannot be stopped for a moment.	•
7.	Jat Fakina the consignee Village : Bada	• What will GHCL do for Maldhari? Which can be answered.	• When it comes to the maldhari of Bada village, generally what the maldharis need is one for them to have a fodder system and the other for them to have the facility of a veterinary doctor that we will arrange.
8.		• Sir, listen to the proper issue, we don't want doctors, we are concerned about pollution.	•
9.	Prakash Ranmal Gadhavi Village : Laija	• In case, company comes or plant comes then, how many people will you provide employment opportunities if the company comes and if you provide employment then we support you publicly.	• As we have told you earlier we have employed 80 to 85% local people in Sutrapada plant, we will try to follow the same here as per the requirement as per qualification.
10.	Suthar Nirav Village : Mota Laija	• We appreciate your ambulance running under CSR for treatment and we support you openly for the fodder you provided for the livestock. • But at the same time we want to ask questions for the priority of the people here , that you will keep the first priority of the local people who are educated class people who are educated students and if you keep them, how much you will keep them. The laborer who will work here will also be a native of 10 villages here or will you invite them from outside. Another major issue is what you will do here for the preservation of the environment and for the improvement of the environment. In order to preserve the environment, we want to improve the environment here so much that this place becomes	• We have answered your employment issue before. In what you are talking about environment, we are going to do many things for the environment. Along with this, if we talk about environmental dust, today the norms of GPCB are very strict, we will see that we will maintain even more strict norms, use advanced equipment and in this equipment it will be such that whatever impact we have is more or less be restricted in the plant it self. Because a dense green belt will be created all around, there will be no major impact of noise and water or dust pollution. We are sure that the impact will be less than the norms of the environment.

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		worth visiting. If you accept our request, we welcome you with open heart.	
11.		• Hello , there is a misrepresentation here that marine life will not die, skin diseases will occur due to soda ash and then the company will open a hospital. First people will be poisoned by inhalation, then the company will open a hospital. This company makes false representations. Opponents are not allowed to enter. • Go back GHCL Go back GHCL Go back GHCL ,	• Now it has presented skin and respiratory diseases , today I am showing you that we have been running the plant there for the last 35 years and no such major problem has been observed. Apart from this, today there are four soda ash plants in Saurashtra namely Tata Chemical , Nirma, RSPL and Dhragandhra Chemicals. Looking at all these plants, no impact has been observed anywhere, so this seems to be a misleading thing, no such major impact has been observed. • Another thing was said that there will be pollution in the water and loss of life. The treated effluent we release is non-toxic and inorganic. And it has no impact on water. And it has been studied independently whose papers are available. Studies show that no fish or marine animals are harmed. Moreover, there is growth of sea weed and fish growth is more so there is no impact on it.
12.	Bharat Karshan Gadhavi Village :	• How hygienic and clean will the plant that will come up in Bada village be compared to the Sutrapada plant . • Thank you and we welcome you. • Second question We have more and more farmers and what facilities and protection will this GHCL company provide for the farmers?	• Sutrapada plant is 35 years old today, the technology we are going for today is very advanced and for the pollution control it. I can say today that this plant will have better control than any plant in India today. And by all means the advanced plant will come and provide good conditions and there will be no impact on the surrounding villages. • What we talked about today and our CSR presentation also

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			showed that agriculture and animal husbandry are our main themes. And in farming we do different things like organic farming, we work in zero budget farming. Also, GHCL provides support for the government's schemes like for drip irrigation and sprinklers , if we make it effective by giving subsidies, efforts will be made to produce more green production and good production by using less water.
13.	Vijay Karshan Gadhavi Village : Pachotia	• It is asked whether you can neutralize this public hearing or are you doing it at the behest of a person sitting in a corner under pressure from someone.	
14.		• If the EIA report prepared by the company is to be viewed legally by the public, the EIA has prepared the report without considering the nature of the matter here. First of all our demand is before you and honorable officials that this EIA report is wrong which is known to the public, our technical team and we have done this study and we put this before you this EIA report is wrong. While our area is shown as a dry desert, you should know from the road that our is our area actually a dry desert when you come to our area? And you guys have shown our area a dry desert in EIA. As the EIA report is completely wrong, It is our demand that it should be amended first and only after the amendment, this public hearing should be held. I end my speech.	• Today you made a submission that the EIA report is wrong, now the EIA report that we have prepared, it has been prepared by a very reputed agency of India. This is a government agency and their report is generally accepted for all projects. Apart from this, if there is any kind of suggestion in this EIA report, it will be noted, and if any correction is suitable or someone suggests it in the final EIA report, then we will try to implement it, we will review it for sure. So if you have any suggestion for EIA please show.
• During the entire public hearing, there was a continuous noise by the people , so that the Regional Officer As stated by make presentations one after another so that the voice of all can reach all.			
15.	Maheshwari Dhanji Valoo	• As our supporters have given you a statement, if you are able to fullfill,	• As you have talked about the chimney, then it will be fully

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	Village : Mota Laija	I welcome this company. • Second, sir , disclose the height of the chimney in this company to the public.	calculated for the height of this chimney and the minimum height of the chimney will be 130 meters.
16.	Bhawanjibhai shouted Village : Former Taluka Panchayat	• I support and welcome the company. • Here are our youth who are coming from the villages in your criteria area who are ready to study for skill development but if their economic condition is poor, what can you do for them. • I want to know what you will do for the farmers here in our area related to agriculture.	• We at GHCL do various such things and if there are any such thing in future we will try to help them as part of CSR . Apart from that, we will arrange education here too, but some suitable students will be selected for higher education. • As we mentioned earlier we will do many things for farmers out of which agro livelihood is one of our core skill areas where we will do things like zero budget farming, organic farming, drip irrigation and sprinklers .
17.	Viram Gadhavi Bada	• We want confirmation in writing that the company is committed to our cows for 365 days or not. Committed or not.	
18		• Make sure that there is a center of vipassana meditation nearby. All over is in the world. Vipassana center is near.	•
• During the hearing, there was continuous uproar from the people. It was presented simultaneously by different persons .			
19.	Valji Jashraj Charan	• EIA notification, this public hearing is held only in 24 days time, 45 days time is not given to us. to close this public hearing. Stop this public hearing and give us 45 days. • Sir, stop the proceedings, we don't need a hearing , Corona guidelines have been violated. • No, no, public hearing do not close, continue continuously. Just keep going • We don't understand why this public hearing is going on despite all this outrage. Tell us what is the reason for this public hearing, do	•

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		you not understand such public outrage hearing. • Outside men are coming and speaking. • Sir, which law and order which we took and order breached you to put in these minutes first you show which order we took and order breached. We will die but not go away. • Hon'ble Chairman Sir you make the public seat like this and give the company VIP treatment, is this right. • I want to make a presentation through electronic medium , then if I am provided with electronic medium and the LED should be turned on, this should be played, through electronic medium I want to ask questions.	
• Stated by the Regional Officer that you are frequently requested to present any issues you may have. If you don't have any technical presentation, please let us know so that further action can be taken. • Told by the Regional Officer, make the representation you want to make simultaneously so that the proponent can respond. • Told by the regional officer that this public hearing is only to hear your objections and representations, present your objections. It is our repeated request. This forum is neutral only to listen to your objections and take them to the right place. So give your submissions. • Chairman said that we are here to hear your objections and submissions but you are taking law and order in your hands you are getting into quarrel with the authority we are taking all your objections in writing and verbal don't take law in your hands . It is my humble request to all of you that whatever objections you may have, please let us know in writing and verbally on camera. Please I again inform you don't take law and order into your hands. Feel free to put your objections and representations and suggestions before us. We are ready to take on camera and in writing. But maintain the law and orders and maintain discipline. • Stated by Chairman Shri , whatever your oral presentation is, you should say it on camera. First you calmly tell us your objections and suggestions. • Regional Officer said that any objections you may have will be audio and video recorded and forwarded. • Stated by Chairman that make your submission.		
20.	Village : Janakpur	• Says I support this company and welcome the company. We support publically. • At the same time, we ask that you will do the work that the company	•

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		has to do in the interest of the public, and put it before us.	
21.	Vipassana Center		• Pollution or sound or any other effect does not affect the center of Vipassana. • All measures have been taken by us for pollution control. Dust pollution will be so low that it will generally have no impact due to green belt and minimum dust generation. For sound , any equipment having noise problem will be enclosed , the equipment will be inside the building and also because of the green belt , the impact of sound will be limited to the boundary of the plant. And the sound will stay within the board's norms so it has no major unappreciated impact. For which the plant assures that there will be no impact and for that one of our reputed agencies has done the entire study and the study shows that there will be no unappreciated impact.
• Told by the regional officer that once again a humble appeal to all of you that whatever issues, objections, representations you have, please make them so that we can minutise them and send them for further action. • Told by the regional officer that, sit down, do it quietly, if you all speak together, you can't be heard, please all speak simultaneously.			
22.		• We support this public hearing and welcome the company.	•
23.	Khushalbhai Gadhvi Village : Pachotia	• He said that around 300 laborers have come with them, so how will the GHCL company take those people into confidence that they will be given a chance first. Why will they be given priority to work.	• As mentioned above for employment, we will give priority to local people based on merit and need .
24.	Dr. Devendra Gauswami Village : Janakpur	• He said that in the presentation made by this company, you have not indicated whether they use ammonia in Sutrapada or store the ammonia tank there or not. And tell	• Your three - four questions are. I am answering three - four questions that ammonia is recycled in the process, ammonia is used, it is recycled and used,

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		here whether you will use it or not and how dangerous ammonia is. If his dust comes here, I am a doctor with 21 years of experience. Asthma cases have increased by 100 to 1000 percent here since the earthquake. You bring a company here and develop it, but you don't tell anyone that we will do this and we will do that. If you store ammonia here, what will you do about it, if there is a leak, what will happen to the people who are there?	ammonia consumption will be reduced from the existing plant, its advanced technology will be used, so ammonia consumption will be reduced. • Another question is whether ammonia will be stored yes it is clearly written that ammonia is in its ammonia bullet will be stored but the amount of storage will be very less and it will be well within environmental norms. For this ammonia what you talked about that if leakage will happen, then normally ammonia will not remain in the atmosphere. But in case of a catastrophic ammonia leakage, adequate provision is made for it to be controlled inside the plant boundary, a special scrubber is installed inside the plant boundary. As soon as ammonia level increases the spray of water showers like rain and ammonia is scrubbed and ammonia is eliminated in the same area, because ammonia is soluble in water. So in such a case, it would have rarely happened in the entire history, one case out of thousands would have happened anywhere and it can be controlled comfortably.
25.		• We have not seen this public hearing happening in this way anywhere in the country. and you are stoping people here, and not allowing public to come forward. You are doing forced public hearing like this, sir, you are working against the law, you are working against the people. And even though there is so much opposition from the village where this plant is to come, you forcefully hold a public hearing, you are doing it	•

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		forcefully this shows here. • No, I will speak, you have been speaking so long, if I forcefully come to the courtyard of your house , you will let me come. By buying the land of Bada village by your money do you have the right to put the plant. Public hearings do not take place in this way. • Note that a person cannot support or oppose from outside.	
• Stated by Chairman that Madam, state the reasons for your opposition on record we record here. You speak with reason. If you want to argue, we welcome and accept it, but suggest and present your objections to us. • Stated by the chairman that outsiders should give in writing. Any objection, suggestion, representation reason of your people give us oral written. We will consider your objections, suggestions and representations verbatim. At present public hearing is only for your objections and submissions. You don't have to protest. But if the reasons are genuine , you give us oral and written, we are ready to take. • D.Y.SP. By saying that "Brother, step back a little bit, everyone has to make a presentation. You step back a little bit. Please step back a few let's step back everyone. Everyone will get full opportunity of presentation, no one will be left behind.			
26.		• Please consider that no one from outside can support or oppose. • Ignoring the arrivals from any villages outside the affected village . You have full support from nearby villages.	
• GHCL go back, GHCL go back , • Sir give us the mic, • D.Y.SP. But if there is some arrangement here, I can give you the mic, is for you • GHCL hey hey, GHCL hey hey, • D.Y.SP. as stated that madam, go back a bit. • Chairman Give the mic to whoever wants to present and give everyone a chance to present. • Chairman said that everyone should give their objections and representations verbally and in writing and all objections and representations will be noted.			
27		• It is with great sadness that I have to say that you are a GPCB officer who is witnessing so much protest in the atmosphere inside the dome, the breathing for the colleagues is difficult even if an ambulance comes and takes them away, the shameless government is sitting silently, sir. I have studied EIA and	•

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		have come to put my points and I have also brought my points in writing sir. You are bound to listen to my points first you should preserve human values. These three sides of the dome are kept closed, which you cannot keep as per Corona guidelines. Three sites of dome are closed here and my colleagues are my colleagues are gasping for breath, in this case how will the public raise or hear this. How shameless you are now, you don't realize how many of our people are taken away by ambulance, what you will hear from us in the future. My request to the sirs of GHCL company is that you are not listening to human values now, if you do not appreciate human values now then what will you listen to us in future. I have come with all your reports, I have studied your marine report and your terrestrial report as well. And also we are not a people who have come to chant slogans, we are educated people, seekers of Vipassana. • Barmeda sir, I kindly request you that there is so much opposition and how you can allow this hearing to continue. What you are hearing by crossing human values is very sad sir. If you want to hold a hearing, keep it for three days.	
• Chairman said that, you may make your presentation, • Any representation issues you may have as stated by the Regional Officer, forward them to us. The hearing is for you to make your representations. Give us any issues or make representations.			
28		• I have a question to the honorable GPCB officials that a petition has been filed in the Gujarat High Court which directly means that the people are right and the people have the right to speak. And if the Gujarat High Court is listening, then	•

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		why this vulnerable government is not listening to us and our request is that we have 5 GB of data, if this data is shown on this screen, then we will believe you that you are capable of asserting our right. • Honorable officer of GPCB and Collector that sir we have the data evidence to be put on the screen. If the people see the supporters and also see the opponents, that means they will understand what is the real situation of the company and stop fooling the people and oppressing the people.	
• Told by the regional officer that, whatever issues you have, give us, we will send it along with the minutes and it will be decided. You can give us any data you have, so that we can forward your submission to the next committee to take a decision .			
29	Koli Mohan Viraji Atmaram Village : Bada	• What will you do for our Koli society ? If you do the work, our village has public support for the company.	• As a representative of the society of your village Bada, we have already informed that the coming of this plant or its effluent will not cause any problem in the fish catch and will not cause any damage , opportunities will be given to the youth as per merit.
30.		• Sir, listen to my presentation, this land where the plant is located belongs to Bada village. If the land of Bada village is gone, you are obliged to provide fodder for the cows of Bada village for 365 days.	• We have already given all our confirmations, we will provide fodder for cows as and when required.
31.	Govindgar Desai Goosai Village : Bayad	• He said that it is our request that some arrangement be made for education and animal husbandry and if the arrangement is made, we publicly support you and thank in behalf of 150 peoples.	• The requirement of Bayad village which you have shown, I have already said that in our activities, education and skill development will be done to make the youth of this place eligible to earn. Besides, we will modernize the existing schools and new schools as per the requirement. We will establish in the future.
32.		• Sir, it is my humble statement that more than 90 percent of those who speak in any opposition do not fall	• The work of seeing all this is being done by the reginal officer of GPCB and chairman sir.

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		within this buffer zone. So they have the right to give in written representation. • We believe that they has the right to give in writing but they have no right to speak in the public hearing sir. • Sir, we have many supporters behind us. But only the video is visible so far so you don't reach the eyes of the supporters. Actually 1000 of people and persons have come in support of this GHCL company. So my absolute request to you sir is that all the persons who oppose this only want to fight with government, to cancel this hearing and it is our humble request to you sir that you will be placed for 5 pm till the hearing is over. stay till Then. We ourselves want that any question or any solution can be made only from discussion. So, if we do not sit and discuss this, then there will be no solution to the question, so my humble request to the opposition party also is to maintain order and sit well and if you quarrel in this way, the health of the people will be 100 percent seriously affected.	

- If you have any complaints and submissions or objections or suggestions related to the hearing, please let us know informed by Chairman.
- Told by the regional officer that, you are again requested to the everyone that you can sit at your place and present any suggestions, representations, objections you may have. Which will be included in this agenda and forwarded. This forum is only for hearing your objections suggestions suggestions. No decision is to be taken from this forum. Therefore, we assure you that any of your submissions will be minutise with audio and video recording and sent for further action, so kindly request again to make any submissions to the everyone.
- D.Y.S.P. It has been stated by that, Chairman Sir please instruct that both the parties should present one by one.
- Please maintain discipline as told by Chairman. This thing is going out of order now. You have the right to object. But maintain discipline in it. If you have any objections , suggestions or representations, say them one by one inside the mic, then we will minitise them and send your suggestions word to word to the decision making committee. We have not come here to decide on the forum.

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33 .		• Listen sir, you said that we will give fodder to the cows as per requirement. Exactly, Jain society gives fodder as per need. You say that we will give fodder as per requirement, if you are transferred somewhere tomorrow morning, who should we catch? So we don't want, don't want and don't want this company. • GO back , GO back GHCL GO back.	• As you have said I will be transferred or when I am transferred, when we speak in this public hearing, the entire recording of the commitment is done, not as individual person, this is the commitment of the organization.
• D.Y.S.P. As stated by, Chairman Sir, there is no hearing of any kind in this manner. Until then, the hearing will be held only after peace is maintained, tell everyone in order.			
34		• I am not from this zone. I am a citizen of India, a citizen of Gujarat, a citizen of Kutch and have full rights, I have rights.	•
• As stated by Chairman that, whatever your objections are suggested, make any submissions you make in writing or orally. Whatever objections or suggestions you have, speak one by one, all your objections and suggestions will be heard. • D.Y.S.P. As stated by, all are allowed to speak but sit down all. • Speak one by one, present any objections one by one as stated by Chairman. All your objections will be heard. • I request you all to raise any representations or objections and maintain some discipline, said the regional officer . This doesn't seem like your behavior right now. • As stated by Chairman D.Y.S.P. Sir whoever is throwing all the shoes at the moment is kindly instructed to sit quietly. • D.Y.S.P. By saying, everyone please sit down. Now the police will do the work of the police. It is not considered reasonable, so please maintain discipline. • As stated by Chairman that, this is not discipline. I tell you again. Do not protest in this way, democratic protest should not be in this way, present your objection suggestions within your protest, we will listen to it. But what you are doing now is not protest. • D.Y.S.P. As stated that, all of you sit down. Sit down for a while. The question arises.			
35 .	Vijay Gadhavi	• One minute brother, one minute brother. First of all, I request you to sit down quietly, brother. We have to stay in this area and you. So you will not give any reaction. So we are capable but if you don't react then ok, Brother calm down, Mind my words have no power in this company. The court is big, the public hearing is not the last thing, the public can be sold, I can be sold, the officers can be sold but	•

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		the courts are not to be sold. We have so much opposition, so much matter. Dear chairman and Regional officer, We consider you biased. You are forcfully advancing the public hearing. Right now the petition is going on in the high court, I challenge you for being baised take you to the court in this matter. But the brothers who are sitting with us today. I request them to leave peacefully. So get out comfortably without making any noise. • Let's go brother let's go • GHCL hey, GHCL hey, GHCL hey, GHCL hey, GHCL hey, GHCL hey, GHCL hey, GHCL hey, GHCL hey,	
• According to the Regional Officer, anyone who has any objections or representations regarding the project can do whatever objection if left. You can make any objection or suggestion regarding this project. Your submission is acceptable in both written and oral form. Which will be included in the minutes and sent for further action.			
36	Shamat Singh Sodha Bada	• I am the Trustee of the International Dhyana Center in Bada and listen to all people, all those who are in favor and against please listen. • Earlier also when officers of GHCL company came to meet the trustee . Even then we have made our submission. This is a very ancient science of India, the meditation of Vipassana Dhyana that no one has except India has and the attraction of all the world towards India. Vipassana meditation method has its attraction. So thousands and millions of people from all over the world come here to meditate. comes to do penance. For the past 32 years, this center has taught thousands and thousands of people the method of meditation and has given peace and happiness to their personal lives. Even before this meditation center, it is described in	• As for the vipassana center that we were introduced to, I have to say, first listen to me, the vipassana center is really a very good meditation center. And we respect it, we will also try to take advantage of them in future. Another thing is that the Bhopal example you gave is a bit misleading because in Bhopal methyl isocyanide was used and not ammonia and this ammonia dissolves in water and our consumption is very low, besides our storage of hazardous. is much less than limit , so no such question will arise. And its chances are very less. And if this happens, remedies have been taken for it, apart from this, talking about ammonia in those remedies, for this ammonia NEERI has done a very good study and studied it in detail. And

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		the scriptures that in the middle of this Bada village, many sages have practiced penance on this earth and that is why it is called Tapobhumi. Bada is a tapobhimi. So this is our history as a witness that our religious books spiritual or whatever sages are a witness that when any meditator's attention is disturbed, when someone disturbs it, the disturber and that meditations violator is condemned. To which our scriptures are witnesses. • Now secondly, sir has accepted that ammonia is to be used in this company and its storage is also to be done. So, within our India, an ammonia gas leakage incident has happened in Bhopal. All the news reporter of which are sitting here as witnesses. In which thousands and millions of people died of suffocation. My only suggestion is to save your money and energy and take this company far away from this center of attention. I am not saying that it should not be established here, the sea of Kutch is so big, from Abdasa to Nalia, you should take this company wherever there is less human population or many times far from human population, and especially from Vipassana meditation center. Otherwise, in my opinion, the company that is distracting in this center will be condemned, then it is up to you to decide what to do. If you want to save time and energy, this Bhanate (whom we call Sadhu with me, that Sages also has the same promises that explain to this company if the attention of these sages is disturbed then the company will be condemned. Sadhu, have already said that this	it is also believed that this quantity is very less and on this account there is no possibility of going beyond our plant boundary. But still all corrective actions will be taken for it. There is an automatic ammonia detection system and whenever this system detects any ammonia, immediately there is a protective water shower and scrubber that neutralizes it there and then.

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		company will not stay here, maybe if you set up here, there are also incidents that you will have to leave in the future. I have been doing meditation for 22 years and I express my inner feelings that I put before you then your wish.	
• Chairman said that, thank you very much, we have presented this very calmly and have recorded your presentation on camera and we will consider your presentation in two minutes. That's why this is a public hearing, whatever your objections, suggestions, there is no decision authority here. We have only come to listen to you, we take minute to minute word to word on camera whatever presentation you make, we will send it to the above decision authority in the same way as we have made such presentation. We assure you that.			
37.		• Sir, my environmental issue is that the report of the EIA report prepared by GHCL is also on point number 3 of the working summary of point number 1.2 analysis of five options in point number 16 of the project site. Analysis of the five options for which the company is to be established. According to the options analysis report, the company has selected Bada as the site after identifying five different alternative sites. So our view was that Modhwa village which is very close to the port was a more suitable option for this project because Modhwa village already has industrial units and is not a sensitive area in terms of environment and port logistics and other facilities are also nearby. Compared to this option, the coastal environment near Bada is highly sensitive. Also this area is currently free of any kind of sea or air pollution and there are reserved forests around Bada, Gorad Bird Sanctuary is just 25 km from Bada village. It is only here in the whole Asian continent that there are so many ecologically sensitive areas, but what is the purpose of choosing Bada among the five alternative	• This is a very important question of yours. When we thought of setting up the plant, as shown in the above, five sites were selected, the initial environmental impact assessment was done for all the selected sites and studying all these impact, where there is minimum environmental impact, and where it can be easily dissolve in water. And according to the various reasons given by MoEF (17 to 18 points) the best site Bada was identified and accordingly this site was selected. • Now if we talk about it, you people have shown that the forest is 25 km away from here, so the forest does not come in our impact area . • First listen to me, I have listened to you, now you listen to me, I am answering you. Another thing is that there are flamingos around Modhwa and there are also reserved forests, so about this plant is not suitable here, but any questions you may have. So I am showing the presentation of Mr. Krupadan who is an expert of NEERI . • Can I talk to NEERI sir for a

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		sites? • We say that Modhwa site is the best site when there is no pollution of any kind in Bada, no pollution of sea, no pollution of air, no pollution of any kind. The entire coastline from Mundra to Modhwa has been industrialized and fishing and polluted by every sector and every industry. Now only the coast from Mandvi to Jakhou is left only from Mandvi to Jakhou and the area of the environment is left and the area between Mandvi and Jakhou is the area of Bada and the area in between Introduce this company and how will it solve the pollution Well, why have you selected this area in between for pollution? • Well, why have you selected this area in between for pollution? • and another question that we have given NEERI organization to make all these EIAs, NEERI organization has studied all these sand dunes from forest department or from which department and with whose permission or have they gone away after doing illegal studies? • (turned off my mic) • Sir forest is not 25 km away from here, the forest is only 2 km away from here. Mandvi's Bada Rakhal Mandvi's Sea, Mandvi's Reserved Forest is a forest just 2 km from where we are standing. More photos of flamingos in the middle of Bada If my mobile is connected to it, show photos of flamingos with GPS of Bada . Flamingos also live here. I want my mobile to be connected. In my written application, photos including GPS have also been given. I will show you the photos of flamingos coming to the creek area with GPS . My	minute) • Karipadan Saheb (NEERI): No we have done in the report. You may have used a mobile but we captured everything from remote sensing data, we selected five sites from remote sending as per government regulation. And among them we have selected the best site. And it is not that I went alone and brought this data, we had a team of 20 scientists to collect all this data. This study has been done by going everywhere and examining everything , not only for the forest but we have taken into account water quality, turtles and all other parameters. • As sir said, I have repeated what I have said which five sites have been selected and which have been discussed. Its Environmental Impact Assessment has been done. Another is thing is that Modhva land is marshy land. Which is suitable for salt work but not for this project.

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		mobile should be connected. • Sir I have a question for those who don't want the company to raise their hands. These men do not want company. These are anti-company men. They want environment. They want animal husbandry. They don't want company .	
• D.Y.S.P. Tell them that these people do not understand Hindi and English, so there is no use in speaking in English.			
38		• Sir I have a question though everyone has the right to protest and support. But thousands of our public are sitting. I prove it here. Those who need company should raise both hands. Those who need company should raise both hands. You can also see this support. You can decide by looking at this support. All my brothers are there so there is no problem. And can see the men of support of the company. So we welcome and accept the company.	•
• Chairman said that, I request you to listen to me first, this forum is not a forum for taking decisions, so we should not discuss the matter of who is in support and who is against. This is my request to you who have objections or submissions, please put them before us. • It is my humble request to Sir that this is not a place for show of power. It is humble appeal. • As stated by the Chairman that, this forum is not a forum for taking decisions. Who is supporting and opposing is not to be discussed. This is only a forum for your presentation and public hearing, this is a forum to listen to any submission or objection or suggestion you have. This is a request.			
39	Charan Valji Jasraj	• Hon'ble sir, it is a humble request that this Govt GPCB recording is to be live on screen. Later, GPCB has given 17 notices to Gujarat Heavy Chemical Limited in Sutrapada by Gujarat High Court and these notices have not been shown to those people, to the society, ignoring the notices that this company is going to come up with	• Your question about disturbing sand dune is completely correct that sand dune cannot be disturbed. and for that we have studied the details of sand dune we also want the sanddunes. So the sand dune will not be disturbed at all. The first thing is that your point is correct, how will we lay the pipeline, for that

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		another plant here. What are the facts in those notices should be presented to the people so that people get more awareness. Then our question is that the places for 54 turtles within India have been selected. Hon'ble Chairman. There are three places in Kutch most of all which is the coastal area which we understand from Mundra to Narayan Sarovar the turtles which comes here to place the species of turtle within the whole world. People come here, their pollution comes here, the question here is the turtles who come here, but what the company will do for these turtles. • EIA Issue No. 56 Sea Water Consumption The company's sea water consumption report has clearly stated that the project site near Bada village is continuously covered with sand dune , sand dune along the entire coastline towards the sea coast. Located south of the sand - dunes. CRZ Environmentally Sensitive CRZ also declared these sand dunes as sensitive area on the CRZ notification , which you know and we also know. So no one is allowed in any region to disturb such sensitive area. sand dues protect from, tsunamis, and sea storms. And keeping that In mind, CRZ has made such rules. As per survey report of GHCL there is no natural way to get sea water. And to do this , the average width of the beach sand dunes near Bada is less than 1 km from the beach, which is very less compared to other villages. And any mistake will prove fatal to the sand dune . The responsibility of the company will	we will do underground micro-tunneling, and this underground will also go down about 15 to 17 meters from the ground and 15 to 17 meters below the base of sand dune. Micro tunneling will be done. And for this micro tunneling is also studied by NIO. And in the details of this study, the Intake and outfall point has been determined and will be done accordingly. We will not disturb the sand dune of any kind. We will not cut any trees. So the work of this pipeline will be done without any impact on the environment. Another thing is that we talked about turtles, what you have said that this work will be done underground tunneling and pipeline will be laid, there may be disturbance for two seasons during construction. After this, the coast will become as it is. So suppose the turtles are coming, but the report of ZSI and the representative of the guide with us have also studied, that if the tide comes in the sea of Bada village, there will be no space between sand and water. Being a rocky area, it is not suitable for turtles. And when people surveyed, no major observations were made, no nests were found, no dead things were seen. A guide representative is with us for that. A representative of NEERI is present This is the reason in my opinion. However, we do more things whether the turtles come or not, the first thing is that after two seasons it will be the same. If the turtles are coming, they can come. But

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		be whatever happens. Pipe line..... • Sir, my only question is that if you make a plan for the breeding of turtles, the turtles will not believe you or me and the turtles will not come to lay their eggs. It is a natural process, a natural creature, a natural animal. In EIA Summary Page No. 16 Point No. 4.5 Ecology and Biodiversity you have stated that the 2 km marine area south of the project boundary is not suitable for breeding and nesting of turtles. You have given wrong information.. Peace.. Peace.. Peace.. • According to the report of Sundarraj Potential Nesting Beach in Kutch, the 11.5 km sandy beach from Nana Laija to Bada is the number one potential nesting beach and the beach from Bada to Bambhadai in the southern direction is the third potential nesting beach. The company's EIA notification has indicated that the company's site falls on the third potential nesting beach. But the company's proposed location is east of Bada and is on the No. 1 potential nesting beach. A map of the area mentioned in Sundarraj's report is enclosed with the application. If you want to see sir kindly please connect my mobile so that I can show you the report of Wesley Sundarraj which shows the 11 km stretch of sea from Khata to Bada as potential No. 1 beach for turtle nesting beach. Please connect my mobile. Please connect my mobile. • So, sir you show the same report in your EIA. • Sir, my mobile should be connected so that I can show you the report of Sundarraj with proof. My mobile	we have taken the help of the guide to make a conservation plan for the turtles and sanddune and those people have made a detailed plan for the conservation for the breeding of the turtles and we are going to work on it. • Now what you are talking about that the report made by Sundarraj in 2002 is a very old report and there is no clear data, no long term data available. • ZSI's report we have taken reference of Sundarraj's report. And in addition we have done the detailed study again with the guide and also given them inspection in these details we will include in the EIA report and any corrective action will be taken. • You can certainly give anything that's there but I'm telling you again when we do the pipeline work and these two reports show what's not here. But you can send it to GPCB. • The first thing that has been said is that only two seasons are enough and then the sea will be absolutely normal. • This I will request the representative, Guide today to shed more light on this. • Guide: The first report of Wesley Sundarraj to be shown is the report of 2001-2002. There are still a couple of reports. The report that ZSI has made has not been mentioned, we guys have been working since June. • This brother says it is correct, since this report is from 2002, no study has been done on it. A study has been conducted by ZSI in 2019 .

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		should be connected , my mobile should be connected. My request to the technical team, Chairman, reginal Officer of GPCB Board, My request to these people that my mobile is connected then only the further hearing process should proceed. Sir, my humble request to the GPCB board is to present my objections. • So sir, if you can show this company on this screen, why can't you show our work ? In which law is it written? • Since so many times sir you are saying, how will this be on record if the public sees it all? If you can show the company on the screen, then you have told us so many times that keep calm, take your case, we are presenting our case, then my mobile should be connected to present this case. • Whatever legal question you have, whatever team of lawyers, whatever lawyers have come to us , highlight this thing and say, GHCL has the right to speak , the right to show the script, so we are local opponents here, so can not show us the screen? not right. • All the proofs I have obtained through RTI on birds and animals from here. Above this I request that my mobile be connected. • We have submitted electronically, sir, I have noted it, but I want to show it along with proof. • Sir, this officer says that we will send it to above, if it will be ssen and recorded than otherwise how will you say the same. • Sir show now I want to show proof public and GHCL . My mobile should be connected. I will show you schedule 1 animals, reptiles, marine	• Project Proponent : What you say is not reported. Give your name and village name. • The Katda does not come to our affected village. no 22 villages are not. Any representation you want to make can be made in writing. • Let's listen to his presentation first. Let's listen to his presentation in full first. • 22 villages are not in 10 km area.

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		plants, flamingos, all things, my mobile should be connected. Show you including its GPS number. • No sir, no sir, I am an environmentalist, an environment lover. So like NEERI organization I am an environment lover. • Sir, what goes into connecting our mobile, our mobile should be connected. • This is not Kerala or Bihar, this is Gujarat, this is Kutch , this is Kutch. You talk in Gujarati. • These people should be given the mic only after my presentation is over. I have a representation. Chairman, I want my mobile to be connected . • Everyone sit down comfortably. All those who are against us also sit down and those who are supportive brothers also sit down. Everyone sit and listen, I will sit and present properly. What birds do we have? What animals do we have? What kind of culture do we have, I suggest everyone sit down. • Hello sir my name is Charan Valji Jashraj, I am from village: Kathda, taluka: Mandvi, Kutch. The first thing you need to know is that as per the law no advertisement of your GHCL company GPCB board has been done in our village. Our Sarpanch has come with me, but we have not been informed. We have come after listening to the voice of all the public in our way, as per the notification, if you have to inform, you will also take it on record that our village has not been informed in any way. • As shown in your EIA report, 22 villages are shown in buffer zone in your EIA report. shown in your EIA report.	

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		• Our village name is as 22 villages are shown in your EIA report. Sir, I want my mobile to be connected to this screen, so I can tell you the answer to my questions from the area. • The points have been presented sir, I want to show the map of Sundarraj. • Here I want to show schedule 1 animals and birds. I want to show her photos, is it okay? If you show these people a presentation on the screen, then what will we do? • Sir my only submission is that my mobile should be connected, you have right to submit or not. Sir, my question is that I have the right to make a full presentation or not? Answer me Chairman sir. And GPCB Officer answer me my question whether it is my right or not. • So cancel this public hearing, what's the point of such incomplete work? If our mobile is not connected, the public hearing is violating the law. Please connect my mobile. • So cancel this public hearing, what's the point of such incomplete work? If our mobile is not connected, the public hearing is violating the law. Please connect my mobile. • If given an opportunity, I would like to present through electronic means. • Let me connect my mobile. Even if my misrepresentation after connecting my mobile, all my points are dismissed. • I also say publicly , if my points are wrong , if any of my points are not environmental oriented, then you can dismiss my points. • Sir, if my mobile is connected, GPCB board or GHCL has not made this arrangement, then how can we	

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		make this presentation. • In written/oral it means GPCB board met with GHCL. If the GPCB board allows GHCL to present on this screen, why not give us a presentation. Else postpone this public hearing or technically connect our mobile to present our issues. • Chairman sir, if GPCB is not competent in such technical matters and the company is not competent in technical matters, then you have no right to hold public hearing , you are not letting the people speak. If you can allow the company to perform this then the first is the citizens of India and the people of India. You have come to listen and we have come with evidence. And we are also able to challenge you. • Hon'ble Sir, In Law and Order there is a perfect right to present through electronic medium. Our demand is that our representation is done through electronic medium,What work does GHCL offer if not us? • So if you are a GPCB officiar or a government officiar, then you need to be aware of the fact that people like us will want to present through electronic means. • Not soft copy sir , electronic medium. • If not possible, cancel the hearing. • I can't show soft copy to people, I can't show it to media. • My mobile should be connected. • If it is not possible, the hearing should be cancelled . • SDM sir.....SDM sir.... , I am asking you if these people do not have the instruments to listen to what you are saying, we have no right to speak. • No, not a pen drive , I have my	

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		mobile. • If you don't have system, your system is very weak , it is proven. So let us complete the arrangement for you , help us to connect with the mobile we have. • Honorable Chairman, you are responsible. Points to be noted You are responsible for people's submissions. • Your media as well as these people, this hearing is completely wrong. The public hearing is completely misplaced and wrong to prove this. All the public are informed by us that there are insufficient instruments in this hearing. What is the use of hearing to make our submissions? So it is the hearing of one party, not our hearing, you have to listen to the same party? I want to show Schedule 1. • Connect our mobile with this then we will present. • Postpone the public hearing if you can't connect the mobile	

- Your oral presentation is on camera, the camera is running right in front of you, said by Chairman . So whatever you want...
- Chairmen said that show from there, if you can show from there, then you show from there.
- Regional Officer says that you can present yourself.
- Regional Officer says that it is noted and you can provide proof you can provide proof to GPCB.
- Any submissions you may have will be sent along with the paper and will be collected, as stated by the Regional Officer . And that thing will be declared.
- Told by the regional officer, , hear, hear
- D.Y.S.P. As stated that, both parties should be side by side. Move to this side, all the opposition move to this side, brother, move to one side. Put them aside, Sir, adjourn the hearing until these people sit aside.
- D.Y.S.P. As stated that sit down peacefully, it will be start only after sitting.
- If you give the name of your presentation, it will be recorded and from which village you belong, it will be recorded.
- D.Y.S.P. Let's sit down bro. Hello brother hello keep calm.
- The regional officer said that , everyone will be given a chance to speak maintain silence .
- D.Y.S.P. told that, " Brother, sit quietly, otherwise everyone will be removed from here." Brother, turn on this electric fan, turn on the table fan .
- You can present your issues as stated by the Regional Officer .
- As told by the regional officer that, give us the map and give us a hard copy. You can submit too.

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- As told by the regional officer that, you are presenting yourself.
- Told by the regional officer that, there is a possibility that mobile can be connected. Valji Bhai there is no possibility of that but let us ask.
- D.Y.S.P. told that , turn on the fan Sir turn on the fan here.
- Women: Patel Sir – Patel Sir
- You are being given complete opportunity and are being heard said by the Regional Officer .
- Told by the regional officer , you are not being stopped in any presentation. You can present yourself completely. Your submission has also been received in writing. Can also be done verbally.
- D.Y.S.P. As stated that, the fan will take a while to turn on , all your wires have been cut, the grates have been opened, and are kept closed to prevent any accidents.
- As told by the Regional Officer that, continue with your submissions. You can make the submission in writing or orally.
- Told by the Regional Officer that, we are not going to judge your issues right or wrong , we are forwarding your submission along with the accompanying videography.
- As stated by the Regional Officer that, you can present . We are listening to your presentations and it is also being recorded , there is no question of interrupting or interrupting anyone. You can submit.
- According to the regional officer, his presentation was in soft copy. If you have it, let us upload it
- Told by the regional officer that, if your submission is in soft copy , then give it and attach it.
- Told by the regional officer that, it is not possible, asked in your presence.
- As told by the regional officer , you can make whatever representation you want.
- Stated by the regional officer that, but it is not likely. Those who are technical people do not have convenience.
- Chairman said that if you have a pen drive or something like that, let us turn it on .
- As stated by the chairman , if you do not have a pen drive and the mobile is not connected, then you should present from there.
- Police: Whatever is written and can be spoken.
- As stated by the Regional Officer that, we will take whatever written submissions they have.
- Told by the Regional Officer that, whatever your submissions, if these are your submissions, you should give them in writing.
- Told by the regional officer , then these are your submissions Mike in your hands, you give them in writing. If we don't take it, tell me, now you shouted, please don't make representations. Whatever your presentation , photographs, give us.
- Stated by the Regional Officer that, any other issue , if any other person wants to make a representation, he can do it.
- Sir, you don't even give a mic, where can we get the screen to show you?

40	Meet Prakash Gadhavi Village :	• Honorable Chairman, we request, we request on behalf of the protesting villages. Honorable Chairman you allow our presentation. We can give our presentation. It is our right, we are residents of this country and sir we do not shout. People who are considered educated are arguing	•

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		against you. This is a conversation not a shouting person. • Sir, it is the demand of the people that we make this presentation.	
• You make your oral presentation as directed by the Regional Officer . The camera is on , recording. Written and oral submissions are to be taken within the hearing. Whatever you want to present , whatever your issues are, we are ready to take every issue word to word. We also hear you verbalize. On camera, on camera recording. We are also ready to take the representation on record.			
41	Charan Valji Jashraj	• I want to show you the map of Sundar Raj. I want to show the animals of schedule 1 here, we want to show the birds of schedule 1 here, I want to show the sand dunes here. So how do I show ? How to show the public and the media. • Our issues are the same, connect my mobile then I will present my issues. • So you accept the fact that there are not enough facilities in this hearing, give us the reason in writing and cancel the hearing due to this, you bring all the equipment and then hold the hearing. • If the facility is not for us then what is the work for the presentation of GHCL. • Hon'ble sir note within that minute that the company has not kept this arrangement and neither has GPCB. • We the people are sitting till you say. If you say ten days then adjourn the hearing till we are sitting for ten days.	•
• Told by the Regional Officer that, you can present the points that you have , even though the proponent has replied on that point . • Told by regional officer that, but mobile connect is not possible which I asked in your presence. • We have to accept any submissions, written and oral , as stated by the Regional Officer . There is no talk of electric media but we can not do it because here is no facility for it. You can put your issues in front of the people. • Stated by the Regional Officer GPCB that, your points will also be recorded whatever you are presenting now will also be included in the minutes. Anyone who wants to make another submission			

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can do so. • Told by the regional officer of GPCB that, your issues are being noted. Recording is continues and will invariably included in word-to-word.			
42	Meet Prakash Gadhavi Village :	• GPCB take our issue on record. Sir take our issue on record. You Don't let us connect from mobile or else cancel public hearing. we are sitting Adjourn the hearing.	•
• Chairman said that we are going to record your oral presentation, and it is on camera only.			
43		• Give it to us in writing or cancel the hearing. Indian government is not that weak. Our Indian government is strong, if a mobile, pollution officer can't connect, people suspect that they are favoring the company. • Honorable Magistrate Sir, Honorable Magistrate Sir please pay attention. Please note that Hon'ble Magistrate sir is our officer. The company is plotting. Let us speak. • Honorable Magistrate sir, listen these officers do not allow us to speak , the voice of the people is muffled. While I was speaking, they were speaking in between. My Indian government is not that weak, wait will connect us. Play the hearing only if our wild animals appear on the screen, otherwise stop. • Dear SDM sir, if the company's screen can be turned on here, why not ours?	•
• There is noise. • As told by the regional officer that, we are listening to your submissions. What is given in writing is also taken by us and still you can make any representations you want to make. The recording of whatever you are saying is going on continuously, so there is no question of stopping anyone. Mobile connectivity is not possible here and cannot be done as there is no technical expert and you have to accept both written and verbal representations which we are willing to accept without fail. So whoever wants to present can do it here and later also. • Was stated by the chairman that your oral presentation is done on camera, recording is being done, written and oral presentation only written and oral presentation is to be taken in the hearing. Whatever you want to present, whatever your issues, we are ready to take all the issues word to		

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word in writing and oral also.			
44		• Honorable Chairman Sir, I have one thing to say, the surrounding villages which are affected have also given it in writing to their people's representative given their support and we all support here that we all are in support all these villages that fall in the buffer zone. Now the people who come from outside who speak do not work. Take it in writing from him. And now talking about technical, if I want to do that, take the support form him and take it in writing. Then, sir, we have given all the support forms, we are the people's representative, it is there support forms, so now you consider our support forms.	•
• Told by the regional officer that, now do you have some other presentation regarding the project. • Again (appeal to keep calm)			
45	Yashish Shah Village : Mandvi	• I am a marine biologist. I am not in support of the company or I am not in opposition but I have a question that we also have life, we are also human beings. About 70% of the oxygen that the sea gives us contains microorganisms. It is called phytoplankton. What proof does your company have that the diversity of phytoplankton will not decrease because 70% of the oxygen is going to the opposition party and the support party as much as it is going to get from the sea , and how much phytoplankton diversity will decrease after this company comes. A decrease in phytoplankton diversity will affect the food chain. In the next 10 to 20 years , which the UN and UNESCO are currently coming forward to support the environment, will this company be	• In this, when the treated effluent goes into the sea, it will be done with proper treatment and proper design. And a lot of independent studies have been done and one R.N. Jadeja 's research paper at MS University looked and survey and found out that the effluent released in sea has increased the growth of phytoplankton Its growth increases the generation of fishing. And fish catch also increases. And its records are also available with the Gujarat Fisheries Department.

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		able to come forward and reduce pollution.	
46	Name : Meet Prakash Gadhvi	• Dear Sir, Before coming to the company, we have several questions. Before the company comes, the CSR activity that has to be done did the company do it, and what funding has been done within it. And the first question arises that sir, his own foundation which is working here from Sutrapada . They does not know about ground zero here. They does not know about our water places, he has no knowledge of our water and the work of CSR has been done by his own organization rather than there were many organizations like VRTI And what has been done for skill till now let us know. • We don't have to hear all that , now listen to my question, listen to my question , listen to my question, first listen to my question. GPCB Officer Listen to my question first. • (Seat down, Seat down, all public Seat down)	• What you are talking about CSR is not a compulsion with law but our CSR foundation which is working which shows our attitude. If you look at our company vision, it says maximizing stakeholder value responsibly. Maximizing stakeholder value and one of their stakeholders is the social society. Now when it comes to working on this, we have worked on education, and worked on animal husbandry, and a little bit on agriculture . • with this, NEERI has also done a socio - economic study.
47	Charan Valji Jasraj	• We don't want to listen is, now listen to my question, listen to my question, first listen to by question Sir, in EIA executive summary page no. 10, EIA report page no. 10 has shown that there is no sensitive or schedule-1 animal or bird in the proposed project area, which is wrong as we have definite information. Where I have roamed the whole area. I am a bird and animal lover of this area and the forest area of Bada and nearby village Bhishra, Pachotia is home to schedule-1 animals like Herotra, Caracal, bird Jarak, Henaj and Chinkra, Gorkhia (Gorkhodio) etc.	

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		Schedule-1 species lives. All the evidence is there. All the evidence of this matter is there. So I have evidence of Panchnama etc. to prevent the poaching of Chingkara in Chagdai area of Chagdai area of forest department some years ago. So I want to show proof how will you give me a chance to show proof. You can't connect my mobile how can I give you proof.. • My first thing is also to be recorded. The beach of Bada village is shown as potential turtle beach number 1, then this record is taken and secondly, there are many animals and birds of schedule - 1 in this area. Schedule - 1 species like peacocks in surrounding areas number in thousands, all these Schedule-1 birds are nowhere studied in EIA and it is clearly shown in EIA that there are no animals of Schedule-1. Video of Peacocks I want to show you, through my mobile medium, how many peacocks here in Pachotia village called Asrayvala pir, at least five hundred peacocks are roaming around the place of pir , more than five hundred in the center of Vipassana. So it is clear that the animal of schedule - 1 is the national bird peacock, so this organization has not counted the peacocks anywhere, nor has it appeared to the people. • Sir, if my mobile is connected, I will say. • So sir this thing should also be recorded that my mobile is not connected. • Hon'ble Govt., my request to the Central Pollution Board is also to take this on record that the issue of our people and the proof given	

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		by them, our mobiles are not connected. be taken up on record. • My sir answer one point at a time. If the birds of Schedule-1 are given then informat to people. • My question to these people is that I am a local here. Who are the locals who came with you? Where you did not see the animals and birds of Schedule-1 at the place. The organization coming from outside should study in their own way, the local residents of the place, the names of the birds and animals of schedule-1. • Which local people did those organizations take with them? • The organization took along the local people of Bada, Pachotia, Bhinsra, surrounding areas and five schedule 1 and endangered species of animals and birds will not come out on their own as expected by the organization. It is a natural life and let it come out in its own way, tell them that I am a local of here, so I am saying that so many birds are animals or I am giving proof of it, then these people have not seen it there too, if they have not seen it during i they study then deny. And my matter be taken on record so many animals and birds are in the area CPCB Board, Central Pollution Board consider this matter as main issue. • Answer now, Continue answering our questions. • Our presentation is completely environmental and not a single issue is without reason.	

- Told by the Regional Officer that, your issues will be noted in writing and action will be taken. Whatever you say will be recorded.
- Told by the regional officer that, one a minute speak all your point you have. Whatever your issues are, tell them all and it will be done. Whatever your points are incomplete, tell them whatever

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points are left complete them.

- As stated by the regional officer that, the mobile cannot be connected. we talked.
- According to the regional officer, whatever we discuss with you is on record. Nothing happens without a record. Continue your presentation.
- The regional officer said that whatever the issue is , the recording is still going on and if it is taken up on the record, continue your presentation.
- Told by the regional officer that, we will include your issues in the proceedings.
- Stated by the regional officer , the institution for the study is of national level and is reputed.
- The Regional Officer said that, however, we will take your submission on record. And the committee will give the answer to the people.
- Continue with your issues, continue with whatever issues you have , said the Regional Officer .
- People : sir please keep our mic on don't turn it off we request.
- As told by the regional officer , their presentations one after the other are fine, continue, don't interrupt, don't talk in between. Please let them speak, everyone will get a chance. Continue your submissions no issue .
- D.Y.S.P. As stated by that, now presentation can be done only when you sit properly. It can't happen until then. Sir, in this way presentation can be made.
- Told by the regional officer that, the proponent should reply if your points are completed. Speak, speak together, speak your points.
- Told by the regional officer that, if you speak all your points, then they will answer all together. Gadhavi bhai continue all your points.
- There is noise.
- Was told by the chairman that , after you all sit quietly, let us listen to the presentation, sit in a disciplined manner, let us maintain discipline. You make your presentation now.
- Sit down brother, everyone sit down for a while. Listen to all the topics.
- Listen to that, sit down for a while, then come, sit behind everyone. We don't want to back down at all. Let us sit down, drink water and sit down. All wise up and sit down. We have many questions and they have nothing.

48	Dhvani Shah Village : Bada	• The police can't show us your gun and stand up on us and oppress us. Please ask them to sit in his place.	•

- As told by the Chairman that, then you also sit in one place and present peacefully.
- Told by the regional officer that, present in turn, we are listen carefully and recording your presentations on camera. You make your presentations, we are here to listen you.

49	Dhvani Shah Village : Bada	• Sir, I am the daughter of Bada village Dhwani Shah, I am here to present by issue to you today. So this presentation should be done in Kutchi because we all are Kutchi and you have come to Kutch but for your convenience we are speaking in Gujarati and our issues which we will present now are expected from you as you are	• I am N. N. Radiya, President & CEO of GHCL Plant. • Our EIA representative is Mr. Karipadan and NIO representative is Mr. Pradhan. • NABET Accreditation Certificate is in their possession and will be uploaded. • Dr. Karipadan : NO, Without NABET accreditation no any

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		chairperson today, Chairman will respect this and give us a fair decision. Me and three other people filed a petition in the High Court, the judge has heard the petition but no order has been given, but even though the order has not been given, this public hearing is going on. Therefore, I present my submission under protest. If you wish, I will go further. • You keep saying that you are takeing on-camera recording, you will write these points and read them at the end of this hearing with all the names and speak a summary of the points raised and the answers given or not? • If you do not summarize all the points today, you are not meeting the EIA notification requirement. • EIA notification that when the submissions of all done let it be one day, two days, five days or 10 days, at the end of the collector sir who is a chairperson, the officers of the GPCB in the chairmanship must give a summary and all should listen . And the same summary and same minutes are required to be approved by you on the same day. If this video recording is under your and the company 's and GPCB's control, it will be tampered with, whatever happens is not in our control. • As Rule you needs to summarize this, tell us if you will do or not. Whenever this public hearing ends, we want to be assured that the 10 points presented by Dhwani, 10 points presented by Gadhavi Bhai and his company's reply will be read or not? • The issues we have presented or	organization can do the EIA . NEERI is ..... Hey brother will say in Gujarati latter. • He can show if you listen, if you listen. It is not necessary to show everything, if you listen you can show it with date and it is necessary to give proof. And the proof will be shown in a minute. We are doing this public hearing . • Dr. Karipadan : Madam, it's authorized , NEERI and NIO are national institute. • Karipadan : I don't know Gujarati that's why.

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		covered since morning. The issues that our people or other people have spoken have been recorded or not ? • Apart from who is sitting on the dais, who is present here from the project proponent to answer our questions. • Who is the representative man? • And the representative of your EIA consultant is the representative of your two EIAs. • Who is the representative of NIO sir, please show us the NABET accreditation certificate here and give us a copy of it sir. • No, on screen, on screen is in your hands right now. You don't give us screen access when we ask. Access to that screen do whatever you have, this public hearing cannot proceed unless you show us the NABET accreditation because he is not an authorized person and if you put him there, you may also be involved in illegal activities. It is not an official party in any way. • Now sir • One minute, keep calm, one minute. • If you have seen sir, two EIAs are presented on your website namely Terrestrial EIA and Marine EIA. We have seen it and the encloses with it has also been presented. We have seen it and after seeing it, I am raising this question. • Any query we have on EIA notification. We want to get the answer from your company representative. When this organization.. • If it is NABET accredited then why are you afraid, show us here then we will move on to the next point.	

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		If not, this public hearing cannot be held on the basis of illegal EIA. • Sir you are not the chairman excuse me sir you are not the chairman you are not the chairman you will not tell us whether the minutes will be recorded or not, your duty is to show us the accreditation certificate and only after that why are you afraid if you have done the authorized EIA. • Excuse me sir if you are showing it on screen and don't try to talk in English. We know English but we are Kachchi we are Gujarati . We will talk in Gujarati. Please talk to us in Gujarati. • Then sent somebody who knows. is there.... • Sir you don't .... you don't.. sir today is the platform sir. • Give me five minutes to prove that this platform is correct for this, and why I should prove it. • You who are sitting on the seat, it is in your hands that if you allow this thing to proceed illegally, you will be misusing the power of yours. This is our initial presentation, I would like to tell you that this is a public hearing based on the EIA and we have objections based on the draft EIA. And we are here to report that exactly this is the report. Illegal is our stand. This public hearing is illegal. But today it is available on the website of GPCB . One of which is Marine EIA done by NIO . Nowhere in the Marine EIA report is the record of accreditation of NIO shown in the EIA report. Also NIO is not recognized as an accredited organization on NABET site. On the basis of such illegal and false EIA, you are telling us	

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		that if we present our issue here within the illegal public hearing, we cannot ask for the accreditation certificate we have. • Sir that is not sufficient . The certificate is not attached to the EIA report. • If you are allowing this Public Hearing you are allowing an illegal activity to proceed. • Sir I am saying on the basis of the rights given under the EIA Notification. Sir if there is accreditation for NIO any company has accreditation then sir let me speak let me present. Any agency that conducts EIA has accreditation from NABET also maintains it on its website. Now is the ara of technology. Open its website and show us that it has done EIA report during 2018-2019, and it has accreditation. So show us we will present next. But he is an illegal person and this is an illegal report, so we will not allow any public hearing on the illegal report. That would be our violation. And you are above on this seat you as a Justice. You shall not make public hearing on this illegal report a. • Please give us a hard copy of it and we need 5-10-15 minutes of time to read it completely and make further presentations. • Sir, you are not the chairman, you are not the chairman, the chairman is here. Sir you are present in the public hearing which is currently chaired by a chairperson. • Sitting here, if you have accreditation, why are you afraid ? • No sir screen is you have. We demanded that you don't even	

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		give us to connect our mobile phones, so why have you built this big palace-like tent here and you have done this fencing of 5-6 feet, you have kept people away, you have kept the company close to you, if the company is close They have all the systems and all the facilities. So, no further representations will be made in this public hearing unless this certificate is shown to us. There are 6 screens, laptops, internet, mobiles. We don't know. This hearing will not proceed without seeing this certificate and Sir, the fact that these people are not providing it means that they do not have it. We will submit further only if there is and illegal you will not force us to submit further. And this is our right we can ask for a certificate. It is illegal if you take it from us. • notification clearly states that any objection from the public should be satisfactory response to project proponent , It is what a EIA notification states.	

- As told by the regional officer that, yes, definitely present your objection, we are taking that on camera record.
- Told by the regional officer that, one thing is important that we will be listening to the recording of what you are presenting and we will also write it down in detail. And all this will be uploaded online before sending to the Ministry. So there is nothing private about it.
- As told by the Regional Officer that, the recording is still going on, Madam
- Stated by the regional officer that, there is no editing of a single thing from the video recording. And it remains as it is and will be sent to them as it is.
- As told by the regional officer that, now you can come and present your points.
- As stated by the Regional Officer that, all the issues are recorded and the recording is in progress.
- Stated by the Regional Officer that, the representative of the project proponent is present.
- Stated by the Regional Officer that, a humble request to note that any EIA report can only be done by institutes having NABET accreditation.
- As stated by the Regional Officer that, which you may request. Please continue with your points. Please continue with your points.
- As told by the regional officer that, we have noted your issues.
- Chairman stated that, madam this public hearing is for objecting and for your representation and

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not here to present evidence against you now. For submission of your objection.

- Stated by Chairman that, you are going outside the subject. You are going off-topic. You can ask for whatever proof you want but this is not the platform for that. You have every right to ask for your proof. But currenlty this is not the platform .
- Was told by the Chairman that, Yes , sure, sure your on camera is recording.
- Was stated by Chairman that, but you can ask, you are taken on record. What you are saying is true it is recorded on camera. They will have to answer you.
- Told by the regional officer that, we will minitise any submission you have and the committee will also respond to it. Present any other points you may have. Please, your points are written, you present your points. Your submission has been taken on record. Madam speak.
- There is noise
- Stated by the Regional Officer that, we take note of the documents to be sought in pursuance of your submission and will be produced along with the minutes.
- Stated by Chairman that, no one is going to take away your right. We take your word in minutes. Taking video word to word . We take a record of it.

50		• Hello, hello, I request the collector sir to write down the number of villages that fall in the buffer zone. Show the number of villages falling in the buffer zone. You don't even turn on the mic for our presentation. Sir, the questions of the local people should also be heard, others will also have their turn. Any of our villages fall in the buffer zone. Local people should be heard. • Collector sir that as many villages as come in the buffer zone, show us legally. We have been sitting for the past one hour to present our presentation. Mic not turning on. We want to knownl who will get benefit , which villages will get benefit.	
51	Dhvani Shah Village : Bada	• Can not take further questions unless my questions are answered .	•
52		• Honorable Officer, I have a request, this madam is speaking, I don't think she belongs here, but please take his questions in writing.	•
53	Dhvani Shah Village : Bada	• O uncle!!!! You cannot say or ask whether we are from here or not.	•

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		You cannot say whether we are from here or not.	
54		• These questions are for support. The pollution board is designated to come from anywhere. It is made in the constitution , Gujarat Pollution Board will do its work itself, it is their job. You can ask for the document you want from there. Don't waste our time. Company is our talk....our support	•
55	Dhvani Shah Village : Bada	• So you can go .	
56		• I have a special request sir if you come with such questions then you are wasting our time. We have our support for the company. We want company.	
57		• I am a resident of Bada , let local people speak outsiders will not be taken on record So I have a request. • Sir please let us also point 0ur questions. • Chairperson it is my request please answer to 2000 supporter people also.	
• D.Y.S.P. It has been told by that , sir, one minute, sir, I have already told you to come to this side, come to this side. Please come here do understand. Please, no public hearing can be held like this, whatever your issues are, your leaders are all speaking. Anyone who wants to oppose does so, just all come to the side. • Sir, please continue let us present also. • D.Y.S.P. said that, let's all come to the side. • Reply to support men Collector sir, I have a request here. • D.Y.S.P. , as stated that Come to the side			
		• Today, representatives of all the 12 villages are present here. We have confirmed in writing and all leaders are present. And please all the leaders are present and welcome to the company.	•
58	Dhvani Shah Village : Bada	• The people who have come here to save the Bada village, our sea and the environment of the surrounding village, please sit on	•

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		the chair or sit on the ground.	
		• Brother, please go back and sit quietly in the air, no worries , it is okay to give trouble, we have such a capable team that we will not let this hearing stop for five days. All right, bro, sit back and don't disturb at all. Drink water, have fun, have fun, eat tea and water. Asking one by one we still have 500 men such technical. • And to challenge what belongs to madam Bada is a personal objection. I say to the police officers, do not tolerate such challenges, tell them there	•
59	Dhvani Shah Village: Bada	• I request that no one else's presentation is taken till then we will continue after it is shown on the screen sir. This public hearing will proceed after my questions are answered. • Sir, will you put this on the record, I cannot ask questions here, you are mis using your chairmanship. • I am reading this I have this EIA notification. EIA Notification Appendix 4 Para 6.4 clearly states that person present at the venue shall be granted opportunity to seek information or clarification on the project from the applicant. Sir I am using my right to ask for a simple accreditation document from you if you are covering the proponent then you are using your position in a biased manner. • Sir, if there is accreditation on this website, you have a system that you are not allowing us to use. Ask the project proponent to show us. He does not have any of them, so he is afraid. And if not, then you conduct this public hearing on the wrong EIA. You are misusing your post. • It is not its accreditation.	• Today all the soda ash in Hindustan its marine EIA done by NIO and whenever we get their consent it is also written in that this is done only on the basis of NIO 's report. All these things NIO is a government agency this marine is done according to EIA and every soda ash plant today we have 5 soda ash plants all of there EIA are done by NIO . • If not, then MOEF will take objection. And they will inform us • Request the Chairman. Sir, let me show that here we are conducting a public hearing, whose observations are being noted. This is not a forum for decision. I am talking to Chairman. Objection suggestion.

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		• What you said is not proof of accreditation. Let me give you an example of your own EIA report. I want an opportunity to use an example of your own EIA report. Your own Territorial EIA is done by CSIR NEERI organization and its certificate is attached with NABET Accreditation EIA report why not NIO . Because he has not, but if he has it, show it here. • Here public hearing cannot be held on non-documents. It is illegal, I request Chairman to use your power right side unbiasedly and cancel this public hearing impartially. Public hearing cannot be held on wrong EIA report. If the report of NIO is accredited then it has a certificate then I am telling you in plain language that the company has NABET accreditation and I am certified for the project and there is a website with its own EIA report attached to the report. That this report is authorized as I am NABET Accredited. NIO has not done any such thing so there is no ground for this public hearing on the basis of false report this public hearing cannot be held. It is up to you to decide what I should do. You have the authority we will wait for 2 hours 4 hours 4 days this certificate should be presented. So will go ahead. • We need clarification, we need proof. • Use your own post to approve the application. • This is not a misguide I am forwarding the EIA application given to me. • Why don't you give me any direction or give me a certificate, if you give then the issue will be over. Here you show that it is under the section that this thing looks to me these people come from 1000-1200 km away these people are from outside we need certificate without it this EIA cannot be done it is not possible for you to take a biased	We note and record your every presentation and you are repeating one thing and if this public hearing is done on wrong EIA then MOEF will not approve it I am not doubting on any government agency or Chairman.

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		decision you should approve their submission If you do, you are misusing your post. • The concerns of the local people should be addressed. • You know public hearing is the only place in the EIA process that comes to the project proponent and we don't know what decision is made above. It misleads you that we have done EIA report. But the EIA notification is clearly written that this is not a NABET accreditation organization so it cannot do the EIA report, then how do you conduct this public hearing using the power of your Chairman on the illegal EIA report. • Because EIA Notification clearly state you have to give the notice in the local language in local news paper date is circulate. But we did not get this notice on time, we got information from the board of our village. • Sir approval is next. You just tell us that you have come to address our concern by ticking the checklist of Public Hearing. If this public hearing is done today, they way to get EC will be clear .	
60	Valji Charan	Sir our mobile is not able to connect. This notification certificate is not able to be issued. You answer any question from him. Please support public also Yes, no, don't listen to the answer. Sir please answer our objection. We have raised our question you answer. If you are not able to connect the mobile show us certificate the cancel the public hearing. So stop the public hearing. Stop the public hearing if you have a problem.	•
61	Lakshman	Listen, honorable magistrate , people are having a doubt. Pollution officer Barmeda sir is not favoring the company? You are a competent authority. You are our officer. Pollution officer sir reply, provincial officer reply.	•

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		• According to the regional officer of GPCB that, let me tell you one thing in pursuance of your submission that as many submissions as you want will be answered with proof by the company. But continue your presentation. This is not a forum for questions. This is not a question forum and no one is being covered here. We have also taken a record for the certificate issue. And so we will inform you. • Clarification has also been given said by GPCB Regional Officer . • According to the regional officer of GPCB, this is not an approval authority. Do not misguide people. This is not an approval authority. We are not an authority to approve the company we are only here to hear your objections and suggestions. • As stated by the regional officer of GPCB that is why we are asking you to take make issue in writing. • I request Chairman that in the public hearing that we are conducting today, any objections made in the note, clarification has been given to you. There is no approval authority. Don't misguide these people. This is not a discussion forum. • Stated by Chairman that means we are taking your objections verbally and in writing on letter . The project proponent is responding to your questions. No one is opposes anyone here. • Stated by the chairman that, here no one is supporting anyone, no one is opposing anyone, we have heard your submissions for the last 2 hours. every single presentation is taken on record. Minute to minute word to word and will be sent to the decision making authority .	
62	Dhvani Shah Village: Bada	• Sir, the basis of public hearing is to fearlessly present to the people any of their submissions.	
63.	Nathunji Samraj Village: Bambhdai	• I am sarpanch of Bambhdai village and I support GHCL company. I give my questions in writing. Anyone who has questions should put them in writing. Please answer me where and what type of product you are going to produce. GHCL WELCOME GHCL WELCOME	•
64		• Sir you have every right to ask your question. We also want to ask a question, sir, in the public hearing, we are coming to Banfer zone of 10 villages. We have our turn to ask questions.	•
65.	Dhvani Shah Village: Bada	• I have seen this is illegal. Your power is not being used. Sir we have seen the answer. Sir EIA notification Indian constitution gives us right. If you go ahead with it, if you misuse it, you will violate our rights, we have seen the answer. We are certified. This report is false. If you authorize this, then you will do illegal activity . So you give direction to authority. You will go ahead, sir, you saw me making a presentation, please	•

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		don't talk between them. Sir my right is violated. Keep calm and order to saw the certificate. • Violation of public hearing Sir.	
66.		• We should also get a chance. We have come for the hearing and also take our questions. Speak in Gujarati.	•
67.	Dhvani Shah Village: Bada	• You don't use illegal sir, public hearing is violated, tell him to speak after my presentation is over.	•
• It was stated by the chairman that you speak your point . If you have objection, we will answer you. We are not the decision making authority. This public hearing is for your objection. This is legal rather than illegal • Stated by Regional officer that, submit your next the issues. If you want to make any clarification about the certificate, do it. weather its available in website.			
68.		• Chairman Sir check his Aadhaar card whether he has the right to speak or not. Give us a chance to speak. Listen to the local people, we have also raised this in the public hearing. Our questions are also heard. Hear the expectations of local people. This company comes and it has a very good effect on the economic life and people's life, people get daily bread. • This madam has been speaking for the last 2 hours. Now give us a chance.	•
69	Vijay Gadhavi	• If such a challenge is thrown in public that weather she has the right to speak in the public or not, then there will be cases of quarrel. For what are you seating as chairman ? A daughter says the certificate is authorized or not. So this report of yours is wrong sir why are you running. No sound.	•
• The regional officer responds that the TOR is issued from the ministry on the primary application of the project . And then study is done from concern agency .			
70 .	Dhvani Shah Village: Bada	• Sir, talking about TOR, there is no hesitation in giving TOR. In 2021, Marine EIA is ready before receiving TOR. From which authority has it happened? No you justify. Do not justify the illegal report. I have the right. Sir I have proved your document before you that you	• Sir today we have done public hearing. You have also noticed that Barmeda Sir or chairperson the no one is competent to take a decision. Right or wrong, those people will submit to the agency. I don't

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		application requirement. You don't justify. You order the report to be displayed. • Sir, they have no right to answer from your side , You are bounded by Indian constitution, you are public servant, we have come to see the supporting evidence. • EIA notification is correct. If the EIA report is wrong then what is the basis of public hearing. • This is our right, don't take it from us. Sir you are a public servant. You are a public servant, I believe there will be pressure on you to finish this public hearing in any way, but my right cannot be violated. This public hearing could not be completed. We will sit here with you for a week. I have right. Don't stop us from using it. You are on a judicial position to decide whether its right or wrong in the fever of public. Sir, we are allowing the process, we have not come to oppose the party, we have come to save the environment. If NIO has this certificate, there is no concern, no study and consulting has been done here, then on what account is the public hearing going on? • Sir, the EIA process is misleading. • Legally our mike should not be closed	think this is the stage to decide now. And we should note their objection. Because today marine EIA of soda ash plant is done by NIO. It is a reputed agency of the government . • Sir, when we asked the requirement for TOR to do this, we told MOEF in writing that the next study will be done by NEERI and NIO. And they are expert for that . • Sir EIA and we have given the justification of both the things. Let it be recorded that when the TOR was done, we clearly told the MOEF that we will do this through this agency and the TOR was given to us on the base.
71	Dhvani Shah Village: Bada	• Another thing Sir TOR has been received by people in 2021. On the basis of EIA notification, they should go to TOR which automatically generate standardize TOR for all studies in 2021 and use 3 years old base line data and any wrong EIA submission is made on this old data by wrong agency. Wants to cheat EIA's scoping when you submitted Form-1, Form 1 did not show them our temples, our lake, none. It is also illegal.	•

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72		• Sir give us a chance to speak welcome GHCL welcome GHCL is not working please read our questions give us a chance to speak	•
73	Dhvani Shah Village: Bada	• Sir why are you take decision of moving forward without Without getting answers to our questions, this public hearing will not proceed, please do not use your power in illegal way. • EIA notification clearly states the project proponent is supposed to give adequate answers or clarifications to the questions raised by the public this is our rights. Give it now sir.	•
• Chairman The objections you have raised now for that only the public hearings is arranged. You present the point before us, there is no legal in this matter, it is legal, that is why you have presented your objection. The process of public hearing cannot be stopped. It is not necessary to give all the evidence in the public hearing, so you cannot ask for evidence. • Stated by Regional officer, you cannot stop on 1 issue and stop public hearing.			
74	Dhvani Shah Village: Bada	• We don't want a copy of the certificate, keep calm, even if you don't have a copy, you are not so competent. Even after bringing 4G internet Modi sir, you are not competent. We believe on record only say whether NIO has NABET accreditation or not yes or no then only we will proceed on record this should be on recorded on proceeding.	•
75		• English can't work sir, we can't do it, we can't do it, our question is, if there is an employment opportunity for them, how much time will you give ?	•
76	Vijay Gadhavi Village : Laija	• You have come to listen This public hearing and to listen to us and you are telling us that we are getting sticky to the matters rather your ears to technical issues rather than supporting the company. What is your right? To tell us to the people to step forward .	•
77		• 30 days before advertisement and notice in Gram Panchayat of each village is not done. The date of advertisement in print is also 26th	•

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		September and if public hearing is to be held on 17th October then 1 month is not given and even as many as 20 villages According to the list of EIA, all the villages have not been informed about that ineffect even in the Gram Panchayat. The number of people who are present here today is because they have come from their own awareness, but it is the duty of the government and the company to inform the Gram Panchayat of every village. Here it is not done here you can check and ask and take this record whether you have any record or proof or not that you informed in each panchayat or not. When this project is going to be done in Gujarati with so many technicalities, when all the people in the village do not understand, you have not given the EIA report properly in Gujarati. Anyone who does not understand what the project really is for the people of the village, should also be recorded, properly informed and not the rule that we have decided, it is the rule of the government, which was not followed even before 30 days.	
78	Dhvani Shah Village: Bada	Please let me know whether certificate is available or not. The second question has been raised that if it has been reported 15 days before each village panchayat 21-22, in which days the receipt will be received ? Give sir date wise. Shall we calculate ? You say date wise. Sir, there is a notice from the pollution department. Sir you are the chairman we don't want any reply from the company.	• 12 villages have been informed, Gujarati executive summary of EIA has been given. Date wise will be given.
79		• Sir, I will be introduced. Sir, I have 1-2 questions ? Give us a chance we also want to speak we are supporter. We have the right. Please don't speak in English speak in gujarati.	•

• Chairman said that do not discuss internally. Everyone will get a chance at the same time. We are not here to see supporting evidence. It is your right to object in a public hearing because you are

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		presenting it. Whether the notification is correct or incorrect will not be decided here . If you say it is wrong, then we have a committee sitting and we will inform them. • According to Regional Officer of GPCB, Bayad 03/10, Mapar 03/10, Padampur 03/10, Changdai 03/10, Bambhadai 03/10, Bada 3/10, Bhinsra 03/10, Mota Laija 04/10, Janakpar 04/10, Panchotia 04/10, Bhada 04/10, Nana Laija 04/10. • The provincial official replied, I am not justifying anyone. I did not give the date. According to us, does not have or does not have any information at this time. There is a certificate. • As told by the regional officer that it is a matter of 15 days, if you asked me a question, I answered. Due to notification dated 09/05/2022, the first public hearing can be held again if postponed within 45 days, for which public newspaper advertisement should be given within 15 days. 12 stakeholders Talati Minister has been given a letter along with executive summary. • The regional officer said that, which is located in 12 villages.	
80	Laxman Gadhavi	• Dear chairperson kindly listen we have not came to hear the company we have came to hear you. Company is directing us in wrong way. First question • How many languages are valid in this public hearing? Your answer is not received and Our request to police that other mics are being turned on. How did you informed 21 villages in buffer zone. We have not come to listen to the company officials, we have come to listen to you.	
81	Dhvani Shah Village: Bada	• There are 21 villages in your study report, you said that notice has been given to 12 villages, not giving notice to 21 villages is a violation, it is a violation of procedure. Public hearings are illegal. Provide date wise proof , notice has reached 12 villages. Sir, you have given notice in all the 12 villages regarding the public hearing . It should be given in 21 villages. First violation of GPCB. You have informed the villages in a biased manner. EIA notification and my you get the authority and You are also violating that. Sir, this is a public hearing on the 17th, even if it can be done after this day, even if you have given it at 3 o'clock, you can also give it at 6 o'clock. So we will not count 3rd date. How many days are there from 4 October to 16 October ? Your requirement of 15 days has not been completed. This is illegal. This public	

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		hearing is illegal. What is the distribution of Divya Bhaskar in the village? EIA notification clearly states you have to give notice in local language and local newspaper that is largely circulated. We have not received the notice of Divya Bhaskar.	
• According to the regional officer of GPCB that, let me tell you one thing in pursuance of your submission that as many submissions as you want will be answered with proof by the company . But continue your presentation. This is not a forum for questions. This is not a question forum and no one is being covered here. We have also taken the record for the certificate issue. And so we will inform you. • Clarification has also been given to them as stated by the Regional Officer of GPCB . • According to the regional officer of GPCB that, this is not an approval authority. Do not misguide people. This is not an approval authority. We are not an authority to approve the company we are only here to hear your objections and suggestions. • As stated by the regional officer of GPCB, that is why we are asking you to give this issue in writing. • I request Chairman that any objections raised in the public hearing we are conducting today is not a discussion forum. • As stated by the Chairman that we are taking your objections in written and oral form and in written form on letter.			
82		• The company should answer me that where and what type of product you are going to produce	•
83	Dhvani Shah Village : Bada	• Sir, I want to make a presentation, please inform them not to talk in between . Sir my right is violated. • Public hearing is violated sir.	•
84		• We should also get a chance.	•
85	Dhvani Shah Village : Bada	• Sir public hearing is being violated tell him to speak after my presentation is over	•
• It was said by the Chairman that you speak your point .			
86		• This madam has been speaking for the last 2 hours. Now give us a chance.	•
87	Dhvani Shah Village : Bada	• I have the right. Sir I have proved your document before you that you application requirement.	•
88		• Sir give us a chance we also want to speak we are supportive. We have the right.	•
• Chairman said that do not discuss internally. Everyone will get a chance at the same time.			
89		• Sir, we are sitting silently for 2 hours and listening to madam.	•

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• As told by Chairman that, madam, whatever your issue is, speak it quickly. Talk about your points together.			
90		• Sir we have come here to ask a question sir we have got a chance to ask a question. They have not informed us the time..	•
• As told by the Chairman that, madam, speak as fast as you can. Because we...			
91	Dhvani Shah Village : Bada	• Sir you are a public servant. Sir, you can't give me direction to speak fast. You came for the public. • You have come to listen to us. Do this to prevent the public. Give answer. • You cannot bias my right to speak .	•
92		• Sir, you Hear to us they wants to stop the hearing. We maldharis also have questions so please answer to us..	•
• Stated by Chairman, we are not biased, you are here to present your objections. From the last hour, we are giving you complete opportunity to express your objections in writing and orally.			
93	Dhvani Shah Village : Bada	• You have violated the EIA. You are a public servant. You are doing illegal activity .	•
94		• You are trying to stop the public hearing.	•
95	Dhvani Shah Village : Bada	• These are trying to provoke our people.	•
96		• We come from Bada village. Have come for public hearing. Give us a chance. Ask their Aadhaar card.	•
97	Dhvani Shah Village : Bada	• I have a right to a public hearing. • You are abusing your presidency. • Don't make it illegal.	•
• As stated by the Chairman that, you and I cannot decide whether this activity is legal or illegal. It will be decided by the central level committee which seats in Delhi. We are hear to note your objections and suggestions. • Said by Chairman that, Madam this is a hearing committee , not a decision making committee. • I am the chairperson of the environmental hearing as told by the Chairman. There is no chairman to decide anything. So I will not give any opinion.			
98		• Sir, listen to me, why can't this daughter speak what is the meaning of speak fast (fatfat) ?	•
• As stated by the Chairman "Fatfat" means to present your points one by one.			
99	Vijay Gadhavi	• We are here for five days to speak.	•
• Chairman said that you present the objection here. (speaks to all)			

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100		• We are not leaving here until we get our answers.	•
• As stated by the Chairman that, that's why we are asking you to present your issue one by one.			
101		• You have to take every point we have, you have to listen to us. you have to listen to the people of Bada village.	•
• There is noise. • It was stated by the Chairman that bro speak turn by turn.			
102		• How can you tell us that our questions are not appropriate.	•
• There is noise. • Chairmen said that speak on by one whatever your presentation is.			
103	Dhvani Shah Village : Bada	• I speak sir	•
104	Laxman Kanji Karani	• Sir we are making representations of the people to a Magistrate competent authority. People are paramount. Listen to the voice of the people listen to our voice Magistrate Sir. This is recorded by the media of entire Gujarat. People are being injustice.	•
105		• Now we should get a chance to present ourselves.	•
106	Meet Gadhvi	• If chairmen is not able to answer us then you can leave the stage. • We're not going to leave until we get our answer. Your duty to answer and it is our right.	•
107		• This hearing will not be cancelled.	•
• As told by GPCB regional officer that, keep some peace you all are talking at the same time, both of your points are not being heard. • There is noise.			
108	Meet Gadhavi	• Sir, it is right with us if you don't have time then you can go.	•
109		• Chairman listen to all the questions and answer them.	•
110	Dhvani Shah Village : Bada	• If you want to hear our talk, tell the police to go outside the tent, you conduct public hearing like this, sir. Police are walking around us with guns	•
111		• Sir we have come here to ask company some questions	•

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112	Dhvani Shah Village : Bada	• Sir this is our presentation sir	•
• Chairman sir said that, in view of your submission which has reached us. Well done you pose as a democrat. Your presentation appears here right from back everyone is throwing cardboards throwing shoes this is also not democratic way. Cardboards are coming here, shoes are coming, this is not a democratic representation. • As told by the Regional Officer of GPCB that, you all can make your presentation with keeping the request and with limit of Chairman.			
113		• Chairman, You have been trying to listen to one party's presentation for an hour. Honorable Chairman, maintain your dignity and do not go astray.	•
• Was stated by the Chairman that, you present here at the front and the card board come from behind. This is not a democratic presentation.			
114		• These people are protesting like this.	•
• According to the regional officer of GPCB that, first of all, everyone should sit on their seats and present. • As stated by DYSP that, turn off the mic. All sit in their own place.			
115		• The representative of the people is present here, here we present, sir, this is a public hearing, every citizen has the right to raise questions, so please maintain the dignity of chairmen. From hear someone throw a cardboard. The opposition party also has the right to speak, but listen to what we have to say.	•
• As told by the Regional Officer of GPCB that, if you have any representation in writing, give it in writing, give it verbally, all the rest take their place and make their presentation.			
116		• If public hearing is to be done in writing, public hearing does not take place in this way. Public hearing means that we come here and make an oral presentation, so you should not give it in writing at the end of each issue. Because this is a platform for oral presentations and you are specking a democratic since morning. You should understand that. The position you are sitting on, 25 feet away from the people standing. That's not exactly a democratic way either. You have allowed the company to protect the company inside and allowed to do all the projections and tied the people here	•

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		and made them stand behind the baton of the police. This is not your democratic way.	
• Said by the Chairman , Madam it is a democratic that's why you had the mic in your hand and you are speaking now.			
117		• So you will not teach us the democratic way.	•
• Said by Chairman that madam what you are presenting is .....but what you are doing is not democratic. • Chairman said that we are quietly listening and taking it on record all your presentations .			
118	Dhvani Shah Village : Bada	• Thank you very much, public servant, for coming to listen to us. Salutations to you that you listen to us but we expect you to listen in a just and unbiased manner and sir one minute I request you to tell and all those who speak in support of the company not to provoke our villagers and we will listen to them calmly. Do not try to provoke us by arguing among us. After our presentations are over, we will sit quietly and listen to them.	•
• It was told by the chairman that, madam, please present your presentation. Internally we ...			
119		• Two mics are move together, , turn off the other mic .	•
• Stated by the Chairman Do not make a presentation together make one by one presentation			
120		• Whoever makes the presentation, continue. Another thing, I have requested the people living in Bada village (.....) if they know the meaning of democratic, then we who are standing here are standing wrongly.	•
• Stated by the Chairman , Madam, talk about the issue, talk about your objections and objections.			
121	Dhvani Shah Village : Bada	• I was talking about the issue for you, now about the issue, we listened to the representative who is here in GPCB, he told me that it is mentioned in 12 villages 20 to 21 villages come in the buffer of 10 km, it is presented in the EIA report. I called the first violation of public hearing and EIA notification. The second violation is the violation of campaigning in the villages within the limit of 15 days, although you have	•

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		come here to conduct the public hearing and this GPCB officer has repeatedly taken the company's side and wants to prevent me from speaking. Finish speaking fluently We want to help the company. I have a question for you are you doing it to put a tick mark, I have shown you the procedural losses against you, you are the chairman, you have the power to allow this public hearing to be held or not. I show you why this public hearing is illegal. Now will you allow this illegal public hearing to go ahead or not. Give us an answer on the record, from which side you will exercise your right as the chairman, for whom you will exercise your right, whether this illegal public hearing will be closed or not, answer yes or no if you do not. If not, it will be taken on record that this public hearing has been fixed by mis using your chairmanship.	
• Chairman said that, GPCB is also a member of this committee and he will answer your technical and EIA notification issues. So you listen...			
122		• Let me tell you one thing, notice of public hearing, while technically you are not there employer, you are a public servant, your salary is paid from my tax money. Issue number one. • Issue No. 2 This is the procedure of public hearing under a notification that it has been violated no one is above it neither I nor you. This right gives you the notification as the chairman. From which side you are going to use the right today, you give us clear, if we expect public hearing from you, or not, tell us clear, let us know, I have a notification and under which you are increasing, the procedure is lost transparent public hearing. So these losses have been counted, sir I have given us a clarification that twelve villages have been given. 3 and 4 are given during the date. I told you that the notification came at 6:30 pm on the 3rd, so the 3rd	•

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		should not be considered. Considering that the public hearing is on 17th, we have received a notification of 13 days. So the EIA notification which you have held this public hearing using the official is a violation then what do we give us that even after giving this violation notice we are your chairman as a public hearing responsibility will you allow this public hearing to be held today or is it an illegal public hearing. If so...	
• stated by the chairman that, you don't speak for one side, let them also decide.			
123		• Speak we listen too. • Now you have heard 2 sides, we have also kept the evidence that this notification is a violation, so what is your decision.	
• According to the Regional Officer of GPCB that, the record of information given to Talati from our Board is available here at present which I have announced. The information that was to be given to the Talati at the end of the announcement has been sent to them in time as per the provision of the notification. So there is no violation of the provision of notification and this operation is going on according to notification only.			
124	Dhvani Shah Village : Bada	• Requirement 15 days you have new notification.	•
• As stated by the Regional Officer of GPCB that, an advertisement has to be given in it			
125		• listen no sir	•
• As stated by the Regional Officer of GPCB , however your concern will be raised.			
126	Dhvani Shah Village : Bada	• I will clearly tell you that in the notification Appendix – 4, which is the EIA notification, in Appendix – 4 para number -3, D-3, A-3, B-3, C-3, O, 3-A, 3-B ,3-C, 3-D, 3.2, 3.3, 3.4, this procedure is done according to the four provisions. There is only one amendment in the 9th May notification which is 3.4 , the number 3 is small amendment, that amendment is applicable and it is clearly written in the notification that Grampanchayat, Impact Notification also states that this It is written in the EIA notification that a public hearing has been held but you are not following the notification. At present we are not	•

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		raising queries but it is clearly stated in the notification that there is a Gram Panchayat along with the public offices should be known within 30 days. You say according to the new notification that 15 days if there is an amendment in 3.3.a then the other provisions in Appendix – 4 are applicable to them, it is necessary to inform us within 15 days before. Divya Bhaskar does not come to our village and even if it does come, it comes on the next day. We came to know from the Gram Panchayat office on the evening of 3rd.	
127		• Sir Gram Panchyat has received notice. I am not protesting against Gram Pachyat	•
• Both speak together....			
128		• Sir how did the second mic turn on.	•
129		• All the people have the right to protest, that Gram Panchayat can also do , then they are also member of the Gram Panchayat.	•
130		• Sir, how helpless are you , other people are answering.	•
• As per GPCB Regional Officer that, your queries are as given in 2 Notifications.			
131		• Sir, there is an amendment in 3.3.A, those who feel it is necessary in public interest can give it 15 days before, although we do not know how it came, the Gram Panchayats have taken it since the people know, in which the provision of 15 days has not been undertaken, Sir, Chairman. There are 2 parties against you, this public hearing is illegal according to us, we have given you legal provisions, you have the right to cancel this public hearing. You again give 30 days notice we will come back. We will present our issues again We have not been given actual opportunity of public hearing It is proved against you with proof that you are the chairman of public hearing You have right and it is your duty which Public hearing continues	•

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		on the cause...	
• According to the regional officer of GPCB that, when the approval of the advertisement comes from office, the advertisement is given in the news paper and the letter is given to all the Talati and for which we recommend that it is not sent by post but to all . So some days have passed for that.			
132		• Thank you so much for giving us so much importance and reaching out to us sir. I am telling you that if the procedure is going to take time then you would not have held the public hearing on 17th you would have kept it on 20th....	•
133		• Honorable Chairman we have asked our questions and we have got a satisfactory answer from the company. We the villagers have raised our questions in the public hearing we have asked our questions we have got the answer from the company we are satisfied with the satisfactory answer.	•
134		• You can see the public outcry.	•
• According to GPCB Regional Officer that, we are listening to your submission.			
135		• There is no public protest, we don't need anything, we have thousands of people with us, no one can suppress our voice.	•
• You present your objections as stated by Chairman. • As told by the regional officer of GPCB that, you should make a presentation point wise, you should not make a presentation internally.			
136	Dhvani Shah Village : Bada	• You didn't inform people sir why did you let the second mic on.	•
• GPCB Regional Officer said that, We are hearing your submission			
137		• We've asked all our questions and we've got our answers.	•
138	Dhvani Shah Village : Bada	• Sir you approve the illegal public hearing	•
• According to the Regional Officer of GPCB that, whatever action is taken is announced as per the timely notification approved by the Talati.			
139	Dhvani Shah Village : Bada	• Chairman Sir, today you are the chairman of the public hearing as per Appendix -4 of EIA.....	•
140		• Kanjibhai, the president of Maheshwari Samaj, Mota layja, will ask the question. He is present here and we support him.	•
141	Dhvani Shah Village : Bada	• Sir turn off the mic until one man presents another person can't speak turn	•

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		them off the mic they are trying to provoke our people sir answer us our questions.	
142		• We want development, we are supportiing the company, you listen to us also, we want development	•
143	Dhvani Shah Village : Bada	• Sir second mic needs to be closed you have procedural law we have strong evidence against you. you are the chairman of public hearing if the procedure of public hearing is wrong then EIA notification gives you right to cancel it and reschedule it we Come on, but today you answer me that instead of 21 villages, the advertisement has been given in 12 villages, if you have taken it into consideration, then you are proceed with the public hearing by doing this illegally. You are making this public hearing legal. Take it on record that after showing proof also your decision is in the favour of company only. After that we will move forward. Tell us in whose favour will you decide.	•
• According to the regional officer of GPCB that, now both of these are announced and in Divya Bhaskar on September 30 and in Times of India on October 1, so they are in time.			
144	Dhvani Shah Village : Bada	• Sir, people here don't read Times of India. Divya Bhaskar does not come to our village. Sir, it is Notified to infrom Gram Panchayat. • As per provision of notification in Gram Panchayat within 15 days. • You have heard their answer, now you give your decision.	•
• According to the regional officer of GPCB, as per the notification provision... • Chairman said that, Madam, if you listen to the answer, then we will give it, simply by asking a question and protesting.. you also listen to his answer. • Listen to your answer as stated by Chairman. • To the Regional Officer of GPCB that, as per EIA notification, advertisement has been given in newspaper and we have given time limit which is suitable for provision of notification.			
145		• This madam is passing the time. Give us time to speak.	•
146	Dhvani Shah Village : Bada	• Turn off this second mic.	•
• Was stated by Chairman that in the front page of Divya Bhaskar it is mentioned.			

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147		• All these are attempts to stop public hearing	•
148	Dhvani Shah Village : Bada	• Its clearly state that news is widely circular in the village, divyabhaskar does not come in their affected area .	•
• There is noise			
149		• Here in every village Divya Bhaskar comes to every village	•
150		• Turn off the mic of this people	•
151		• These people want to stop the public hearing and are diverting from the issue.	•
152	Vijay Gadhavi	• Sir we are on the point Chairman and Pollution Officer we have raised environmental issues, impact issues. People who are supporting the company is it an public hearing for supporters or environmental public hearing please tell me my question is....	•
153		• And the press that you are talking about has not given the notification to each gram panchayat which has to be given within its rule and all the places are holding public hearings in such ways all over Gujarat which deliberately do not let people know and therefore people do not come. There are such public hearings, you read these dates yourself and you one of them	•
• According to the Regional Officer of GPCB that, proper advertisements are made and sent out from time to time in every place, which is accessible to the public and the public are given full exposure opportunities.			
154		• Also the dates which you read now prove that we were not given notices within 15 days and you also know....	•
• According to the Regional Officer of GPCB that, the same date has been given for public hearing which is convenient according to time.			
155		• Sir, we have been listening to madam's objections for an hour, we do not care about any of the questions. Baby turtle live or die give our baby the right to live. Baby turtle is taken care by the pollution control board and arrange it in its own way or it will manage in its own way we are working hard to save our children	•

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• There is noise			
• As stated by the regional officer of GPCB that, there is no internal discussion			
• Was stated by the chairman that there is no need for internal discussion, whatever your submission is, about the notification is also on the record and we are not going to leave a single submission.			
156	Vijay Gadhavi	• Sir, that brother has made a good presentation. Whether the baby turtle lives or dies, it is up to the government. Environment, we have come for this at the environment public hearing take him on record.	•
157		• We are asking for us if company comes then employment will be provided and turtles will be saved and cared by the environment department sir listen to us.	•
158		• Tortoise is a schedule 1 animal, whether the turtle is died or alive, the company does not care about the environment...	•
• Is stated by the Chairman that your submission that tortoise is in Schedule 1 animal. We have also taken on record that turtle is a schedule-1 animal.			
159		• The brother said that it does not matter if the turtle lives or dies, it means that the Gujarat Environment Board is not competent, if not, then legal action should be taken.	•
160		• We have only one issue, we support the company, if the company arrives it will increase the employment and we are working for that otherwise the turtle which are surviving is cared and conserved by Environment Board protects, there are other departments and they are performing they duty. what we ask to get us employment.	•
• Stated by the Chairman that, we have to protect turtles which come in schedule 1. Listen to my answer Tortoise comes in schedule 1 it is our responsibility to protect and preserve it.			
• There is noise			
161	Vijay Gadhavi	• No, Sir take steps against it how can you say 'Turtle Die or Live' which is schedule- 1 animal. I will file a FIR, you write, we will die for the turtle, why this brother is against you, you are listening to these sentences.	•
• It is the duty of all of us to protect and preserve the turtles as stated by the Chairman.			

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162	Dhvani Shah Village : Bada	• Sir, the presentation of the issue is misleading, which is a violation of the Wild Life Protection Act, action should be taken, but our question is.....	
163		• We welcome the company, we trust the environment department, the environment department will make the company comply with every rule.	•
• Was stated by the Chairman that, Madam, please make your next presentation, you are being taken minute by minute, your questions have been answered, you may proceed now.			
164		• You come from environment department you know everything which animal comes in schedule 1 and which animal comes in schedule 2	•
165	Vijay Gadhavi	• Please note our points that we have raised.	•
166		• Environment should be considered and environment should be preserved	
167		• The company is aware of everything and will maintain everything	•
• There is noise • As told by the regional officer of GPCB that, if you all speak turn by turn, your voice will be heard by us.			
168		• We are not getting turn to speak.	•
169		• We trust environment department sir.	•
170		• If the question of life and death of turtles is being raised from now, where will the turtles go after the company comes, where will our national birds go ?	•
171		• We have full confidence in the company sir the company will follow all the environmental norms and set up the plant we have full confidence in the company and we have full confidence in the Gujarat pollution department of India.	•
• As stated by GPCB Regional Officer that, it seems like you are debating within yourself when you are present simultaneously nothing is being heard here, this is not a political debate, just speak turn by turn.			
172		• None of your rules are followed.	•
• There is noise			
173		• We have trust in our pollution department and we have requested the	•

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		chairman and to the sitting officer, we have trust in pollution control board, so the permission should be given to the company .	
• According to the regional officer of GPCB that, please maintain peace because			
174	Dhvani Shah Village : Bada	• Sir, tell them not to provoke us by speaking in between and turn off the mic	•
175		• The company we are here for our employment questions and to ask our anganwadi questions so we wish that we get to ask questions. The brothers from the Maldhari community who have come childrens from school have also came.	• We have a question, we have a request that today when we are sitting for the public hearing, there is a violation of the public hearing on time, there is a violation of the procedure, as many questions are asked, how can the public hearing be stopped, when this is going on record. Another thing that is the topic is being diverted another thing is that this public hearing is of GHCL. This public hearing is not for an individual person. There is no point in arguing on those points. I feel that public hearing is being hijacked.
• There is noise • As told by GPCB regional officer , Peace please present quietly, your voice is not reaching us.			
176		• We have presented our question and we have received the answer from the company and we are satisfied with that answer. For hearing our question and public hearing, we have presented our questions from villages of the buffer zone. Thank you very much for making this public hearing a success. We are grateful for that.	•

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• GPCB regional officer said, if you want to make a presentation, just do it, don't shout,I request please don't debate internally.			
177		• Chairman, you have made this public hearing successful and we have asked the questions of the villagers to the company, we are satisfied with the fact that the company has answered the questions and we support for the company.	•
178		• Sir, in your presence, it does not matter whether the animal of the schedule 1 lives or dies.	•
• A GPCB regional officer said , " We have discussed it for a minute, let's look at the next issues."			
179		• Company people say that public hearings have been hijacked and you need to see who is doing it.	•
• As told by the Regional Officer of GPCB that, you are kindly requested not to talk to each other.			
180		• If they don't know what to say, whether the turtle lives or dies, what do the supporters of GHCL mean, they don't know what they are talking about.	•
• According to the regional officer of GPCB, the chairman is sitting please maintain peace			
181		• We the villagers have gathered here and we are satisfied that the company has answered the questions of the people	•
• Has been stated by the chairman that, but listen everyone, when it comes to animals of schedule 1, if any kind of animal of schedule 1 is harmed, there is a provision in it and its detention, if there is any harm to the animal, there is a provision for action according to the provision. If there is a loss to an animal of Schedule 1, be it a particular party or a company or anyone, there is a provision within the law for that loss, be it a particular party or a company or anyone, action will be taken as per the provision.			
182		Dear Sir, Mic is off	•
As stated by Chairman Mr. Mine also gets turned off automatically. We are not turning off.			
183		• Sir, today we have presented our questions and objections here. We are satisfied with the answers given by the company for the 12 villages which fall in the buffer zone.	•

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• There is noise • As told by the Regional Officer of GPCB that, turn by turn to speak.			
184		• Let us speak sir, we are also villagers, we are also here for public hearing, we who come in 12 villages buffer zone we want to ask our questions and are asking questions.	•
185		• Supporters of GHCL say whether the turtles live or die means that the company of GHCL speaks the same.	•
186		• From the fact that we have received satisfactory answers to all the questions we have asked...	•
• Chairman states that he not from the side of GHCL neither he is from any side , ..			
187	Dhvani Shah Village : Bada	• When will I get the right of public hearing first of all tell me? Sir how can I get the right of public hearing sir.	•
• As stated by the chairman that, you have free right.			
188	Dhvani Shah Village : Bada	• Turn off the mic on that side.	•
189		• Sir, Thank you very much for making today's public hearing a success. We have got a satisfactory answer to the questions we have asked. We welcome the company from our side. Thank you very much to the chairman. Today we got answers to our questions and this public hearing went well.	•
190	Dhvani Shah Village : Bada	• Sir, do I have the right to this public hearing or not?	•
• Chairman said that , madam, how many hours have you been speaking.			
191		• You can't even stop, the public hearing is still going on, so how can he say thank you.	•
• There is noise			
192		• Sir, the right to turn off the mic or suppress the voice in public belongs to the chairman and not to the people.	•
193	Dhvani Shah Village : Bada	• Violates my right to public hearing, violates law and order.	•
• As told by the regional officer of GPCB that, you continue your point.			

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194	Dhvani Shah Village : Bada	• Sir, please make peace from the support party. They have come to provoke our people.	•
• According to the Regional Officer of GPCB , first of all take your place.			
195	Dhvani Shah Village : Bada	• Sir, first of all, under protest, I am making my presentation, then record it, I will make the next presentation, until you give me an answer, the presentation will be suspended, please give me my answer and I will not waste the time of Chairman, and I can present, but they are diverting the topic by speaking in between. The point is that without giving the notice in the affected 21 villages on the base of notice. Sir, they are speaking in between. This is illegal.	
196		• Sir we have full confidence in Gujarat Pollution Control Board and the company will follow everything and set up the plant. It is our hope that this project will come up here and follow all the rules and the company will follow every pollution rules. It is the hope of our villagers that the company will set up its project.	•
• Chairman said that you present turnwise and all of us are here to hear. you all present in turnwise.			
197		• You will take this application on record immediately Project proponent says public hearing has been hijacked how this happened in your chairmanship sir.	•
198		• Madam, has only one presentation to make. Give me 2 minutes sir	•
• As told by the regional officer of GPCB that, turn off the second mic from the other side.			
199		• Since 2 hours, madam is talking, give us also the chance of speaking. Give us also.	•
200		• I will speak for 4 hours	•
• There is noise			
201		• Madam has been talking for 2 hours, give us a chance, give me a chance, sir. why don't you give me two	•

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		minutes, sir? I request madam to listen quietly for two minutes.	
• Was stated by the Chairman that , DYSP Sir, it is a humble request to you that you make everyone sit down and then take further action.			
202		• Madam please listen to me for 2 minutes.	•
• Said by Chairman that, Madam first sit in your place.			
203	Dhvani Shah Village : Bada	• Please respect me. Please sit down on your place. We have been provoked by wearing T-shirts of other companies. Until we complete our presentation, turn off their mic. Then we will listen to them too. To the supporters of company let me speak first. Sir all of us have seated as we stand the police stand up and immediately show us the baton and they don't show them we see the discrimination. We don't mind. It is your right how you use it is up to you the other thing It is my humble request that the mic should not be turned on until my presentation is over. Thirdly, the people of the company, when we are presenting, the company man comes and says that we are hijacking the public hearing, it is not within their right so record it, There is a violation of our right, Sir, I request that this violation be taken on record in your chairmanship. The third is a supporter of the second party trying to deflect my point. My issue is a simple question, we are looking at you, we have brought proof before you that this public hearing is illegal, but you want to go ahead with this public hearing or not, let us continue with the next presentation.	•
• Was told by the chairman that , madam, number of questions you have are answered, I am the chairman. So I on behalf of the Chairman states that your questions are answered whatever your technical matters or the point of your notification...			
204	Dhvani Shah Village : Bada	• So you are saying that this public hearing will be moving forward as it is right	•

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• Stated by Chairman that, you may continue with your objections and submissions			
205	Dhvani Shah Village : Bada	• I do the same sir who is this not in uniform sir you are the chairman who is this sir? sir who is this? you are the chairman who is this?	•
• As stated by the Chairman that, Mamlatdar.....			
206	Dhvani Shah Village : Bada	• Sir, who is this, why are they taking my mic, why are they coming near me, what right do they have, I am speaking.	•
• As stated by Chairman that, you continue with your objections.			
207	Dhvani Shah Village : Bada	• I am speaking, why did they come to take the mic from me?	•
• Chairman said that , you continue with your presentation.			
208	Dhvani Shah Village : Bada	• I continue, tell them to sit down and don't interrupt	•
• According to GPCB Regional Officer that, everyone sit quietly and continue your presentation.			
209	Dhvani Shah Village : Bada	• Please keep calm for a minute all sirs you said this public hearing will continue. Even after bringing the procedure laws in the public hearing process you say	•
• Chairman said that we are taking all the illegality on record and we will convey your matter to the decision making authority.			
210	Dhvani Shah Village : Bada	• You are the one, You are the one, The right of the collector.....	•
• Stated by Chairman that, Illegality from here..... • Brother, do what you say within the legal limits, take special care that what you say is going on in an orderly manner.			
211	Dhvani Shah Village : Bada	• I request you all that the daughter of your village, the daughter of Mandvi, the daughter of Kutch, I am speaking on your behalf. If you throw something in between, our side will be weakened and those people will win. Please do not throw anything and sir You will not do so much of standing and sitting, it is too much oppression and other things please tell policemen not to come in between. Your face is not even visible. Tell the policemen to stay on the side. We don't mind if	•

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		there is any problem inside, you can order them, you have the right to oppress me from time to time and my mic should not be taken, please give them direction.	
• Chairman said that, Madam, we have been listening to you for the last hour and we are still listening now. The mic is in your hands and we have given you the opportunity to make a full presentation. The mic is also in your hands. Madam Baton is shown to people who try to take the legal system into their own hands			
212	Dhvani Shah Village : Bada	• This is a public hearing	•
• Has been stated by the chairman that After all, this is a public hearing, then why are you throwing cardboards here.			
213	Dhvani Shah Village : Bada	• I have requested them not to throw anything against you anymore but stop provoking us.	•
• Said by the Chairman that, Madam, again instruct your people in the back, they gather back in five minutes and the cardboard are thrown. You have seen and it is happening in front of your eyes, first you make your people sit, we are sitting to listen to your objections, but if there is a method, you speak here and later on, it is not the right method.			
214	Dhvani Shah Village : Bada	• Will you Maintain my dignity by not throwing cardboard anymore, or not and if it comes from the supporting party then sir it is not our responsibility	•
• Was stated by the Chairman that, yes, now you continue your presentation.			
215	Dhvani Shah Village : Bada	• Sir please tell the police don't come in between this madam is standing on top of me I am being oppressed the right of public hearing is being violated here. she is standing here very welcome it is for our protection don't stand on top of me I am disturbed, Please sir please please.	•
• Stated by DYSP that, she is stand where one stands and no one has any form of obstacle for that.			
• Was stated by Chairman that, DYSP sir, I would like to request you to give some space to his submission			
216	Dhvani Shah Village : Bada	• Among the public with a gun.	•
• Said by the Chairman that, Madam, now you have got your answer.			
217	Dhvani Shah Village : Bada	• Sir, my request is that you tell them to go a bit aside.	•
• Give some side as stated by the Chairman.			

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218	Dhvani Shah Village : Bada	• And sir, secondly, my first point was that the illegality I have brought before you, you have used your right to decide that this public hearing will continue right.	•
• Stated by Chairman, we have taken the issue of your illegality on record.			
219	Dhvani Shah Village : Bada	• You have decided that this public hearing will continue.	•
• As stated by Chairman that, your questions have also been answered from GPCB and replied with date.			
220	Dhvani Shah Village : Bada	• You let your decision be heard.	•
• Stated by the Chairman that, is I am asking you to make your second presentation now, this will be on the record.			
221	Dhvani Shah Village : Bada	• Next yes or no answer was asked whether NIO has certificate or no answer yes or no then I will proceed further.	•
• According to the Regional Officer of GPCB that, Madam, this issue has been discussed, it is not present with them now and I have told him that he has expressed it to the project proponent, so we will take note of the issue and the reply will have to be given to the Ministry. You should continue with your issue.			
222	Dhvani Shah Village : Bada	• Why does it come forward that we have hijacked a public hearing that is just a yes or no? I'll move on to my next point.	•
GPCB regional officer told that, madam don't do repetition on every issue means clear cut that your issue is going on same issue for last one hour.			
223	Dhvani Shah Village : Bada	• Chairman sir. I don't get answer say yes or no I will go to next point.	•
• Was told by the chairman that , you have now come to know from the company that they do not have the certificate that you are asking for at this stage and they have given you a detailed reply. You present yourself.			
224	Dhvani Shah Village : Bada	• Even if it is not now, even if you have not shown it on the screen now, we have left it, just come here and go on record whether it is NABET accreditation or not, whether it says yes or no .	• First hear one thing that complete EIA is done by NEERI listen to me we have Marine EIA Completed .....listen to me.. • NEERI has done a complete EIA study and NIO has been declared a technical expert agency and its database has been studied. Complete

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			EIA report has been given by NEERI and confirmed by MOEF.
• Has been stated by the chairman that, after listening to his answer, listen to his full answer.			
225	Dhvani Shah Village : Bada	• Sir, I will speak now?	•
• Said by Chairman that yes.			
226	Dhvani Shah Village : Bada	• Sir, if your marine EIA which can be run on screen sir.	• Sir the study has been done which complete responsiblity of NEERI as per EIA. For everything we need to talk over here instead of hearing it is discussion.
• As told by the regional officer of GPCB that, we have to know what the issue is....			
227	Dhvani Shah Village : Bada	• Sir, these rights have been given by the company, they have come to put the company on our land , we have heard them, now listen to us..	•
• Was told by the chairman that, madam, I have given the mic only because nothing is going to happen until your objection is justified as right or wrong, because there is a public hearing for your objections.			
228	Dhvani Shah Village : Bada	• Sir, what are you saying, in other words, let me say I have come to fulfill the formality of which is the tick mark in completion of public hearing for the company, in any case, you make your presentation and go from here, then whatever you want to do. Do it and let this public hearing end, you say.	•
• Chairman said that , Madam, we are taking the report of your presentation			
229	Dhvani Shah Village : Bada	• I am not defending it, I am just interpreting and want to confirm to you in front of me.	•
• Chairman said that, your understanding is correct, I have come to listen to your objections and am listening now.			
230		• • Listen open my objection, you see its Marine EIA report, which is authorized by GPCB officer, and On that report of Marine EIA it is clearly written that NIO has done and company wants to say it is done by NEERI which is totally false. NIO has said that there is no	•

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		effect here as NIO has stated that outfall and intake points will not have any impact which is totally false as they don't have such authority. We want to know and they clearly answer us that they don't have accreditation right we will proceed is that right?	
• According to the Regional Officer of GPCB that, this point has been clarified to him			
231		• This is written or taken on record ?	•
• Told by Regional Officer of GPCB that, ok go ahead			
232		• May this be taken on record....	•
• According to the regional officer of GPCB that, whatever we say here will be on record.			
233	Dhvani Shah Village : Bada	• As you said Let there be a public hearing, what you told, if it is illegal, then we will let it happen.	•
• Chairman said that it is not illegal, he is answering our questions, whether it is legal or illegal, you or I should not take a decision sitting here, the Ministry of environment , ministry for different things is there , everything will be reported and, everything has been reported and then it will be decided. What is yet to be decided			
234	Dhvani Shah Village : Bada	• If you console the at least that this sir who is the representative of the company tells you that the NIO does not have accreditation, if you put it on record, I will proceed further.	•
• on record as stated by the chairman.			
235	Dhvani Shah Village : Bada	• Gram Panchayat affected by public hearing is not informed to Gram Panchayat. Gram Panchayat is public authority within constitutional amendment is bigger than newspaper and you can't do it even 15 days before you are running this illegal public hearing for the company. My submission is under Protest I submit.....	•
• Stated by the Chairman that, we have certainly taken this submission into consideration			
236	Dhvani Shah Village : Bada	• In your EIA report who has done a study on ecology impacts in the EIA report, he has not been given his accreditation certificate sir...	•
237		• Honorable sir today we have full	•

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		confidence in the company village residents who have come from the buffer zone we have asked our question our maldhari brothers who have come here today, students have come today farmers from 12 villages also want to ask questions. Sir we are seating since 1 to 2 hours. Every one has the right to ask question. Sir we the people of 12 buffer zone should also be listened and heared please give us the chance to speak.	
• There is noise • Was stated by the Chairman that , do not do the presentation simultaneously, present turn by turn.			
238	Dhvani Shah Village : Bada	• Sir you are take law and order in hands turn off the mic.	•
239		• Today we have been sitting for 2 hours, sir, the farmer brothers have come from the village, the maldahari brother, the students have come, everyone has the right to ask questions, so we also have a humble request to give us time to ask questions, we have all been waiting for one and a half hours, sir. Chairman Sir, let us also be heard from the villagers who have come from the buffer zone. We have come from the buffer zone of 12 villages. Let the villagers be heard. Farmers, students have come. Hear us from 12 villages.	•
• There is noise. • As told by GPCB regional officer that, do not debate inside, make presentations turn by turn, after the presentation is over, after your presentation is over, everyone should sit at the back, so the public hearing can be proceeded.			
240	Dhvani Shah Village : Bada	• Sir you are violating Law Order.	•
• GPCB regional officer told that , madam continue your presentation			
241		• The issue of environment is straying somewhere else Sir we have come here for the public hearing of the environment, only those who are going	•

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		somewhere else..	
• The regional officer of GPCB told that , present turn by turn brother, keep the mic off, till his presentation is over.			
242		• We have been sitting for 2 hours sir	•
• There is noise			
243	Dhvani Shah Village : Bada	• Respect us sir.	•
244		• We farmers and students have come here to get a chance to present the question sir this is a public hearing this is democratic and chairman sir we have full faith in the Gujarat Pollution Department we have the right to ask questions we are farmers, brothers and sisters there are questions of unemployment.	•
245	Dhvani Shah Village : Bada	• Sir, I said everyone to sit down and to respect you.	•
• Was stated by the chairman that now madam you have made a presentation.			
246	Dhvani Shah Village : Bada	• Everyone calmed down in front of you, respect you, you respect us, turn on the other mic and listen to them too.	•
247		• Dear sir, we have got satisfactory answers to our questions which we have asked many of our brothers we have got satisfactory answers from the company we are satisfied and we have full confidence in the pollution control board, we hope from the company.	•
• " Turn off the mic and listen to them" the regional officer of GPCB said.			
248		• The company will also set up the plant keeping everyone in mind and we hope from the company that each company has its own....	•
• As told by GPCB Regional Officer that , finish your presentation and let them continue.			
249	Dhvani Shah Village : Bada	• calm down please calm down, sir please give me a chance to finish my presentation.	•
• It was stated by the Chairman that, madam, you speak			
250	Dhvani Shah Village : Bada	• Thank you sir sir give me a minute	•

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251	Aditya	• Sir the company said that no recreation center, tourist area comes within 15 km radius but meditation center comes within 0.6 km and the company stated that none comes is wrongly mentioned in the appendix form 1 Bhimnath Temple is also located nearby and Ashar Mata Temple is also located. Vipassana Center is located within a radius of 15 km. Vipassana Center is an international center for the last 32 years and people from outside also come and this company keeps a distance of half a kilometer, then what the company will give guarantee that noise pollution will not occur and peace will not be disturbed.	•
252		• We don't need guarantee, a breach has occur. Even the company does not see that there are so many religious places and vipassana centers within half a km that the government itself has decided how many radius it should be within a radius of 15 km. Gujarat Pollution Board does not see what? The answer is how can this be approved? How can public hearing be done? What is the answer to this the basic complaince is not being done? Bhimnath Mahadev temple is near it is not the matter of 15 km and vipassana kendra this is not a small area we are talking about a area spread over of 35 acres.	• In the report it is clearly mentioned about the Vipassana center. Secondly in Vipassana center when we talk to the people of Vipassana center they say this is not a religion temple this is a meditation center here all kinds of people come and do meditation and this is also clearly mentioned in the report.
• According to the Regional Officer of GPCB that, listen to the answer given by them, the Vipassana Center is clearly mentioned in his report.			
253		• It is a meditation center.	•
• Chairman said that first let him answer then you ask questions you people can also sit and discuss we have not stopped you from setting at your places and discuss.			
254		• Here we have so many people standing and asking questions. So he should limit himself to such an extent that he stands up and at least comes forward and gives an answer. One	• It is clearly written on the paper 3.7.3 of NEERI that Vipassana Center & Shiva Temple are there. All those details are given.

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		thing and another that Vipassana center is not a religious center and you remove it from it and that is a meditation center within a radius of half a kilometer. If you do that, you have removed that it is not a religious place. It is a meditation center. And this is all. The government has made a rule to keep a bar of 15 km radius. People have not made this set rule. So if this rule is made by the government then it applies to every company and every individual who wants to put up a project in this country, then it also applies to GHCL. And if it does not fulfill all the compliance, then it has no right to reach to the public hearing.	
• Chairman said that now you have another presentation to make.			
255	Dhvani Shah Village : Bada	• Yes, I have very long 10 pages please keep calm. I am tired now, my throat also hurts but I have to make a presentation. I will but you please keep calm. Sir I would request the representative that, Stand up and answer us, we will enjoy watching them. A bit like we are talking to someone. And we will also be encouraged to advance our point sir. Another thing which temple and center of vipassana are not indicated, it is necessary to indicate it while submitting form-1. On this bases the TOR is issued. If they have not presented it in Form-1 itself, then the ToR has been taken from the Ministry by giving wrong information under wrong information. If this is on record, the submission from us will be considered illegal, and the many are still pending. ok sir next point,	•
• As stated by the Chairman that yes yes speak...			
256	Dhvani Shah Village : Bada	• Their TOR as I said tells me the exact date of issue.	•
• Said by the Chairman that, Madam, please state your point of objection			

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257	Dhvani Shah Village : Bada	• Sir, the date of issuance of TOR let us know, let them answer. I say next.	• TOR issue date: 10/08/2021
• Stated by Chairman that, but state your point of objection.			
258	Dhvani Shah Village : Bada	• This is the problem.	•
• As stated by Chairman that, but you should object. Madam, you spend 45-45 minutes, half and half an hour behind your one presentation.			
259	Dhvani Shah Village : Bada	• See I am not having fun, I also have a job, my home and my family. I don't have any fun. To hold and sit here for an hour.	• TOR issue date: 10/08/2021
260	Dhvani Shah Village : Bada	• That's why you support the company so that we move forward without their reply.	•
• As stated by the Chairman that, you people can also sit and discuss. We did not refuse you.			
261	Dhvani Shah Village : Bada	• When TOR is issued?, let them answer. Tell us the answer.	• TOR Issue 10/08/2021
262	Dhvani Shah Village : Bada	• Sir please come there, please sir with folded hands please sir please there. And again I don't know the date. Please.	• 10/08/2021
263	Dhvani Shah Village : Bada	• 10/08/2021. One minute, one minute.	• I want to say something I request you people to sit comfortably and talk .
264	Dhvani Shah Village : Bada	• Sir, when your base line data collection for terrestrial has been done? Baseline Data Collection for EIA Studies.	• Today all these details are available on the website. Present your objections.
265	Dhvani Shah Village : Bada	• Sir you answer me.	•
• According to the Regional Officer of GPCB that, listen to the information which is already disclosed in the advertisement and also available on the net. So please present the rest of the issues which are technical.			
266	Dhvani Shah Village : Bada	• Sir EIA notification said that I should get the reply. You are violating it. I should get an answer. EIA notification says that I will get the answer.	•
• According to GPCB Regional Officer, your questions which are available on net.			
267	Dhvani Shah Village : Bada	• People can't read. What is the problem in speaking?	•
According to the regional officer of GPCB that, these questions are just like a debate. Better than that put your technical points..			
268	Dhvani Shah	• Sir we are not in debate form. Sir it is	•

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	Village : Bada	the same. Are you on behalf of the company or on behalf of the people? EIA for...	
• According to the regional officer of GPCB that, we are not on behalf of anyone, we want to listen to the public.			
269	Dhvani Shah Village : Bada	• The EIA notification gives me an assurance that I will get an answer to my query from the consultant. Please don't shut me up. Ask consultant to answer me.	•
• No I am not silencing you ma'am as told by the regional officer of GPCB.			
270	Dhvani Shah Village : Bada	No you do the same. Ask them to answer me. I have asked a simple question.	Chairmen, we have presented his question in the record. Answered is given in the minutes of meetings.
271	Dhvani Shah Village : Bada	• Sir...	•
It was stated by the Chairman that your every presentation will be taken in minutes...			
272	Dhvani Shah Village : Bada	• Sir, I am open EIA notification and rights granted to me under EIA notification are you willing to violate my right than you can bar him from answering my question. He is supposed to answer my question every question.	•
It was stated by the Chairman, Madam, there is no question answer session at this time. If this is not related to your objection, you will automatically get your answer.			
273	Dhvani Shah Village : Bada	• Sir..	•
• Said by Chairman that Please don't make question answer session now just suggest your objections just give us your objections suggestion.			
274	Dhvani Shah Village : Bada	• Can I read the EIA notification ?	•
• It was stated by Chairman Yes, you read but you present your objection.			
275	Dhvani Shah Village : Bada	• I will read But you don't take the side of the company.	•
As stated by the Chairman that, we have not gathered here for question and answer. we have gathered here to hear for your objection.			
276	Dhvani Shah Village : Bada	• You are on record saying that you are ordering the provision of EIA notification not to disturb me.	•
• Chairman said that if you have any objections, you can make a presentation regarding the project.			

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277	Dhvani Shah Village : Bada	• Sir I have asked him a question.	•
• According to the regional officer of GPCB that, the information is available on the net regarding questions.			
278	Dhvani Shah Village : Bada	• Sir...	•
• According to the regional officer of GPCB that, no information is private. It is on public domain.			
279	Dhvani Shah Village : Bada	• Why do you favor them? Are you bias? Are you bias?	•
• As stated by the Regional Officer of GPCB that, no.			
280	Dhvani Shah Village : Bada	• EIA notification tell me that I will get an answer.	•
• As told by the Regional Officer of GPCB that, you can submit your next submission.			
281	Dhvani Shah Village : Bada	• Are you being biased on record. you said him to answer. I will tell my point. I may speak in English.	•
• As told by the Regional Officer of GPCB that, the proponent will respond to whatever representation you have. they have to give without fail they are forced to give. • As told by the Regional Officer of GPCB that, on which day you			
282	Dhvani Shah. Village : Bada	I will present my point and he will answer me. I will state my point. My question to them is when is the baseline data collection of terrestrial EIA done. Environmentally suggestion has been given that mitigation will be done. when the baseline data for the mitigation has been taken. I want a date. I will present my point.	•
• Is the data available ? as stated by the Regional Officer of GPCB?			
283		•	• If it is available, it will have to be taken. And this is still a draft EIA.
284	Dhvani Shah Village : Bada	• They have no availability. you tell me	•
285		•	• This is still a draft EIA.
• According to the Regional Officer of GPCB that, we request that do you have ..			
286		•	• This is still a draft EIA and its mitigation plan will come in the final EIA.

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			If you have any question, please let us know and we will answer it.
287	Dhvani Shah Village : Bada	• Sir, he has no answer	•
• According to the Regional Officer of GPCB that you received your answer.			
288	Dhvani Shah Village : Bada	They don't have the answer, but you say it's just their EIA report watch finals online. It does not say that baseline data has been collected? Who are the representatives of NEERI? So NEERI has prepared the report, then who are the representatives of NEERI? I want an answer. If you don't know the base line data, do you guys do EIA consultation?	•
• Chairman said that, Madam, therefore, we have taken your objections and their replies on record.			
289	Dhvani Shah Village : Bada	• Sir I am reading the related clause of public consultation of notification of EIA Ok. Give me 5 minutes go ahead it doesn't matter if you don't ask them to answer just give me 5 minutes I Want to read.	•
chairman told that, brother, you have given 5 minutes to the madam, then let her make presentation, keep calm. please.			
• As told by GPCB regional officer that, ma'am give your other points.....			
290	Dhvani Shah Village : Bada	• Sir I have asked for time from you, I am saying you will give me time give me an opportunity. my points will be presented, I read.	•
The regional officer of GPCB says that, yes, until then, if anyone want to present they can.			
291	Dhvani Shah Village : Bada	• I want to read then it takes 5 minutes to get the provision then why can't you wait?	•
292	Valji Jashraj Charan	Sir, The number of National Bird Peacock in Bada village is more than 500. Peacock is a Schedule I bird, although peacock is a schedule 1 bird, it is not mentioned in their EIA report, The number of peacocks in the surrounding 10 km buffer area is more than 1500. Here in where the largest	•

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		peacock nest, Bada Vipsyana center is only half a km away, only 150 to 200 peacocks are seen wandering in Vipsyana center even today. Also in Pachotia area in Peer Wala area is our supporter Brother's village, they will tell the truth but may not back down. More than 500 peacocks are also found in the shelter extension of Pachotia village. You don't connect my mobile phone, otherwise I will show the video to tell our supporting brothers whether it is Pachotia area or not. So the number of peacocks is 500 in this area. More than 100 flocks come to graze which I have seen with my eyes. I have also sent you my selfie with GPS. If this project comes, these people have not shown a single number of peacocks in the EIA report. All these numbers of peacocks are not so much public but also GHCL supporters can see, the number of peacocks is 1000. Due to coming of GHCL company, our peacocks will have to be shifted. We are of the opinion that innocent and dumb animals will be sacrificed. So why not a single peacock appeared in its EIA report.	
• It is stated by the Chairman that , that we have also taken this presentation in the minutes. We are going to take the each presentation on record. Whater discussion has been made on peacock, it will be taken on record.			
293	Valji Jashraj Charan	• Number of 500 to 1000 peacocks should be recorded.	•
• It is stated by the Chairman that sure sure,			
294	Valji Jashraj Charan	• There are 600 to 500 peacocks in the center of Bada Vipsyana only. Sea area, in Aashrey vada pir area, this side has nesting places of peacocks in half a km area. the national bird is a schedule 1 bird, So, if you can see, ask these people that during your study, not a single peacock was seen, when or how	• Details of the peacock have been given and a conservation plan for it has also been suggested • Talking about peacocks, you don't have to decide whether I should do this sitting or standing One

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		many peacocks were recorded. Ask sir to stand up and answer calmly, show the number of peacock studied in our area, otherwise if you connect my mobile then will show the number of peacocks living in your area with proof. Vipsyana Kendra, Bhimnath Temple peacock's eating video I show on mobile but you are affected for this thing. I accept it, you disagree.	minute, the details of peacocks has been shown and conservation plan has also given.
295	Laxman Kanji Karani	Provincial officer, company officers are lying, now don't support them, cancel the hearing.	•
• It is told by the Chairman, that your submission has been taken on record. The submission of Peacock's matter has been taken on record.			
296	Charan Valji	• So what do we mean by taking on record what you have taken on record and these people sir are hearings, then they don't have an answer to any of our things....	•
• It is informed by Chairman that this hearing is for taking on record only.			
297		• Sir we have presented our questions we have found my answer satisfactory, so we are satisfied, we have presented our questions in written and oral form here in our buffer zone. We have received satisfactory answers to our queries from the company and so we support the company.	•
• The regional officer of GPCB says that there is another representation?			
298		• Dear Chairman sir, Thank you very much for holding today's hearing .	•
• There is noise • It is known by the chairman that , make a presentation calmly sir, then speak what you want to make a presentation. • It is known by the Chairman that Madam , you should make your presentation.			
299		• Do not repeat one presentation.	•
• It is informed by the Chairman, to make your presentation			
300		• Thousands of people we are satisfied with this company and now we are leaving Welcome GHCL.	•

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• It is stated by the Chairman that we should stop the internal discussion • The regional officer of GPCB says that , stop internal discussion and sit quietly. • It is stated by Chairman that , make your presentation inside.....			
301		• Listen as I give my presentation on environment. People with this support have no environmental question and they want to complete the hearing, let them go their way, let us ask environmental questions.	•
• Regional officer of GPCB states that please sit in your seat before presenting the questions calmly. • There is noise			
302		• Welcome GHCL, Welcome GHCL	•
• There is noise • It is announced by the Chairman that, please take your seat.			
303	Dhvani Shah Village : Bada	• Sir, we calmed our people, other people came and provoked.	•
• It is stated by the chairman that , it is our humble request to all that do not take law and order in hand, maintain peace. It is a humble request to the police officer to maintain peace and obey the rules and make them sit down.			
304	Dhvani Shah Village : Bada	• Sir, our people often sit but if you give them opportunities to provoke, then I will not be able to do anything.	•
• It is stated by the Chairman that , Madam, please make your presentation			
305	Dhvani Shah Village : Bada	• No representative of NEERI is present here to answer our questions. Right sir that may be taken on record.	•
• It is stated by the chairman sure sure we take record.			
306	Dhvani Shah Village : Bada	• Violation of EIA notification. EIA notification clearly gives the rights to me seek clarification and ask the question. they don't have an answer when was the base line data done? do they know what is the base line data? A draft EIA is made under this EIA notification. On the basis of the draft EIA, this public hearing is held. The people and the base line data who conduct the field visits to prepare the draft EIA are called the base line data.	•
• Provincial Officer of GPCB said that Madam please proceed with your presentation which is the explanation of the applicable officers. Please continue.			

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307	Dhvani Shah Village : Bada	• I say you do not stop.	•
• Regional Officer of GPCB said that , I am not stopping you, go with your issues.			
308	Dhvani Shah Village : Bada	I am coninueing, please you don't talk in between. This draft EIA report is made on the basis of the base line which you have facilitated that this public hearing is done is the EIA report which is draft....	•
• It is stated by the chairman that first madam you maintain peace we should follow discipline here.			
309		• Sir you have come to other people's side in support of the company also tell them that please respect us, I told all my people. Why does the second mic turn on? He wants to provoke.	•
• It is stated by the chairman that , I am giving a general instruction, madam. It is a general instruction, I have not used the word supporter or opponent. This is my general instruction. Clearly has been said, I have appealed to everyone to maintain peace. Do not use the same words. I have clear cut said appealed everyone to maintain peace, in everyone all has come.			
310	Dhvani Shah Village : Bada	• You facilitate the second mic to continue	•
311	Vijay Gadhvi	No no no you all are biased and the ladies are presenting, the daughter from village is presenting to save the environment, a deputy collector tries to suppress her.	•
• It is stated by the chairman that I am here to listen to her and appeal to others to maintain discipline to listen her.			
312	Vijay Gadhvi	• We still have thousands of questions that you have to answer	•
313	Dhvani Shah Village : Bada	• You give us an assurance that another mic will not be switched on so that people will not be disturbed and everyone will sit quietly and listen. Will you sit or not? Sir everyone will listen. Sir, base line data can not be older than three years from the date of this public hearing happens. They don't know their baseline.	•
• It is stated by the chairman that sure sure speak speak....			
314	Dhvani Shah Village : Bada	• What I give, take it on record that the consultant is not present and those who are present do not even know when the base lines were taken and I tell you that the TOR according to them	•

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• It is stated by the chairman that yes yes yes tell.....			
315	Dhvani Shah Village : Bada	What I want to say is that the TOR provided based on baseline in August 2021, their base line was done in 2018-2019, if there is any authorization letter from them, from ESE or environment ministry, that using old data, such false EIA is made and false public. hearing can process, present here and if not present my point be taken on record.	•
• It is stated by the chairman that yes yes yes.....			
316	Dhvani Shah Village : Bada	This public hearing is being conducted completely in violation of EIA and EC procedure. They have not done any kind of base line data in these villages. They have not seen the turtle, sea, vipassana center, temple of these villages. People have not met, to such an extent sir, you are the district magistrate and our father. Sir, in your presence, those who have the right, who have the duty to do so, we the people, the Pagadia fishermen who have been doing Pagadia fishing for years since the time of British, there is no EIA of them, in your presence we do not get even that protection, we have come withour study record. They come with false EIA and come to present which is illegal according to us. We have presented it to you, you said let the process go ahead I am making my second point.	•
• It is stated by the Chairman that, Madam, let me make it clear to you that the public hearing is neither legal nor illegal. All the objections you have raised now are illegal, this is a public hearing to record the matter.			
317	Dhvani Shah Village : Bada	• Pagadia is not mentioned at all. If you are new in our district, then for your information let me tell you that Pagadia fisherman has been doing sea fishing for years. The high & low tide will release 3 degrees of warm water in the sea if there is no EIA of those people,	•

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		then those people have not been studied at all. The villages have not come, the EIA is totally wrong whose public hearing is being facilitated now	
• It is stated by the Chairman yes			
318	Dhvani Shah Village : Bada	Apart from that, this is a forest area, inside the forest area there are spices, animals, plant spices, whatever we want to say, my request to increase of volume of my mic , People sitting behind are not able to hear. Secondly, if five degrees warmer water is to be released into the sea, the impact it will have on our people is not on record, the process of public hearing is fraudulent, illegal. Secondly, in the forest area, Valji Charanbhai has repeatedly said that we have protected species, it is nesting, it is clearly in the EIA report that this species is also done in the EIA report in the forest area, the permission taken from the forest presented to us.	•
• Regional officer of GPCB said that if your presentation is over, then continue..			
319	Valji Jashraj Charan	• Madam has asked question, now answer it.	•
320		Can I get information yes or no, please give us direction that permission is taken or EIA permission is taken then show me letter, give me letter number, will get details.	•
Regional Officer of GPCB said that any such information is present, Mr.Proponent? madam, ask your question until you get the answer, parallelly you continue.			
321		• I get the answer, I further, no sir I get the answer, I will present, answer me. I will present next yes or no? And the number and date of the letter, do not even bother to bring the letter and present it.	•
322		Sir, we do not want any proof, if permission has been taken, yes or no, this public hearing has been attended so many, sir, we know how the public hearing is	•

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		done. Our question their answer in public hearing, no other things.	
• GPCB Regional Officer said that please maintain some peace.			
323	Laxman Kanji Kariya	• Regional officer sir If there is no reply, cancel this illegal public hearing.	•
324	Dhvani Shah Village : Bada	• can i read the EIA report ?	•
• GPCB regional Officer said that yes sure.			
325	Dhvani Shah Village : Bada	• In EIA 6.4 it is clearly granted and for unity information verification project that you or I cannot take over the notification of it .	•
• It is stated by the Chairman, that I am not overruled.			
326			• Today, when the forest is being studied, the study experts to go for the forest have done it with their permission or not.
327		• SDM sir, my humble request, why VIP treatment to these people as well as our company men. He has been seated in a chair and a fan, we have been given only a chair.	•
• It is stated by the Chairman that, you have also been given and chair given, you are standing of your own free will, everyone sit down, you have been given a chair, sit down, you have been given a chair, everyone sit down.			
328		• And why does the company have the courage to sit like this? Place them here and if the company doesn't have the certificate, cancel it now.	•
• It is stated by the chairman that whether there is a certificate or not , we take it on record, this public hearing is not a question answer session, if your question is not answered, then we take it on record.			
329		The record will not work, even in this modern ,time, everything is available on the net, these people have all the equipment, the net, all this is being recorded, the net is working, search now from the net, otherwise cancel it. We don't want anything except one thing. If this company, this GHCL, considers us as fool, considers us as villagers, then we will not let it happen and these people are given	•

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		VIP treatment and we are tied up in this barricade. Media and international media to request to take a note of this. If thay don't have the answer, cancel it now and catch it running. If sir now you want to do them a favour, then say it open, we are joining GHCL and we are with GHCL.	
• It is stated by Chairman that we have only come to listen to the objections , this is environmental hearing and we are not giving any response from the company, we are only within the scope of our work and we are not making a decision at this time. Whatever your questions are, It is technical, there is no obligation to answer it, it is being recorded minute by minute and wherever it is possible to send the video, which is an objection, we will send it impartially.			
330		Sir, please direct the company to ask for the certificate from the head office and cancel the hearing if it is not presented. we don't want anything except that thing, If it is illegal then how we can give one question from last 2-3 hours...	
• What information is available with you ? as stated by Regional Officer of GPCB.			
331			• I am referring to the entire report of the forest department which has been submitted by the forest department. The question of forest department NEERI 's report, whether permission to go to forest or not is a question of forest department, it has nothing to do with public hearing.
332		• Our question is that if his certificate is not shown, cancel this hearing, issue a fresh notice and give a fresh order and conduct a fresh hearing.	•
• It is stated by the Chairman, that the hearing is not legal or illegal, the public hearing for the objection you are raising now, without a public hearing it is not possible to say what you are saying now.			
333		• No positive response from you.	•
• It is stated by the Chairman that, but we are			
334		• Ask them for the certificate from NEERI from head office.	•

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• It is stated by the chairman that, in the public hearing, we are sitting to take your objections, who are you to say that don't take objections, it won't work.			
335		• No public hearing on false EIA report. We do not want any report except one thing. Show us correction of report, correction in report	•
• It is stated by Chairman that this is your suggestion and we take the suggestion. We take your objection and suggestion .			
336		• This process is not legal. Now send them to Mandvi, From Mandvi will get access to net, fetch from there and come back. Can't attach the mobile, what acceptance do we have with you? We have nothing to do with the company we want to talk to you. • Show date and certificate.	• NEERI has certificate and renewed in 2022. • Renewed on 5 September 2022.
337		• Sir we want the certificate of this report prepared in 2018-2019. The second thing is that the certificate is on record in 2022, before that it is not specifically this is to be taken on record. And another thing is that again this is a member uncle with me and the police came to take it away from him. Please, the next thing is that the EIA report consultant is here for the public hearing so that our questions can be answered peacefully and satisfactorily. The consultant is not present. It is illegal and they does not have the answer to our questions. Therefore, this public hearing under your chairmanship is illegal. This is a presentation to take note of what is happening.	•
338		Sir, there are no many documents, there is nothing to present to us, yet why continue this hearing? And yet you don't want to cancel. Why are so many people protesting that there is no certificate giving you base because the EIA report is completely wrong, there is no certificate. Even if the EIA report proves that the same is wrong, still why the public hearing continues.	•
• It is stated by the chairman that, the public hearing is for your objection, I have no decision to give			

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here, there is no point in keeping the public hearing on or off, the objection you will give now or after that week is today that are same.			
339		• This hearing will be for the public and if you cannot answer, you should cancel.	•
• It is stated by Chairman that, we will take your objections and your answers on record, we will not decide whether the report is wrong or right.			
340		• Ask all these experts sitting here, ask them.	•
• The Chairman said that all these reports will go to the Central Committee and it will be decided there			
341		Sir, I request you, make those stand up who made this and we question, if they don't have it then this hearing has no meaning.	•
• It is stated by the Chairman, that this is not a forum for questioning, this is not a session, this is for your objections. This is not to get a satisfactory answer after questioning, now objections have to be taken			
342		• And if the one who has something wrong in his stomach stands with his face down, all these people are sitting without record, they have no record.	•
• It is stated by Chairman that we are taking objection from him.			
343		• You ask a question ,	•
• It is informed by the Chairman that this is not to be answered from him, the Central Committee will ask for your objections from him. We give direction for your objection, submit your objection, we are neutral.			
344		• Are you from Public or GHCL?	•
• It is stated by the Chairman, that we are neutral and have taken your objections as they will have to answer your objections to the Central Committee.			
345		• So why is the company not responding, why are you responding? Why is the officer not answering?	•
• It is stated by the Chairman that since I am the Chairman I am the Chairman of the Environmental Hearing I can answer.			
346	Dhvani Shah Village : Bada	Sir first of all you often say, let me speak for a minute. You repeatedly say that the presentation of this public hearing is only for our hearing, which is a violation of my right as directed in para 6.4 of this EIA notification. And you violate it right. if you're not allowed us to get answers and give directions then give us answers.	•
• It is stated by the Chairman that here legal or illegal			
347	Dhvani Shah	• Here again I read, the person present	•

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	Village : Bada	at the venue shall be granted opportunity to seek clarification of the project from the applicant you can not take over our opportunity back , We have the opportunity to ask questions , seek information and clarification.	
• Regional officer of GPCB said that, madam you are asking your questions. This is followed by presentations that go further.			
348	Dhvani Shah Village : Bada	• Sir it goes on record that you say that repeatedly.	•
349	Valji Jashraj Charan	• Sir, the previos hearing was canceled in just 15 minutes , then you have every right to cancel the hearing as well. Even if we protest so much, why not call you to cancel the hearing? We canceled the previos one in just 15 minutes.	•
• According to the regional officer of GPCB, this committee has no authority to evaluate the EIA report.			
350	Keshav Gadhavi	• Sir, this is a favor. Inspite of so much outrage from our people, we request you to the officer sir, inspite of so much outrage, why do you people support the company. Why are you asking us so many questions?	•
• Regional officer of GPCB said that this committee does not support anyone. This committee is only for listening to the public.			
351	Keshav Gadhavi	• No one believes in the power of the public. What question do you want to ask? And secondly sir you have no answer to any of our questions. The company does not respond. And you come in front of us and you sir give up and cancel it. Request to cancel this public hearing. sir Despite the public outcry you don't understand why. Remember this, you have babies, we have babies too. There are also children in this public. Remember not a single person, money does not work. I am the son of a Charan. I am the son of a Charan. Remember to cancel this.	•
352	Meet Gadhavi	• Hon'ble Officer, We have been seeing since morning that inspite of very vehement opposition this	•

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• It is stated by Chairman that, but we have recorded all your objections. We give in writing. You are discussing the matter that this committee has no powers for that. That power does not belong to the committee.			
353	Meet Gadhavi	• You have the power to further hearing canceled in view of public protest, we demand again cancel this, cancel this.	•
• It is stated by the Chairman that we are not from the Power Committee , that you are demanding. • Regional officer of GPCB said Whatever your submissions will be forwarded. Whatever the representation is.			
354	Dhvani Shah Village : Bada	• If your committee does not have these powers, then you do not have the power to violate the provisions of the EIA notification. • 6.4 Clearly states that, I have rights to Seek Information and Clarification from the Project Proponent. Let me fulfill my right. You do whatever you want to do. • Sir, this EIA notification has not been made online by me, but you yourself said that you should search this draft EIA from the internet. So I also fetched this EIA notification from net. I need information and clarification. • Sir...	•
355	Meet Gadhavi	• Hon'ble officer sir, let us also be heard personally. What are you talking about inside? In the ongoing hearing, you listen to the company's officer personally, listen to us also personally, you can't talk to any employee of the company personally on the stage in your own way. What does it mean to talk personally?	•
• It is stated by the Chairman that, they called to answer your question. • Listen to what the chairman has been told, said by the regional officer of GPCB.			
356	Meet Gadhavi	• Sir, what did you do personally? Declare, and cancel and why above?	•
• As told by the regional officer of GPCB that, I am talking about the same .			
357	Meet Gadhavi	• Sir, what did you do personally? Declare, and cancel and why above?	•
• I am talking about the same as told by GPCB regional Officer.			
358	Meet Gadhavi	• If you don't allow anyone to come on stage, then why do you allow employees of the company to come?	•
359		• Sir, you don't let us pass through this barricade.	•

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360		• Sir, how can you allow a company man to come on the stage like this, you are biased, you are biased, sir, how did you tell us that sir, if you cannot cross the barricade, then how can the company employ ?	•
• As told by the regional officer of GPCB that, please listen my talk. • There is noise			
361		• Sir how can he talk to you personally?	•
• According to GPCB regional Officer that nothing is personl.			
362		• You should do it on Mic sir.	•
• It is stated by the chairman that if you want to know the answer, listen to the answer, you should not only ask questions, but also know the answer. • According to GPCB regional Officer that, the answer to your questions is that the information available with the party is given and the rest will be given along with the minutes.			
363		• Sir, how can the rights of the company go up on the stage like this, sir	•
• As told by the regional officer of GPCB that, you can continue with the next presentation, we can do any presentation if you have to.			
364		• Honorable Chairman, I want to come and make a presentation on your desk. Please allow me. If you allow the company, I am your public. You have come to listen to us. Open this barricade. This barricade should be opened. If you listen to the compny what is your relation with them?	•
• Stated by GPCB Regional Officer that, put forward your points			
365		• Sir, this is the issue, why did you talk personally, sir	•
366		• Chairman sir, is this public hearing or company hearing you are listening to the official of the company. Chairman why did you listen in personal this is not your collusion.	•
• According to GPCB regional Officer that, I called the proponent of the project or his representative, I wanted an answer from them, what information is available with them and I have disclosed the same answer to you, no information is private.			
367		• Sir, let our Gadhavi sir come there privately. Our V.K.Gadhavi was allowed to come there in private. If you let the employees of the company come, then you don't let us come? And this barricade should be opened.	•
• Continue your next submission as told by GPCB regional officer.			

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368		• Sir, first clarify your attitude towards the company, why the company can climb over your dais?	•
• It is stated by the chairman that he was called to get information from the company and to answer your questions.He was called here to give you the information available to him at the moment.			
369		• He climbed up, you have been giving such instructions here and there for so many times, he came to you in this way and spoke in this way, what did you do to stop him or come down and tell me what you want to say in the mic.	
• It is stated by Chairman that, that is why he was kept down.			
370		• How can they have so much courage? How can they have so much courage? You know that there are only two persons on this stage, one Pollution Department Officer and Provisanal Officer. Apart from these two persons, no third person has any right to come and he climed and he talks and you listen but you can't tell him directly that you go down there.	•
• It is stated by the Chairman, that you make your presentation and make any presentation related to the subject.			
371		• Sir, I request you that this public hearing is not legal, we are asking so many questions, but you are one sided, this public hearing should be canceled, the public is tired of hearing one thing, the public is not in control of itself, hearing your question repeatedly, you do not speak in favor of it.	•
• It is stated by Chairman that we take your objection on record. You say notification is wrong this report is wrong then we take it on record.			
372		• Honorable Chairman, Why the company's employee came on the stage, you are in doubt or the company is in doubt, please clarify your attitude.	•
• It is stated by the chairman, that the company has been called to know what is on hand.			
373		• Sir if you want to speak on hand, you can also announce from the mic, do what you have on hand. Is it reasonable to come up on the stage and make a secret complaint with Provincial Officer, sir?	•
• It is stated by the chairman that because all of you were, 10 people talking together did not make			

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any sound, so we have told them to give whatever they have with them right now.			
374		• Sir, this thing doesn't work	•
• According to the regional officer of GPCB, that if we have to make any presentation regarding the issue then make the presentation further			
375		• If this is not the issue, then what is this sir, this is the issue of these people, how can any our man come to you, sir	•
• As told by the regional officer of GPCB, if we have to present the issue then do it.			
376		• If you are letting company employees in, keep our people inside and open this barricade.	•
• As told by the regional officer of GPCB, if we have to present the issue then do it.			
377		• Sir, our submission is that again we are told that you are giving a personal suggestion to the company, we are getting suspicious.	•
• According to the regional officer of GPCB, If we have to make any presentation,then do it			
378		• You are 100% with the company. As a defender of democracy, I will appeal to the media to show this to the officer who went to meet this personnel, because you are our voice, because these bullies have been opposing democracy since morning.	•
379	Vijay Gadhavi	• That voice will not sit, if you go and clarify everything privately, your voice is also heard in the recording, which we have no right to be an officer. company officer should answer here. The officials are speaking in favor of the company which is pressed by the company We will present in the High Court.	•
• It is stated by the Chairman, that if you want to make a representation, do so. This is not a representation, this is an allegation, this is not a representation, this is an allegation.			
380	Vijay Gadhavi	• This is the presentation sir	•
• It is stated by the chairman that , this is not a representation, it is an accusation, you also do not know what they did say to him coming over here, you will not make a one-sided accusation, no, no, you are not within the limits of the law and you will not take the law into your hands. Accusing an officer You accuse an officer			
381	Vijay Gadhavi	• We say what we saw.	•
• It is stated by the Chairman, that, that is why I would like to you make your presentation.			
382	Vijay Gadhavi	• No one has taken law and order into their hands. You yourself have said what	•

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		has come in this video. This is not a story.	
It is informed by Chairman, that is why this public hearing is organized to listen your presentation. Whether it is legal or illegal after the public hearing we will take your objections then the company will reply to the Central Government Committee.			
383	Vijay Gadhavi	• Sir, the one thing in each of you which is opposing the company, it is criticized and the company which is favoring	•
• It is stated by the Chairman that you do , you certainly protest, you are not denied.			
384	Vijay Gadhavi	• If we raise slogans, we have no right in the public, in the...	•
• It is stated by Chairman, that you protest. We are not denying it to you. We have no objection to your objection, but you give us your objection in the form of objection, written and verbal, we are sitting to take it.			
385		• These ladies do oral..	•
• It is stated by the Chairman that, But if you talk about it.			
386	Vijay Gadhavi	• But there is a procedure, sir, we are not blind either. We saw how open you were to him when he came to you. What came to say that we doubted?	•
• It is stated by the chairman that, but that is to give you clarity.			
387	Vijay Gadhavi	• We came to you and said that I will go up, there is no this much even for the Prime Minister, I have goneput something like Pakistan where you have put this barricade but that is...	•
• As told by the regional Officer of GPCB, Mr. Vijay Bhai, what personal presentation do you have to make?			
388	Vijay Gadhavi	• It is to make a personal presentation to sir.	•
• As told by the regional officer of GPCB, that. you can come here, I will take the permission of sir, one person should come.			
389	Dhvani Shah Village : Bada	• Sir Vijay Bhai and our other brothers and sisters presented, Saheb this democracy is being demonstrated. You are on the stage, the representative of GHCL Company is closest to you, and people 30 feet away from you. This is how democracies performing. Invite us there. Would you do it if someone came and spoke? You won't, but this company will, because this company set it up, they gave you statements, and we know for sure that you're speaking from their side.	•

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390	Laxman Kanji Karani Village: Pachotia	Provisional officer sir my humble appeal, I am Laxman Kanji Karani, village Pachotia, this is the person you were talking to is our chairman the leader of this fight, he is the honored officer of His Excellency the President of India. V. K. Gadhavi has been awarded by a medal by the supreme majesty of India for his devotion to duty. For that, the people of Kutch of Mandvi taluka are also ready to give this head. Respect our officers.	•
• It is stated by the Chairman that , we have to proceed politely and co-operatively, we have no personal			
391	Laxman Kanji Karani	• The provincial officer, majesty is the head of the respected constitution he has honored him and you don't believe it.	•
• It is stated by Chairman Shri , We believe all and all are given respect.			
392	Valji Charan	• Sir cancel this public hearing by cooperating with all of us. if you really want to cooperate with us, then really you like people who came to kill innocent lives, people came to save innocent lives, then you cooperate with us accept our demand and go fair public. last hearing was cancelled, in the same way, even if you cancel this public hearing late, my demand is the same, cancel it.	•
• It is stated by the chairman that, my cooperation is with you.			
393		• Gadhavi Sir we really appreciate your cooperation. He has cooperated. Your full cooperation will be when you give us a letter of cancellation of public hearing, we will consider that you have cooperated. Otherwise, we believe that you have come to the wrong hearing by taking a decision in favor of the company.	•
• It is stated by Chairman that , my cooperation to you...			
394		• Sir, remember one thing here dumb animals are grazing cows, buffaloes, as well as sheep, goats. Take their prayers, you remember, you will not be favored, I say as charan.	•
• GPCB Regional Officer that, this committee has no such authority to take decision on report. No such authority committee has. Whether you have suggestions or objections, we have to minuteize all this			

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and send it to Delhi and the decision has to be taken from the Ministry.			
395		• Started from 11 am from morning, arrived at 5 pm. You can see from the last hour how many people are protesting in such a big mandap, even after that, it is wrong to conduct the hearing by force for so many hours. And you have the authority that if there is so much public outcry and so much opposition, there is no need to conduct any public hearings that I know you you are not authorized to give such permission for company. We all are educated. I know you are not here to give clearance but you have the right to take decision regarding public hearing, but you should understand that.	•
• It is stated by the Chairman, that the public hearing has already been canceled once and it is the second time.			
396		• 2 times, will happen 5-10 times.	•
• It is stated by Chairman that , we take your objections			
397		• It is your duty to see and understand that if a project of 3.5 thousand crores is going to be done in the village where the area is to be built over 1300 acres of land, the entire area is to be destroyed, if such a project comes, people will protest.	•
• It is stated by the Chairman that , that's why we have held a public hearing, madam my authority is to hear you and I am hearing you.			
398		• Your authority is to listen to me and to listen to the people. Your authority is also to take decisions regarding the public hearing and last time the public hearing was canceled only because those who came instead of you saw that the public hearing could not be held amid so much public outrage. That's all this time..	•
• It is stated by the Chairman that , there was no presentation then, now you have made all the presentation, minuted it, everything has been recorded and we have taken it in writing. Now if you have any presentation, speak up.			
399		• So that this time one minute one minute.....	•
400		• Sir, you also wrote the note about the public revolt that was happening at that time in such a way that the public	•

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		hearing was postponed due to unavoidable reasons, not that the public hearing was postponed due to public outrage. Even now there is more outrage than what you are seeing since morning but still not taking a decision .. showing insensitivity.	
• As stated by GPCB Regional Officer, that your outrage, your grievance will be minute along with any representation and forwarded for further action. If there is no other representation regarding the project then with the permission of the authorized chairman.....			
401		• Honorable Chairman, I want to ask you a question that the hearing that was held was due to exigent circumstances which was such an exigent circumstance due to that was canceled the answer should be presented to us here.	•
• According to the Regional officer of GPCB, that last time the reply to the approval was sent in the minutes and it is written in it that the issue is yours, the issue is written only because of unavoidable circumstances.			
402	Mitrajit Gadhavi	• In the RTI I read, Sir in the above mentioned matter to know that a public hearing was scheduled for this company on 06/04/2022, in which the hearing was cancelled due to strong opposition from the local people Sir I am Mitrajit Vijay Kumar Gadhavi.....	•
• According to GPCB regional Officer, that it is unavoidable circumstances and public outrage is a part of unavoidable circumstances.			
403		• Sir there is a difference between vehement opposition and compelling circumstances. Sir, there is a lot of difference	•
404		• When any person is doing public protest, writes public protest in the word sir.	•
• According to the regional officer of GPCB, Well now someone has to present about the project...			
405	Mitrajit Gadhavi	• Request to you sir, responsible, why contradiction sir, in your speech and in RTI to you I am Mitrajit Vijayakumar Gadhavi. • So what is the part of ? • What do you mean by giving different in report and paper ? You yourself are not clear , your government system is not clear. • No no sir here is our presentation, our	•

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		presentation. • No no sir here is our presentation , our presentation • Otherwise, we the people will sit in your office on the fast movement and....	
• According to GPCB Regional Officer, all your submissions have been heard. • Chairman said that now all your submissions have been heard. • This is not part of the public hearing. Discuss the present.			
406		• So after hearing so many presentations, you don't have an answer.	
407	Meet Gadhavi	• What do you mean by giving different in report and paper ? You yourself are not clear , your government system is not clear.	•
• According to the regional officer of GPCB, that if there is no any further presentation about the project, then with the permission of the honorable chairman, we declare today's public hearing complete.			
408	Meet Gadhavi	• No no sir here is our presentation, our presentation	•
• Stated by the Regional Officer of GPCB, speak presentation.			
409	Meet Gadhavi	• Do not take any decision until our presentation is over.	•
• Speak your presentation as told by the Regional Officer of GPCB.			
410		• Otherwise, these people, we will sit in your office on the fast movement.	•
• It was stated by the chairman that if there is a presentation, speak, but if it is a presentation, then you speak			
411	Dhvani Shah Village : Bada	• This is all presentation.	•
As stated by Chairman No, this is not a representation.			
412	Dhvani Shah Village : Bada	• This is all presentation.	•
• As stated by the Chairman, Madam, there is a hearing regarding this presentation. Present regarding them madam.			
413	Valji Jashraj Charan	• But these are all submissions, sir, even though we made all these submissions, what did we get the answer ?	•
• It was stated by the Chairman, but we did take it on record			
414	Valji Jashraj Charan	• But not a single answer was received.	•
• It was stated by the Chairman. that even if we have taken the record, we have taken the record. present your presentation (we are taking on record) • Chairman said that we take everything on record, we also take on record as many questions as you asked and you did not get the answer.			

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415	Vijay Karshan Gadhavi	• Sir I am Vijay Karshan Gadhavi. I am presenting to you, which company to you which village Bada, No water body is mentioned in form no. 1, answer what is it? In that, oh sit down, calm down, sit down quitely, sit down please, we have to ask a question, we don't want to riot, sit down camly,	• Hello, Feasibility Report is clearly mentioned and that is part of Form No.1.
416	Laxman Kanji Karani:	• Now let us stop the slogans for a while and let us speak freely, listen to them, answer them, but in the boundaries of our Bada, in the boundaries of Pachotia, as many Dharma places, as many lakes as there are, let us answer them all. • No, tell me where is it ? • No, now there is a public hearing, so we are going to ask questions • No, tell me where is it? • Mentioned? Show us where it's done. • Mentioned in Feasibility Report in Form No. 1, submitted to Govt. • Sir, we are asking the question, it has already been given.	• Now we have to see. • No, no, we have shown you the water body that was your question and it is mentioned in it . • It is mentioned in Pre-feasibility report and submitted to Govt.
• If the information is available in your report, then provide. said by the Regional Officer of GPCB • Chairman said, that's why on-record is running, if there is a record with them, it gives information or not, we take it in the minutes.			
417		• • Absolutely. We don't have any GPCB but I want a clear answer on this. Show the map, we have to show something here, why you sir! What do we want from them sir? What do we ask of you? • We are asking these questions after studying this, they are saying it is with them, then everything is with them, then sir, , we expect from you that the company shows us all this.	• These details are given by EIA. Land use map. These details are given in the EIA land use map. • today..
• Submit the information you have, as told by the Regional Officer of GPCB.			
418		• Mentioned in Form 1, tell us! • Sir show us the map. • Sir have you read your own EIA report, on form, feasibility report? If you haven't read it, send it to someone who has read it, we need an answer. who	• Map 4.3 is given in ecology report, we have it now. • Currently we do not have the details online

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		gives You answer something else No Sir (Do You Know) Importance of Form 1. Form 1 is the basic documentation of TOR. • Form No. 1 is the basic documentation of TOR The issue, there are rivers, there are lakes, any kind of mention is not covered in Form No. 1 and Feasibility Report because you have given completely wrong information in the TOR and the documents taken.	mentioned in five places. • in Section 4.3 of the Ecological Report .map is given. • We have answered you. and details are given.
Chairman stated that, it is your representation that he has taken any permission. There is no evidence with them, they did not follow the proper guidelines, we are recording it, this is your presentation.			
419	Vijaybhai Gadhavi	• They Can't answer, this is also an answer.	
• Chairman stated that , yes , we also take the presentation on record.			
420	Dhvani Shah Village : Bada	• Is Sir NEERI's representative who made this report or not? • yes or not and he does know the local language or not? • If he doesn't know, sir, those who know, they don't know anything, those who know, ask him to tell us. But please sir give your introduction first. • Hindi, we can speak Hindi. You Said I am • You prepaid this report? • Have you prepaid this report? • Please keep an answer of the question? • Does Not mentioned any water body Is Our Question? Why does it not mention? Please tell them and ask the Gujarati. you don't know Gujarati. unfortunately we also know Gujarati as you see, • Read and translate	• Here is Dr. R. J. Kripadam. • They don't know how. • Dr. R. J. Kripadam: Hello, I am Dr. R. J. Kripadam • Dr. R. J. Kripadam: Name is in a single language! • Dr. R. J. Kripadam: My name is R. J. Karipadam, I am a scientist in NEERI, so my designation is scientist. • Dr. R. J. Kripadam: I am not alone we are 25 people. • Dr. R. J. Kripadam: Ya • Dr. R. J. Kripadam: Ya please • Form No. 1 is

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			given in Point No. 4 • It is written that that he says
• Chairman said that, Madam, Madam, this hearing should not be conducted in this manner.			
421	Dhvani Shah Village : Bada	• You don't know.	•
• Chairman said that the hearing is conducted in this way, you make a presentation, he gives your answer if he has, and if he doesn't, he will refuse.			
422	Vijaybhai Gadhavi	• Sir this is a very serious thing because we need you for environment... • Siir I.....	•
• Chairman stated that , we take your objections.			
423	Vijaybhai Gadhvi:	• You take object but what to do with only objection ?	•
•. Chairman stated that we will present the objection above!			
424	Vijaybhai Gadhvi:	• No no we here..... • Hey my sir I have to stay here my boy to lick the dust.	•
• Chairman informed that, we will make your presentation above. Yes, but that's why your objections, that's why...			
425	Vijaybhai Gadhavi:	• My boy has to drink salty water. My boys will get cancer.	•
• Chairman Sridwara said that , sir, that is why I have called you for your objection.			
426	Vijaybhai Gadhavi	• No no means you have to... • No, we don't decide in this.	•
• Chairman said that, you will decide here, it will not happen, there is no authority here, not you or me...			
427	Vijaybhai Gadhavi:	• No, No authority we know, you can't do it here but we have to understand, what is this situation of ours?	•
• Chairman said that, if not, the above head will cancel the plant and not allow it .			
428	Vijaybhai Gadhavi:	• No, we saw that!	•
• Chairman said that people are giving as much as they have .			
429	Dhvani Shah Village : Bada:	• Sir, I request you again, this public hearing is not for taking our suggestions, it is for us to get clarification and information, so please do not use the same phrase again and again. • Not giving, it reads.	•
• Chairman said that They are giving			
430	Dhvani Shah Village : Bada:	• It reads and translates. Sir, do it in Kutchi in local language, if not in Kutchi, do it in Gujarti? Not asked to say in kutchi.	•

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• GPCB regional officer said that we will minute it that they don't have an answer, let the decision be taken by the competent committee. Because you can't stop like this, so keep going. I am telling you the same thing madam, if they don't have an answer then we take it on record.			
431	Dhvani Shah Village : Bada	• They must have an answer !	•
432	Vijaybhai Gadhavi	• No sir, they are not saying that, if they are saying it to us.....	•
• As told by the Regional Officer of GPCB that, Let me ask proponent to give information what they have.			
433	Vijaybhai Gadhavi:	• Not mentioned in the same.	• No No This is an answer considering what has been said. Given its details and map number, now what is its description we have to see from the report.
434	Dhvani Shah Village : Bada:	• You say answer here, explain us. • you explain	• This is that.
435	Vijaybhai Gadhavi	• Brother, keep calm, we are looking for an answer, we are looking for an answer, keep calm. • Sir we have written applications , objections, do any arrangement to take them.	•
• As stated by the Regional Officer of GPCB, that give this side. • Chairman said that whatever objection there is, your government official should go and take as many written representations as they have.			
436	Vijaybhai Gadvi	• Arrange the table here, then there will be no inconvineance.	•
• Chairman stated that , yes yes yes.....			
437	Dhvani Shah Village : Bada	• Sir, please take the table to the side and take the receipt copy of any submission between us, disturbances happen here, put them outside for our submission.	•
• Chairman said that whoever you want to give a written statement, you should give all the written statement to our officers. Speak into the mic. We were about to take written submissions from all.			
438		• At 5 o'clock this evening, we, the GPCB, have to sit here and take written submissions from all. This is because we have raised the issue, if not, In designed	•

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		things, was it possible?	
• Chairman said that we were about to take the written submission of all.			
439		• If any GPCB gives physical submission along with this barricade, we are not going to talk about giving submission to us mentally, then why are we called?	•
• Chairman said that we are taking madam. • All your written submissions will be minuted as stated by the Regional Officer of GPCB.			
440		• Sir, you will not do the same wrong thing 50 times.	•
• Chairman said that, there is nothing wrong.			
441		• It will not help that, there is not the same answer for everything.	•
• Chairman informed that your objection application will be minuted.			
442		• The answer to the argument is no that we are sitting to listen, what is the issue here, GPCB has to come and take written submissions from all, so much barricade has been built, GPCB is sitting 50 feet away, how will they take the objection petitions of public hearing.	•
443	Dhvani Shah Village : Bada	• Sir please set the table to take the receipt copy. Sit us out here, so that we can be comfortable.	•
• As stated by the Regional Officer of GPCB, the arrangements are being done.			
444	Dhvani Shah Village : Bada	• We are not criminal here. We are citizens, you have put us in jail. We bear your oppression since morning. Don't think that you hear us and we hear you. Your suppressed public hearing proceedings We submit to you in peaceful manner. We also ask questions, show you illegality, though it is increaseing. Please I have 6.4 Is the Right to Clarification and Information. Kindly do not hinder, let them answer us, if there is information then the detail is said first, if not then why not. Don't tell us you go online and do it because that's not what it's here for.	•
445	Ritesh Vijaybhai Thakkar	• My name is Ritesh Thakkar. Worked as Assistant Manager at Gujarta Heavy Chemical Limited, Sutrapada from July 2019 to July 2021. I am thankful that those people who have given me	• The very nice presentation that was presented today was also a very nice

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		employment, but the public here, the people who have come here, have to see my eyes and listen to me. For that I have been given a mic, the people presented it, lime stone and salt in the raw material, these two things came up on the display. I present what I saw there. Those people are using lignite there, that's right. Using ammonia gas and in my two years of experience ammonia has leaked many times. Inhaled. The dusting in the plant there has been highlighted many times, those people were taken by the management while I was performing my duties as a safety officer. So there I put those representations. Those people also worked there, but the dust-collector of that place said in the morning that we will arrange dust-collectors here to prevent dusting of soda. But sir, it would be good if those good dust-collectors are arranged in that Sutrapada first, because even today there is so much dusting in that plant, the smoke of their kiln is the dust of their kiln. The smoke of their power plant chimneys is dusting in the surrounding villages. You will find their carbon print in the surrounding fields, that's right. Second, there are two sides of the coin, if a country is to develop, industrialization is necessary, right. government is supporting it, it is also necessary. Do not cause any damage to the environment. If those people are bringing their new industrial equipment as support, then it is necessary to present them on display and it is their duty and the government's duty to satisfy the public. We will only produce so much, we will do it from among these, it is not necessary. How do you think all this dusting is harming the environment, that's right. The loss that was occurring there, the effluent water which is the waste water, which was released into the sea, I have checked with my finger, the	presentation for Vipassana Center. One thing is that the report gives us all the details of Lignite & Ammonia. His second question was good. We also showed in our presentation that we are running this plant for 35 years and the environmental norms were different 35 years ago, when this plant was commissioned and the environmental norms for the old plant are still different, then these environmental norms The equipment of the plant is running accordingly. Now the second thing is that all these equipments of Limestone and any other equipment as we have talked about before are going to be installed very advanced, in which this type of problem will not occurs because, we have faced, seen, it was difficult to control.

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		degree of water was really higher than what is being said now. I had a burning sensation in my finger. There is no temperature measurement calculation so I can't say. This thing should be presented to them systematically. If our madam is asking for the certificate, it should be presented to her. And then you give these people the satisfaction which they are not getting now. So what if the people calm down and satisfy the people, then you go ahead. All want development. There are many companies located in Kutch, be it Welspun, Mann Company, Surya, there are many companies, which I don't want to mention. Kutch has developed because of it, that's right. Industrialization will increase the country's GDP. We will cooperate with you in the country which is the goal of Modi sir, 5 trillion economy. We will make a self-reliant India. But on the other hand, you adjust the equipment, outlet that we are using in your current plant and operate it well, then you think of something here, that's right. You will say that I will use this equipment well here, OK, when you drive the conveyor belt there, the siren will run , so it will not disturb the people nearby? Can meditation centers run? The meditation center which is running since 1991, sir is correct. Which has given millions of people a better way of life. The practice of rising is being taught continuously here, right. Can it be taught here? What we need to think about is sir, we have heard the question from the people and have answered them that we will run the company with advanced equipment that will not make noise. Just don't show it. Actually, where is the equipment that will make a sound that it will not make a sound in one and half kilometers, the center is located in one and a half kilometers, it is equal to your	For complete design change, and all new equipment suppose lime kiln like all densification plant. All types of soda dusting equipment will be of new design, densification plants will not have any chimneys in the plant. But we have to say that all these equipments will be changed because of what we have shown them. Their design will be modified. As of today, if we talk about dust, the environmental norms, which were 150 grams, have been reduced to 30 mg, so today it is made very strict, so it becomes necessary to make the equipment etc. and after that these norms are maintained. As is well done, Norms may be lower than what is shown.

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		boundary. So how will Sadhana be done in it? Such seekers of the future that today's young generation are taking good rites, panchshil being taught there, do not steal, not to be drunk, not to speak falsely. Today I have been doing sadhana for 22 years, so there is no intoxication sir, I have been standing without any intoxication since morning, how I am standing on is due to this sadhana. If this sadhana is not done on your future generation, then we develop as much at your expense, no matter how much materiality is changed, but we do not know how to make good use of it. If knowledge comes, we can use it well and if that center is suppressed by such a center sir, then we really should not bring such companies. It is my suggestion to the management of the company that they should be taken away from this area, where it is so rich in environment, where there is such a beautiful beach. I pause my speech, say Bharat Mata Ki Jai.	
446	Dhvani Shah Village : Bada:	• Sir, I thank you. you praised about your plant, but I want to give some praise, sir, tell me whether I am telling the truth or not? Site visit of GPCB to your plant on October 15 was done on the basis of complaint yes or no? • Complaints, people's complaints • Right • say from the front. • Joint site visit was done on 31st October. • You have been issued number of time showcauses, closures have also been made. • Sir our comments are not against GPCB. • Ok sir thank you, our allegation is not on GPCB, our just one submission. We don't convince people that you are not doing any kind of environmental compliance on your existing plant and you want to do the same here, so we have since, I started speaking and my	• GPCB • Listen GPCB is very sensitive organization. And if there is any kind of small issue, if there is a complaint, then the people of GPCB will visit, and do verification on the part of the complaint and write. • The number of times you need to talk. • Listen to me, you • Listen to me Number of times this type of visit has been done

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		fellow members are speaking, since you are an illegalist within this process. While Pagadia has been recognized as important by the British Gazetteer for so many years, this report states that there is no fishing in the area. Such a company would come to us and hypothetically submit and operate an Environmental Control Device. We cannot have any expectation, hope, trust, confidence, because they have not taken any kind of environmentally sensitive steps in the existing plant. Their same effluent which is hot water, lime stone mixed with ammonia mixed effluent, which is released into the sea, all our members here have done site visits there themselves. Based on that, a complaint has been made, on the basis of which GPCB has been taken action. Unfortunately, call it ours unfortunately, we could not bring the copy of Site Visit, but will definitely bring it and our whole village will study it. And your efforts to mis guide us today, which is an existing plant without any kind of violation, we will show it by black and white water and milk separator, it would be better if you don't mislead us. Secondly, even today there are huge piles of lime stone, slurry, any by-product or acid, whatever is on the shore. Even today. On that, the site complaint was done and visited was made. You have taken some action, GPCB does their job, we have no doubt about it. GPCB belongs to us, and works for our good. So you are not trying to create an image that we are against GPCB or doubting on GPCB. They are our parents. Our environment remains clean through them. Because they implements the same, and what does it implement? How much does it do? This is not a hearing on the GPCB. Since all these years you have been issued show cause notice etc. These people who are	and.... • See all plants today, no plants closed any time today. But all these plants get small derivation, so the show cause notice of GPCB always comes. And that shows we can doubt on GPCB today. But GPCB norms are so strict, now people are asking online. When the derivation takes place, they know immediately. And those people visit and with or without complet means in this plant... • When this plant is running, minor derivation often occurs, GPCB comes, take complaint it and listens to its presentation. Take direct action of how true it is. It often happens that there are small accidental problems in the plant, then it is given for it, and GPCB says, by when you will attend to this, a complete plan is given and it is

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		here have personally visited your plant and also seen the videos, so we also know clearly what is going on there and what our situation is going to be. . When british also include our pagadiya? But you do not include then What you can can do for us. None and we don't expect too. But our expectation is that the President sees the illegality from the beginning, yet we still expect, that he will be heard us. And take the necessary steps for us. Second thing, not only Pagadia, here on Gauchar land, on government land, people who are alive and awake, who are grazers who are goods holders, who are migrant goods holders, that place is not even mentioned. But unfortunately for you sir, which is the company, few educated people came out. In the villages, they came to know that the company did not go to the people living in the Chanian area and mentioned them. Sir, all those under you, in your presence, under your protection, who live by trusting you, this company does not mention. Sir you go above this suppression. How is it sir, we hope you will take note of this and take necessary action.	given.
• Chairman said that surely, madam, whatever presentation we have, we will send it word to word, word to word, there will be no change in it.			
447	Charan Keshav GadhAvi	• We have a request, Charan Keshav Gadhavi I am speaking Khodiyar Mano devotee, Sir I am charan. Remember these cows, buffaloes whether the are giving false bribes or fodder or they are not giving fodder, they will give it for two or three months now. Even if those people give fodder for two or three months, if you ask them about our sheep and goats, who will answer the question, who will give the sheep or to the goats or who will give the sheep or to the goats? Ask them the answer? And still answer?	•

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• Will you give, speak ? as stated by Chairman.			
448	Vijaybhai Gadhavi	• Chairman Sir, I have a question about GHCL Greenfield Chemicals complex Project village bada, no water body is mentioned in Form No. 1. Give the clarification about it. Sir please give.	• In the ecological report 4.4.2 the water body is located. our observation and literature review suggests there are no major wetlands present with in study area i.e. 10 km buffer area of the project site however, there are total 6 seasonal drainages that run north to south in the study area, these drainages have small check dam are built on them which do not accumulate over flowing run of water for the short period. A part form being important hydrological features in the semi -arid area, this check dam is also an important habitat for many bird species and water source for wild life in the rhythm of one such seasonal drain is known as Vangdi River which flows from north to south. Adjustment to project site in Western Site of Proposed Project Site (Map 4.3). There is one checkdam on this river adjacent to project site boundary of the project site. However, all such drainages are seasonal in nature and flow only during rainy days. This drainage produces water from the main land to the Arabian Sea on the Kutch coast. Apart from drainage and

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			dam, there are number of pond location in study area. This pond mostly have smaller catchment area and are located near village, wasteland, forest, or in the agriculture area to hold rain water for domestic use such as drinking for human small minor seasonal pond is located at 250 meters. in South-East direction from the proposed project boundary. A Village Pond is located at Bada Village in North-East direction. These ponds may not be important hydrological features but they provide a crucial source of drinking water for wildlife in the region .
449	Vijayakumar Gadhavi	• Sir, Bada river passes near us, you has shown it seasonal, when did you survey it or was it seasonal? • But sir, if there is no water in drought, why can you say seasonal, if today, sir, listen, it has stopped raining for 2 months, there is water in the river. 6 months ago Please accept this report as misquoted. • What is ? how ? • But sir our river is not seasonal. There is a dam on it, and it remains full of water, it is hidden.	• This river is classified as seasonal and we have been side by side from the river bed for number of times. • No it is not but it is classified as a seasonal river. • Classification The classification of rivers of this type as seasonal rever is shown. • It is clearly written that it has a dam and that it has a dam and it has water all rituals are utility.

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450	Dhvani Shah Village : Bada	• Sir, only one thing, from where did you read such a long paragraph from this report. • Our question is Related to Form 1. Our question was related to Form 1. Form 1 and EIA report are different, don't mislead us and secondly you say that there is seasonal river and you tell us about standard but standard says that there is seasonal river then what is seasonal river is seasonal river according to you. Coming in that season you have to do a study which you don't even show your desire to do, you just do a three month four month study and say it has no ecological importance then you misguide us also you misguide the authority and you unfortunately mistakenly said that It will not matter if we leave it but are an educated people sir. • But what you are reading sir ? • But why not? We will wait for it? We Want Form 1. • No sir, the correction is wrong in the EIA report, come again, the EIA report is wrong, come again, that is our suggestion, the EIA report is wrong, you go back, come to us again with the EIA report, we will give a suggestion that you have not studied in the season, in monsoon. If this is not active, then tell us.	• Ecological Report 4.4.2. • All this is given in point number 2 dash 3 in form 1. • I don't have form 1 right now. • Listen to me your suggestions are recorded any corrections will be done in EIA. This is a draft report and will be included in the final EIA report.
451	Vijayakumar Gadhavi	• Chairman sir, we want to save environment we said something, you saw everything saw such questions, we say the report is wrong. He himself admitted that	

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		form number 1 in our report is this, that all these are not mentioned. our river is not seasonal. I mean we're not going to get butter out from the water. we do because these people made that report all wrong. I'll ask up to this time till tomorrow. Explain all that in the report. We don't want explanations. If you don't have an explanation, then say no to it, we won't insist that we want it.	
452	Dhvani Shah Village : Bada	• Sir second time you were showing me notification issue date 9th May 2022 there is another notification dated 14th February 2022 in which it is clearly written that you cannot set up your plant within 500 meters area of any wet river have you seen that. And if you want to see, your proposed project site is totally illegal because this river goes to the bank and what you say is first Vegadi river plus there is another seasonal river as well which is passing through your project site. Convently in EIA report in form 1 has said about it, that you will divert but it will not have any environmental impact but how do you know how many animals live in the seasonal river? when there is water during rains and how many grasses grow? How many trees are grown? how much ground water is recharged? how much the surrounding water bodies get nutritious? you have not done any kind of study about it and you have done wrong seeding. Project's 14th February 2022 Valentine's Day, Environment Ministry has shown its love for the rivers, and has ordered to protect the rivers, that you cannot set up your company here. That's our suggestion, what do you	

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		do now? When you go to MoEF, what will you do on the basis of our suggestion to remove this project from here? Answer us.	
453	Vijayakumar Gadhavi	• Please we always respect each other till this morning we said a lot, now let's talk to the company in such a way that the relationship becomes normal.	
• It is said by the Chairman that whatever your presentation is, state it			
454	Vijayakumar Gadhavi	• Sir, we need this answer, this is the water body in form 1, we need this answer, sir, we have our life on it, sir, we live on it, our whole base is on it, when GHCL comes, then all of us....	• In Form No. 2 is written, area Which is Important or Sensitive for Ecological research Water Fall on of Water Body ECO person Zone in By For of Mountainous Forest.
455	Vijayakumar Gadhavi	• Sir this is not clearance • Sir, the answer we are getting is not satisfactory, the question asked is not satisfactory, it is not in their project report, their project report is wrong, it is requested that no hearing be held.	• It states that Coastal Land Zone Land Sand dunes Schedule 1 an over side along being area been 0.8 km South-East River to vengdi River 0.5 km North-West for the Two Sea Site run near to the plant unless forest out Site project boundary.
• It is stated by the Chairman that whatever your submission is			
456	Dhvani Shah Village : Bada	• • Sir whatever have read is in English....	
• It is stated by the Chairman that yes yes yes...			
457	Dhvani Shah Village : Bada	• What he has read in English, how can people know it in Gujarati, did not translate it into vernacular language....	• Let us give it in the report or we will make the minutes and the reply will be given in Gujarati
458		• Sir, it is a request that inspite of so much public outcry, why so many times.....	•
459	Vijay kumar	• Sir, why is it with you that we will	• We did not say that we

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	Gadhavi	give, he will give or you will give	will give.
• It is stated by the Chairman that we will send your submission above.			
460	Vijay kumar Gadhvi	• no no no.....	•
• It is stated by the Chairperson that we will have to respond, we will put your presentation up			
461	Dhvani Shah Village : Bada	• Sir 6.4 Public Hearing Proceedings Please, Sir here too they know that people don't know English. Public hearing should be held in vernacular language. However, it reads in English. Unfortunate people here knows english. He read them in English, but he did not mention that the sewers will be built and the seasonal river is coming here. Tell them this is written without mentioning that he will build a drain and discharge their water into the Vegdi river. And they were saying about Sand dune, the question of sand dune will come later, that time you say them. even if Vegdi river is a seasonal river, according to them, its study is in the season in which it is active, it has water, in which life force lives on it, on which When people are alive,. The answer has not been given to us yet. They had any such permission to skip that season and study another random season even before getting TOR, that is illegality. Before receiving the TOR, they did the report and study as per their convenience. This is the baseline data that is three years old, when the public hearing is held today, it has no legal validity. Let's go ahead.	•
• It is stated by Chairman, that madam I am telling you again, that there is no forum to decide legality and illegality. We will put above your objections which you presented in this forum, which are illegal. Don't get confused yet we are not sitting down to decide. We are not sitting here to decide.			
462	Dhvani Shah Village : Bada	• • We are not confused at all.	•

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• It is stated by the Chairman that we only you.....			
463	Dhvani Shah Village : Bada	• We also told you under the public hearing proceedings, you have the right, the procedure to cancel is the only clause. And we are so clear but you don't understand that we are confused sir....	•
• It is stated by the Chairman that we...			
464	Dhvani Shah Village : Bada	• We are so clear, we want answer we told you we have the right. You don't think we are confused.	•
• It is stated by the Chairman that sure....			
465	Dhvani Shah Village : Bada	• Yes sir, even though they have no right, they filed an appeal on the illegal EIA report. You have executed your order to conduct this public hearing. We do not support you to conduct this public hearing. No problem, we will make further submissions.	•
466	Vijay Gadhavi	• Chairman sir, it is stated that government land is to be taken in this project. So we are local residents here, our animals will graze, we will have many jobs, so what government land will this company take? Tell us a little.	• Here is the question of revenue, It is seen by revenue department. • This is government land and come in center and will be complete when the project is completed.
• Provide the information as stated by the Regional Officer of GPCB.			
467	Vijay Gadhavi	• No we have government land there, we have roads. • Stand up and answer. • One minute sir let me say one thing, sir We are not doing false stubbornness. • I don't understand English, so you explain me in Gujarati. • Sir, Govt. I am asking the same thing, Sir, that if I want to take government land in this, after I apply..... • What is it done sir?	• In the feasibility report... • This item is given in feasibility report . • These details are given in feasibility report. • We have applied already.

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		• No no, the report that you have given or given to the government belongs to the public and stage is your personal, not that you have any personal dealings with the government.	• Details are given in prefability. Survey number wise details are given in prefability report. • I was going to ask the same sir, all these details are revenue's issue. Environment is not an issue. So, there is issue for revenue, even though it is said...
468		• Village land is called village land.	• Although the details of this revenue are given in the report, another thing is that there is no Gauchar land In it.
469		• Village land is called village land, that means the government also has the rules for it, it is not like that, only the company and the government are talking. The people of the village are asking whether the government land of the village is given or not and they have to give an answer as to what has been given. And even if you say that there is no other Gauchar land, prove that it is not Gauchar. This village has cattle population. If you showed that in your EIA, you should say that. How much cattle population is there in this village and according to the rule set by the government how many cattle per acre are there in the gauchar and how is this calculated and if you are going to take this gauchar what will you do to those animals how will they live?	• Every question you ask about is for the collector office and government office etc. All the details of which are the government lands of which we ....
470	Vijay Gadhavi	• Siri , sir this... • • •	• Calculation is that ? When the government will give this government land, it will be given according to the law. • We will reply in minutes. We don't have the details.

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		• • Chairman Sir, we are asking so that this land has not been taken away from us as it has been shown in its assessment report. So if they have a report, where are the survey numbers's map? So if we find out, don't wake up tomorrow and accept as this will go to the company only • We want it now • • • No, no, sir, you have to come with full preparation. Chairman sir it is required. Chairman sir, all the answers are given like this, there is no such guarantee, so what are these people. What we are and what are this people we want to know.	• It is not needed that everything be provided in deep.There is no need to read every detailed answer right now.
471	Dhvani Shah Village : Bada	• Sir, Government land if not declared Gaucher land, but used as Gaucher is an important part for ecology and people. You say, you have done a survey. You have created an EIA report. We say, you created it sitting on the computer. If you have made an EIA here again, you have deliberately hidden it that during the rains and winters when grass is available, our cows come here to graze all our cattle. In this report you oppress us. you know english You can create a report by money. But you oppress us, you have not mentioned about us in it, you have not acknowledged the existence of us as per the Constitution of India. You Can Not Deny Our Right Our existence. We live here, the Constitution acknowledges us. Gives us the right, that whatever	• For your information this has been recorded.

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		profession we can pack, if you exclude us in your report, you exclude us under the provisions of the Constitution of India. For a time for study and other procedure	
• The regional officer of GPCB said that now you have another submission.			
472	Valji Jashraj Charan	• Sure, sir there are many representations about our environment.	•
• It is said by the chairman that you work one presentation after another.			
473	Valji Jashraj Charan	• You listen	•
• It is said by the chairman that yes yes say..... • It is stated by the Chairman that madam in the constitution, according to Article 226 and Article 232 in the Hon'ble High Court and the Supreme Court, there is a provision that if a person's constitutional right is lost, they can approch the High Court and the Supreme Court. There is no one stopping you either, you all have ready gone, when their judgment comes, the judgment of the Hon'ble High Court and the Hon'ble Supreme Court will bind you all.			
474	Dhvani Shah Village : Bada	• Sir we are presenting to you. You tell us of the Supreme Court or the High Court..	•
• Chairman stated that because you showed us the Constitution that's why I have replied to you it .			
475	Dhvani Shah Village : Bada	• No, I am showing the structure because they want to include us in the study.	•
• It is told by the chairman that so madam, we are taking your minutes in the report.			
476	Dhvani Shah Village : Bada	• Then you...	•
• It is stated by the Chairman that this thing is not in the report.			
477	Dhvani Shah Village : Bada	• Why did you show me the constitution. you can't say that you want to go to the Supreme Court .	•
• It is said by the Chairman that it will not be decided sitting here, Madam.			
478	Dhvani Shah Village : Bada	• So where did I ask you to decide.	•
• It is said by the Chairman that we have less authority. I am only asking your objection. No authority to give.			
479	Dhvani Shah Village : Bada	• I am not saying anything. Nothing tells you to make a decision. I make my submission.	•
• It is said by the chairman that we are nobody to take the decision.			
480	Dhvani Shah Village : Bada	• So why you put me in High Court and Supreme Court.	•
• It is stated by the Chairman that we are not here to take a decision			

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481	Dhvani Shah Village : Bada	• Where did I say, that decide as S.D.M like this..	•
• It is informed by the Chairman that we will report the same study which you reported in minutes to minutes.			
482	Dhvani Shah Village : Bada	• Then you ask me to go to Supreme Court and High Court. This is my submission, please take it on record and settle it.	•
• It is said by the chairman that you speak to the point madam.			
483	Dhvani Shah Village : Bada	• No sir, sir this was my problem.	•
• It is told by the chairman that we have taken your objection into consideration.			
484	Dhvani Shah Village : Bada	• Then why are you asking to go to Supreme Court and High Court.	•
• It is said by the Chairman that we are just talking that we all are not competent officials.			
485	Dhvani Shah Village : Bada	• Where am I asking you to make a decision? You took the decision that was within your competence. I am not asking you to take a decision in this matter.	•
• It is said by the Chairman that you present your objections.			
486	Dhvani Shah Village : Bada	• Should have been written neutrally. It whould have been finished.	•
• It is stated by the chairman that if it is illegal, that will also be decided.			
487	Dhvani Shah Village : Bada	• Yes, it will be seen. Let me speak now. You are sitting to counter me.	•
• It is said by the chairman that say yes			
488	Dhvani Shah Village : Bada	• Why are you countering me from the company side.	•
• It is stated by the Chairman that I have given a neutral reply from the company side.			
489	Dhvani Shah Village : Bada	• So why are you asking me to go to Supreme Court and High Court?	•
• It is told by the Chairman that you told me to take a decision here, so I said.			
490	Dhvani Shah Village : Bada	• Who threw? Who threw? Don't throw anything. Don't throw anything.	•
• It is stated by the Chairperson that you may continue your objections, Madam.			
491	Dhvani Shah Village : Bada	• Sir, my objection was that you advised me that there is no need to go to High Court and Supreme Court. Do not take any action. Delete it from the record even though the record is on.	•
• It is said by the Regional Officer that whatever objection you have, present it. That is why we are standing here. We listen one after another. Minutes to minutes are happening.			

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492	Vijay Gadhavi	• As per Office Memorandum dated 14/02/2022 of Environment Department of Government of India any industrial project should be at least 500 meters away from the river but the boundary of this project is on the banks of river Vengli which is violated in the above office memorandum so this company is giving false information and did process to takes permission so that this.....	•
• It is stated by the Chairman that yes yes yes.....			
493	Vijay Gadhavi	• How far is this river, answer the question? As per office memorandum dated 14/02/2022 how far is the river from the project this my question can be written from anywhere and answered from the company.	•
• It is informed by the Regional Officer of GPCB that your question has been written down here in writing where you have submitted in writing.			
494	Vijay Gadhavi	• Ok sir, thank you sir, brother discipline means strong discipline.	•
• It is said by GPCB Regional Officer that any information is given for. Vengli river			
495		•	• In this, the plant area and company's land is roughly half a kilometer away from the river.
496	Vijay Gadhavi	• Sir gave that answer sir. • Sir, we say that the company is close to what it is today as per office memorandum dated 14/02/2022 or not? It says Mention this, which Indicates, I want to note this. I want to go to the Supreme Court tomorrow. • Sir have written the answer to this?.	• The company has a joint land but its plant is roughly half a kilometer. • I have given the answer, that is my answer.
• It is told by the GPCB regional officer that yes, I wrote it down and he told that it is about half a kilometer away.....			
497	Vijay Gadhavi	• So it shouldn't be	•
• The Regional Officer of GPCB is told that yes exactly , that is the answer			
498	Vijay Gadhavi	• No, he did not show it to me because, I have to go to the	•

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		Supreme Court on one-one minute. I write your answer on your minutes, sir, I will not ask wrong questions to bother you. There are questions about going to Supreme tribunal or High Court. We don't have annoying questions.	
• GPCB regional officer says no no sure all your queries are welcome here			
499	Vijay Gadhavi	• Say sir...	•
500		• Where are the minutes being written here because usually on this side of the GPCB notes and above it.	•
• It is stated by the Chairman that the minutes are being written here also and what is on camera is also done in the minutes.			
501		• Not on camera Not on camera Where are the minutes written?	•
• It is told by the chairman that madam, it is an oral presentation, it has to be taken on camera, if you give it in writing, we will write it in writing and if you give it orally, that is on camera recorded.			
502		• That's a different thing, that's a different thing • It is a submission from you where are the written minutes. How will you read the written minutes.	•
• It is stated by the Regional Officer of GPCB that everything is recorded.			
503		• After all this is over, we talked in the morning that after the public hearing is over, you have to read it, then, where is it being written in those minutes, who is writing it, there is not a single paper visible on the desk of GPCB.	•
• According to the Regional Officer of GPCB, the minutes are fined and uploaded online.			
504		• It has to be put on the net	•
• It is stated by the Regional Officer of GPCB, that there is nothing to keep private in this video..			
505		• Must be posted on the net at the end of each public hearing and it should be read after the end of public hearing.	•
• It is stated by the Regional Officer of GPCB that it is not possible to write such a submission on record, therefore only recording is done.			
506		• Yes, but its points can be written...	•
• The regional officer of GPCB has informed that the issues are written, all the records are recorded, we will make the record by listening to it.			

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507	Dhvani Shah Village : Bada	• Sir, what time did you come, it was 6 o'clock, we took a little break from 11 o'clock to 6 o'clock, and we can get some introduction of people sitting here on two sides.	•
• GPCB regional officer says ma'am continue with your questions. • It is said by the Chairman that Madam present your objections. • Please continue your questions continue your presentation by Regional Officer of GPCB.			
508		• No no this...	•
• It is stated by the Regional Officer of GPCB that if you have any objections we write madam minutes.			
509	Dhvani Shah Village : Bada	• Both sides have an introduction sir.	•
• It is stated by the Chairman that all those introductions do not come in such hearings.			
510	Dhvani Shah Village : Bada	• You have given him permission, so they are sitting on this side, so what authority does he have? We want to understand why, when you said that GPCB should take the submission, then Mamlatdar Sir came to us to take it, when this submission should be taken by GPCB, but why is he asking, we want to understand who is still sitting with him. We want to recognize them.	•
• It is said by the chairman that ma'am you should talk about your objection, you are separating the question from the topic now....			
511	Dhvani Shah Village : Bada	• Sir, here from the public...	•
• It is said by the Chairman No no, Madam, talk about the objection, talk about the objection.			
512	Vijay Gadhavi	• Sister, Chairman Sir, Sister's question is not unreasonable, be it our officer, journalist, company officer, I will present this video of the whole day in the Supreme and anywhere, even in the head office, the MLA's son should sit on the table and monitor you from there. How reasonable it felt to sit from From what authority was he sitting . Is it a monarchy that the son will sit after the father, with what reason did you allow him to sit, we can ask you...?	•

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• It's getting noisy			
513		• This is our Radia Sir and other person were sitting next to each other as I speak, on the right side at the top end are you trying to influence us. 20-25 people can do the entire monitoring, they have built such a big boundary for us, have done this, fencing, and allowing to seat someone's son, how much is your consistency? Sir, there is a question mark on it.	•
• It is said by the Chairman that you, you discuss your objections and do not discuss anything else.			
514	Vijay Gadhavi	• It matters, it matters, it matters, it matters you are influenced.	•
• Your objection is recorded said by the Chairperson.			
515	Vijay Gadhavi	• Record my objection. The GPCB and our chairmanship held this public hearing since I arrived in the morning. In that public hearing, the public was kept out of the bush with a strict police presence, a barricade was placed in the middle, and the MLA's son and the company officer kept a chair next to him. Sitting, gossiping continuously. Answer it or not, but you are biased, we see.	•
• It is told by the Chairman that if your presentation is project related then do it.			
516	Vijay Gadhavi	• Sir it was related to this project. People's hearing needs to be very free, very open hearted, no one can suppress, no one can bind, it is called public hearing. But it doesn't matter, it doesn't matter. Going forward, I am asking my question, the EIA report has not mentioned the details of Pagadia fisherman and the marine report has been misrepresented. So the information has been deliberately hidden. This is the process of taking permission based on wrong information, so sir, does this impact the soil or not....	• This was already shown but still in the case where the effluent is discharged. It has no impact. On the contrary, there is more growth of fish. In other words, the Pagadia you mentioned are fishing in the coastal area. While this pipeline will be one to one and a half kilometers deep in the sea and roughy ten to ten and half meters deep, where Pagadia will not be

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		• No sir, I am saying whether Pagadia fisherman is there or not? Where they will do the fishing is not to be seen by the the company, it should be mentioned that there are Pagadia fishermen in this area. If you are referring to the same animal, referring to a turtle, you are bringing a small object of your company's and appreciating, such a large class socially and ecological are to be harmed. And when the environment is going to be affected, you didn't mention those people or did you? Tell us that. And if not, then you have written the EIA report wrongly.	fishing. • In this report, one, fishing is discussed, namely Pagadia fishermen.....
517		• Show us where this is done in the report Provide information on where this is mention in the Environment Report.	•
518		• Show page number	•
519		• Give page number and show in projector if you have arrangement.	•
520		• And what do you think, a pipeline will be laid at such a depth one and a half kilometers away, then the fishes in such a big sea decide whether we should live on this side of the one and a half kilometer in the sea or on that side which means the fishes...	• Pagadiya fishermen are fishing on shores normally.
521		• That is how the fish come to the shore?	• But when the treated effluent is discharged from this pipe, its effect does not occur within 200 meters.
522		• Answer the question whether fishing is there or not. We ask one question and you answer the other question. Is the area around Bada and Mandvi talukas fishing or not?	• Page no. 52 It is written.
523	Vijay Gadhavi.	• Chairman Sir, you have nothing to do in this matter. Mr. Chairman, we say that the fisherman is such a	• His opinion was being taken and written. Exactly as written there is no

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		huge number class, who will have direct effects, it should have been in this report. Many projects have been closed due to fishermen, many challenging. So how many fishers is it mentioned anywhere. tell me	commercial fishing in this area.
524	Dhvani Shah Village : Bada	• Sir again please.	• It is mentioned in this that there is no commercial fishing in this area, hence the quantity is off...
525	Vijay Gadhavi	• Where it is mentioned state how many fishermen there are and where it is mentioned. • No, sir, there is fishing, there are fishermen here. In our report, it is written that there are no fishermen in Bada.	• It is not written how many fishermen are there but it is mention that it not present. • It is not even written that there is no fishing in Bada.
526	Dhvani Shah Village : Bada	• Sir you have written, there is a fisherman in Bada. But you have clearly written that no fish is found dead which is clearly written in the report. • Second Declaration of Commercial Fishing Sir, Paghadias do not fish only for their food. Fishing is done here, it is sold to commercial. What data have you requested from the Fisheries Department? Please give us the details of the letter when you received it from the Fisheries Department? And what data has been taken.	• Page no. ... • It is also mentioned in details of fishing on page 101 in the EIA marine report.
527	Vijay Gadhavi	• Sir, means he has mentioned that fishing does not happen in Bada ? Have they done , sir, if you have done it later... • No no show what is there ? • Sir, let us show you how many fishermen we have. I want all this in writing. I don't want to bother	• There is no commercial fishing but the details of the fishing that takes place are given on page no. 111 of EIA. • I don't know why all these reports, what we are talking about is available.

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		you.	And the details can be seen.
• It's getting noisy. • It is told by the regional officer of GPCB that if the fishing record is still OK then give it. Give whatever is available.			
528	Vijay Gadhavi.	• no no.....	•
• What records are available with the company ? as stated by the Regional Officer of GPCB.			
529	Vijay Gadhavi	• If you have not mentioned it then don't show to us we don't mind if you did don't mention it. We don't want to have it. • Where is it in Bada? • Show me where it is mentioned, I don't see you in the report. • Where is the show? show Show page number. • Show the number, sir will have the report, sir will see. • Where are you sir? See page number 111 above, show it, show it sir. Show us that. Show above screen, sir see what answers are given, you see page no. 111.	• Details of 193 Fishermen are given 193.. • In the Bada area, in the adjacent area of Bada. • is written. • When? sir see page no. 111 have shown you.
• It is stated by GPCB Regional Officer that what he says is on record.			
530	Valji Jashraj Charan	• He does not say no sir, it is not about your favour, but he says it is an extravagant answer sir, what can a chairman like you say, see above 111.	• Whose details are available. It has been given. It has been given in Page no. 193.
531	Vijay Gadhavi	• Chairman sir, see by yourself, is 111 written up, and don't show us. And let the Chairman say that it is 111. If mentioned as such, we approve.	•
• According to the Regional Officer of GPCB, they have been given the information including the page, then we have put it on record as 111.			
532	Vijay Gadhavi	• Look, sir, this is the truth. Sir, you have come to sit for this today, paying so many thousands of rupees at the expense of the police and company, sir. • What is this?	•
• It is said by the Regional Officer of GPCB that send with someone			
533	Vijay Gadhavi	• What is this ? Sister, what is this, sister report is not another study,	•

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		we want to read your impact report. So I have a lot of things in Google. • • Yes Yes OK What is written in this.	
• It is stated by GPCB Regional Officer that the figure written as 193. 193 fishermen in Bada area.			
534	Vijay Gadhavi	• Yes sir, I want to ask them how many fishermen have been given the kit by these people as a social Welfare, the company gives money and gives all this. • Not how many fishermen, but how many fishermen it has given. The company has been saying this for 6 months, • Then why do you say that we will give. • So sir, if this company has sold that kit, then if you give us the figures, we will pair it if we know. • So write that it is not started.	• Our plant has not arrived yet, when it arrives all the details will be given. Small things may be given by a company but still.... • No, some people must have got. Until the plant is commissioned, we will not run any regular CSR. • We don't do regular CSR and we have started quite a few.....
• It is stated by GPCB Regional Officer that yes we are writing the issue.			
535	Vijay Gadhavi.	• The beaches of Bada village and Mandvi taluka have very fine sand dunes due to which green turtles from Indonesia, Australia and Lezte two turtles lay their eggs on these beaches.comes up on this shore , so if the project comes up on this shore, intake channel will be made and water of lime stone and salt will be pour into the polluted water on this shore due to which the turtles will die and stop coming. No information about endangered species falling under Schedule I. None of this information is mentioned in the EIA report in this project form 1. Indicated ask such a rare world species turtle comes here for safety to lay eggs, we are its pier.	• All this problems is studied and will be done and a conservation plan for turtles has been given. The second thing is that nothing should be thrown on the shore, which will discharge within a one and half kilometer and 10 meters depth of the sea. 200 to 500 meters will be discharged and this has no significant impact as shown earlier. Answered. May be the shore gets disturb the shoreline for two seasons while construction continues .
536		• Sir, due to environmental development, these turtles, from	•

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		Kathda to Kari Bada and Bambhadai and on the sea coast from 2019 to 2022, about 7 green-sea turtles have died due to industrial pollution. Here I want to show the information through on record proof RTI. How do I show you my information by sending it to you or showing it via video?	
• It is stated by the Chairman that give your information written and oral presentation give written and presentation			
537		• So sir, my information be taken on record.	•
• It is said by the chairman that yes we will take the pollution.			
538		• During 2019 to 2022 of Green-Sea-Turtles due to industrial pollution, 7 Green-Sea-Turtles on record were registered by the Forest Department and these turtles are stranded here in dead condition, and also injured turtles are stranded here. • Second question, Sir, EIA report page no. 9 No. 9 of these people. It has been shown that, the time period of site observation for the study of reptiles is between pre-monsoon and post-monsoon season, and no turtles have been observed for site observation, these people say so, those people have shown that. Sea Turtle Green-Sea-Turtle and Olive Reed species come out at night only to lay female eggs and that too at night, and I know maybe you don't know, because of this laying of egg at night data from public are often says, eaten by foxes. The information is reported by the local fishermen to the forest	• The thing is, turtles come at night and lay their eggs, they are also found during the day. Another thing is that, we are not saying, these do not come in the shore, but the area that is in the area of our plant boundary, the rocky area from here, the slope, is not suitable for turtles to lay their eggs. Such is the opinion of the experts, but despite what I said earlier, we are recruiting a special guide to make a conservation plan for these turtles. And after studying all the seasons, they have given us a conservation plan. Which we have to submit in the EC letter, and according to what defect or observation, presentation, that will be given as conservation plan.

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		department. whose eggs have also been taken for rearing, the details of whose eggs have been taken for rearing, whose eggs have been obtained through RTI and this I have enclosed with my application. If you also GPCB Board, you Provincial Officer shri Also, I am Charan Valji Jashraj, I have placed a hard copy of my application along with proof to you before your office. You may have also found from outside in the post. So most of the eggs were found in Mandvi Forest. Large numbers have been found in Mandvi, indicating that sea turtles frequently come in the area. Forest department successfully released 6905 hatchlings from 8545 eggs Drop back into the sea, while these people are saying, not a single turtle hatches here. In this regard, I have given you the information with the signature of the Forest Department through RTI. It should be taken on record even now. Answer sir. When you don't find a single turtle, tell us the day forms your EIA report study, or you ask someone local or the fisherman, if here the turtle has come out to lay eggs? or is the green sea turtle a female turtle came out? Answer me that.	
539	Valji Jashraj Charan	• Sir, I have a question sir, based on the answer given, the question is about the plant boundary of the people, the plant boundary of the people	• This sister was also shown that 2 to 5 degree water will go in 5 degree difference. And if the water is cooled first the

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		is in the barren lands of this side from the Bada forest area, those people are showing that they will plant in the barren lands. It is not the people's plant at the seaside. So the water released from their tunnel will go directly to the sea or not. Yes or no. • This water may or may not be ammoniated plus heated. • Whether or not our question is about ammonia is it or not? • Give this answer whether it is ammonia or not, sir, you tell them, the answer to our question is simply, we question answer according to your opinion. Now my question is if there is any environmental unfairness not about environment then you can stop us. Now I have a question, tell sir to answer whether there is ammoniated water plus hot water or not. • You sir don't ask questions. • I ask you.	content of that water will not be more than 5 degrees maximum, • It has norms for ammonia, the impact of ammonia in soda ash plant is very negligible. • Listen to me first I answer • What is the definition of ammonia? • I am replying you and you are stopping me. I say so.
• GPCB regional officer is told that you have heard the answer.			
540	Valji Jashraj Charan	• Sir one minute one minute sir stop it, you can't stop us. • It is our right. You don't question us. • Aren't you diverting the point yes or no ? yes or no?	• The water that is released... • Have to know to understand this ammonia , this ammonia.... • This ammonia will be released into the sea at a very low level of its limit so there is no impact in sea.
• It is stated by the Chairman that you have been answered.			
541	Valji Jashraj Charan	• We want the answer in yes or no..	•
542	Vijay Gadhavi	• Sir, Chairman Sir,	•
• It is stated by the Chairman that , yes yes yes			

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543	Vijay Gadhavi	• My question is if I ask about turtles, who is the expert in the group here? Give us that answer. Sir, is giving every answer, we need an expert's answer.	•
• There is noise.			
544	Valji Jashraj Charan	• The geological person who answers us who studies these turtles studies.	•
545	Valji Jashraj Charan	• Sir, first give us an introduction and what are your qualifications? Do any of them have degrees? Where do you work? In which organization do you work? Then reply to us. • We will not do it, Sir we will not do it at all, this is Gujarat, not Bihar. Sir we all don't know Hindi.	• Answer given by Dr. Gupta: You will accept the answer in hindi.
• It is said by the chairman , but what to do if the expert you call is not a Gujarati?			
546	Valji Jashraj Charan	• So sir, then sir, arrange for him to speak Gujarati. Bring a translator. Let's hear our answer in Gujarati. Today we are sitting in Gujarat. not in Bihar or Kerala.	• I will translate for him.
• It is stated by the Regional Officer of GPCB that you have received his technical reply.			
547	Vijay Gadhavi.	• Sir, Sir This Sir ... • Chaimen sir, Hindi words will work. Sir, introduce yourself. • Sure • No No Sir recorded. was written. yes then... • Who was not recorded.	• You just speak in English. • My self Dr. Gupta. I am working with Guide. • I read the report of Sundarraj from 2001 to 2002 and ZSI report done at 2019, where it was written that no record found.. • Even then that study .... • There was no direct certificate record of turtle.

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		• Meaning, sir, today you have the report without the study, you can know that...	It is recorded in the study. Okay, now you've heard it, you've heard it all. But it was a seasonal study. That was not the study of the year. That's why we have started studying from June, Which will be a whole year long study.
• It is stated by the Regional Officer of GPCB that , note his reply			
548	Vijay Gadhavi	• I sir..... • No sir, chairman sir, I am saying that the entire report is made from the study with great effort. Wind directions, humidity, all of that. If there is no such information about an endangered species like turtle, then the report is wrong, is it believed or not?	• These studies as they are saying today, is studied. The guide study that is being done today is a study for making a conservation plan. This study is being done on what ZSI has advised. • Main study is ours. • No No, it is studied. Which has done this report in 2019.
549	Valji Jashraj Charan	• Not clear. no no i...	• Get more details about the conservation plan.
550	Vijay Gadhavi	• Sir, can I ask a direct question?	•
• It is stated by the Regional Officer of GPCB that , you can do.			
551	Vijay Gadhavi	• I can do it sir, I did physical study and it was green sea turtle..... • No no sir, everything is ok, the report is generated, check it sir • Chairman Sir .... • No no sir...	• Answer given by Dr. Gupta: Just started Just started We started from June guide • That Was Conservation Planning. • Previous report made by ZSI in May 2019,
• According to the Regional Officer of GPCB , we are taking both the issues on record.			
552	Vijay Gadhavi	• Look sir...	• The previos report was created by ZSI and made by making a physical visit.
• It is stated by the Chairman that , the report of the turtle is from 2019 and now we are taking both his question and your answer on record.			
553	Vijay Gadhavi	• My question is, my question	•

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		is, to be clear, there are green sea turtles in this area. This is not mentioned.	
• It is stated by the Chairman that , OK OK.			
554	Vijay Gadhavi	• There are many rare species which are not mentioned.	•
• It is said by the Chairman that , OK OK.			
555	Vijay Gadhavi	• On asking his expert, he says that I have studied so and so and have not done a physical report.	•
• It is stated by the Chairman that , Yes.			
556	Vijay Gadhavi	• The public hearing was held before the public hearing today, but now those people study. What a reliable thing it is. This is my question.	•
• It is stated by the Chairman that , OK OK.			
557	Valji Jashraj Charan	• Answer and take this on record that the study of these people	•
• It is stated by the Chairman that we are taking everything on record .			
558	Valji Jashraj Charan	• As per EIA notification, this EIA has given that dated 2018. Those people have said that they have done this study in 2018, now this brother is clearly saying that, we have not gone to any place and this EIA page no. Let me also tell you that these people should clearly say what is written on this page. Nor did we see any sea turtles. So how is it written? Those people have written the same without checking the place. While we are local here, we are on the sea 24 hours, our brothers are fishing on the sea. If any turtle comes out injured, any turtle comes out to lay eggs, then we immediately know that the turtle has hatched in this side.	• I am again giving an answer that in 2019 ZSI has done a study and it has done physical verification and this study has been done. Now that the guide have been given because ZSI asked us to prepare a conservation plan, we recruited guide And said that we will study ourselves than give you the conservation plan according they are studying. study done by ZSI in 2019 is in the EIA report.

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559	Vijay Gadhavi.	• Where are the experts here? Sir, ask that is done physically here? Turtles came to our area to see. Even though what he says... • where here where _ • No tell us... • We want experts, we don't listen to this sir, replies round and round. Sir, we ask the expert to stand in front of us and give us an answer. You are not bound to answer yes or no.	• ZSI is physically done. • Bada's shore, in the surrounding area... • No, it happened in 2019, those people are doing it now.
560	Valji Jashraj Charan	• It is clearly written on page no. 9 of the EIA report that, in page no. 9 of the EIA, it has been shown that the period of site inspection for the study of reptiles is the period shown by these people in the inspection 2018. Before rainy season and after rainy season, these people came to observe, they did not see sea turtles. When now the people, the organization, the official who surveyed the turtle is not here, then what is the meaning of public hearing?	•
561	Valji Jashraj Charan	• Let me say this today. Even today we will say, cancel it, someone...	•
• According to the Regional Officer of GPCB , we take all your turtle matter sent to us,it is Include in minutes.			
562	Valji Jashraj Charan	• Sir , this thing is new which these people have studied no one is present to answer us to answer the question	•
• It is also stated by the regional officer of GPCB that we take it.			
563	Valji Jashraj Charan	• These people admit, the Green sea Turtle is a Schedule 1 reptile, an amphibian, and	•

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		for its study, no one has come from the company, nor is there a conservation plan to do so, from where the EIA has been done. We are giving you this proof, whether the brother is here or has not visited, which should be taken on record should be taken on record.	
• It is said by the regional officer of GPCB that OK OK.			
564	Vijay Gadhavi	• Sir, the company has not answered my question, the government land is being taken in this project, so please give me its map and survey number. If you have ever asked a question, I think they will searching. answer now. • These people will be searching so they will respond.	• We will submit .
• The Regional Officer of GPCB has informed that whatever representation you have, forward it			
565	Vijay Gadhavi	• We do, sir, no answer, sir.	•
• It is said by the regional officer of GPCB, Hello, there is a record of government land, give a clear answer. Whatever it is, give a clear answer.			
566		•	• The record is available and will be submitted.
567	Vijay Gadhavi	• Who shall the public tell? Answer that • Sir, we have lost the village land, then our gauchar land has gone, the government land has gone, if we have to report, then we did not ask, who are you yourself that you will use the government land. So we say which land to use?	• This report will come in minutes.
• It is stated by GPCB Regional Officer that after OK.... • It is said by the Chairman that your government land matter has been taken which we will take the answer in minutes if not then we will take it accordingly in minutes.....			
568	Valji Jashraj Charan	• Now another question, Sir, page no. 15 of the EIA report, point no. 4.5 Ecology and	• The details of Lizard are given in page number 3.8

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		Biodiversity, written in the report, the claim made in the report of reptiles as there is no presence of any rare and highly protected reptiles in the proposed project area or buffer zone. Absolutely wrong. Lalira Lake in the southern direction of the village is the land right in the middle of the proposed project area, and within 2 km around the lake there are many species of Sandha, Lizard, Swanlazard, including Swanlazard and Swan lizards. Schedule 2 is a protected reptile, as evidenced by photos taken on camera by GPS, the Sandha that often come to caves, burrowing underground. I have also included in my application by taking photos through GPS, also in mobile. But I don't have mobile connection so can't show you. I tell you all these animals coming in 500 to 600 Swanlazard is schedule 2 have their colonies above in Lake Lalira. This company lives right in the middle. Nowhere have these people mentioned anything in the EIA report. And the adjacent protected forest and buffer zone are home of many species of reptiles and amphibians, and are also proof. And due to technical problem, I could not show my proof. However, I have sent this proof in my application. So where is the number of 500 sandhas in 2 km around the protected area and Lalira lake which is not mentioned in	

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		the EIA report, or even answered me? • • What did you say sir, I did not hear the answer. Speak again sir? • • Details are given. You don't have the details of who lives here, how many colonies there are, while we have those details. Let us take this matter on record. These people have only given details.	• The details of Lizard are given in page number 3.8.
• It is said by the Chairman that OK OK			
569	Valji Jashraj Charan	• Similarly, 90 km from Ami Bada place, wherever there is Sandha species, there are Lizard species in the whole Bada area . These people know that these people have simply mentioned it, but they have not given the place where it is because 200 to 500 The Sandha of the joints are in the middle of the company, in the center of the company, which is the animal of schedule 2, near the protected guard.	•
570	Vijay Gadhavi	• Sir, I have a question related this. Can I ask is there anyone who khow about Sandha anyone is there.Sir.... • But sir, if there are many seas like Salim Mamad, I can give the answer name, but I want to know the answer, who is the expert of sandha, in what temperature can sandha live, how much heat can it tolerate, how much noise can it tolerate, how much dust can it tolerate? Are you an expert in Sandha? is there anyone.	• It is Mr. Jethwa who is not present and Mr. Jethwa is an accredited expert.
• It is said by the chairman that no, not now, that is not an expert, he say...			
571	Vijay Gadhavi	• taken on record.	•

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• It is stated by the Chairman that OK.			
572	Vijay Gadhavi	• No sir, it should not be, no it should be an alternative arrangement. We have entered the fray to save life, and we will not be fooled by the answer. What study have these people done for all this, if it is not a study then sir has read it.	•
573		• If the expert is not present, then the one who has done it is the expert, then his name and his accredition of the prepare who and his accreditation certificate or not.	• Dr. Bharat Jethwa has done it and is NABAT accredited and as an expert....
• It is told by the Chairman that the details are sufficient to answer your presentation, we will take the rest on record, you should make your presentation.			
574		• Honorable sir and have been asking for the certificate form the last four hours, till now they are responsible, there is lack of net and equipment, they can go mandvi and come so many times, they don't have the certificate, the entire EIA report is false, so we cancel this hearing.	•
• It is stated by the Chairman that the certificate...			
575		• No, sir, certificate, we are standing, these lenders are sitting, we are standing, these lenders are sitting, call for their certificate, otherwise cancel the hearing.	•
• It is told by the chairman that the certificate is given to you			
576		• No sir	•
• It is stated by the Chairman that the certificate you say that this data survey is illegal and your submission is taken on record will not be decided here.			
577		• sir	•
• It is said by the Chairman that what is right and wrong will not be decided between you			
578		• Sir, who records the minutes, what is to be written, write down the book and where it is written and show who writes	•

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		it.	
• According to GPCB regional officer, audio and video recording of all these is going on.			
579		• We have a lot of doubts, audio video can have a lot of noise, humans can delete it, it can have noise, it won't work because it is written....	•
• It is stated by the regional officer of GPCB that, these records will also be placed in the public domain, so the thing can never be wrong and GPCB is not.			
580		• There is no revenue system in it, at what time each minute has started and at what time it has ended, how many GB is and all these records have to be given to you in writing here.	•
• It is said by the GPCB regional officer that there is no problem to see it, when it is completed.			
581		• And until the certificate comes, this public hearing is illegal with them....	•
• It is told by the chairman that we are not the decision authority but neither you nor I can take this project as legal or illegal.			
582		• You can take a decision	•
• It is stated by the Chairman that we can only take records.			
583		• You have taken the company on a soft corner.	•
• It is stated by the Chairman that I am not doing anything in the beyond of procedure.			
584		• So the procedure.....	•
• It is stated by the Chairman that no one can decide whether the project is legal or illegal			
585		• Why not direct them?	•
• It is said by the chairman that if you write that the certificate is not given, then write your presentation.			
586		• He is not an expert	•
• It is stated by the Chairman that we take everything on record.			
587		• We have to hear everything	•
• It is stated by the Chairman that we take everything on record.			
588		• But we have doubts in the record.	•
• It is stated by the Chairman that we have taken it on record that the thing which has not been presented to him has been presented and how much he has made a demand but not shown how much.			
589		• So far not even 30% satisfaction answer has been given, 70% are lying.	•
• It is stated by the Chairman that we are taking your request on record.			

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590		• So then	•
• We also take it on record that he has not replied it is stated by the chairman.			
591		• Come up with a new EIA	•
• It is said by the Chairman that no, it will not be brought by the new one, it is only for our objection.			
592		• So pospond it , cancel it...	•
• It is stated by the Chairman that this hearing is not to decide whether the report is true or false, whether the report is legal or illegal.			
593		• This is all wrong as you can see.	•
• It is stated by the Chairman that that is why I am saying that we do not have that authority.			
594		• You are a public servant, you are our...	•
• It is stated by the Chairperson that I am a public servant and will present and present your objections. • According to the regional officer of GPCB, the wording that we have will be put in the MOM and a technical committee will emulate it, no processing decision will be taken and this committee will not have the power to take a decision, it will go ahead and decide. There is no question of hiding anything, there is no chance of missing.			
595		• Now the company currently operating in Sutrapada discharges the water into the pipeline or is left from above.	• Today the death level in Sutrapada is much closer because the sea depths are different so total one pipeline is 275 meters and the other pipeline is 150 meters.
596		• Live has shown you in the pen drive, where you left off.	• All this is put in the context of as per the reference of NIO
• It is told by the chairman that where is it being done in Sutrapada, where is it not being done, you should give your presentation here, now don't discuss the other location of the other project.			
597		• On paper...	•
• It is said by the chairman that you give, you give you make a presentation, if you have any objections you speak... • Presented by the Regional Officer of GPCB about the project for which discussion is going on. Make presentation for that.			
598		• This is a matter of making us stupid.	•
• It is told by the Chairman that you submit in writing where we refuse..			
599		• In this pen drive...	•
• It is stated by the Chairman that you have refused to submit a written submission...			
600		• You said that time that, If you have a pen drive then insert it.	•
• It is said by the Chairman that you present your objections			

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601		• How many are wrong will be known now.	•
• It is said by the Chairman that you present your objections			
602		• Turn on this 2 minutes now and show us what practices on all these papers are holding back the people of this poor village.	•
603	Vijay Gadhavi	• Sir, the one who spoke about Sutrapada, that chairman sir, should not talk to the boy in the fire for him and burn him a few times. If it is burnt, it is said that it is burnt. It is said that where there is burn, where there is bad, there is bad.	•
• It is said by the chairman that if your oral talk is over, there was a question in Sutrapada.			
604	Vijay Gadhavi	• We do it sir because if we get a project.....	•
• It is stated by the Chairman that yes, but I am telling you the same thing, that you give oral and written presentation, we take it on record that this is the case in Sutrapada. If we go into details in that matter, this public hearing will increase. If you object, we are sitting down to listen to it.			
605	Vijay Gadhavi	• Sir, we also say the same that sir....	•
• It is stated by the Chairman that, because the days will be less for the answer of such a question. Give your presentation. This is not for our committee to decide now.			
606	Vijay Gadhavi	• Sir...	•
• It is stated by the Chairman that we will send your submission above			
607	Vijay Gadhavi	• Our representation is that, our representations are skewed. Your sir, who is sitting, is filling us with lies.	•
• It is said by the chairman that it is ok.			
608	Vijay Gadhavi	• Which of our here....	•
• It is told by the chairman that yes, just talk about two things here			
609	Valji Jashraj Charan	• 2 minutes sir we are giving pen drive.	•
• It is stated by the Chairman that, we have discussed with Sir (Vijay) that you said that the information was wrong, we have taken it on record.			
610	Dhvani Shah Village : Bada	• This is your refusal to receive our electronic submissions.	•
• It is stated by the Chairman that electronic submissions are not accepted.			
611	Dhvani Shah	• So play it	•

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	Village : Bada		
• It is stated by the chairman that he did not refuse.			
612	Dhvani Shah Village : Bada	• Insert the pen drive and play it, then the video will be on record and there will be peace.	•
• It is stated by the Chairman that the video is on record only...			
613	Dhvani Shah Village : Bada	• Turn on the video	•
• It is told by the chairman that it belongs to another plant, that is, Madam...			
614	Dhvani Shah Village : Bada	Sir...	•
• It is stated by the chairman that it is not of existing plant but of another plant.			
615	Dhvani Shah Village : Bada	• Sir, we have a submission. Whether it's an existing plant or an old plant, we want to show them that we know that what starts today is the first (stand a minute) today when the public hearing started. The most opportunity came to speak to us exactly. What he said in 3-4 lines while speaking, in the submission, that the project proponent that the project will not cause any damage to the environment is on record.	•
• It is stated by the Chairman that yes , it is.			
616	Dhvani Shah Village : Bada	• So why are you refusing to play something when we show us something?	•
• It is said by the Chairman that you are showing another plant			
617	Dhvani Shah Village : Bada	• Sir, not from other plant	•
• It is stated by the Chairman that Sir...			
618	Dhvani Shah Village : Bada	• The company is the same..	•
• It is stated by the chairman that no, even his.....			
619	Dhvani Shah Village : Bada	• No sir	•
• It is stated by the Chairman that, there are..			
620	Dhvani Shah Village : Bada	• Sir we submitted it, from the beginning sir we submitted it from the beginning, could you	•

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		give the example of Sutrapada, you didn't stop us, how good is Sutrapada plant, then allow us to say how bad is their plant, ?	
• It is said by the Chairman that you have given written report that how many questions you have, you have given all the report in written form.			
621	Dhvani Shah Village : Bada	• Sir in all matters you can say no or give in writing. You connect our mobile.....	•
• It is stated by the Chairperson that the video recording has been sent.			
622	Dhvani Shah Village : Bada	• No sir	•
• It is stated by the Chairman that Jaitley Process Ne			
623	Dhvani Shah Village : Bada	• Sir 6.4 again	•
• It is stated by the Chairman that 6.4 is OK all are your submissions.			
624	Dhvani Shah Village : Bada	• no sir	•
• It is stated by the Chairman that Don't let you...			
625	Dhvani Shah Village : Bada	• You denied us access to the computer or photo mobile evidence cannot deny in the every think it is our right to the work.	•
• It is said by the chairman that we are in the meeting itself, we have been in the meeting since 11 o'clock			
626	Dhvani Shah Village : Bada	• Why are you denying me that I want this video recording?	•
• It is stated by the Chairman that it is another plant.			
627	Dhvani Shah Village : Bada	• So why allow them?	•
• It is stated by the chairman that you can do it in writing or orally.			
628	Dhvani Shah Village : Bada	• Why did you allow the company to talk about Sutrapada here....	•
• It is stated by the Chairperson that because you are asking questions here			
629	Dhvani Shah Village : Bada	• You are biased	•
• It is said by the Chairman that, no objection, ok madam, ok madam, you continue your presentation.			
630	Dhvani Shah Village : Bada	• You want to talk to the company about Sutrapada and why are you refusing us.	•
• It is said by the Chairman that if you have any other representation then speak.			

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631	Dhvani Shah Village : Bada	• No sir, we have our presentation in video evidence. It makes me...	•
• It is said by the chairman that madam has given your evidence.			
632	Dhvani Shah Village : Bada	• You have the authority You are our My-Father. We believe	•
• It is stated by the Chairman that I am not the father of anyone.			
633	Dhvani Shah Village : Bada	• But you are a magistrate	•
• It is stated by the Chairman that I am no one's my-father is the word...			
634	Dhvani Shah Village : Bada	• You are a magistrate, a collector, the position makes you my father. Individuals do not make you, positions make you. Your respect and coming to handle our submission. It becomes your duty to have an audio and let it play. First you showed the mobile evidence, then we brought the pen drive, now let us turn on the pen drive. Whoever's submission was Sutrapada's submission, but you used your position to deny it, but now let us continue.	•
• It is told by the chairman that we have something ..			
635	Dhvani Shah Village : Bada	• No sir let us see.	•
• It is stated by the Chairman that we will not delete any verbal or written details.			
636	Dhvani Shah Village : Bada	• Sir, Allow Them Use And Machinery....	• We have not shown any presentation about Sutrapada here, we are just talking about it.
637		• Wrong , wrong , wrong	• We record the rest
638	Dhvani Shah Village : Bada	• You are wrong, sir, you are wrong, sir, you have spoken a lie. You now...	•
• It is said by the GPCB Regional Officer that we are taking your word on record, only Sutrapada saw any problem.			
639		• If there is no sin in today's date, show the one who can fight taking leadership. A pen drive does not have the power to show. They do not have the	•

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		strength to show a pen drive. Speak in them, this is the voice of the general public. You have the strength, say to turn on this pen drive.	
640		• Hon'ble Chairman GPCB has given him as many as 17 notices so it proves that something is wrong. We all have brought the same report in the pen drive, then give it to him, then he said, bring the pen drive. So you 2 hours ago.....	•
• It is stated by the Chairman that the matter not belonged here.			
641		• This matter belongs here.	•
• It is stated by the Chairman that the matter not belonged here.			
642		• If sir will put a factory here, then those people are not going to be there. If only soda is to be made, then it comes, there is no biscuit factory to be set up here. Only soda factory is to be set up. Destruction there....	•
• It is said by the Chairman that you should make a written and oral representation that there are no questions and that there were so many questions when you were in Sutrapada, so we take them in evidence.			
643		• So much soft corner to wards company and your bureaucracy is a question mark. To the public, you...	•
• It is stated by the Chairman that we , we , we			
644		• we	•
• It is stated by the Chairman that we are going to take our minutes on record			
645		• Then we just need this 2 minute pen drive and if it is true, the company people are sitting here, if it is true then they can show a 2 minute video clip, the challenge is from this Bada village. I challenge. I say open. Sir, it is not 1 meter away from the beach. The discharge point of	•

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		which is not 1 meter away, but these people are 275 meters / 150 meters inside. such a lie....	
• It is stated by the Regional Officer of GPCB that your submission is that they diacharge at beach.			
646		• Yes, see	•
• It is stated by the regional officer of GPCB that yes we take note of the issue.			
647		• Yes, take note	•
• The Regional Officer of GPCB is informed that we are taking note of the presentation given word to word.			
648		• Sir, if you take note, show this record and take it.	•
• GPCB regional officer says that everything you say is recorded.			
649		• If yes show , from here to here	•
• It is stated by the regional officer of GPCB that another plant cannot be run here.			
650		• How many people can go to Sutrapada and see the heinous business of this monstrous company. Those who were taken by these people, sir, know what they have shown, sir, an empty anganwadi, their good hall, their good office. Was anyone taken to the discharge point? Our village has been taken 2-4 times against their eyes, so ask, sir, ask, you have the right to ask. It is a right to ask (one minute), right sir.....	•
• It is stated by the Chairman that therefore we have taken on record that Sutrapada is different from the facts			
651		• Ask him and let us answer. Ask him and how many people he takes.	•
• According to the regional officer of GPCB, we are conducting a public hearing of this place, so we have taken all the records on record.			
652		• But then the side effect of soda came to know about GHCL. When did these men know? You come here to our place or I will send the laptop to you. So you look at your	•

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		table.	
• It is said by the Chairman that your speech has been recorded, please do not repeat the same thing over and over again			
653		• This record has to be taken in video.	•
• It is stated by the Chairman that the recording will be sent			
654		• You look at this laptop.	•
• It is stated by the Chairman that it does not come in this procedure of public hearing.			
655	Valji Jashraj Charan	• We request you if you see us in laptop then what is the problem to see if you don't need to.	•
• It is said by the Chairman that ok show me...			
656	Valji Jashraj Charan	• We have the right	•
• It is stated by the Chairman that until then, make your other objections and submissions till this goes on..			
657	Valji Jashraj Charan	• When you let this end, we stand with peace.	•
658	Dhvani Shah Village : Bada	• Sir public hearing you put on the screen it will take only 2 minutes	•
• It is told by the regional officer of GPCB that the sister does not come in the procedure, only your written and oral presentation comes in the procedure and on camera.....			
659		• No problem sir let us show in our laptop.	•
• It is stated by the Regional Officer of GPCB that you have shown it.			
660		• Please record this video.	•
• According to the regional officer of GPCB, the recording is still ongoing.			
661		• The media should also covrage about this a little and after watching it, we request you to ask your soul what is the need ?	•
• It is said by the Chairman that I am saying that only because the no has been decision is to be taken.			
662		• We hope you will submit your personal filling.	•
• It is said by the Chairman that I am not going to take any decision from here, I am going to send your presentation above.			
663		• No no sir for our records...	•
• It is told by the chairman that if I was to take a decision, when would it have been done			
664		• Sir I have a humble request to you because, this is what appears to be water and its discharge. See this is the	•

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		discharge point and this is the old discharge point. This discharge point is old through the canal, through the open canal then this entire slurry pile is 60 feet high and 1 kilometer long.	
• It is told by the chairman that brother you show your process.			
665		• See where this is being thrown. See how far the discharge point is, not even 10 feet, sir, not even 10 feet. This entire canal pours this waste into the sea for 24 hours 365 days. Where did this slurry go and the discharge point here, Radia sir, if you say 150 feet then show me? Where is your 150 feet?	•
• It is said by the chairman that ok you have shown the video, you have shown the recording, there is a presentation.			
666		• It should be noted that the answer is wrong.	•
• It is stated by the Chairman that OK.			
667		• The answer is wrong	•
• It is stated by the Chairman that OK.			
668		• A similar situation will happen here or not?	•
• It is stated by the Chairman that OK.			
669	Valji Jashraj Charan	• The EIA report shows that the current SO_2 and NO_X levels in this area are very high. The figures shown in the report do not seem to be correct because there is no major activity in the area that emits gases in this area . But if it is indicated high, then this gives the information that the pollution from its emissions is less.	•
670	Dhvani Shah Village : Bada	• Sir , the chairs are lifted from the back	•
• It is stated by the Chairman that there is enough behind			

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671	Valji Jashraj Charan	• Sir, the public hearing is not over yet, let our facility be maintained, tell the company to maintain our facility. Public hearing is still going on otherwise....	•
• It is stated by the chairman that you can see the back.			
672		• Only then the question will arise, not until then, first you make arrangements.	•
• It is told by the chairman that you should go and see that there is a backlog			
673	Valji Jashraj Charan	• Sir, my question was that SO_2 and NO_x levels like noise pollution from vehicles sound are shown here more than in big city like Ahmedabad.	•
• It is stated by the Chairman that OK			
674	Valji Jashraj Charan	• There is not a single company around here, not only in the area of 30 kilometers, but according to us, the noise level should be very low. Ask them how much the noise levels have been shown. Sir, the display and sound are being released from behind. The public hearing is not over. Please inform them...	•
675		• Sir, display and sound are released from behind, public hearing hearing is not over. Please inform them...	•
• It is stated by the chairman that we are not hearing from the back LED...			
676	Valji Jashraj Charan	• No, sir, want to see the people sitting behind.	•
• It is told by the Chairman that you do not make any other submissions, present your objections.			
677	Valji Jashraj Charan	• Our presentation is correct. you have seen and heard us now after some time you will turn off this sound.	•
• It is stated by the chairman no no			
678	Valji Jashraj Charan	• Until we speak, you must listen, listen, and listen.	•
• It is said by the Chairman that we are listening but you raise the objection and do not do			

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anything else like LED takes out don't say like that.			
679	Valji Jashraj Charan	• Answer by the experts that these levels of SO_2 and NO_X are shown in this EIA, we are asked by the experts to answer how high these levels are and in what proportion these levels are in dB where this situation exists.	•
• It is said by the chairman that are we experts here ?			
680	Valji Jashraj Charan	• Every question is answered by Radia Sahib which is not suitable for us.	• Mr. Jethwa is the expert who has given this information • Dr. Karipadam: I have studied.
• It is stated by the Chairman that if you listen to him, then...			
681	Vijay Gadhavi	• Yes, we know he speaks in Hindi, we will understand everything • What is the degree of this sir ? Where did you study? An indirect answer to everything will not work.	•
• It is stated by the GPCB regional officer that introduction is given.			
682	Vijay Gadhavi	• Speak in Hindi.. • What do you know about sound? You have done chemistry. What do you know about pollution? • You are speaking. • Ji sir I will ask a few questions. When did you come to Bada? • When did you join this firm sir? Our counter question is when did this sir come to the village to study us? (don't make noise brother) • Did you come here? • Where were you visit? Where	• R. J. Karipadam: My Name Is R J. Karipadam. I am Scientist in NEERI so my qualification is PhD in Chemistry.. • R. J. Karipadam: I..... • R. J. Karipadam: I did 20 years ago. I have been working at this EIA for 22 years. • R. J. Karipadam: In that Bada ? • R. J. Karipadam: We did this study in February 2020.

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		was this machine installed?	• R. J. Karipadam: Yes, I came
		• If you have come, tell me where this machine was installed. Data taken? • Was taken from Bada village? • Where was the machine installed in Bada village? See, if you put it at a bus station, it will be different and if you put it in another area, it will also be different. Randomly you show me what D study is. • I know you came to tell me are you coming? How much you stay and how did you study in 24 hours every night?	• R. J. Karipadam: I have put this noise meter in 10 location.... in the report. • R. J. Karipadam: Yes, I did. • R. J. Karipadam: It has a plan study.
		• Tell us how long it took you to do the research you did in Bada?	• R. J. Karipadam: Sir, in our record it is written that Whole Day and Night is available in public domain please go available in public domain so don't tell us that we didn't. It is not so.
		• How long has the monitoring been done? Did it sit here or did it sit there?. • Sit in the Bada or in the laboratory? • Where did you come to Bada?	• R. J. Karipadam: No I did not research. Monitoring has been done. • R. J. Karipadam: Where to sit?
		• Let's assume you came.	• R. J. Karipadam: Here the machine has to be installed and viewed on site. • R. J. Karipadam: After coming in February 2021, it has been done after COVID, complete monitoring was done in the month of February. Monitoring was also done as per CPCB guidelines.

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			Four people came in this. You should go to Bada Village, and then ask After doing that. • R. J. Karipadam: Our work is government, we cannot lie on this account.
• It is said by the Chairman that now do your presentation. Because the object is going beyond the subject.			
683	Vijay Gadhavi	• No sir.	•
• It is said by the Chairman that give any objection you have.			
684	Vijay Gadhavi	• Sir this question is still pending. I have this left. Government land is pending. Now tell me if this is a record.	•
• If the records are available as stated by the Regional Officer of the GPCB, give a clear answer , whichever is the case.			
685		•	• Sir, this annexure is given. All the information about which land is government is given in it.
686	Vijay Gadhavi	• Want it now, we don't ask anything else , no sir, don't give details. If they give any kind of round answer, we should not have the real satisfaction of public hearing.	•
• The regional officer of GPCB is told that there is another one where we can prepare the answer pending our walk ahead.			
687	Vijay Gadhavi	• Sir yes, I would like to ask one thing sir, what are the negative aspects of such a beautiful company coming to us, what is the harm that can be caused by it, can any expert show us.	•
• It is stated by the Regional Officer of GPCB that any other submission of yours apart from this...			
688	Vijay Gadhavi	• Sir, I told myself to show what are the Hazards in this .	•
• It is stated by the regional officer of GPCB that all this is given in the report and no one can explain it by doing a complete study here. This question is big.			
689	Vijay Gadhavi	• Sir, my question is, so many 4000-4000, 3000-3000 people cannot read the report, what	• R. J. Karipadam: Any industry comes with its negative points. I am

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		happens if there is a leakage, what happens if there is a fire, what happens if something else happens, what happens if a boiler bursts. What are the risks to us then we let the company come ?	clearly saying that it does have negative points similarly every industry has.
690	Vijay Gadhavi	• Take note of what this gentleman is saying.	•
• The GPCB regional officer said that the record is still ongoing.			
691		•	• R. J. Karipadam: I am still talking, what is in this?, what is the emission?. There are gases like Nitrogen Dioxide, Sulfur Dioxide, Ammonia Ask Ammonia Also There. If the gas is volatile, it will burn quickly. We have suggested for that. You have to use high stack bullet. In even of break c we have also proposed in the mechanism that is scrubbing the management plan of how to do it has been given. It is not that those instruments came.
• Listen calmly, says GPCB Regional Officer.			
692	Vijay Gadhavi	• Sir, sir now talk about ammonia. • The problem is you have a problem answering. We listen in Hindi, your Hindi is also not good. Can't even speak Hindi.	• R. J. Karipadam: No sir, hear my answer, what is the problem? • R. J. Karipadam: A management plan has also been given in this, it has also been shown that this gas, nitrogen dioxide, sulfur dioxide and ammonia and water, you have also shown that this is also very high, the temperature is also very high. How to manage this has also been shown. We

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			have shown this example open channel, the temperature drops. We have set a temperature limit of 5 degrees before water goes into the ocean. As noise you have explained it perfectly. There is also noise, the status for equipment used for noise is called for using new equipment and we are strictly recommending used and these emissions come with sound enclosures. So we have also shown it in an impact report. So look at the negatives once.
		• What we want to know is, if you have a case, happened in Sutrapada, what should we do with Bada people? • Sir, this answers no. Now sir, show me which accident from terrible to terrible to more dangerous can happen from this company.	• R. J. Karipadam: So you have many legal options. We will verify it with the Pollution Board GPCB. Is That Which Are Negotiated.
		• A gas will be manufactured or brought from the company, this is ammonia. • Accha will bring from outside. • • What should we do for anaprotection if it leaks. What happened in transport is dangerous, in transport, in transportation ...	• R. J. Karipadam: There is nothing like that, the only chance of getting one is ammonia storage, so we have also shown about that, if ammonia storage leaks, how far it can go. In that we can say damage disappears. If it breaks, it goes 200 meters. 300 meters goes. Accordingly, we have shown in mitigation for that. So to reduce distance, it is not like that how much is scientifically studied.
		• No sir, • We are in earthquake zone – 5, what has the special	• R. J. Karipadam: They Will bring this. It will not happen here in this company.. • R. J. Karipadam: Then will

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		company done for anything can happen to us here? • This should be noted.	store in bullet here. • R. J. Karipadam: Now we are suggesting for transportation that Ammonia gas can not come in petrol type. There are specifications for that too, AC condition also comes. The transporter will also be transported in AC condition, so don't think that ammonia leaks. • R. J. Karipadam: You can give an example that ammonia is leacked from bullets. • R. J. Karipadam: Sir, we have made bullets for that, if there is an earthquake, we will experience that.
• It is stated by the Chairman that this has been noted. If you have any other suggestions please let me know. The talk is being done from one side just to drag on.			
693	Vijay Gadhavi	• Not answering me.	•
• It is stated by the Chairman that you have submitted your written submission, it has been received. Noticed and what are your objections regarding the details of government land with you.			
694		•	• 251, 400, 459, 453, 272, 282, 311, 271, 270, 406, 277, 252, 470 which is government land
695	Vijay Gadhavi	• These are private lands and not government lands. • Sir sir • Sir mentioned 419 in government land, how false this is.	• No this is government land • 271, 548, 719, 407, 408, 521, and 245
• The Regional Officer of GPCB has informed that we will check their records.			
696	Vijay Gadhavi	• No	•
• It is said by the Regional Officer of GPCB that what is there will be taken on record.			
697	Vijay Gadhavi	• No wrong answers.	•
• It is stated by the regional officer of GPCB that it is not included in the report			
698	Vijay Gadhavi	• No no	•
• It is said by the regional officer of GPCB that there is no question of lying.			
699	Vijay Gadhavi	• It says that 419 is our	• These are all new survey

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		government land, it has been purchased which is private land . • Sir, we think of making this fool. It makes us. We are public and none of that. Sir, we also tell you that don't take the public for granted that you have done anything. Why do you answer 419 has been sold. Why did you answer to make us stupid?	numbers. • What is mentioned is given in our report.
• It is stated by the Chairman that there is an on-hand report with him now.			
700	Vijay Gadhavi	• It will be the same with them.	•
• It is said by the Chairman that what is your questionof government land, say it.			
701	Vijay Gadhavi	• Which land is govt. Say that the number of private land has been given sir .	•
• It is said by the chairman that where is the private land and where is the government land is your matter.			
702	Vijay Gadhavi	• I have always had the same question since 2 hours, since 2 hours, why do you want to take government land.	• And we cannot give that description now.
• It is stated by the Chairman that you have that reference?, not, ok.			
703			• We don't have details other than this.
704		• SDM sir, all these answers given by GHCL, are all nonsense answers. Not a single answer is serious. So the whole report is wrong, no clarification yet.	•
• It is stated by the Chairman that we have taken it on record.			
705		This hearing is hereby Canceled.	•
• It is stated by the Chairman that all matters have been taken on record, may you make your second presentation.			
706		• This presentation will continue until we get clarification.	•
• It is stated by the Chairman that you said on the one hand that such reports are wrong, we have now taken the record, so have the matter....			
707		• Do not put so much pressure on the people of the village.	•
• It is stated by the chairman that no no....			
708		• Do not put so much pressure on	•

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		the people of the village.	
• It is stated by the Chairman that you...			
709		• The company is corporate, we have the right to vote, we have the rights to ask, we are the parents, and these people give me whatever answer they want and get away with it.	•
• It is said by the Chairman that your questions will not be allowed.			
710		• You're a...	•
• It is stated by the Chairman that your questions will not be released, will not be released.			
711		• This question was about 5 hours ago about the certificate, and there is no service available here, Mandvi can come in one and a half hour and show it.	•
• It is also on record that it is stated by the Chairman that the certificate has not been shown. Taken on recored.			
712		• So if the report is wrong then why the hearing.	•
• It is stated by the Chairman that if the report is wrong then the committee will decide it and the Central.....			
713		• Yes, Hearing done on the false report ?	•
• It is said by the Chairman that if you say we were deciding, then what will the committee do ?			
714		• So gave you rights.	•
• It is told by the chairman that if you or we were to decide that the study was not to be done here, then what would the central committee do.			
715		• Canceled the previous one.	•
• It is said by the Chairman that we cannot decide sitting here, no one will report. • The regional officer of GPCB is told that if the issue is to be presented, do so. • It is stated by the Chairman that the possibility of being right or wrong will not be verified.			
716		• That the previous public hearing was canceled due to public opposition. That is true. Due to people's opposition... • No no no.... • First I want the answer to the certificate, give it, no, your whole report is wrong , there is no public hearing on it.	• Once again I want to repeat that according to Govt • If there is any mistake, he can correct it. Again I want to follow the Public Govt.
• It is stated by the Chairman that the report is wrong will not be decided here, I tell you again no no no , one sided will not be decided. (You have to be neutral.)			

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717		• SDM sir , tomorrow we...	•
• We will not decide on the basis of discussion, right and wrong. We will only take your objections word by word. Right or wrong is not to be decided here.			
718		• Such a lying company sir said 150 meters and leaves at 10 meters and these people are telling such lies. Still fun to watch though.	•
• It is stated by the Chairman that we have not taken that thing on record.			
719		• No no how are they all sitting.	•
• It is said by the chairman that it is fine. • It is informed by GPCB Regional Officer that your submission has been accepted.			
720		• There is no technical head in front of him, no human being to give reply.	•
• It is stated by the Chairman that OK. • Let the Regional Officer of GPCB present your issue.			
721		• How unfair is this people. What an injustice against this people.	•
• It is stated by the Chairman that OK.			
722		• What is the degree of N.N Radia sir, answer all questions is of wild animal .	• I am BE Mechanical. I have been working in the soda ash for 35 years, since 40 years. I also worked in Tata and now worked in GHCL.
• It is said by the chairman that if you have objections, speak up, if you have objections, speak up. We are not here to discuss any education, qualification and experience. If you have any objections in the matter of the company, present it in the matter of GHCL. We will not discuss anyone's education, qualification or degree or experience here.			
723		• Show the certificate.	•
• It is stated by the Chairman that he does not have the certificate on hand at present. Having said that, we took it in writing.			
724		• The entire EIA report is wrong	•
• It is stated by the Chairman that OK. • It is said by the GPCB Regional Officer that no further submission is yet to be made. • It is said by the Chairman that now you are saying that the EIA report is wrong then now you have to have a discussion.			
725		• Cancel today's hearing.	•
• It is stated by the Chairman that in today's hearing you have to make another submission that you are saying that all the reports of GHCL are false. Or should we take on record that all records are false.			
726		• Whether the report is true or false is another matter. The first thing is that the government has given a	•

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		list of these types of assessment. Which agency should be approved by the government. Be it a government certified company or an agency, they can make this type of report. We do not know if the agency that has made them work does not have an accreditation certificate.	
• The regional officer of GPCB is informed that madam, it has been discussed. • It is stated by the Chairman that the matter has come on record. • It is stated by the regional officer of GPCB that the matter has come on record. Present any remaining issues you may have. • It is stated by the chairman that the discussion of the certificate is already done.			
727		• When did you say that we didn't do it or whether the report is true or false, true or false is a matter of later, the government has made a rule about who can do it and who can't do it. Not read, it's about black and white.	•
• It is stated by the Chairman that we have taken your objection and we...			
728		• Secondly, the agency named Biodiversity's Guide is the one who named him, Bharat Bhai Jethwa, who has the accreditation certificate.	• Bharat Jethwa has an accreditation certificate.
729		• If not, all these certificates should be in EIA report. You GPCB site, no you are such a big company. You will get the certificate generated by paying money. What are we sure of? All this should be ready before the public hearing is scheduled. You open the website of GPCB, as many as are in the public hearing schedule, open and see all of them, there are certificates in all of them.	•
• It is told by the chairman that ok ok we have recorded it.			
730		• No no how does it work, how do you approve, this conduct type public hearing ...	•
• It is stated by the Chairman that we are not checking any data for the public hearing, madam, we are not checking the data here. There is a public hearing for all these objections.			

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731		• You should do	•
• It is stated by the Chairman that madam we are not technical experts nor do we give opinions by checking data.			
732		• This rule is made in the government not our house.	•
• It is said by the Chairman that we are saying that we take your objection			
733		• I have an answer for everything.	•
• It is stated by the chairman that, I am not holding the hearing of forest data for SDM's technical data, environment data, ecological data. A hearing is simply a process, in which we call people and take their objections and present them to the committee. We have been doing the process since morning.			
734	Valji Jashraj Charan	• We have not yet received any response to our objections if all the queries have been made to the environment.	•
• It is stated by the Chairman that we have to take your objections, we will take your objections in writing and verbally and send them.			
735	Valji Jashraj Charan	• Mr. Radia Sir, answers everything. Actually, according to the government rules, the experts of the institute who have studied the environment, animals and birds have to come and answer.	•
• It is stated by the Chairman that the answer to the item ...			
736	Valji Jashraj Charan	• There is no degree that answers this question.	•
• It is stated by the Chairman that, I have heard the answer to one of the things, which you have asked the question, but the answer has not been given or the expert is not present at the moment, or the information which they do not, have on record at the moment. You have not been informed that so many people are not present.			
737	Valji Jashraj Charan	• Sir, the levels of SO_2 and NO_x have been shown in a city as big as Ahmedabad, while the so-called air pollution and the levels of air pollution have been shown, they do not have the answer. Those are the levels that people have shown, and how much they should be in the current situation.	•
• It is stated by the Chairman that OK.			
738	Valji Jashraj Charan	• Answer me expert.. • He just came and kept talking in English and got no response. • Sir, when you heard the answer,	• We now have information about Karipadam Sir... • It has been done with an expert and

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		you made me translate it to Gujarati, which was answered in English. • Can you tell me the decibel volume of the sound or why so much decibel volume came .	has been answered. • One need not repeat an answer.
• It is stated by the Chairman that we have not gathered here to discuss even decibels. There are no experts here.			
739	Valji Jashraj Charan	• Sir, in the EIA report of those people, you accept the EIA report, even if you keep something, you don't keep anything else, you accept its EIA report, right, those people made it.	•
• The regional officer of the GPCB said that the objection you have is that the decibels are too visible here, and the committee will have to respond to it.			
740	Valji Jashraj Charan	• The decibel volume of a city as big as Ahemdabad, Bombay is shown here, when there is so much volume, is there a Vipassana center here?	•
• It is stated by the Regional Officer of GPCB that the agency for the study is a government agency and not a private party. The officer from NEERI who has done the study is not private party or private consultant.			
741	Valji Jashraj Charan	• Yes, this official from the NEERI has created the wrong decibel volume.	•
• The Regional Officer of GPCB states that yes he has noted your objection.			
742	Valji Jashraj Charan	• Let it be taken on record that this is shown to be false.	•
• The regional officer of GPCB is told that OK , the objection has been taken, what is the next issue ?			
743	Valji Jashraj Charan	• The EIA report states that the project will use ammonia gas (NH_3) in large quantities. Ammonia, Ammonia gas Is highly flammable and harmful to the environment and health.	•
• The GPCB regional officer said that the matter has just been discussed. Just finished discussing ammonia.			
744	Valji Jashraj Charan	• Ok ok, it is postponed, sir, due to this project, the amount of polluting gases like sulfur dioxide SO_2 and nitrogen oxide (NO_2) will increase in the air of Bada area.	•

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• It is stated by the chairman that yes yes we.			
745	Valji Jashraj Charan	• So the health and the surrounding forest will have an adverse effect on the side on which the forests are located. SO_2 is the main cause of acid rain as you will know and experts will also know its effects have not been properly assessed in the EIA report. For the project, the captive power plant will emit NO_x gas, which will increase the amount of ozone gas in the environment. Ozone gas causes diseases like asthma to people and reduces agricultural production which these people have not observed.	•
• It is informed by GPCB Regional Officer that your issues will be noted and forwarded for necessary study.			
746	Valji Jashraj Charan	• So sir, let us be answered what these people have assessed?	•
• It is stated by the Regional Officer of GPCB that the assessment is given in the study report. • It is stated by the Chairman that the assessment.....			
747	Valji Jashraj Charan	• So sir, if you give all the answers, then what will these people answer?	•
• GPCB regional officer tells me I am not responding.			
748	Valji Jashraj Charan	• Our proper...	•
• I am told by GPCB Regional Officer that, I am not ready and unable to give any answer on their behalf.			
749	Valji Jashraj Charan	• No, you have given, that the study will be done, what will we do if you do all the study ?	•
• It is stated by the Regional Officer of GPCB that the study...			
750	Valji Jashraj Charan	• Sir, you are studying everything from morning everything we have done in the evening, evening has come, we have to study all this...	•
• It is stated by the regional officer of GPCB that please state your next points			
751	Valji Jashraj Charan	• If we tell all the following points, this will give the answer. You will send above. Above will give permission. And we have come	•

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		here today to make an argument because we do not approve of the breach here.	
• of GPCB , there is an evaluation committee and the committee will decide. The same cannot happen because one person can not takes the decision.			
752	Charan Valji	• Your committee is not supporting us now, what will the above committee support us. I say in general media. Any committee that raises the right questions for this matter from our people, or our right questions are for the environment and pollution of the environment will also be false. How many such companies have been given clearance by GPCB in this way.	•
• To GPCB Regional Officer said that, clearance is never given by GPCB .			
753	Charan Valji	• All matters are coordinated and finalized by the GPCB. Sir, we have a problem now and even if you don't speak, don't force me to accuse.	•
• According to the Regional Officer of GPCB, but GPCB does not speak anything for that.			
754	Charan Valji	• So sir, let us get the answers to our questions from you sir. If sir cannot answer then answer yes or no. • Are you an expert in those gases then answer if you are an expert. • boiler made of iron does not contain gases. • SO_x cause acid rain or not? Yes or no ?, yes or no ?. • The question is not that it will not come, my question is whether it will be only yes or not.	• Yes, you have been presented that for SO_x and NO_x by us equipment and listen to me. • Today I am an expert on boilers, today I am an expert on boilers. • A limit has been given on how much gas can be generated from the boiler and how much SO_x and NO_x come. And for that I have said before and show again that De-Sulphurization process accordingly

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			for SO_x. and what will be the emissions. Its equipment will be taken as it is within the norms of pollution. • If So_2 exceeds its norm then it can be possible, but we don't have this question.
• Stated by Chairman Yes, acid rain does not occur till SO_2 is up to the prescribed limit, we measure SO_2 everywhere.			
755	Charan Valji	• You do not speak sir, sir you are a supporter of GHCL, sir you are a supporter of GHCL .	•
• Stated by Chairman, I am not a supporter of GHCL. I am just replying to you that I am also educated as much as SO_2 is the prescribed limit.			
756	Charan Valji	• We have been pleading with you since morning, in so many numbers, yet you do not understand. Not so sir, you are educated, then as a young man as a young man, and as SDM....	•
• Stated by Chairman, you ask wrong questions, and it answers you, but you are not convinced by its answers. Not really convinced by his answers.			
757	Charan Valji	• In time you as SDM, I am your question, your answer that Radia Sir.	•
• Was stated by Chairman that, he replied to you that the prescribed limit ...			
758	Charan Valji	• So sir, you answer our questions in that answer, our questions are taken on record. Why are you answering our question?	•
• But we take it on record, but that reply, you also don't want to hear it later, as stated by the Chairman.			
759	Charan Valji	• We don't trust this hearing at all, even though we have been running since morning, the date of the hearing, which is called the date, is clearly a hearing in favor of this company. Hindi speaking speak in hindi, speak in English, we run everything we run everything, we run we asked for certificate not from you, we asked	•

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		for mobile not from you. We prove everything and we come to show even if we are not ready to listen to anything, so we request that at least do not speak in favor and let the gentlemen speak .	
760		• Dear sir, if this plant comes, you are not going to be present, it is good that you have knowledge to be present, you must have knowledge. But if those who will be present do not know then what is our future? There is no problem with you. What is our future? who comes has no knowledge.	•
• Was told by the Chairman, that is why he has replied to you, I am telling you that.			
761	Charan Valji	• You don't answer, no, they give the wrong answer. Those people....	•
• We also take it on record that he gave a wrong answer as stated by the Chairman.			
762	Charan Valji	• My answer to you is sir, it is taken on record SO_2 causes acid rain then the environment is damaged and agriculture can be damaged due to this, then because of these people company there is a possibility of acid rain there which is on record taken.	•
• Was stated by Chairman that, I say the same, your question and its answer are taken on both these records ok .			
763	Charan Valji	• The transportation of coal will increase not only the project site but also in the surrounding villages, the pollution of air particles $PM_{2.5}$ means 2.5 micrometers to small particles PM_{10} means 10 micrometers which is bad for health. Which is understated in the EIA report. From coal burning is such as mercury like trace metals and leaches into water and air. These metals are harmful even in very small amounts which is not	•

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		evaluated or mentioned in the EIA report. If mercury metal If mentioned, show us with the page number that mercury is mentioned as per this page number.	
• Was told by the Chairman that, ok ok where is mercury used in this brother if it is in your plant then answer it if not then give answer no.			
764		•	• There is no use of mercury, they say that there is some mercury in the production due to burning of coal, then once you see it, it will show, once tell the page number of mercury.
765		• Tell me sir how much mercury metal will be produced there is no estimate in EIA.	• EX -7 which is a point in the EIA report is shown in
766		• Sir what those people say should be taken on record.	•
• It was stated by the Chairman ok			
767	Charan Valji	• As per our understanding in. Your EIA report has not mentioned any mercury that is produced due to coal. It is also recorded.	•
• was stated by the Chairman that, EX - What did you say, where are you referring to Mercury?			
768		•	• Sir it is mentioned in EX 7 that we will take it on record.
769	Charan Valji	• According to the EIA report taken on record, it is written that there are no mangroves in Bada and its surrounding area, this is completely wrong. There are mangroves in Bada area. It doesn't matter, I'll give you photos of Mangrove in my mobile, crick here.	•
• Was stated by the chairman that, let us ask him for a minute, brother, whether you have mentioned any mangroves in this.			
770	Charan Walji	• That people is clearly mentioned the there are no mangroves.	•

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• As stated by the chairman that, we should ask him			
771	Valji Jashraj Charan	• I am standing in the mangrove forest with GPS number and this mangrove forest is not mentioned anywhere and in the ECO-Sensitive zone as per the notification of CRZ which is classified as very sensitive .	
• According to the regional officer of GPCB that, its I think Gadhavi sir has been discussed for duse for one time ...			
772		•	• Mangroves are mentioned in Base 8 Page No. ...
773	Charan Valji	• It is clear sir that the mangroves are not mentioned but the forests of mangroves.	•
• Stated by Chairman that, No, but he says no, but he has mentioned Mangroves.			
774		•	• Mentioned in Ex-base 8.
775	Charan Valji	• Sir, may it be taken on record that according to us is clearly written in the EIA that any mangroves are not in Bada.	•
• Stated by the regional officer that, Sir, a note here...			
• Stated by Chairman that , ok			
776	Charan Valji	• And these people say that, if flamingos come around Bada or in Modhva. The place of Modhva is not chosen because of flamingos. I show them the mobile phone, then I show the photo of the flamingo standing in the Bada Creek area with my proof, I am standing, the whole flock of flamingos is standing behind, I show the GPS photo of that too. If you want to upload my mobile platform, I will send it there too and prove this thing to you. These 50 to 60 plots are taken on 90 acre records. Bada which is the western side of the company, there are 50 flamingos like these	

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		flamingos which come here from Sahib Arabia as migratory birds every year in the creek of Bada. Apart from that, these flamingos roam this area very freely, this photo of which has GPS numbers. Show my mobile if you want.	
• It was stated by the Chairman that, yes ok ok yes ... .. no no we take the record.			
777	Charan Valji	• Ok ok ok	•
• is stated by the regional officer of GPCB that, in suiting, we take it on record.			
778	Charan Valji	• Ok ok ok	•
• The Regional Officer of GPCB that, Sir, we take in the shooting, take in the record also.			
779	Laxman Karshan Bhai Gadhavi , Village: Farmer of Bada , Pachotia	• First, I declare my feelings, after that my question should be recorded. I am the leader of the people. The people are constantly saying that your officers have conspired against the people and are becoming a party of the company. Please answer. Answer.	•
• Chairman said that if it was so, then we would not have taken anything on your record, now it is going on in a mix up manner so everything is taken on camera record.			
780	Laxman Karshan Bhai Gadhavi , Village: Farmer of Bada , Pachotia	• Ok sir, more than 300 questions have been asked, none of them have been answered. So my question comes later, I take it on record	•
• officer of GPCB , ok			
781	Laxman Karshan Bhai Gadhavi , Village: Farmer of Bada , Pachotia	• My question starts that, Hon'ble Provincial Officer shri, Company tell us or Pollution Officer Barmeda sir tell us, how many km away from human settlements should be the industries of such polluting toxic chemical heavy companies? Only the pollution department will answer it. Note Company, Pollution Department should respond. • Such heavy chemicals sir, listen	•

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		to me, I am a citizen, of Gujarat, I will talk with my finger down. I ask the question, pollution department such a toxic chemical company listen to me, don't interrupt me, I am a free people. Don't interrupt me, I will move further Bermuda sir, don't interrupt me, until my question is finished, according to the constitutional right, can any official of Gujarat government stop me or not? Provincial Officer give the answer.	
• Stated by the Regional Officer of GPCB that, speak up.			
• It was stated by the Chairman , Sir, ask your question.			
782	Laxman Karshan Bhai Gadhavi , Village: Farmer of Bada , Pachotia	• My question is not finished, until sir point finger at me and honorable officer sir, why are you interrupt me in the middle, can you interrupt me or not...?	•
• Stated by the Chairman that, No , do not ask, you should present your questions.			
783	Laxman Karshan Bhai Gadhavi , Village: Farmer of Bada , Pachotia	• No no sir my next question comes later whether an officer speaking for the public can stop the call or not Hon'ble provincial officer.	•
• Stated by the Chairman Mr. , that means that he will answer after you ask your question			
784	Laxman Karshan Bhai Gadhavi , Village: Farmer of Bada , Pachotia	• No, sir, sir, he has interrupt us, he has stopped us, he speaks in the middle of the mic, can he do it or not? That is to be answered sir...	•
• Stated by the chairman that, Now, because he wants to answer your questions...			
785	Laxman Karshan Bhai Gadhavi , Village: Farmer of Bada , Pachotia	• No no sir...	•
• As stated by the Chairman that, there are no absolute things, so you do not ask me. why he interrupt me. This answer cant given by me.			
786	Laxman Karshan Bhai Gadhavi , Village: Farmer of Bada	• No No Sir I have been stopped. No No Sir I am expected before your Magistrate.	•

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	, Pachotia		
• Told by Chairman that, But that 's why I can't answer, why he stopped you, but I can assure you that he will answer after you, ask your question.			
787	Laxman Karshan Bhai Gadhavi , Village: Farmer of Bada , Pachotia	• I want to know from a provincial official how it can be stopped.	•
• Stated by the Chairman, I am telling you that it is not an absolute thing, it is relative. I don't know why they stopped you,			
788	Laxman Karshan Bhai Gadhavi , Village: Farmer of Bada , Pachotia	• No sir...	•
• As stated by Chairman that, you can ask him later			
789	Laxman Karshan Bhai Gadhavi , Village: Farmer of Bada , Pachotia	• No, it is our officer, the magistrate officer, you are the pollution officer and the people have a big doubt towards him, may be he can stop me or not?	•
• Stated by the chairman, that is why you may have felt that you have been stopped in the middle.			
790	Laxman Karshan Bhai Gadhavi , Village: Farmer of Bada , Pachotia	• So sorry will say that ?	•
• Chairman said that, then make a presentation and then he will answer			
791	Laxman Karshan Bhai Gadhavi, Village: Farmer of Bada , Pachotia	• No my question remains.	•
• As stated by the Chairman that, you ask questions.			
792	Laxman Karshan Bhai Gadhavi , Village: Farmer of Bada , Pachotia	• I have been restrained in your presence.	•
• Stated by the Chairman that, I said again that it is not an absolute thing, but a relative thing, why did they stop you? We cannot answer that someone is speaking from your side			
793	Laxman Karshan Bhai Gadhavi , Village: Farmer of Bada , Pachotia	• Thank you sir this also can't give me clear answer, now I draw my question again.	•
• As stated by the Chairman yes, speack up..			

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794	Laxman Karshan Bhai Gadhavi , Village: Farmer of Bada , Pachotia	• Such heavy chemicals companies which are polluting, the pollution department has heard this, such heavy chemicals emit toxic fumes, emit noise, kill turtles, kill cows, how many km should such industries be away from human habitations? Let my question be recorded first. Awaiting reply, only we provincial officer question whether or not is not his business, only pollution department, GHCL will not speak, thank you, GHCL will not speak in this. Let's wait for the answer, provincial officer sir, you are listening, I have already asked the question 4 times, and if you will give a roundabout answer as a conspiracy, then let's not accept.	•
• According to the regional officer of GPCB that, the siting criteria for any industry is fixed as per red category distance should be minimum 500 meters.			
795	Laxman Karshan Bhai Gadhavi , Village: Farmer of Bada , Pachotia	• The second time this answer is recorded. As long as this company seems to be the Primaises from the human settlement, these questions are my second. It seems for this company, talking about all the given companies, talking about the rule, now this Gujarat Heavy Chemical Company should be in Bada from how far? Awaiting reply from pollution department..	•
• To the regional officer of GPCB, it should be according to the criteria of the city, so if it is more, it will work.			
796	Laxman Karshan Bhai Gadhavi , Village: Farmer of Bada , Pachotia	• Powering the Pollution Department, Officer Mr. everyday is sitting in your office. Sir, one answer has not been received in the whole day, how far should this company far from Bada village? How far should be from the Pachotia village? How far	•

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		should the Bhada village be from the village? How far should janakpur be from the village? How far should be from the Mapar village? How far should it be from Bambhadai village? How far should it be from Godhra village? Do you have the answer?	
• Regional officer of GPCB said that, no			
797	Laxman Karshan Bhai Gadhavi , Village: Farmer of Bada , Pachotia	• Provisonal officer...	•
• Ok ok we take on record. as stated by Chairman.			
798	Laxman Karshan Bhai Gadhavi , Village: Farmer of Bada , Pachotia	• Reiterating my question, still this officer is betraying the people. My direct allegation is that the pollution department, if the officer is close to retirement, that is, does he know how far the Bada company will be or should be? Even if the official magistrate does not get the answer, then what will happen to our people. What will happen to our people? Expecting a answer.	•
• The regional officer of GPCB said that, I will speak for 2 minutes. I again made the same presentation and said that there should be a minimum distance of 500 meters .			
799	Laxman Karshan Bhai Gadhavi , Village: Bada , Pachotia's farmer	• Tell , Regional Officer officer, how much far company should be from Bada and this company is.	•
• According to the regional officer of GPCB, this unit is of red category so minimum should be more than 500 meters.			
800	Laxman Karshan Bhai Gadhavi , Village: Bada , Pachotia's farmer	• Wait, wait, so the regional officer, if we say this answer in Kutchi language "Hane aado avro hale to sacho che nato" I am translating into Gujarati and his answer changed for the second time in my question within two minutes. I will ask again. Bada GHCL's plant, No answer in vague manner. I am asking you Straight	•

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		forward question. I need answer from it. How far should this plant be and how far is it? I will continue asking the question until I get a clear answer Sorry Regional Officer.	
• According to the regional officer of GPCB, the answer to my questions has come again.			
801	Laxman Karshan Bhai Gadhavi , Village: Bada , Pachotia's farmer	• GHCL company plant in Bada	•
• According to the Regional Officer of GPCB, GHCL Company is a red category unit and the minimum distance is more than 500 meters.			
802	Laxman Karshan Bhai Gadhavi , Village: Bada , Pachotia's farmer	• No No Specify more clearly , please specify.	•
• According to the regional officer of GPCB, more than 500 m.			
803	Laxman Karshan Bhai Gadhavi , Village: Bada , Pachotia's farmer	• That means 1000 km , 2000 km, one and a half kilometers sir. I am asking to regional Officer. Just look at me, Regional Officer	•
• According to the Regional Officer of GPCB , your question.....			
804	Laxman Karshan Bhai Gadhavi , Village: Bada , Pachotia's farmer	• No I am asking to Regional officer. Let me ask question to Regional Officer	•
• As stated by the chairman that, I am saying that it states that it should have minimum criteria and there is no maximum criteria, minimum 500 meters.			
805	Laxman Karshan Bhai Gadhavi , Village: Bada , Pachotia's farmer	• Sir, this should be recorded, media should also take it on record.	•
• Told by the chairman, he has replied answer.			
806	Laxman Karshan Bhai Gadhavi , Village: Bada , Pachotia's farmer	• Officer, my regional officer as per my information these heavy chemicals plants should be more than 3 km away from human settlements .	•
• It was stated by the Chairman that, yes ok.			
807	Laxman Karshan Bhai Gadhavi ,	Whether you are agreeing to this, the Regional Officer will respond.	•

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	Village: Bada , Pachotia's farmer		
•It is a technical matter as stated by Chairman. This is technical matter. Whether it is 3 Km or 500 m, I cant give answer, If you are saying it is 3 Km, then it shall be taken in record.			
808	Laxman Karshan Bhai Gadhavi , Village: Bada ,	•Sir, I have one more question, Sir, I have the right to ask questions Regional Officer shri?	•
•So what are you doing now? You are asking questions only Said by provisional officer.			
809	Laxman Karshan Bhai Gadhavi , Village: Bada ,	•Yes my second one is coming	•
•Stated by Chairman that, then...			
810	Laxman Karshan Bhai Gadhavi , Village: Bada ,	•They will make soda ash slurry, bring lime, coal, and salt. Now in India there is a no such facility that it can come by plane. The first question for this is how many trucks will come daily? Under that, my second question is how many trucks for raw material, trucks for labor will pass through the border of Bada? The question for the road remains, give an answer and these 25 to 30 people are sitting. •There are totally useless technical people, is this a big deal? I think sir, these people don't really need, that's why Radia ji is answering, then we, you, this and we are 2-4 people and we would have answered the question now answer that, how many trucks will coming? My question is.	•At present we have given the information about the material, that much tons we will bring, the trucks will be brought according to this, now big capacity trucks are used and no. of trucks will be reduced and this will covered with tarpaulin and there will be parking area and waiting area will be within plant boundary and all trucks will wait in it.
811	Laxman Karshan Bhai Gadhavi , Village: Bada	•Regional officer, My question was that how many trucks will come, their answer was how trucks will be parked sir you are unstable magistrate sir, limit is	•

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		crossed I am requesting.	
• Stated by the Chairman that, I am also saying same thing this question stating that how many trucks shall come and still plant is not yet commissioned and you are asking how many trucks will come, I am not taking this question as a problem how many trucks will come , this is matter when plant gets commissioned, It will depend on how much raw material and finished product shall come, Now all these calculations can not be done now at this place.			
812	Charan Valji	• Sir, my question to these people is wrt EIA whether Indian monitar lizard, which is a species of reptile. whether these people have studied it or not?	•
• According to the regional officer of GPCB, the report of study of Lizard and Sandha has been discussed.			
813	Valji Jashraj Charan	• This is different sir this is different Sandho and Indian Monitor Lizard . if you don't know if there is any expert here ask him about animal otherwise I will take the name of the animal in Kachchi.	• This has been studied and its details are mentioned in the ecology report.
814	Valji Jashraj Charan	• Exactly now the details are given in ecology. Can you tell me you have experts what is this called in local language.	• I don't know. This is studied by expert and they do this type of studies and expert does it..
815	Charan Valji	• Take this on on record, then call the experts sir.	•
• Stated by Chairman that, no, you give your objections. If In this way, experts will be called, then when this, this things are primary level, if there is any problem please provide.			
816	Charan Valji	• So sir no problem Indian conological lizard species is a reptile in schedule 1. Sir don't know anything about that thing	•
• Stated by the Chairman, Ok ok yes			
817	Charan Valji	• To be taken on record. Now the point is that in view of the EIA and various languages, due to the project area migrants population will increase, and because of this the surrounding forest area, which is protected, is a forest subject, poaching of wild	•

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		animals in this area and wild life. The threat is the same because EIA ANNEXURE 3 ecology study and page number 43 of wild life conservation plan in which point number 5.3.1 Indian monitor lizard hunting will happen as this happens for meat and oil It is known that there is a threat of poaching due to the influx of migrants and the local population in the project core area and buffer area Many have awareness and they ready to protect the wildlife They also provided water and food for animals and birds, but with the influx of migrant population, as seen in other areas, hunting activity has increased, so this is a schedule 1 animal, which are large in no. Now you say that the Indian monitar lizard is called Chandan go in Gujarati, it is a schedule 1 animal. And it is found in many places in Bada. Even today, it is found in plat area	
• It was stated by Chairman that, ok			
818	Charan Valji	• It is absolutely a question of the environment that if this company comes then it is having an impact on this animal. Take a record.	•
• Regional Officer says, Ok this is question pertaining to Indian monitoring lizard and there is risk Ok.;			
819	Charan Valji	• It may also be taken on record that an Indian monitar lizard is present in the bada.	•
• It was stated by the Chairman yes sure.			
820	Valji Jashraj Charan	• It is also a Schedule 1 animal and not shown in EIA	•
• stated by Chairman, Ok ok			
821			• It is shown in EIA and conversation plan is also

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			mentioned.
822	Dhvani Shah	• Sir Valji Bhai's next question was how many trucks will come? In that you replied that you cannot guess. Sir do you know what is EIA? There is an EIA report to show the estimated number of trucks coming from the road and the amount of production, how much raw material will be required for construction, its cumulative impact and the ecological impact. Why are you misguiding us that we don't need to do that now. Traffic studies is an essential part.	•
• Was stated by the Chairman that within the Environment Impact Assessment, the number of trucks has been asked to be shown?			
823	Dhvani Shah Village : Bada	• Yes traffic study.	•
• As stated by Chairman, then you show me			
824	Dhvani Shah Village : Bada	• Summary traffic study is essential part of EIA notification..	•
• Was told by the chairman, yes, but he gave his answer now..			
825	Dhvani Shah Village : Bada	• You may ask them sir you may ask them, the TOR they have got, it is not written in it to do traffi cstudy, ask them they have all the documents. • OK sir, you said that you are going to use the road, Are you going to make a new road? • Do you know While doing EIA report if public road is used, it should be written clearly. Secondly what is the local impact when public road use is done. What have you done about it? Let us know in the EIA. We know you haven't done any traffic study. As soon as the truck comes, you now know that it is an EIA part. And what is required in EIA, please don't miss guide us. If you	• From whom the details have been obtained, the average truck will come around 500 to 600. Still, if the big trucks come, the number will decrease. • As of today, there is no scheme to build a new road, after talking to the government, efforts will be made to do so, for now, public roads will be used.

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		don't have the authority to speak or make a decision, then you don't have the authority to speak on their behalf. Let me speak.	
• Said by the Chairman that, if you have any objections, Madam, then say your objections, we are recording your problems and whatever they are not answering that also we care recording but topic can not be changed.			
826	Dhvani Shah	• No sir I know sir we have objections. we need to get answered but on their behalf answer can not be given , you are misusing your authority, Anwer us. but why did you answer us to abuse your diss on his behalf.	•
• No, I do not miss guide as stated by Chairman.			
827	Dhvani Shah Village : Bada	• What you did. Record has been made now.	•
• As stated by the Chairman, what to object to and what not to object also comes under my responsibility as the Chairman. Don't act like that, or I won't speak. Madam you speak, then I will also speak...			
828	Dhvani Shah	• Sir, don't favor them by speaking.	• Madam Listen
• Chairman said that, listen mam I am not favoring anyone, I felt that they are unable to speak everything has been taken in minutes, the company is unable			
829	Dhvani Shah	• They should study perfectly. You just came here to check. We have not been able to respond on behalf of him.	•
• Was stated by the chairman that, I am not answering you, I am telling you the subject that discussion isgoing outside the subject that is being discussed.			
830	Dhvani Shah	• This environment study .... • No sir, you said that the construction will take place when the company knows how much raw material will come, then what is the EIA made for? • Traffic study you have done while standing on a road, you are not aware of any details village roads have been used let me explain that the public road we use is heavy truck transportation well aware sir that heavy truck transport can not happen from	• Please listen madam, in EIA that details are given in 4.1.4.3 in EIA that traffic study has also been done. • We have given the details of what has been done

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		villages road and they are failed in do though they have not included anything regarding accident.	
• It was stated by Chairman that ,ok			
831	Dhvani Shah Village : Bada	• Our life is at risk ....atleast can not say that they don't have to do that traffic studies.	•
• Stated by Chairman that , ok			
832	Dhvani Shah Village : Bada	• They have to do you not answer on their behalf.	•
• Stated by Chairman that , ok			
833	Valji charan	• Sir, please tell us we want to ask Radia sir that for withdrawal of sea water , tunnel will be put up and fresh water will be withdrawn through tunnel, to pressurize this water whether any machine will be installed or water will come on its own Gravity means sir I did not understand air pressure... • Ok sir, listen, take it on record, the water is pure water due to air pressure, this company is only 200 m from Bada village, the end of the company is 200 meters from here, the village starts. OK, now Do you know Kutch falls under which seismic zone ? • Now sir, take it in record that earthquake seismic zone 5 i.e. high sensitivity area. Now sir, what is liquefaction? Ask your experts what liquefaction is called. • If the land issubsiding down, the structure of the land is weak, it is called liquefaction in the language of earthquakes. Now Kutch has been classified as seismic zone 5 and the land of Kutch has also been declared as liquefaction land, which is available in records. our land of	• Will come from gravity • It will come through level difference from air pressure. • seismic zone 5 and any design will be done considering seismic zone 5. • Land will not subside as it is coming through tunnelong. • Intake you talked about is that we are taking water because we can get turbidity or clean water and the air pressure is atmospheric, that is, the water will come here with the same pressure as it is now.

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		Kutch Due to high heat, there is more liquefaction. If these people build a tunnel, the structure of the earth is weak because of the tunnel. If there is an earthquake, there is also liquefaction. The ground will break and if the tunnel breaks, how will we stop the water coming from the sea because it is air. If the pressure is high, it can damage Bada village only 200 meters away or not ? Sir answer me • If the ground breaks due to liquefaction or if your tunnel breaks, the water will come to Bada village or not?	
• It was stated by Chairman, that ok			
834	Charan Valji	• Sir, I am explaining the whole issue to you, a tunnel is to be laid and that tunnel is coming in the relevant zone of Kutch area during the earthquake, there is soil liquefaction and if there is a chance of the tunnel breaking, we think it is due to the environment and you also from GPCB. If you are an officer, it will also be relevant to you and the people who understand the environment will also be relevant. If this tunnel breaks due to the environment, to what extent the sea water can damage Bada village and it's a big risk which should be taken on the GPCB record.	• Due to the pressure, the water does not enter the sea. If this is broken, the water will not enter. Water will not go to or anywhere else.
• Ok ok, stated by Chairman.			
835	Valji Jashraj Charan	• That, sir, is a 15-20 meter tunnel.	•
• We are taking your complaint on record ok ok ok as told by the chairman.			
836	Valji Jashraj Charan	• Sir, let it be taken on record that earthquake prone zone-5 and liquefaction is also in land.....	•

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• Ok ok yes yes stated by Chairman.			
837	Charan Valji	• As mentioned on page no. 12 of EIA, that means the dhuwa is only 1 km away from badas dunes. and then sea comes. Sir, the width of these dunes is up to 1.5 meters, Digging sand dune will impact natural greenbelt wherein prosporis julifera is naturally grown. Green belt will be destroyed on sand dune due to 15 m tunnelling on sand dunewhich will lead to destruction by entry of cyclone water in bada.	• As you mentioned about sand use, sand dune is necessary for all. It is also necessary for us, because it is our protection. A geotechnical study has been done for sand dune, according to the geotechnical study, the sand dune is properly designed and about 15 meters below microtunneling will be done. There will be no disturbance to sand dune . Pipeline will gi through plant area to sea and there will be no requirement of cutting of trees and disturbance . This is justified.
838	Valji Jashraj Charan	• Sand dunes matter should be taken on record.	•
• Said by Chairman ,Say yes			
839	Valji Jashraj Charan	• A sand dune bed is naturally hilly so it is not a flat surface but a sloping surface. Also, on the fine sand s prosporis julifera plants are growing. If these people want to measure 15 meters of San Duce, then how can they measure it if there are at the top and bottom? How they did they measure? • The EIA report shows that impact is less to birds. During October –	•

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		February month thousand of migratory birds like common crane stays. So, due to this project, these migratory birds will be disturbed many times. Apart from this the the Pink-billed Surkhab, the Lesser Flamingo .I have shown you the photo. comes here. I request that they should say whether there will be impact on birds. while common cranes feed on cultivated groundnuts and crab Migratory birds travel thousands of km from Saudi Arabia. it should be taken on record.	
• Ok ok, stated by Chairman Shri			
840	Valji Jashraj Charan	• No bird will come near toxic chemical Sir EIA ANNEXURE 3 In Page No. 34, Table No. 4.7, a bird called Black Soldier Kite was seen in the buffer area. ButI have seen this bird in the core area of the project in the border of Bhinsara village of Bada with my own eyes. I have a studies these birds, animals and schedule 1 birds. Apart from this Mars harriers which we call sitros in our language, which is also a schedule 1 bird. Which is seen in the core area of the project. Apart from these birds mentioned above, animals like schedule 1 chinkara, wild cats, Jarak coming in schedule 3 schedule 3 jarak have been observed in the main area proposed for the project. which should be taken on record.	•
• According to the Regional Officer of GPCB, well.			
841	Valji Jashraj Charan	• Wildlife is not covered in the EIA report. which declares the report false. Many bird species will be affected by the project. If project	•

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		is permitted than this is not benficial to Wildlife.	
• Ok ok stated by Chairman.			
842		• Yes sir, I am present since 11 o'clock. Being a citizen of India too, many provisions have been made in the constitution. The citizens of this village are all running a kind of mass movement without food or drink, without thirst, how are we running, arguing for one side. Most of those who were favoring and then also you are conducting public hearing	•
• According to the Regional Officer of GPCB, there is no submission left.			
843	Valji Jashraj Charan	• My points are still pending to raise I am opposing this in environment front.	•
• According to the regional officer of GPCB, we have noted that issue, we have noted that issue.			
844	Valji Jashraj Charan	• Now next point , in EIA page no 14 it is shown that high conservation significance species stays far away from the project area, so I would like to ask sir, how far your project area is from Bada and Pachotia forest area?	•
• Presently you have any record, of all these matters as stated by Chairman.			
845	Valji Jashraj Charan	• Sir, it is very common matter. So they need to know how far the project area is from the forest. How far is it from reseve forests? • We have to take the matter on record, sir has said not only the animals rescued by me in the reserve area, the rakhal of Bada, on which 4-5 officers are posted by the governor, the rakhal of Pachotia, There are so many people appointed the reserve forest area only declared declared as a protected forest area.	• Reserve forest is not here. the forest area is near to our plant Pachotia area is about 4-5 KM away.

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• The regional officer of GPCB is informed that, your issue noted very well.			
• It was stated by Chairman that, ok ok.			
846	Valji Jashraj Charan	• Sir's point should also be noted that those people deny that there is no reserve forest area. • So now I have the same issue or another question. Protected Forest, according to us is only 100 meters from this project. The southern end of this project is on the beach side. It is only 100 meters away from the whole forest. There is no human population there. Bada as well as Mapar and Pachotia sim area have many conservation significance species as mentioned above these are Chinkara, Jarak, Hagetra, Jackal, Khawkhadro, Porcupine etc. As proof of this, I can show you the group of porcupine on mobile if you don't mind and ot should be taken on record.	• unclassified forest area.
• We take on record that stated by Chairman.			
847	Valji Jashraj Charan	• Porcupine is a schedule 2 animal.	•
• Took it on record that you said reserve forest , he said unclassified forest.			
848	Valji Jashraj Charan	• I have included their footmark in application and so I am telling you. Schedule 1 animals and birds living in this reserve forest, innocent wild animals will die, to what extent they will be able to survive, that is a question for the GPCB so what is shown in your EIA report? Answer my questions. • Conservation plan is the next thing. Before establishment, the company has to evaluate the environment impact report EIA report i.e. environment impact report. You, hey, you have done the assessment, you have shown	• Deviation of the EIA report has been brought to your notice, accordingly, whatever correction or conservation is to be planned, whatever is suggested will be planned. • So you say whatever is shown in this report, then what is your

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		the reserve forest animals, if I these is not reserve forest, then how these animals have come in the EIA report? • So the question is, there is a reserve forest here. didn't you know that here in the Reserve Forest there are animals of Schedule 1 of the category staying in this forest? Please take this on record that only one official from GHCL is answering that is Radia sir. Who has no degree above zoology, biology. He is not knowing about environment then my question should be taken on record. We have studied and survey by ourself conservation species living in the protected forest and we have evidence and information has been obtained through RTI . Please take in this record. GHCL has not mentioned anything about environment or birds coming in schedule 1 the or these people are not aware.	question?
• It was stated by Chairman that ,ok			
849	Vijay Gadhavi	• Sir, I have a question. In this project, a power plant of 120 mw is to be built, in which once through cooling system will be utilised. As these would impact marine organisms , Forest & environment department has banned this technology in 2015, This technology will impact marine life and project has mentioned wrong details and is trying to obtain permission. For this reason cancel this public hearing and Sir, Reply.. • Sir I want to ask you one more question in Bada and surrounding areas 800 families earn their	• All type of power plant has this once through cooling system and this is standard procedure and tehre is no significant impact in environment . We have studied 10 villages and details are mentioned in EIA.

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		livelihood from forest produce. but in the EIA report the social and environmental studies of forest dependent families have not been done so the process of taking permission has been done on the basis of wrong information and there are 800 families. please tell me how much and what it is • No sir, why do you answer like this? public hearing should not be organised and youa are saying this and that. We are saying these are the numbers.	
• Was stated by Chairman that, Yes, if you say that we should take it on record that there are so many and they are not mentioned in the EIA report.			
850	Vijay Bhai Gadhavi	• Yes, add 800 families to this, how many have these people shown, ask them whether they answer yes or no, why not. If it says not shown.	•
• It was stated by the chairman that, yes, how many are there ?			
851	Vijay Bhai Gadhavi	• I say 800 families.	•
• Chairman said that 800 families say ok			
852		•	• We have shown livelihood details.
• The Regional Officer of GPCB that the study report includes this?, Proponent sir.			
853		•	• in socio Economic Studies
854	Vijay Bhai Gadhavi	• Where sir? how many families are mentioned in which page no. Show this to Sir, If he says yes then I have no issues.	•
• There is noise			
855		•	• How may overall families are dependent in 10 villages pertaing to forest ....
856	Vijay Gadhavi	• Sir , where has it been shown that our objection is that we want to fight on the report and you say	• Details are mentioned in Page no. 3.1.20 but

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		that it is not or not, For this reason we are coming to numbers. • We want to talk about this as you will grab our land you told that it is not mentioned then I don't have any problem So I don't mind if the environment of this on the forest.....	exactly figures showing dependency on forest are not mentioned, It is shown in but what I am talking about is the total population of the village and the details are there, it does not have the details of exactly how many families are working on the forest.
• According to the Regional Officer of GPCB, he was given a clear answer that it was made general and not specific.			
857	Vijay Gadhavi	• We also said that they are not saying that how many families live in each village.	•
• stated by the Regional Officer of GPCB , it is correct			
858	Vijay Gadhavi	• But 800 families from here are forest dependent, why this has not been shown	•
• According to the Regional Officer of GPCB , we are taking note of it.			
• It was stated by Chairman that , ok ok			
859	Vijay Gadhavi	• Please ensure this is in record that forest dependent families are not mentioned.	• We have not shown the details of how many villages and how many families live on the forest.
• It was stated by Chairman that , ok ok			
860	Vijay Gadhavi	• There is madadpir temple in the project area and report does not mention anything or temple or mosque or cremation center . This should be mentioned and tell us where it is mentioned, There is a temple of Madad pir Dada in the area of this project, which is not mentioned in this	•

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		report, where there should be mention of temples or mosques or crematories.	
• There is noise			
861	Vijay Gadhavi	• We are asking relevant question	•
• Was stated by the chairman that, do one thing is not the answer with people, it is ok, you can give us in writing any questions you have, we will take them on record.			
862	Vijay Gadhavi	Sir	•
• stated by the Chairman , there is no end to this discussion if we discuss it one by one			
863	Vijay Gadhavi	• Even if there is no end...	•
• Chairman said that the question, we will give all your questions in writing, we are going to take the minutes at the end.			
864	Vijay Gadhavi	• Chairman sir, this is our last chance to make such representations. How much wrong is your report?	•
• Chairman said that , your words are true, we are not denying what you said.			
865	Vijay Gadhavi	• Whether this Madadpir is mentioned in the report ?	•
• There is noise			
866		•	• Temple details are mentioned in 3.4.2 table
867	Vijay Gadhavi	• You show us • Whether details are available or not, where we are going to represent	• Details are mentioned in the report , but as desired by you details needs verification .
• There is noise			
868			• Shiva temple is mentioned.
869	Vijay Gadhavi	• Not Shiv Temple, What about Madadpir dada temple?	• This does not come in our project area
• There is noise			
870		•	• It does not come in our project area
• As stated by Chairman Shri , do you have information in hand ? If not, then said no.			

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871		•	• No sir it does not come in my project area.
872	Vijay Gadhavi	• it comes	• We have provided available details
• Stated by Chairman that, we have recorded both the questions that you ask from here are answered.			
873	Vijay Gadhavi	• Provincial Officer Sir, my question is the temple of Madadpir Dada is located in this project area, Right.	•
• It was stated by Chairman that , ok			
874	Vijay Gadhavi	• I am saying that it is there, I have not mentioned it, whether the company accepts it or not, you write and submit	•
• Stated by the chairman, we are writing the company's reply that this temple is not located in their project area.			
875	Vijay Gadhavi	• Sir, we will prove it how we can prove it? it will come..	•
• told by the Chairman that, how can I prove it now?			
876	Vijay Gadhavi	• This is not mentioned.	•
• Was said by the chairman that, then it will be biased. Why should I say yes then it will be biased			
877	Vijay Gadhavi	• We are saying, we are not saying to write anythingwe are saying that the temple exists	•
• Told by the chairman that, we will write your presentation in the same way.			
878	Vijay Gadhavi	• Write like that	•
• Chairman said that, we will write your submission in that manaer, as has written that reserve forest is unclassified for them.			
879	Vijay Gadhavi	• This is not the answer we are saying that Pirdada's temple is located.	•
• Stated by the chairman that, we will write in the same way.			
880	Vijay Gadhavi	• Write that company is that there is no temple of Maladpir dada in our area.	•
• It was told by the chairman that, yes, the same thing was said to him.			
881	Vijay Gadhavi	• No, I didn't say that	•
• Stated by Chairman that , said that it does not come in our affected area.			

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882	Vijay Gadhavi	• Madad pir dada temple is not affected or whatever it is just say that his is not mentioned in project report	•
• Was told by the chairman that, same thing was said by him.			
883	Vijay Gadhavi	• Did I did not say • Not seen, sir, it will be seen tomorrow.	• Shiva temple details are provided, Pir dada temple details are not seen.
• As told by GPCB Regional Officer, tell us whether it is mentioned in your study report.			
884	Vijay Gadhavi	• If we get up tomorrow and add them, • Public have worked hard.	• There is no detail of the temple.
• Has been stated by the chairman that. the temple which is not mentioned in the report will be noted.			
885			• We will check pir dada temple.
• It was stated by Chairman that, ok.			
886	Vijay Gadhavi	• What, what, sir, Why you will check this in area. • Write that down that Maradpir dadas temple is not mentioned.	• I said that this is not in our report From my point of view temple doen not come in our area.
• As stated by Chairman that, yes same thing he said.			
887			• We have to confirm whether it is inside or outside our area that needs to be confirmed
888	Vijay Gadhavi	• Report is made in such a way that temple disappears • What is reports reliability	• That temple does not come in our area.
• stated by the Regional Officer of GPCB , let us write.			
889	Vijay Gadhavi	• Next, we have said that there is is temple and this company is saying that there is no temple The company has made an incomplete report even the temple has not been considered.	•

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		On this report public hearing should not happen should not be heard. • My second question is your area has two Vachhara Dada temple and there is mention about approach road toward vacchradada Mandir.	
• There is noise			
890		•	• Temple details are mentioned in 3.4.2.2 and further to this details are not available present
891	Vijay Gadhavi	• Why it is not present • This is not the way	• Your questions will be answered in the minutes of the meeting.
• Chairman said that, but you are given a reference			
892	Vijay Gadhavi	• Sir, why does he give reference. We are not free in public hearing . We want answer.	•
• Told by Chairman that, then you do one thing, give your questions, objections, we will answer accordingly. If you answer now, not all things are present.			
893	Vijay Gadhavi	• Cancel Cancel	•
• There is noise			
• Stated by the Chairman, Say your objections.			
894	Vijay Gadhavi	• Sir, these temples are not mentioned, the report itself is wrong.	•
• Stated by Chairman that, it is ok we will take up the record			
895	Vijay Gadhavi	• This report is wrong, why are we discussing this wrong report, you ask this the company, why did you come without a report, people are asking questions. • Sir, I am asking the third question,This is false report as this does not mention temple. Company is not replying and we are strongly opposing this.This	•

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		project has panjhoda pir durgah . What shall we do for the approach road to Panjodha pir durgah which comes on our way. This is the approach road towards durgah . Panjrapir is not mentioned . There are so many hindu holy places.	
• There is noise			
• Stated by Chairman , there are as many objections as you.			
896	Vijay Gadhavi	• Sir you ask him why are you telling me.	•
• As stated by Chairman that, I am not against you, I am speaking your objections			
• There is noise			
• Chairman said that, I am asking your pbjections and asking them to reply.			
897	Vijay Gadhavi	• Sir, he is sitting cross-legged and we are standing without eating or drinking, sir, tell him that the they have come to establish a company .they have not come to please us. He is sitting in fan and we are standing as we are supporting our region we are fighting for my region.	•
• There is noise			
898		•	• In the study area which I have shown four temples have been shown, Photograph is also mentioned . We have to know the exact details.
899	Vijay Gadhavi	• No, we don't see the details, We will drag everyone in highcourt • Next Next	• Details are given in the report.
• It was stated by the Chairman yes yes			
900	Vijay Gadhavi	• Dargah of Kantala Pir is located in this project area. Where is this dargah shown?	•

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• There is noise			
901		•	• Sir, the names of these temples are not given but the details aboutMasjid and Shiva Temple are mentioned.
• There is noise			
• It was stated by Chairman that, ok			
902	Vijay Gadhavi	• Sir, such a senior officer is sitting, we are fighting for our region, He is sitting and answering very comfortably.	•
• There is noise			
• Chairman said that, I have also told you that we have taken your objections if you have more than you can represent orally or in written mode.			
903	Vijay Gadhavi	• They have to give answer as this is not our first public hearing	•
• Has been stated by the chairman that, they gives as many answers as many they have however answer are not with them, We are recording them.			
904	Vijay Gadhavi	• Sir we are discussing on false assessment report.	•
• Stated by the Chairman, I am saying that it will be decided based on your objection whether it is right or wrong, right now we are not discussing whether it is right or wrong.			
905	Vijay Gadhavi	• Now my question is the same as previous one, answer my previous question and answer me. • How can I know whether this is answer to my previous question. • Sir, Chairman Sir, how they can say that it is given in the previous answer. Now let me say previous question, answer the previous question. • Well, sir, it may be noted that this report is done without study.	• What questions are you talking about? • Your question was about the dargah and I have given the details of the location of the temple and the mosque in it, the mosque and the temples are there but the specific dargah you are talking about is in our area or not is not given in this report.

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• It is said by Chairman ok that, ok, then your Mandir Masjid has been discussed. He has told all the records with him.			
906	Vijay Gadhavi	• No, no, I want to ask what has been studied in the report ? why are you putting us in such a false report? Sir, you have brought us to a wrong public hearing and this is not the way, I have attended many public hearings and the officer should answer in this way, We are from public and he is not our father.	•
• Is said by the Chairman that, ok ok, that is why, we are taking your objections, that is, your objections, the objections of the incomplete report.			
907		• Now we are coming openly, you are so biased You are not favouring us by taking our objections . We will fight for this.	
• Is stated by Chairman that, We have taken your complete objections . Please submit your objections			
908	Vijay Gadhavi	• No No sir you are continuously favouring company • Till you give us temple details coming in study area , we will not go further .	
• Is stated by Chairman, Submit your objection If any....			
909	Vijay Gadhavi	• No No sir why it is not mentioned. • We say that if they do not care What studies they have conducted for birds porcupine. We want to prove this.	
• Is stated by Chairman, ok ok took your point on record.			
910	Vijay Gadhavi	• Sir, you are so cold-hearted, I did not expect so much from an officer.	
• Has been stated by the chairman that, we are not sitting to decide it now, if you are saying that record is wrong then we are taking it on record. I cant say now whether you are right or company is right. I am neutral right now.			
911	Vijay Gadhavi	• No, you are saying company is right	

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• It is informed by the chairman that , no, I have not told this is true, your objections has been taken.....			
912	Vijay Gadhavi	• No no no no you didn't take it we say on the record.	
• The Chairman said that, we have taken this on record			
913	Vijay Gadhavi	• No sir you two are loyal to the company.	
• It is informed by the Chairman that , no, no, if even one such comment is made, then it will be announced from my side that this process is over. Speak up if you have any objections. Otherwise it will be declared from my side that this process is complete. No, no, if you have any objection, speak up, don't say anything else.			
914	Vijay Gadhavi	• I am presenting my objection.	
• It is informed by the chairman that, raise your objections you say if we do not take your objections.			
915	Vijay Gadhavi	• We are saying our objection	
• It is informed by the chairman that, if the record is not taken, then you say.			
916	Vijay Gadhavi	• My objection is that there is a temple of Ashapura Mataji in this project area. Show me that it is mentioned. Now I don't have to go ahead and show it in the paper if you have objection then we also have objection	• In 3.4.2.2 it is written that Shiva Temple, Ashapura Mata Temple and Masjid are situated. Three things are mentioned.
• It is announced by the Chairman that, then next, next, next....			
917	Vijay Gadhavi	• Sir, GHCL Company Heavy Chemical did not mention any water body detail in Form 1 .	
• The provincial officer of GPCB said that, these points have been dicussed earlier. • Is stated by the chairman that the Issue related to details has been taken on record.			

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918	Vijay Gadhavi	• Listen to me or you will speak on behalf of company	
• Is said by the chairman that, speak up			
919	Vijay Gadhavi	• You don't want to hear us.	
• It is said by the chairman that , speak up			
920	Vijay Gadhavi	• Kali talavadi is in the area .Why is there no mention of Kali Talavadi in it?	
• Stated by the Chairman that, you are saying that Kalithalavadi is not mentioned ok.			
921	Vijay Gadhavi	• If his project lay over Kalithalavadi, then where is Kalithalavadi?	
• Stated by the Chairman that , OK. Ok , if you have information provide them or ...			
922	Vijay Gadhavi	• We are not here to beg . We need information why there is no Kalitaravadi • Sir this is the answer, you asking us to stop • Get it checked • We need this information.. Now, if you threaten us to complete the public hearing, then we don't mind. We have many other rights as well. We will sit in your office with 5000 people. you should not say this We are cancelling this. This person is sitting and giving answer. as he is our father and you are favouring him. They are doing enchroaching our land. They are destroying our environment and bullying us.	• The details of the water body are given in the hydrogeology report. • The information is given in the hydrological report but it has to be checked whether this Kalithalawadi is mentioned in it or not . • That information is not available now.
923	Dhvani Shah Village : Bada	• Sir, I have a question before vijay bhai speak further .Valjibhai asked about traffic study and no . of incoming trucks whether it is answered or not, Please clarify. Whether their replies have been	

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		recorded , Please clarfy	
• The provincial officer of GPCB said that every discussion that takes place here			
924	Dhvani Shah Village : Bada	• No sir you said if the record is not taken up then the record is taken up or not. Your words sir.	
• Stated by the Chairman that, your questions and their answers have been taken on record.			
925	Dhvani Shah Village : Bada	• You said that this record will not be taken up so I am asking specifically.	
• Regional officer of GPCB said that he has given a clear answer.			
926	Dhvani Shah Village : Bada	• No sir you said record will not be taken up. So whether the record will be taken or not sir is your words.	
• Stated by the Chairman that. your questions and their answers have been taken on record.			
927	Dhvani Shah Village : Bada	• You said not to take this on record so I am asking specifically.	
• Regional officerof GPCB said that he has given a clear answer. • stated by the Chairman that, both your questions and their answers have been recorded.			
928	Dhvani Shah Village : Bada	• Sir exactly you have written and also your speech should be taken on record and further to this I have one more submission. TOR received by them dated 10/08/2021 it clearly states in 6.9 that traffic study is mandatory and I am reading whateveris mentioned in TOR . Traffic study of area, types of vehicle, frequency of vehicles for transportation of material, additional traffic due to proposed project. Parking arrangements should be provided if they use the village road, then sir you know that heavy road transportation	

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		takes place and the village road cannot handle it. Tomorrow there will be potholes, tomorrow the road will be broken. We are the people with motorcycle.. During riding motorcycle ,it may happen that we may fall and it may lead to death Sir, this should be taken on record. We should given all such estimation in the EIA report.	
• Is said by the Chairman that OK OK.			
929	Dhvani Shah Village : Bada	• What ever you said that they need not to do should be also be taken on record. This TOR submission should also be taken on record. If this is not taken on record then public hearings proceeding will be considered incomplete. Whatever you said.	
• Stated by the Chairman that your questions.....			
930	Dhvani Shah Village : Bada	• They don't need to do what you said. What you say it should be recorded.	
• Stated by the chairman that ,I did not say that, I did not say that, I did not say that.			
931	Dhvani Shah Village : Bada	• You said	
• Is said by the chairman that I did not say that. What I say is not recorded.			
932	Dhvani Shah Village : Bada	• Sir, you have clearly said these words, I am repeating , it may be jumbled, but you have clearly said that the company cannot say everything now, When company starts then they may know that how much exact material is required for construction ,	
• Is told by the chairman that you asked for the exact number, I told no for exact number			
933	Dhvani Shah Village : Bada	• How can you refuse, you don't have the right , TOR says that company has To..	

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• Said by the Chairman that, Madam, Madam, I have told you about the exact number.. Do you have any thing left to say regarding environment ? It is not compulsory to provide exact number now			
934	Dhvani Shah Village : Bada	• EIA report is 100% hypothetical because....	
• Stated by the Chairman that, he gave his answer later.			
935	Dhvani Shah Village : Bada	• No sir one minute let me finish.	
• Said by the Chairman that, you speak after.			
936	Dhvani Shah Village : Bada	• Yes, I am speaking, you listen	
• It is told by the chairman that you do not talk about something else.			
937	Dhvani Shah Village : Bada	• You can't tell me like this.	
• Said by the Chairman that you should speak your issue.			
938	Dhvani Shah Village : Bada	• The record I want to bring up. I will say that. You have to take it. You don't tell me to say this or say that.	
• Said by the Chairman that you speak.			
939	Dhvani Shah Village : Bada	• Sir please I have right to say whatever I want to say.	
• Is told by the chairman that yes, you say			
940	Dhvani Shah Village : Bada	• If it is illegal sir then you can arrest me. It is your administration. But you can't pressurize me like this, it is my right.	
• Is told by the chairman that, I am not denying you, I am asking you to speak. But be specific whatever to the point. You don't discuss something else..			
941	Dhvani Shah Village : Bada	• Something else is not discussed. Not something else. You know the point. You know the point.	

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• Is told by the chairman that, speak as many objections as you have with company. Madam, don't talk now, Please be relevant , tell me what is your problem with the company.			
942	Dhvani Shah Village : Bada	• You don't have the authority to say what is relevant and What is irrelevant .	
• Is stated by the chairman that, I am the chairman of this committee. I am the chairman and I am speaking as a chairman. Present whatever concerns you have please speak. I am the chairing this public hearing. As the chairman, I am telling you that we are ready to take whatever objection you have against GHCL company wrt ienvironment. Discuss your objections.			
943	Dhvani Shah Village : Bada	• Sir, It is related to company, it is only related to company. I say the same. Sir you have violated your right as you spoke on behalf of GHCL	
• Stated by the Chairman that, I have not spoken on behalf of GHCL .			
944	Dhvani Shah Village : Bada	• You have violated your rights.	
• Is stated by the chairman that, as chairman, I have right to say whether this matter is required to discuss or not feel that this matter is required to be discussed at the present level or not.			
945	Dhvani Shah Village : Bada	• You have no rights to speak, the company will speak.	
• Is said by the chairman that, now you have to do the discussion on the issue or the general debate. • The Regional officer of GPCB said that, sister, please represent your points whatever is left to be done. • Stated by the chairman that, you want to discuss in general or relevant points. • Stated by the Chairman that, you want to discuss points in general or relevant points are to be discussed.			
946	Dhvani Shah Village : Bada	• Discussions are relevant	
• Said by the Chairman that, after I am asking for the last time then I will close this public hearing.			
947	Dhvani Shah Village : Bada	• sir sir sir	
• Is said by the chairman that whatever objection you have in the company , discuss it.			

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948	Dhvani Shah Village : Bada	• I am doing the same you are stopping me....	
• Is said by the chairman that , now speak now speak now speak.			
949	Dhvani Shah Village : Bada	• You can't threaten me repeatedly and threaten my friends repeatedly.	
• Is said by the chairman that, speak now speak now.			
950	Dhvani Shah Village : Bada	• Closing public hearings is not in your jurisdiction.	
• Said by the Chairman that, it is within my jurisdiction.			
951	Dhvani Shah Village : Bada	• No sir, Every last person the youngest person can present here.	
• Said by the Chairman that, make whatever presentation you have to make. You present. You present your points			
952	Dhvani Shah Village : Bada	EIA report, they already know as they are running a plant, how much material is used for constructing a chimney. They know only how much exactly revenue is generated,they will not know the exact figure , What is this EIA for ?	
• Stated by the Chairman that, OK OK.			
953	Dhvani Shah Village : Bada	• EIA report is hypothetical Project should know that how many trucks will come and how much impact will occur. They have or not have exact figure, This is their forte. Commitie has the decision power. You can not decide.	
• Said by the Chairman , OK OK OK			
954	Dhvani Shah Village : Bada	• Don't threaten us again to end the hearing.	

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• Is said by the chairman that, whether you have any other concern. • Regional officer of GPCB said that, please raise your concern.			
955	Valji Jashraj Charan	• I have concerns related to environment.	
• Is told by the chairman that, your objections have come and represent your all objections together.			
956	Valji Jashraj Charan	• Sir, We have concerns related to environment.	
• Regional officer of GPCB said that , Submit your concern togetehr			
957	Valji Jashraj Charan	• We are submitting cocerns together only. We have attended othe public hearings. You are guiding us in a way.	
• Is said by the chairman that, we are not saying no to you			
958	Valji Jashraj Charan	• This GPCB official, this GPCB official is favouring and guiding the company in wrong manner We have not seen this in any public hearing.	
• Regional officer of GPCB said that there was no biasness. You are asked to make a presentation.			
959	Valji Jashraj Charan	• GPCB Board, GPCB Board is speaking in favor of the company which is not right at all. And our objection is particular, my objection is totally about the environment, not a single issue without the environment.	
• The provincial officer of GPCB said , yes continue.			
960	Valji Jashraj Charan	• Honorable SDM sir, I also request that this matter be taken on record that our objections and we have attended two or three public hearings before, so we know that our question and the company's...	
• Stated by the Chairman that, all your objections will be taken on record.			

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		• Take it on record but a competent authority should reply. A single person single person is answering this since 11 am and also giving an extravagant answer. That we don't know, look at me, look at me. Not a single answer is clear. Still I have question. If you discharge effluent in sea, what will be the temperature of ammonia gas and waters temperature. Answer me that question. • The question is related to environment only.	• We have already given this answer. listen to me
961	Valji Jashraj Charan	• Sir, ask your experts if there is some or more impact on marine life health. • Sir it is shown in your EIA itself that the beach of Bada creates a healthy and healthy environment for life and marine life as shown in its EIA report answer yes or no? • Sir we have proof of this thing, Our team has gone to Sutrapada. We have a video of the fish lying on the beach at their plant, the dead microorganisms due to the effluent plant of these people. So sir government sir due to instruction we can not show this thing on screen. It is not ok GPCB & that we cannot prove this thing, many fishes are lying dead in Sutrapada plant.	• We have given this answer that the effluent temperature will not be more than 5 degrees and the level of ammonia gas will be much less than the prescribed level. That would be much lesser than negativity • Expert says that ... • And no effect on organism and marine as it will be released within prescribed norms asd as it will be less there will no impact.
• Regional officer of GPCB said that your issues are on record.			

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962	Valji Jashraj Charan	• This issue is about the same thing, the main point will come now that, sir, our effluent plant will not affect the marine environment, but the way they are operating in Sutrapada, the plant is currently running, it will also affect the marine environment. doing. We met fishermen and local people there. And the residents and labor have become absolutely miserable,. So here we have mainly fishermen from Modhwa, Kathda, Mota Laija, Bada, Bambhadai and these villages with a population of more than 10,000. There is no mention in the EIA wrt Koli people of Khata village who do fishing, the Pagadia fishermen who have license . One thing, another thing is that if so much effluent from the plant is released into the sea, then in the upstream direction from Kandla Port to Kandla Port, Tuna Port, then Mundra Port, then Bhadreshwar Power Plant, Mundra Power Plant, then Tragadi. In Kari Kari Mandvi taluka, Tata Power Plant and the sea coast up to Tragadi village have been completely damaged. This area is filled up with all pollutants, due to which the fishermen of Mundra taluka and mandvi taluka have become completely unemployed. Where in today's date not a single fish is found alive, or it does not come into the polluted side. At present, the main area of the Athamani side starts from Bada, where the fishes are collected. Fisherman brothers are gathered here Raise your hands. Every brother raise your hand. These fishermen brothers are dependent on this	

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		and only bada shore is left for any development Ammonia emission can be dangerous and this should be taken on record.	
• Is stated by the chairman that, ok ok			
963	Valji Jashraj Charan	• Secondly, wrt Pagadiya , it has been mentioned in the report that that land is marshy and this land can not be marshy as I can show that in mobile, dolphin is seen and I have myself captured video, Dolphin is found in clean water and that should be taken on record.These people are installing effluent plant and tunnel which they are proposing , fishes in bunch are coming.. It is also mention in the effluent disposal area there are dunes and so many organisms are present. Badas shore don't have marshy land and it does not have stones or marshy . Fishing does not happen in land.	• Marshy related matter was discussed wrt Modhva. This is rocky area and sandstones are available. You have some misunderstanding in this case.
• Is stated by the chairman that, ok ok.			
964		• Bada is best area for fishing activity,they are going to release hot water as per EIA, These people have told rock area istead of marshy area. There are two types of study done in EIA, if they want to discharge hot water then it becomes marshy land and if they want to discharge hot water then it will be become rocky area.I want to show dolphin fish along Bada coast. Clean and clear water suits dolphin. This area rotects many animals and birds. This company will destroy everything. This is total crime , This will kill 1000 peacock. There are 500 habitat where chandangho lives . This will lead to death of schedule 1 ,2 if this industrial development	•

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		will happen. We request to GPCB & CPCB that whichever you carry out such companys public hearing, they should not be goven any clearance. This is matter of 5000-7000 animals. This will be gift to humanity .World is facing so many issues such as global warming , sea level rise . If permissions will be given to this type of industry then it will impact innocent life. This is dangerous to human habitation. man-made industries harming innocent living beings will one day pose a threat to mankind.	
• Is stated by the chairman that, ok ok			
965	Keshav Gadhavi Village : mota layja	• I am making a request, you are young, sorry, you are educated , You must have taken oath and you are in good position.I will forgive, Mother cow will not forgive . You are totally biased.	•
• It is said by the chairman that, ok ok now you don't have any problem. So you...			
966	Valji Jashraj Charan	• I have objections.	
• It is said by the chairman that, you don't drop the mike, speak if you have any objection, I am not sitting here to give clearance. I am the poet again, I am not sitting here to give clearance, just to listen to your objections. Whatever objection you have, I will send it above. There is no decision to be made on this matter from my side.			
967	Laxman Kanji Kariya	• Sir, let me ask a question	
• is said by the chairman that, ask.			
968	Laxman Kanji Karani	• My name should be taken on record, I went to urinal when Vijay sir was asking question , Whatever you discussed about Masjid , temple , I am asking ypu through regional officer 2500 year old durgah is present , name is Jarivala dada. I am 54 year old and trustee . Government has contributed grant for this 2500 old mosque. I have all proof. Gujarat government ahs planted trees in 5 acre land . This report ahs this	• In our area I have talked before that Madad Pir Dada, Vachra Dada and Pagoda Dada are part of our study and this does not come in our area.

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		durgah , This radia sir will not know. Even regional officer does not know. Radia sir has replied to 250-300 wrong answer We have listened to wrong answer. Jari vara dada has 2500 old culture. • Sir , Please record this	
• Is said by the chairman tha , yes, it is being recorded, we will answer your question.			
969	Laxman Kanji Karani	• It has no information sir. And this is called public hearing? Sir, if it is to be given in writing, please send it to Mundra and Barmeda sir, if the public hearing is held in this manner. If this is unconstitutional, my one question is this public hearing should be cancelled.	•
• Stated by the Chairman that, he answers as many questions as you have and as many as he does not answer the questions, we take them on record in this way. We take all your concerns and suggestions on record.			
970	Laxman Kanji Karani	• When I am asking a question to Provisionol officer. Please this is my humble request that we have not come to listen to Radia sir. • Sir, once I have said that about 25 to 30 people are sitting, they should be asked to go as they don't have any answers . how much people will tolerate?	•
• Is said by the chairman that, okay, your presentation is like this, yes, we are recording it			
971		• No No Sir, Record that, We have listened to 250-300 wrong anwers	
• Stated by the Chairman that all the questions asked since morning are recorded.			
972		• The answer is wrong sir, respect the people, we pay thetax and your salary is paid .Respect people and do not divert people in wrong	

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		direction.	
• Has been stated by the chairman that, out of respect for you, this has been kept and verbalized.			
973	Laxman Kanji Kariya	• Therefore, this public hearing is proved to be inconstitutional. There is no answer to this, this Digital India is done by our Gujarat government, sir, you can not let us show dolphin fish inspite of big screen.	
• Has been stated by the chairman that, here is your objection, we have not come to see dolphins or to see digital India. Speak your issue.			
974	Laxman Kanji Kariya	• My question sir, this screen which is visible is called screen in English, we say curtain, who has put it, company. Respected Govt or Honorable Govt of Gujarat or Pollution Department answer me who put this screens? Can give the answered to the public, you people are not giving an answer , these people are taking time to answer . This means there is a conspiracy going on. .	
• According to the Regional Officer of GPCB, the arrangements made in the public hearing have been made by the project proponent.			
975	Laxman Kanji Kariya	• To put it bluntly, the company has installed screens, and why is it not working ?	
• As stated by the Regional Officer of GPCB, dscreen was on during presentation and there is nothing to display s it is closed.			
976	Laxman Kanji Kariya	• No, no, we had mobiles, we had EIA reports.	
• As told by GPCB Regional Officer, discuss whatever objections you have. • Been stated by the Chairman that, present your objections. • As told by GPCB regional officer, this issue is going on since morning, if there is another issue, tell me. • Has been stated by the Chairman, that the next objection is someone speak .			
977	Laxman Kanji Kariya	• You lead the people on the wrong path .	
• Has been stated by the chairman that , no, there is no wrong way . You are diverting in wrong subject.			

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978	Laxman Kanji Kariya	• We are the people .	
• Has been said by the Chairman that, if you are a citizen, give us whatever objections you have.			
979	Laxman Kanji Kariya	• Sir, if you have come to listen to us, then in writing, not our bada, not 22 villages.	
• Has been stated by the chairman that, we give justice to each and every one of you. We take care of your issues. And we are listening since morning, you still present the issues you ccan submit in writing and verbally, but you are not to the point.			
980	Laxman Kanji Kariya	• Sir, we are to the point. We have not diverted from the point, so sir, why this army of 25 people has been kept for us. So let us discuss this. If these people are present then they have to answer. What are these 25 people sitting for? If this is the only question we want to hear, then these 25 people are from government agencies or private so are there officials in them? This is my question? Sir, you have a question? If any government official is sitting, then which agency is government, please answer this, Radiya Sir, these are all private agencies, then none of the agencies have spoken their name .	
• It has been stated by the Regional Officer of GPCB that, if you have any issue please speck...			
981	Laxman Kanji Kariya	• This is an issue, whether they are government officials or private officials. If they are government i, there should be registration . Every agency should tell their registeration no. and thus should be recorded.I am contractor and have 3 agency , We communicate through numbers only.	
• The GPCB regional officer said that, the record is still ongoing			
982	Laxman Kanji Kariya	• Whether you are government agency , tell us yes or no. ?	• NIRI and NIA are government agencies .

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983	Laxman Kanji Kariya	• Whether it is by the Government of India or Gujarat Government or not, at the place of hearing, can you provide the record of them who are sitting. Please record whatever radia sir said that they are all government agencies.	• NEERI and NIO are government organisation.
• Stated by the Chairman that, what is your objection honestly. Say that, you will not stop the procedure. No, no, raise objections regarding your project. Raise objections related to plant.			
984	Laxam Kanji Kariya	• Provincial Officer ...	
• Has been told by the chairman that you should not discuss in this way , Please say your point.			
985	Laxman Kanji Kariya	• We have an intangible right	
• Has been stated by the Chairman, that you should submit a valid objection. Present your objections first. • Regional officer of GPCB said that, the two Central Government Officer are presents, he said that.			
986	Laxman Kanji Kariya	• So give us a list .	
• State your objection, as stated by the Regional Officer of GPCB.			
987	Laxman Kanji Kariya	• Ok thank you. I have filed an application in the environment department. Secretary, Govt of India, I have applied with Delhi Govt. I have the answer to this. Now you don't see any papers. I will not come to give papers. And wrong agency has given wrong report .	
• According to the Regional Officer of GPCB, Ok.			
988	Laxman Kanji Kariya	• To this the Secretary has given an answer that a investigation Committee has been appointed and the investigation is going on. And this type of order comes then public hearing can not be organised and this is unconstitutional.	
• GPCB Regional Officer informed that we have no such record.			
989	Laxman Kanji Kariya	• The provincial officer may record this. Pollution Officer, West Kutch Hon'ble Badmera, has been ordered him to investigate by	

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		Delhi Pollution Department, copy of which is present. Will take a look. Provincial officer look now.	
• It has been stated by the Chairman that , Ok			
990	Laxman Kanji Kariya	• Will see.	
• Show me , as told by Regional Officer of GPCB.			
991	Laxman Kanji Kariya	• DYSP let one of our person come inside so that I can forward this letter.	
• Is stated by Chairman that, I have taken your details on record			
992	Laxman Kanji Kariya	• Now you refuse, Pollution Officer refuses. No one knows that and if you are a magistrate, can you make a decision ?	
993	Laxman Kanji Kariya	• I am coming, Instruct to police officer	
• Has been stated by the chairman that, you give us, we will take it from the record. I have nothing to decide here. I will put your matter on letter record. I assure you to if you give your written representation , we ll keep it in record.			
994	Laxman Kanji Kariya	• You are an officer. You are involved in conspiracy.	
• Is stated by the Chairman that, so you give your presentation we take it on record.			
995	Valji Jashraj Charan	• Where do I come from sir, show this record .	
• Is stated by Chairman that, do n't sho , you speak, I am taking it on record.			
996	Valji Jashraj Charan	• I am telling the reader. • Government of Gujarat Forest and Environment Department, Gandhinagar, Ashok Chauhan, Junior Technical Officer, Deputy Secretary. Letter No. ENV-10-2021-43. To, Chairman District Level CRZ Committee, Collector Office, Kutch – Bhuj. The Regional Officer and Member Secretary. District Level CRZ Committee,	

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		Gujarat Pollution Control Board, Katira Commercial Complex 1, Mangalam Char Rasta Kutch Bhuj. Office of Tushar Badmera Saheb Shri. Subject – presentation of damage to environment and agriculture. By proposed project of Gujarat Heavy Chemical Limited in Bada Madhya of Mandvi Taluka. (GHCL) Repressentation is received from Applicant Valji Charan resident of Kathada village , Mandvi taluka , Copy is attached This is with respect to wrong environment impact assessment report prepared for obtaining environmental clearance. Please submit suitable actions atken and revert back . Yours sincerely- Ashok Chauhan , cc Gujaart pollution board, cc- Valji Charan. I have not got answer to my applicatyion till now.Your public hearing is inappropriate . I have all proof.	
• According to the regional officer of GPCB, the letter of yours, Valji Bhai, which is a copy given by the board, says that the plant should be inspected wrt pollution, but this plant has not yet come.			
997	Valji Jashraj Charan	• So, sir, no one has replied to me in the mail since you have sent me your letter. Now that is not what you will give me. The public hearing is over, I am speaking the proof of how these rules are being violated. Another response to my application, Reference Compliance Report. Received from Charan Valji Jashraj – 19/07/22 Please find include complaint received from valjijashrajcharan	

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		again M/s. Gujarat Heavu Chemical Limited, Regarding EIA report proposed – cancellation of PH of the above project of GPCB. URL: required verified to talk necessary actions regarding intermission complaint with this department with regards copy to charanvaljijashraj. Now the order of the third inquiry is the Collector and the District Magistrate, Kacheri Bhuj . To, Regional Officer, Gujarat Pollution Control Board Bhuj Kutch means Badmera sir, Badmera sir, you, Provincial officer, Mundra, Kuchch, you two officers have received my application, in response to which there is an order for investigation, no investigation has been done yet Subject – Gujarat Heavy Chemical Limited coming up in Bada at of Mandvi Taluka. (GHCL) presentation of damage to environment and agriculture . Reference – Junior Technical Officer and ex-officio Deputy Secretary, Forest and Environment Department, Ganginagar. Letter No. – ENV – 10- 2021-43 /Tcell, dated – 22 .07. 22 The above subject, to state that the applicant Mr. Charan Valji Jashraj, resident – Kathda, Mandvi's undated application reference letter is represented here. A copy of the application is enclosed herewith. It is requested to examine the submissions made in the application and send a reply to the applicant. BH Jala , Chitnis to the Collector	

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		Kutch Bhuj. Dated 22.07. 2022 So the orders you received at least 2 months ago have not been checked, There is no such checking yet. This should be taken on record.	
• According to the Regional Officer of GPCB, Ok.			
998	Valji Jashraj Charan	• Sir , the inquiry order of the same has been written on Collector and District Magistrate neooffice by Bhuj Kutch Collector. Regional Officer, Pollution Control Board Bhuj Kutch – 21.09.2022 This application has been forwarded. The application of the subject environment is the matter of the investigation procedure. Reference – Charan Valji Jashraj, Resident , Mandvi Kutch Neerji In the above matter to state that the applicant Mr. Valji Jashraj Charan Res. Kathda , Our office is presented with reference to Mandvi. Which is enclosed with the copy of the application which initiates the application, is requested to investigate and take action as per the rules and reply to the applicant Shri . BH Jala , Chitnis to the Collector Kutch Bhuj . And on the second from the District Magistrate of Kutch Bhuj, a copy is sent. Shri Charan Valji Jashraj We have sent an inquiry 3-4 months ago we have written to you... two officials are sitting. Officer, I have received the inquiry order of your officer which tells you that EIA report should be checked and still report is not verified . This public hearing is going to end but still I have not received reply. All these three	

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		letter should be taken on record You accept this that the application received 3 months back has not been investigated. Sir, may it be taken on record. Then this application ...	
• It has been stated by the regional officer of GPCB that the record will be taken up.			
999	Valji Jashraj Charan	• My applications came to me from 3 places, there are replies and from the application I made which is the investigation agency, investigation is done but the government does not investigate for 3-3 months and direct PH is done in favor of the company. What does GPCB board mean? It is to give clearance to industries and this is not joke . So we request you to check our application. Give us the right answers. We request that any private organisation shouls check a government agency report We have succeeded in proving that the EIA report is wrong and yet we are again saying for the 10th time that the EIA report of these people is totally wrong. Check them.	
• On record, that it has been stated by Chairman.			
1000	Valji Jashraj Charan	• Investigate EIA report , Provide a satisgactory reply, then only these people should be given environment related clearance. They are not giving clear reply related to companys environment clearance	
1001		• Sir, I have a question regarding the management of solid and hazardous waste. That the effluent from the captive power plant RO and DM plant is to be deposited in the landfill where it has been treated and disposal, if you have	• The first thing is that the effluent will not be put in the landfill , an MoU has been done with the cement plant, we have done an MoU with Sanghi Cement

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		done so in your EIA report, the BOD / COD will be negligible only, I would like to know from you that What is the limit when this type of effluent is to be put in a landfill site, how much BOD and COD should it contain and if you have written that there is a negligible amount.what does it mean?	and will give it at that time . If you talk about the effluent plant will be mixed with effluent and as our effluent is alkaline , HCL will be used as & when required and this will act as a treatment.
1002		• Sir, this is also my question that if your EIA report says that your BOD / COD is negligible, then what is the permissible limit if this type of hazardous waste is to be dumped in the landfill site area. And you have said here that this is negligible, so we assume that you will do the treatment as said and suppose that even after doing proper treatment, if it is to be put in the landfill, then how much will be its BOD and COD .	• But I talked about fly ash.
1003		• This is not about fly ash. The EIA report says that your RO and DM plant where your effluent is going to be released and you are going to dump it to a landfill site. It has been said that the amount of BOD and COD will be negligible amount. So what is the standard procedure of that. It has been assumed that if you do the treatment, you will do the treatment 101 %. What will be the BOD and COD after treatment ? • How much BOD is there ? • You have 30 years of experience .	• Normally which is BOD and COD . So this BOD / COD will be within its permissible limits . And only then we will use in land fill site . • At the moment we have not specified anything. Will know when we start. • We do not get any such requirement .
• This is a non-smoking area as stated by Chairman Shri. You go out, you are standing stand in public and smoking. Take out this person who is smoking cigarette. The police are requested to get him out as. public hearings, is still going on. This is harmful for nearby person. Now give your representation.			
1004		• You are running this plant since 30 years. You should know. If you treat the effluent from the power	• I have already talked about using RO and DM plant effluent

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		plant and RO and DM plant and put it in the landfill site, how much will be its BOD / COD .	which is normal effluent and this will be used for effluents correction. These effluent are normally acidic.This is not needed to dispose in landfill
• The regional officer of GPCB has told that Radia sir if you have the details, otherwise you should Say no specifically.			
1005		• No but your EIA report says that • I am saying that after reading the EIA report .	• No, if the need arises, it will be done according to their limit. • We understand your point.
• The regional officer of GPCB told that she is whether yoy have BOD/COD data. ?			
1006			• We do not have BOD / COD actual data in present.
1007	Vijay Gadhavi	• Sir, I request that you have correctly mentioned that he is standing and smoking here, You can see these small smoke but If it comes near by Chimney what will happen. You can see ciggrete smoke but you can see chimneys smoke . We are standing without food . These many people have come . What is reason behind this public hearing? There is one request that company is saying we will provide fodder, they will provide for give for four days. Radia sir I have question whetehr you will give rabbit, deer , porcupine back. Please answer. Please leave Bada and go towards desert area as whole desert is free.	
• Regional officer of GPCB said that. OK OK we have heard all your submissions, if people have objections, if anyone has any questions...			

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1008	Laxman Kanji Kariya	• My question remains sir, look honorable provincial officer, I am Laxman Bhai Kanji Bhai Gadhavi, I have not said anything like that, why are you torturing me.	
• Chairman stated that this is general talk, Please present your objections.			
1009	Laxman Kanji Kariya	• Police don't torture.	
• Has been stated by the chairman that, you are involved in politics, you should talk about the issue.			
1010	Laxman Kanji Kariya	• Dear Provincial Officer, the issue is that there are Gogal trees in our forest area, the company does not cut these trees, family of 264 from the area of this land, let me continue my question these families, collect Gogal from these Gogal trees and 264 families earn their livelihood, then what is the arrangement for those families ? He is currently earn their livelihood whether he should commit sucide.. • The company has said that we will plant Gogal trees, how many trees will grow till then, how will the life of 264 families live, the government or the company has a plan, the answer is expected .	• We have no work to do in the forest area. If these trees are there, there is no point in taking away their livelihood .It will be same and there will be no any impect on Gogal.
1011		• The provincial officer and the pollution department will be responsible for any Gogal tree that is uprooted , My second question .	
• Chairman said that, we have taken your questions and company's answers on record.			
1012	Laxman Kanji Kariya	• Honorable officer, We have not come to listen from the company, we have not come to say anything about the company, we have come for the honorable officer.	
• Has been told by Chairman that, but you have to come here, the head of the plant gives the answer.			
1013	Laxman Kanji Kariya	• They are giving wrong answers.	

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• Has been stated by the Chairman, that we are taking it on record, and we are taking their answer in record.			
• Has been stated by the chairman that, he wants to say that they are still stuck in one matter..			
1014	Laxman Kanji Kariya	• I am thinking of other question. What will happen to 3 check dams built by Gujarat government? If it is made from government money, then the company will eat it. Radiya ji give the answer. Sir he come to answer this.	• Now it depends on the government that it will suggest an alternative.
1015	Laxman Kanji Kariya	• We don't understand English, I'm sorry.	• They will give us their plans which place we need to shift. So we will remove it and make another place. That is because the of EIA experts were saying that when plant will come the water has to be diverted, where will the rain water go when the plant comes, that will be done and necessary steps will be taken, but as of today there is no plan for it.
1016	Laxman Kanji Kariya	• Sir, I used to say that everything is above all.	
• Has been stated by Chairman that, all this has been taken on record.			
1017	Laxman Kanji Kariya	• Yes, 3 dams are there but we still know, I doubt it. Hence... question further	
1018		• How many acres of lands application is submitted to government.	• An application of around 100 ha has been given.
1019	Lakshman	• Sir, tell in Gujarati with explanation. I don't know. These illiterate people do not know.	• Around 250 acres
1020	Lakshman	• A proposal of 250 acres has been put. 5000 animals including near	

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		by cow, buffalo , goat are grazing. What will our buffalo , cow will do. These 5000 no, where it will go ? Did tyou do any study . Againwe are going to listen wrong anwer to this question. They only want to install plant. • give answer	
• The reply given by the Sub Divisional Magistrate That is your represention.			
1021	Lakshman	• Not you, I want answer from them.	
• We have come to listen to your objections even if we do not have the answer we have come here to listen your obejcetions as stated by the Sub Divisional Magistrate.			
1022	Lakshman	• No no sir	
• The Sub-Divisional Magistrate will reject if there is no reply to us given by the court officer. We have taken your objection.			
1023	Lakshman	• So sir, when the DLR report was made, the first public hearing was 6 months ago, till then these documents were not prepared.	
• The reply given by the Sub Divisional Magistrate The information which they have they have given them. Those informations which did not have with them are taken in the letter.			
1024	Lakshman	• This should be recorded. 5000 cattle from 5-7 villages are being fed. The officials of the GHCL company do not tell the truth to the people through the provincial officials. Sir, please be side of Public.	
• The answer given by the Sub Divisional Magistrate Officer, We belong to the people, the hearing is going on since 11 o'clock in the morning.			
1025	Lakshman		
• Answer given by Sub Divisional Magistrate Officer, I am not sitting to give clearance now.			
1026	Lakshman	• So sir, they do not have answer in this public hearing.	
• The answer given by the Sub Divisional Magistrate your objection are there. You have been objecting since morning.			
1027	Lakshman	• Sir cancel this, if they don't have answer.	
• The answer given by the Sub Divisional Magistrate is no. Send us your objections			
1028	Lakshman	• Sir, tell me what they have done in this study.	

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• The reply given by the Sub-Divisional Magistrate, they have to reply to the Committee They have to answer. The answer will be given to the committee.			
1029	Lakshman	• Sir, you explained in one word. This is a committee's responsibility. What are these people for? Why have people been called? So you would have send it directly.	• People of Bada village have presented. Our fodder land is going and that's why....
• Reply by Sub Divisional Magistrate Your objections.....			
1030	Lakshman	• Show the names of the people in this village.	• That is why we have given guarantee of 12 months of fodder for Bada village.
1031	Lakshman	• One minute. This company is going to stay for 12 months? 35 years in Sutrapada, this is 12 months.	• All 12 month. Fodder will be arranged as per requirement.
1032	Lakshman	• Have you Study yes or not. How many in 5000?	• We have not studied no. of cattle.
1033	Lakshman	• Take it on record, these people have not studied at all.	
1034		• This is platform where villagers can represent.Villager can do RTI to statuatary body and get their answers Radiya sir is saying-12 month. who will answer me.	
• The answer given by the Sub Divisional Magistrate is that he has answered the questions asked. Taken in minutes.			
1035	Lakshman	• Provincial officer you are senior to us one second, Let me take a breathe.	
• Inhale or discuss, the answer given by the Sub Divisional Magistrate Strat Officer.			
1036		• Hon'ble officer has arranged fodder within CSR. Fodder has been given for 15 days to Buffer zone. When there was a great need, the villagers demanded fodder. we have a written photo. They were not capable to provide fodder. 250 acres of land for this fodder is not a small matter. This is taken a big area. Shows the	• Fodder has been provided to villagers. We have provided details about fodder. We have given this in writing to villagers.

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		planning of the future. Our livestock is usafe. Let us plan ahead. Where EIA report is not included and CSR activities are to be done there . So did not. Why should we do? Give answer	
1037		• Please provide figure, how many villages you gave fodder in CSR fund.	• I don't have exact figures a present
1038		• I need past data related to CSR fund and their activity	• Approx. 35-40 lakhs have been spent.
1039		• In which village? How many livestock are there in the village?	• have provided 12 village impact area
• Answer given by the Sub Divisional Magistrate Officer, Do not divert discussion. Say your issue.			
1040		• You drink milk, I drink milk. This is same mother cow .	
• The reply given by the Sub Divisional Magistrate Officer that, this public hearing is not for discussion, We are taking your written representation too,We are not discussing on whether you want to bring this plant or not, This is not deciding authority. This is not platform for argument			
1041	Vijay Gadhavi	• I am vijay gadhvi these people are going to install power project. In order to operate it, they should tell how they will operate and from where they will bring fuel .	• Today we are talking about solid fired boiler . Whererin we are going to utilise lignite. We are in consultation with TCE (Tata consulting enginner). We are wishing to utilise biomass in future as an other alternative . We are also checking on their commercial viability. We are going to utilise coal lignite and we ll transport it through truck.
1042	Vijay Gadhavi	• Approximately how many trucks will be ?	• About 70-100 trucks for fuel.
1043	Vijay Gadhavi	• All this is strictly observed. • the coal,lignite handling today is not a violation of the government's coal handling guidelines?.	• It will be done according to its guideline.
1044	Dhvani Shah Village : Bada	• Public roads cannot be used as per the coal handling guideline.	• All these plants use public roads.

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			Alternatives will be considered when instructions are given to us.
1045	Dhvani Shah Village : Bada	• one minute	
• Provincial Officer of GPCB - First listen to sir whatever other objection are. Put it in. Question – Answer should not be done.			
1046	Dhvani Shah Village : Bada	• 6.4 Sir	
• Sub divisional magistrate stated that this type of questioning and ansering is not Ok			
1047	Dhvani Shah Village : Bada	• 6.4 sir you cannot violate my right.	
• 6.4 Sub Divisional Magistrate asked to give in writing.			
1048	Dhvani Shah Village : Bada	• You can not violate our right. • No sir.	
• Answer given by the Sub Divisional Magistrate Officer that, Now I will close the hearing after 5 minutes.			
1049	Dhvani Shah Village : Bada	• No sir EIA notification says you are not above it.	
• Sub divisional magistrate said that you will not decide, I ll decide			
1050	Dhvani Shah Village : Bada	• There is no timeline detailing until the issue ends. You will stop black mailing. You are saying about all power plant. Adani has a plant. It is based on advanced technology. You use using once through cooling. That is old technology why would you use that? • You have given examples of all plants. You said the best technology. But why don't you do it?	• The best technology will be done. this is commercially viable.
1051	Dhvani Shah Village : Bada	• Whether now it is commercial viable or not ?	• We will use the latest technology. We will do it on basis of commercial availability.
1052	Dhvani Shah Village : Bada	• OPG power plant was once through cooling system, it had to change the technology. After studying the available option, why not include it was including in EIA?	•

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		Secondary sir, if you use best available technology and do not pollute. For that, intake and outfall channels are required. You need it because you want to discharge polluting material.	
• GPCB - You enter into the discussion with whatever they have replied.			
1053	Dhvani Shah Village : Bada	• I am seeking clarification. 6.4 you cannot stop me. Please answer.	• As we said once through cooling system we have back pressure turbine and huge sea water requirement. And we will also be using the cooling tower as per the requirement and it is not a question. Otherwise once through cooling system will be used in soda ash. so we have taken as an option.
1054	Dhvani Shah Village : Bada	• ZLD is the best available technology. Why don't you need that.	
• Provincial Officer of GPCB - Your suggestion is good. You send it. This is the subject related to environment. I am telling you. • The Chairman Stated that you cannot make any oral submission. Because you are coming back again 4th times. You all are coming one after another. Give us your written submission. submit your issue related to environment in writing.			
1055	Vijay Ghadhavi	• You are an officer.	
• The Chairman Stated that give us in writing			
1056	Vijay Ghadhavi	• Give you in writing	
• Provincial Officer of GPCB - Vijay gadhavi, If you have any other submissions, let me know.			
1057	Vijay Ghadhavi	• Sir, we don't give it in writing • You are an officer.	
• The reply given by the Sub Divisional Magistrate Officer that,It will be recorded in this record. This is public hearing. So get this in writing			
1058	Valji Jashraj Charan	• We are a citizen we have not come to do investigation.....	
• The answer given by the Sub Divisional Magistrate Officer this is public hearing. You give it in writing.			

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1059	Valji Jashraj Charan	• you can't leave anyone. We will come to GPCB again. You can not leave the place even if the hearing lasts for 4 days.	• GPCB Regionall Officer and Chairman.
• It was stated by the chairmam, That if you have any written submission. give it to us Give your points. • The Regional officer of GPCB said that if you do not give in writing then this public hearing is over.			
1060	Vijay Gadhavi	• My own 9-10 questions are remaining to ask. My question remains. My question remains. But there is no question. 10 question are of mine to ask.	
• As stated by Chairman Shri, you should give it in writing. I have been listening to your public hearing since morning. You are repeating same point one after another. 3 to 4 persons are only coming during public hearing. Only one objection comes then they go out and comes back. Give your representation in writing.			
1061	Vijay Gadhavi	• You become a supporter of the company.	
• It was told by the chairman that, we have been listening to you since morning, we have given you the mic. Everything you say has been recorded. We gave you mic frequently and you have spoke for many time. Your speech has been recorded, no one has taken mic away from you, you have been speaking since 11 o'clock.			
1062	Vijay Gadhavi	• Mic was taken away from me.	
Reply by Sub Divisional Magistrate Officer . You give it in writing. You give your oral submission in writing . No No Give it in writing.			
1063	Vijay Gadhavi	• I have to make an oral presentation.	• Chairman only one thing to say. This should be noted that Dhwani Shah and Valji Charan are far from the affected area. So there oral submission should not be considered.
1064	Vijay Gadhavi	• Now I present..	
• Chairman said that you should submit a written submission. Submit your written submission, present your objection within the legal jurisdiction.			
1065	Vijay Gadhavi	• Radia sir, is giving wrong answers to all the questions. Radia Sir has given wrong answers to 200 questions. Then he is saying that	

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		this sister is not from this area. Valji doesn't belong here, your are doing forcefully. Why are you doing that? The whole public hearing is in favor of the company and they are putting allegations on us.	
1066		• We people are not from here, then from where is the company?	
• It was stated by the Chairman, give any representation you have in writing. We conclude this hearing.			

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Regional officer, Kutch (West), Gujarat Pollution Control Board told the public that written submissions have been received from a total of 1154 persons including 1031 persons with reasonable interest before the public hearing and 123 persons during the public hearing will be included in the agenda.

Regional Officer, Kutch (West), Gujarat Pollution Control Board was present in the presence of any other people's views / suggestions / representations regarding the proposed project , but no other views were presented .

Environmental Public Hearing was finally declared closed by the Regional Officer Kutch (West), Gujarat Pollution Control Board with the approval of the Sub Divisional Magistrate Shri.

Place :
Project Site , Survey no. 432 , Village: Bada , Taluk: Mandvi , District: Kutch, Gujarat ,

Date : 17 / 10 / 2022

T. C Barmeda

T. C. Barmeda
Regional Officer,
GPCB, Kutch (West) as
Representative of the
Member Secretary, GPCB

Chetan Misan (GAS) ,
Sub Divisional Magistrate and
Deputy Collector , Mundra
(Kutch)

2nd PH photographs

















Announcement on 15/10/2022





Nana-Layja Village





Bhada Village





Panchotiya Village




Janakpur Village




Bada Village




Bambhadai Village




Mapar Village

Announcement on 16/10/2022





Mota-Layja Village





Bhinsara Village





Bayth Village





Padampur Village





Changadai Village

GHCL LTD – Public hearing Action Plan

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
1	CSR – Fodder	4	Steps to be taken for cattle Care about Maldhari community Security regarding fodder supply for livestock.	Fodder will be provided as well as provision for veterinary doctor will be carried out by GHCL foundation under CSR activity.	• Activities for fodder supply will be carried out under CSR and CER activities for strengthening the bond between the project authorities and the local population. (refer Ch-8 and Table 10.4 in Ch-10). Fodder field will be developed on the Government/allocate land to nearby villages. • Unit will do promotion through providing support for breed improvement, animal health care, fodder improvement and providing veterinary doctor in nearby villages under CER and CSR activities for communities. • During year 2020-2021, GHCL foundation has spent INR 9.03 Crores towards CSR activities. CSR projects/activities worth INR 19.09 Cr. were implemented. GHCL wide range of CSR projects have touched and benefitted more than 90,200 lives over the years. Promoting such activities like water conservation, Animal husbandry, health care, SHG, Infrastructure development etc. • We have already provided veterinary doctor for nearby affected villages.	• As per MoEF&CC Office Memorandum F.NO. 22-67/2017-IA III, MoEF&CC, New Delhi, dated on 1st May 2018 GHCL Ltd has earmarked 0.5 % of capital investment (appro. Rs. 18.04 crore), towards the Corporate Environment Responsibility in 5 years • GHCL Ltd will spend approx. **4.35 crore*** towards Animal husbandry promotion through providing support for breed improvement, animal health care, Veterinary doctor and others as well as provides Fodder for cattle feeding nearby villages as per requirement under CER activities (* value may defer as per actual requirement)	5 years	GHCL Limited
2	Employment	5	For employment of local villagers Number of employment opportunities to be generated Priority must be given to nearby 10 villages Regarding priority to nearby villages	Information on employment opportunities has given by Project Proponent that there are different types of employment opportunities in the two phase of the projects i.e. construction	• The proposed project has a potential for employment of skilled, semiskilled and unskilled employees during construction phase as well as	• GHCL Ltd will spend approx. 2.25 crore towards Promoting activities for skill building to improve	During construction and Operation phase	GHCL Limited

GHCL LTD – Public hearing Action Plan

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
			for labor work Regarding employment for local communities.	phase and operational phase of the project. GHCL will strive to provide these employment opportunities to the local people, for which work will be done for their skill development and employment opportunities will be provided to the local people. As per requirement, training will be given to local people in coordination with HR department. Priority will be given for employment of local people. In nearby villages a group of women can be formed so that they can work in Gruhudhyogs (Home- based business). M/s. GHCL shall provide employment to women as per their skills and qualification.	operational phase. The plant will create direct employment in phased manner for about 1200 (operational phase) skilled as well as semi-skilled staff and indirectly large number of unskilled manpower will be engaged for the project. For Employment, local people will get first priority as per suitability and requirement. People will also get employed by the contractors for various project related activities.(Refer Ch-8 of EIA report) • GHCL foundation will carry out skill development Programme for local youth to improve their employment opportunities, women empowerment under CSR and CER activities.	employment opportunities and women empowerment in nearby villages under CER activities.		
3	CSR - Health	1	Regarding health facilities under CSR activities	Will provide mobile health van facility and upgradation of existing healthcare infrastructure	• Industry will provide Mobile Health Care, Health Camps, and Specialized Check Up Camps in nearby villages. Necessary support and help will be extended for advanced diagnosis and treatment wherever identified, Free medical health checkup under CSR and CER activities.(Refer Ch-8 of EIA report). We have already initiated mobile health van facility for nearby affected villages of project site.	• GHCL Ltd will spend approx.. 1.12 crore towards Infrastructure development Such as primary healthcare units and the fulfilment of the basic amenities in PHCs including mobile medical van and Provide Bala-Rasayana to Malnutrition Children in Aanganwadi and PHC of nearby Villages under CER activities.	5 years	GHCL Limited
4	CSR - Education	3	Regarding scholarship under CSR activity Regarding skill development of youth and improvement of economic	Will build school in future as per requirement and will also upgrade the existing school infrastructure and will carry out	• Unit will be directed at two levels viz. school and skill building to improve employment opportunities. At	• GHCL Foundation will spend approx.. 1.47 crore	5 years	GHCL Limited

GHCL LTD – Public hearing Action Plan

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
			conditions To provide educational facilities	skill development activities	school level we intend to promote quality of education and learnability, develop infrastructure of Government schools, provide vocational training as per the requirement under CSR and CER activities. • GHCL foundation will support local government and NGO to make that program more effective. • GHCL foundation will carry out skill development Programme for local youth to improve their employment opportunities, women empowerment under CSR and CER activities. • During year 2020-2021, GHCL Foundation has spent INR 9.03 Crores towards CSR activities. CSR projects/activities worth INR 19.09 Cr. were implemented. GHCL wide range of CSR projects have touched and benefitted more than 90,200 lives over the years. Promoting such activities like water conservation, Animal husbandry, health care, SHG, Infrastructure development etc.	towards Infrastructure development for quality of education, which will ultimately upgrade schools in nearby villages under CER activities.		
5	Air Pollutants (SOx, NOx, Dust)	6	Height of chimney to be installed Levels of Sox and NOx Regarding acid rain cause by Sox Emission of PM during transportation and Emission of heavy metal such as	For minimizing Air Pollution, requisite height of the stacks will be provided as per the NAAQS norms. Besides this, Modern technology equipment's like Dust collector, Electrostatic Precipitator, Scrubber will be	• The best available technology-based pollution prevention and control shall used to meet the regulatory standards and these pollution control systems will be commissioned before	• **Air pollution** • Capital cost would include air pollution control devices like ESPs, Scrubbers, Dust extraction and suppression systems,	During operation phase	GHCL Limited

GHCL LTD – Public hearing Action Plan

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
			mercury. Regarding once through cooling for 120 MW. Regarding linkage of fuel and how they are going to use it	installed. As a result, the pollution level will be within standard limits. GHCL will continue to support development of green belt in the surrounding villages through various agencies including GHCL Foundation (AF). GHCL shall endorses AF tree plantation movement of planting trees in entire Mandvi Taluka and 50,000 trees that mentioned, GHCL shall surely nurture those plants for five years.	commencement of operation of the project. Wherever possible, the control systems shall be interlinked with the operational units, so that failure of the control system shall shut down the respective operational unit. • High efficiency ESPs shall be provided in the flue gas path of the CFBC boilers for control of particulate matter. • Finely ground limestone will be added to the boiler combustion zone • together with coal/lignite to arrest the SO2 formed during combustion. • Lime stone dozing system to the furnace to be designed to achieve higher than 90% capture of SO2. Monitoring system(CEMS) of air pollutants SO2, NOx, NH3, PM10 and PM2.5 will be implemented. • So, the expected pollutants will be well within standard norms. • The air quality monitoring will be carried out on regular basis by approved agencies by CPCB/GSPCB. (refer Ch-6 and Ch-10 of EIA report) • GHCL will implement greenbelt /plantation program to ameliorate the pollutants and improve the aesthetics and ambient air quality. (refer Ch-10 of EIA report) • There is negligible cooling water requirement for power generation. There is no any alternative effective system is available for soda ash plant.	Stacks, Dry Fog system, Wind screen etc- 89.28 crore • recurring cost would include operation and maintenance of pollution control devices- 1.50 crore • **Environmental monitoring Programme** capital cost include OCEMS, online weather station etc- 3.4 crore • Recurring cost – 0.95 crore • **Greenbelt** • Capital Cost- 20 Crore • Recurring Cost- 0.5 crore		

GHCL LTD – Public hearing Action Plan

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
					• There is no readily available infrastructure for transportation of fuel i.e. rail or water way. So, we have to transport through road. Traffic study are shown in section 3.2.3 of chapter-3 and impact due to transportation is show in 4.1.4.3 and 4.2.3 of Chapter-4 in EIA report. In future, any alternative option available will explore. • GHCL Foundation will also promoting plantation activities in nearby villages under CSR and CER activities			
6	Water pollutants (BOD,COD,Ammonia, Mercury, Sea Weed, Mangroves)	7	Regarding water related question by Koli society Regarding decrease in number of phytoplanktons and disruption of food chain Regarding temperature and presence of ammonia in waste water Regarding presence of mangroves Regarding setup of tunnel for intake of sea water, seismic zone in which company falls, liquification of land due to heat Regarding discharge of effluents into sea containing ammonia and high temperature and death of fishes at Sutrapada plant Regarding quality of effluent in terms of BOD and COD	Effluent will be highly alkaline so it will be mixed with HCL and then it will be disposed off in sea. Design of structure will done according to seismic zone V. In soda ash industry impact of ammonia is very low.	• Industry will provide adequate effluent management and monitoring system for disposal of treated water • Proper seawater intake and treated effluent disposal (ensure maximum dilution) shall be done as per recommendation Marine EIA report. • The water monitoring results of (surface and groundwater and marine) should be carefully evaluated to identify significant changes, if any, adverse change from the baseline accordingly, corrective measures will be taken to ensure the sustenance of water quality. However, there is no ground water pollution is envisage in such soda ash plant, • The ammonia concentration in treated waste water well	• **Water Pollution** • Capital cost would include cost of ETP, STP etc- 14 crore • recurring cost would include operation and maintenance of pollution control devices- 0.12 • **Environmental monitoring Programme** capital cost include online pH, NH3-N, Temp meter etc- 3.4 crore • Recurring cost including Fresh water & wastewater sample analysis charges and Marine area environment monitoring – 0.95 crore	During operation phase	GHCL Limited

GHCL LTD – Public hearing Action Plan

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
					within the limit specified by CPCB for soda ash industry. • There is no such fish kill cases due to treated effluent in existing plant. There are independent studies available which indicates there is no significant adverse impact on marine environment but there will be positive impact on environment. • During studies, there is no such mangroves identified in sea water intake and outfall line area. • Design of pipeline/tunnel will be done according to seismic zone V. In case of catastrophic failure/ liquification on land, there are no chances of flooding as water transport through gravity.			
7	Marine Life	1	Effect on marine life due to proposed project	No adverse impact on fish or marine animals and sea weed observed.	• Industry should be ensured that the effluent released to the sea meets the prescribed GPCB/ CPCB norms at all times. This should be verified through tracer studies after the outfall becomes operational. The effluent release scheme can then be adequately modified to ascertain necessary dilution, if required. The efficiency of the diffuser must be checked periodically and if necessary, it should be cleaned to revert back to the dilution ascertained through initial tracer studies. • There are independent studies available which indicates there is no significant adverse	• A provision of Rs. 1 crore to be earmarked for the biodiversity management plan to be implemented in the project area during construction phase and operation phase. • For periodic monitoring of the marine area environment during project • construction phase, a provision of Rs. 0.5 crore to earmarked. • For operation phase, Rs. 0.3 crore per year to be kept provision for • the monitoring.	During construction and Operation phase	GHCL Limited

GHCL LTD – Public hearing Action Plan

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
					impact on environment but there will be positive impact on environment. • Design of pipeline/tunnel will be done according to seismic zone V. In case of catastrophic failure/ liquification on land, there are no chances of flooding as water transport through gravity.			
8	Health & Hygiene(Ammonia Leakge)	2	Skin diseases due to Soda Ash Regarding the leakage of ammonia.	GHCL will take care of any such issues related to Health of local peoples and workers. All the necessary measures for handling of chemicals will be implemented to reduce its impact on health of peoples. This information is also provided in the EIA report. All the pockets will have leak detection and repair system technology. Moreover, periodical maintenance will also be carried out. GHCL will ensure that there will be no leakage and therefore, there will not be occupational health issues for workers or villagers working in the plant. Moreover, GHCL will also provide PPE kits to workers for their safety.	• Ammonia tanks should have latest instrumentation provision for pressure indication, temperature indication and level indication. The provision of instrumentation should be within 100 percent redundancy. Continues recording of major parameters pertaining to the storages shall be maintained in the control room. • Unit will provide all the safety measure for ammonia storage as well as also prepare onsite and offsite emergency plan and all the APCM with respective units to mitigate the air pollution. The best available technology-based pollution prevention and control shall used to meet the regulatory standards and these pollution control systems will be	• Capital cost would include cost of OHS center, PPEs, fire & safety instruments, automation system for ammonia storage – 3.4 crore • Recurring cost would include maintenance charges and training, audit & health check-up etc.- 0.35 crore	During operation phase	GHCL Limited

GHCL LTD – Public hearing Action Plan

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
					commissioned before commencement of operation of the project. Wherever possible, the control systems shall be interlinked with the operational units, so that failure of the control system shall shut down the respective operational unit. • There is no significant impact observed in the existing soda ash plants in Gujarat.. • There are rare possibilities of ammonia leakage observed in soda ash plant however, recommendation of Disaster management plan and risk assessment will be followed.			
9	CSR - Farmers	3	Facilities to be provided to nearby farmers How hygenic the plant will be? How hygenic will be bada plant and what facility will be provided to the farmer.	GHCL Foundation is already providing subsidy for drip irrigation and GHCL will also consider to support this scheme further out of the CSR funds proposed for this project. To help agriculture, GHCL will help farmers as part of our CSR activity in consultation with villagers. The details and type of developmental work will be decided in consultation with villagers. GHCL foundation has been working for farmers through its different schemes like ground water recharge, water harvesting, zero chemical farming, drip irrigation etc.	• Industry will Promote environment friendly and nature-based solutions to enhance productivity of farming (Organic Farming) activities. It covers capacity building on farming techniques, provision of high-quality seeds/manure, efficient irrigation solutions, etc. under CSR and CER activities	• GHCL Ltd will spend approx.. 3.00 crore towards Promoting environment friendly and nature-based solutions to enhance productivity of farming (Organic Farming) activities. It covers capacity building on farming techniques, provision of high-quality seeds/manure, efficient irrigation solutions, etc under CER activities.	5 years	GHCL Limited
10	EIA Report & PH	14	EIA report is not correct	The terrestrial EIA report is	• It is requested to note that as			GHCL Limited

GHCL LTD – Public hearing Action Plan

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
	advertisement		Regarding the alternative of site modhwa village. Regarding the NIO accreditation to prepare marine EIA report Regarding ToR granted and Study carried out prior of ToR granted. Regarding the advertisement of the PH Regarding NABET accreditation of consultant organization Regarding Marine EIA Regarding NEERI who has prepared EIA report Regarding the correction in EIA report Regarding the monitoring data collection Regarding accreditation certificate of additional studies for ecology.	prepared by CSIR NEERI and Marine EIA report is prepared by NIO, Mumbai	per OM number J-17011/8/92-IA-III dated 8th August, 2019, there are 7 institutes/agencies authorized for preparation of CZMPS in consonance with the provision of CRZ notification, 2019 vide GSR 37(e) dated 18/01/2019. IRS anna university Chennai has prepared the CRZ map for GHCL LTD. CSIR -NIO is Expert hired to carryout the Marine EIA study. • EIA report has been prepared by CSIR-NEERI, which is reputed governmental body and QCI NABET accredited consultant. • An extensive study on the ecology and Biodiversity in the study area was conducted by the QCI NABET approved functional area expert.			
11	Vipassana	3	Project site is near Vipassana meditation center The meditation center will be disturbed due to industry. Ammonia used in the industry. Related to presence of Vipassana center and other religious places in 15km radius of project site	--	• Environmental Management Plan envisages the plans for the proper implementation of mitigation measures to reduce the adverse impacts. • The EMP implementation will minimize the impact of atmospheric emissions, liquid effluents, solid wastes and noise generation on the surrounding environment. • The monitoring of all valued environmental components will be monitored as per the norms prescribed by GPCB/CPCB and the time to-time guidelines issued for soda	• Cost of Environment-management plant including various installations for Air Pollution, Water Pollution, Noise Control, Greenbelt Development, Occupational Health and Safety and other related activities.-205.07 crore • Recurring cost include maintaining and monitoring of all components- 6.98 crore. • **Greenbelt** • Capital Cost- 20 Crore	--	GHCL Limited

GHCL LTD – Public hearing Action Plan

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
					ash manufacturing industry. • It is reported in CSIR NEERI report that there are no significant impact expected on man-made sensitive installations and habitations. On basis of study of present environment condition near project area and impact prediction and control measures proposed by GHCL Ltd. The proposed project will not have any significant negative impact on environment. Company operations are limited to the plant boundary and no negative impacts on Vipassana Centre are anticipated. The company will have robust peripheral Green Belt in order to attenuate noise and air emission due to plant operations.	• Recurring Cost- 0.5 crore		
12	CSR - Animal Husbandry	3	Regarding arrangements for Animal husbandry to nearby villages Regarding distribution of kits to fisherman under CSR activity Regarding number of cattle present in the area	GHCL Foundation will support nearby community by providing education and livelihood support to make them self – reliant.	• Unit will do promotion through providing support for breed improvement, animal health care, fodder improvement and providing veterinary doctor in nearby villages under CER and CSR activities. • Unit will also promote development Initiatives for Fishing Communities such as Creation of infrastructure like ice plants, cold storages as well as provide operational inputs such as fishing boats, nets and engines • We have already provided veterinary doctor for nearby affected villages.	• GHCL Ltd will spend approx.. 4.35 crore towards Animal husbandry promotion through providing support for breed improvement, animal health care, Veterinary doctor and others as well as provides Fodder for cattle feeding nearby villages under CER activities	5 years	GHCL Limited

GHCL LTD – Public hearing Action Plan

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
13	Site Selection	2	Regarding the alternative of site modhwa village. Regarding showing presence of marshy land near coastline	--	During the site selection, the alternative sites considered for setting-up of the proposed chemical complex project are given below: : Site 1 – Village Pingleswar, Taluka – Abdasa, Dist. Kutch Site 2 – Village Suthri, Taluka – Abdasa, Dist. Kutch Site 3 – Village Bambhdai, Taluka – Mandvi, Dist. Kutch Site 4 – Village Bada, Taluka – Mandvi, Dist. Kutch Site 5 – Village Modhva, Taluka Mandvi, Dist. Kutch The site at village bada is considered favorable based on the environmental and logistic advantages over other four sites. Justification of Site selection are given in Chapter-5 of EIA report.	--	--	GHCL Limited
14	Sand Dunes	2	Concern of presence of sand dunes at bada coast Regarding digging of sand dunes for preparation of tunnels for water intake	--	• There is no disturbance to existing sand dunes. • Tunnelling work (much below ground level) for laying pipeline through sand dunes will be done by adopting proven construction methodology like micro tunnelling. The detailed Studies on sand dune mapping and morphological changes near the project site was carried by National Institute of Oceanography (NIO), Goa. This report can be referred from CSIR NIO Marine EIA. • GHCL Ltd is committed for conservation plan for sea turtles and sand dunes as suggested by various studies.	--	--	GHCL Limited

GHCL LTD – Public hearing Action Plan

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
15	Turtle	3	Regarding presence of turtles on the coastline of bada Regarding information on endangered species not mentioned in EIA report Regarding hatching and presence of sea turtles	--	• Study on Status Survey and Conservation Plan for Sea Turtles along Mandvi Taluka, Bhuj, Gujarat by **Zoological Survey of India**, **Kolkata (April,2019)** is attached with EIA report. • ZSI study report mention that they did not any encounter any sea turtle and fresh/old nests or crawl marks of turtles on the beach. Since many of the factor for selection of a suitable nesting site are not conducive. • As per additional Ecological and Biodiversity study, suggests that the coast near the proposed project site may not be suitable for sea turtle nesting due to narrow supra tidal region, steep slope, dense vegetation and presence of predators such as dogs and jackals. Though, observations suggest that there may be no or negligible probability of sea turtle nesting. • GUIDE is also engaged for study of turtle survey and preparing conservation plan. Premiliary observation are found to be similar. GHCL Ltd is committed for conservation plan for sea turtles and sand dunes as suggested.	• Contribution to Forest department for Sea Turtle Conservation Activities- 0.20 crore	10 years	GHCL Ltd
16	Schedule 1 species (Peacock, Googal. Turtle,	4	Regarding presence of greater numbers of peacocks nearby and not	--	• Details of schedule -1 species and conservation plan is	• the proposed budget	10 years	GHCL Ltd

GHCL LTD – Public hearing Action Plan

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
	Sandha and indian Monitor Lizard)		stated in report Presence of reptiles and amphibians not reported Related to study of presence of Indian Monitor Lizard in study area Regarding presence of gugal trees,		already incorporated in EIA report. • GHCL shall make financial allocations for taking up wildlife mitigation measures and for contribution to forest department for carrying out activities towards propagation, protection and conservation of wildlife. • GHCL Ltd have submitted Conservation Plan (Flap shell turtle, Green Sea turtle, Indian monitor lizard, Olive Ridley Sea turtle, Black shoulder kite, Eurasian Spoonbill, Indian Peafowl, Marsh Harrier, Oriental Honey Buzzard, Shikra, Short-toed Snake Eagle, Chinkara and Gugal - Schedule –I species and Critically Endangered species) to CWLW department of Gujarat.	allocation for conservation of Schedule 1 species for 10 years is 1.25 crore		
17	Conservation Plan	2	Regarding conservation plan for Schedule 1 species Concern regarding green sea turtles and conservation plan for them	--	• GHCL shall make financial allocations for taking up wildlife • mitigation measures and for contribution to forest department for carrying out activities towards propagation, protection and conservation of wildlife. • The unit have submitted Conservation Plan (Flap shell turtle, Green Sea turtle, Indian monitor lizard, Olive Ridley Sea turtle, Black shoulder kite, Eurasian Spoonbill, Indian Peafowl, Marsh Harrier, Oriental Honey Buzzard, Shikra, Short-toed Snake Eagle, Chinkara and Gugal - Schedule –I species and Critically Endangered species) to CWLW	• the proposed budget allocation for conservation of Schedule 1 species for 10 years is 1.25 crore	10 Years	GHCL Limited

GHCL LTD – Public hearing Action Plan

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
					department of Gujarat.			
18	Form 1(Water Bodies, Temples, Schedule 1 Species)	5	Regarding presence of waterbody not shown in form-1 Regarding religious places and lakes not mentioned in PFR report. Waterbody not mentioned in form-1 Data given in form-1 and EIA are different Waterbody not mentioned in form-1	--	• Environmental settings are given in Chapter-1 and Chapter-5 of EIA report. Approximate distance of water bodies, temples etc are given in EIA report. • Through drainage studies of the area, it was observed that there is one stream of 1st order entering the plant area from north. Although, it has small catchment area, it is proposed that this stream, will be diverted to nearby passing Vengadi River in the west. • There are also pond inside the premises. It is proposed that pond i.e. inside the premises will be used to store entire annual surface runoff plant use. If permitted by concern authority.	• -Cost of drainage network of surface runoff, rainwater collection pond and rain water harvesting system – 53 crores (included in EMP)	--	GHCL LTD
19	Govt. Land	3	Regarding type of land to be procured by the industry Regarding status of government land to be procured Providing data for proving gauchar land	--	• There is no gauchar land within proposed project site. M/s GHCL has applied to Industries Commissioner and District Collector for allotment of aforesaid land. Industries Commissioner has granted In Principle approval for Bonafied Industrial Purpose. District Collector has initiated actions for allotment of Govt. waste land.	--	--	GHCL LTD
20	Fishing	8	Regarding details of Pagadia fisherman not mentioned and Marine EIA is misinterpreted	--	• Proper seawater intake and treated effluent disposal (ensure maximum • dilution) shall be done as per	• A provision of Rs. 1 crore to be earmarked for the biodiversity management plan to be	During construction and	GHCL LTD

GHCL LTD – Public hearing Action Plan

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
			Regarding disturbance to fishes due to presence of pipeline Regarding status of fishing near bada and Mandvi Related to number of fisherman not incorporated in study -- Related to presence of dead fishes not reported in study, fishing carried out for commercial purpose Regarding presence of fisherman in study area		Marine EIA report prepared by NIO • Industry should be ensured that the effluent released to the sea meets the prescribed GPCB/ CPCB norms at all times. This should be verified through tracer studies after the outfall becomes operational. • Details of Fishery and fishermen including their family and population are given in Chapter-3 of marine EIA report. • Other than construction phase, there will be no any impact on pagadiya fisher men. As shore line will remain undisturbed. • It is mentioned in marine EIA report that no large-scale commercial fishing operation prevail in the study area except for minor shore based and Gill net operations. • There are independent studies available which indicates there is no significant adverse impact on environment but there will be positive impact on environment. • Unit will also promote development Initiatives for Fishing Communities including pagadiya under CER and CSR activities	implemented in the project area during construction phase and operation phase. • For periodic monitoring of the marine area environment during project • construction phase, a provision of Rs. 0.5 crore to earmarked. • For operation phase, Rs. 0.3 crore per year to be kept provision for • the monitoring. • GHCL Ltd will spend approx.. 0.75 crore towards Development Initiatives for Fishing Communities including pagadiya under CER activities	Operation phase	
21	Water Body (check dams)	2	Related to presence of seasonal river which passes near bada village and presence of dam over it	--	• Through drainage studies of the area, it was observed that there is one stream of 1st order	• Cost of drainage network of surface runoff, rainwater collection	During construction and	GHCL LTD

GHCL LTD – Public hearing Action Plan

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
			Related to distance of river from project site		entering the plant area from north. Although, it has small catchment area, it is proposed that this stream, may be diverted to nearby passing Vengadi River in the west, which has two check dams, one for salinity ingress check and on upstream side for storing fresh water. This will not cause any adverse impact on the downstream. For channelizing the monsoon run off from the area adjacent to plant it is required to construct peripheral drain along plant boundary so that flooding is avoided and run off find its way to the natural slope towards Arabian Sea. So, the present hydrological setting of the area will remain unaffected. So, the present hydrological setting of the area will remain unaffected. • The additional water enter into the vengadi river through drainage will not impact on check dam. As any additional water above the river and check dam shall overflow to the Arabian sea.	pond and rain water harvesting system – 53 crores (included in EMP)	Operation phase	
22	Traffic (RMH, Heavy Trucks, Road Usage)	4	Regarding number of trucks passing due to project for raw material Related to traffic study not mentioned in ToR, impact not carried out Concern regarding public roads Regarding number of trucks passing	--	• Traffic study are shown in section 3.2.3 of chapter-3 and impact due to transportation is show in 4.1.4.3 and 4.2.3 of Chapter-4 in EIA report. • We will use existing road network as no other transportation i.e. rail/water ways are available. We have carried out calculation on	--		GHCL Limited

GHCL LTD – Public hearing Action Plan

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
					Traffic study (Level of Service) and added on Form Part-C.			
23	CSR General	1	Regarding past data of CSR	GHCL has proposed CSR budget in the EIA report which will be utilized based on need identification and village development meetings. CSR will be implemented with CSR implementing agencies including GHCL Foundation is working in following area. 1. Agro-livelihood and animal husbandry, 2. Education and skill development, 3. Health, water, and sanitation.	• GHCL's commitment towards the development of weaker sections of society has been a continuous initiative for more than two decades. Through its "GHCL Foundation Trust", GHCL has upgraded its CSR activities to cover a larger section of the society to provide support to the downtrodden, needy and marginalized citizens and also to create a social infrastructure for their sustenance. GHCL Foundation serves as the Corporate Social Responsibility arm of GHCL Limited and represents our commitment to the holistic development of our surrounding community. During year 2020-2021 GHCL has spent INR 9.03 Crores towards CSR activities. During year 2021-2022 GHCL has spent INR 10.62 Crores towards CSR activities • CSR projects/activities worth INR 19.09 Cr. were implemented. GHCL wide range of CSR projects have touched and benefitted more than 90,200 lives over the years. Promoting such activities like water conservation, Animal husbandry, health care, SHG,	--	--	GHCL LTD

GHCL LTD – Public hearing Action Plan

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
					Infrastructure development etc.			
24	Pollution and Environment General	4	Regarding pollution to be caused by industry -- Regarding to dusting due to kiln and power plant, temperature of water Related to disposal of effluent water	Unit will follow all the rules and regulation with their subsequent amendments as directed by concerned authorities	• Environmental Management Plan envisages the plans for the proper implementation of mitigation measures to reduce the adverse impacts. • The EMP implementation will minimize the impact of atmospheric emissions, liquid effluents, solid wastes and noise generation on the surrounding environment. • The monitoring of all valued environmental components will be • monitored as per the norms prescribed by GPCB/CPCB and the time to time guidelines issued for soda ash manufacturing industry.	• Cost of Environment management plant including various installations for Air Pollution, Water Pollution, Noise Control, Greenbelt Development, Occupational Health and Safety and other related activities.-205.07 crore • Recurring cost include maintaining and monitoring of all components- 6.98 crore	--	GHCL Limited
25	Forest area	2	Related to distance of project site from forest area Details regarding families dependent on forest	There is no classified forest area.	• There is no forest land within the boundary of proposed project site. However, some part of the unclassed forest area located south of the project site outside boundary. Sea water intake and outfall pipeline will pass through underground micro tunnel in specific corridor to cross forest area. The permission from the Forest Department is under process. • There will be no major impact on families dependent on forest. As the pipeline will be laid under ground through latest technology. • M/s GHCL has also applied to MoEF&CC for Forest Diversion	--	--	GHCL LTD

GHCL LTD – Public hearing Action Plan

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
					of 0.9689 Ha. of un-class forest land vide' proposal no. FP/GJ/Others/147527/2021. • GHCL Ltd will support afforestation programme in consultation with local forest department.			
26	Supporting for Industrial Development to GHCL LTD	--	For Employment For Infrastructure development in nearby village Social upliftment towards nearby villages Health facilities Women empowerment Skill development Education Fodder supply support Plantation in nearby villages	GHCL LTD team thanked for welcoming the industries	--	--	--	--
	Total	94						

-TRUE COPY-

GHCL Limited

Date: 09.11.2022

To,
PCCF & Chief Wildlife Warden
Govt. of Gujarat State,
Aranya Bhavan, Near Central Water Commission,
Near CH-3 Circle, CH Rd, Sector 10A,
Sector 10, Gandhinagar,
Gujarat 382010.

Subject: Request to obtain Approval of Conservation Plan (Flap shell turtle, Green Sea turtle, Indian monitor lizard, Olive Ridley Sea turtle, Black shoulder kite, Eurasian Spoonbill, Indian Peafowl, Marsh Harrier, Oriental Honey Buzzard, Shikra, Short-toed Snake Eagle, Chinkara and Gugal - Schedule –I species and Critically Endangered species) For **M/s. GHCL Ltd.**

Respected Sir,

It is requested to note that **M/s. GHCL Ltd.** is a proposed Greenfield Chemical Complex (Soda Ash & Sodium Bi-carbonate plants, Captive co-generation power plant, Sea water intake and effluent disposal) located at **Village: Bada, Taluka: Mandvi, Dist: Kutch, Gujarat, India.** For that we hired NABET, QCI Approved FAE in Ecology & Biodiversity, **Dr. Bharat Jethva** to conduct Ecological Study & prepare Wildlife Conservation Plan. According to study conducted by Dr. Bharat Jethva in **July 2019; Flap shell turtle, Green Sea turtle, Indian monitor lizard, Olive Ridley Sea turtle, Black shoulder kite, Eurasian Spoonbill, Indian Peafowl, Marsh Harrier, Oriental Honey Buzzard, Shikra, Short-toed Snake Eagle, Chinkara and Gugal - Schedule –I species and Critically Endangered species** were observed in the 10 km radius from the project site. We have attached Ecology biodiversity report and conservation plan prepared by Dr. Bharat Jethva as Annexure-1.

The project has applied for Environmental Clearance (EC) at MoEF&CC, New Delhi. In connection with that; unit has received Terms of Reference (TOR) copy from MoEF&CC, New Delhi with proposal number: **IA/GJ/IND3/222096/2021 dated on 10th August 2021**. In TOR no 5(v), project proponent has to submit approved conservation plan in the ministry before EC appraisal presentation. TOR copy is attached as Annexure-2 for your ready reference.

We request you to give us the Approval of Conservation Plan **(Flap shell turtle, Green Sea turtle, Indian monitor lizard, Olive Ridley Sea turtle, Black shoulder kite, Eurasian Spoonbill, Indian Peafowl, Marsh Harrier, Oriental Honey Buzzard, Shikra, Short-toed Snake Eagle, Chinkara and Gugal - Schedule –I species and Critically Endangered species)** For **M/s. GHCL Ltd.** as soon as possible, so that we can submit the same to concern authority.

Please do the needful.

Thanking you.

GHCL LIMITED

Yours truly,
For M/s. GHCL Ltd.

Enclosed:

1. Annexure 1: Ecology biodiversity report and Conservation plan.
2. Annexure 2: TOR copy.

19-11-22

O/C

1313

GHCL Limited

Date: 09.11.2022

To,
PCCF & Chief Wildlife Warden
Govt. of Gujarat State,
Aranya Bhavan, Near Central Water Commission,
Near CH-3 Circle, CH Rd, Sector 10A,
Sector 10, Gandhinagar,
Gujarat 382010.

Subject: Request to obtain Approval of Conservation Plan (Flap shell turtle, Green Sea turtle, Indian monitor lizard, Olive Ridley Sea turtle, Black shoulder kite, Eurasian Spoonbill, Indian Peafowl, Marsh Harrier, Oriental Honey Buzzard, Shikra, Short-toed Snake Eagle, Chinkara and Gugal - Schedule –I species and Critically Endangered species) For **M/s. GHCL Ltd.**

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Please do the needful.

Thanking you.

GHCL LIMITED

Yours truly,
For M/s. GHCL Ltd.

Enclosed:

1. Annexure 1: Ecology biodiversity report and Conservation plan.
2. Annexure 2: TOR copy.

GHCL House, Swastik Society, Opp. Punjabi Hall, Navrangpura, Ahmedabad, Gujarat-380009, India Ph. : +91-079-26434100
CIN : L24100GJ1983PLC006513, E-mail : ghclinfo@ghcl.co.in, Website : www.ghcl.co.in

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Dy. Chief Conservator of Forests
Gandhinagar
19-11-22

6. Conservation Plan for Schedule-I Species

Based on our field observations and literature survey we found several species important plant species as well as Schedule-I wildlife species in the study area (Table-6.1). We reported one plant species and 13 animal species. The faunal wildlife species include 4 species of Reptiles, 7 species of birds and 1 species of mammals.

Table-6.1: Schedule-I fauna and Critically Endangered plant species reported from the study area.

No.	Taxa	Name of Species		IWPA Status	IUCN Status
		Common Name	Scientific Name		
1	Reptile	Flap shell Turtle	*Lissemus punctatea*	Sch-I	LC
2	Reptile	Green Seaturtle	*Chelonia mydas*	Sch-I	**EN**
3	Reptile	Indian monitor lizard	*Varanus bengalensis*	Sch-I	LC
4	Reptile	Olive Ridley Seaturtle	*Lepidochelys olivacea*	Sch-I	**VU**
5	Bird	Black shoulder kite	*Elanus caeruleus*	Sch-I	LC
6	Bird	Eurasian Spoonbill	*Platalea leucorodia*	Sch-I	LC
7	Bird	Indian Peafowl	*Pavo cristatus*	Sch-I	LC
8	Bird	Marsh Harrier	*Circus aeruginosus*	Sch-I	LC
9	Bird	Oriental Honey Buzzard	*Pernis ptilorhyncus*	Sch-I	LC
10	Bird	Shikra	*Accipiter badius*	Sch-I	LC
11	Bird	Short-toed Snake Eagle	*Circaetus gallicus*	Sch-I	LC
12	Mammal	Chinkara	*Gazella bennettii*	Sch-I	LC
13	Plant	Gugal	*Commiphora wightii*	--	CR

6.1. Impact – mitigation matrix

Based on our observation, literature review and consultation with local people, and NGO, we formulated following impact vs mitigation matrix. It is advised that company shall follow the suggestions provided in the following Table-6.2.

Table-6.2: General Impacts vs. mitigation matrix & Conservation plan.

Issues		Risk level	Reason/Status in relation to project site	Suggestions
Species	Rare/ Threatened	Med	Threatened species (Green Seaturtle, Olive Ridley Turtle and *Commiphora wightii*) are reported from the study area.	• Ensure no damage or disturbance is caused to these species and their habitats by project activities or people involved in project. • Take up conservation, protection and propagation measures for these species in the study area. • Periodically monitor these areas for their status as part of comprehensive biodiversity monitoring plan.
	Endemic Species	Low	No endemic species of any fauna or flora were recorded during study in the core area and buffer area.	Nil
Important Natural Habitats	Protected Areas	Nil	No protected area present in close vicinity	Nil
	Eco-sensitive zone identified by government	Nil	No protected area or their eco-sensitive zones are present within 10 km periphery of the proposed project site	Nil
	Important Bird Areas	Nil	No Important Bird Area (Birdlife International) is present in core or buffer area.	Nil
	Ramsar site	Nil	No Ramsar sites present in Kutch	Nil
	Wetlands of National Importance	Nil	Great Rann, Little Rann of Kutch and Chharidhandh are located at more than 75 km distances	Nil
	Wetlands of international Importance	Nil	No wetlands of international importance present in 70 km periphery of the project site	Nil
	Wildlife Corridors	Nil	No notified or officially identified wildlife corridor present in and around project site.	Nil
	Forest Area	Med	Patches of open tropical thorn forest or scrub forest are present in the buffer area of the proposed project site.	• Ensure no damage is caused to forest area due to pollution, dust, movement of vehicle, people through forest areas. • Ensure thick green belt on project site periphery to control pollution.

	Mangroves	Nil	No mangroves are present on the coast due to sandy beach. In the study area.	• Nil
	Corals	Nil	No coral reef area present on the coast falling in the study area.	Nil
	Breeding/ nesting areas	Med	Sandy beach stretch between Nana Layja to Bambhdai falling in the buffer area /study area is known for sporadic nesting of two species of Seaturtles.	• Ensure no damage, disturbance is caused due to any of the project activities, pollution, dusting, material flow etc. during construction or operation phase. • Promote conservation, protection and propagation of these species . • Monitor status of this habitat as part of comprehensive biodiversity monitoring plan.

6.2. Conservation Plan for Schedule-I species

6.2.1. Conservation Plan for Critically Endangered Plant Species:

Gugal: (*Commiphora wightii*)

Status: Our field survey in the proposed project area revealed that there is a critically endangered plant species present in the open scrubland as well as forest areas present in the buffer area. This plant was found with low density in the buffer area. This plant has high medicinal values and is facing the threats of extinction by overexploitation for commercial purpose (Silori et al., 2004; Joshi, 2002; GUIDE 2009) from Kutch. However, recently Gujarat Forest Department has accomplished a large scale project on plantation of *Commiphora wightii* in Gujarat. Through this project thousands of plants were raised and planted in entire Kutch region.



This project has improved the number and density of the species in the region.

Impacts: The construction of Soda Ash, Sodium Bicarbonate plant along with Co-generation power plant and related facilities would involve large scale movement of heavy vehicles, excavation, loading unloading, material handling, creation or widening of roads etc. Dusting and pollution due to these activities could potentially affect surrounding habitats where this species thrives. Apart from these the air borne dusting and pollution due to operation phase could also settle in the surrounding area and the forest areas where these plants are present. Therefore, dusting and pollution during construction and operation phases can potentially affect the density and distribution of this species in the buffer area.

Recommendations: GHCL shall put in place all kind of pollution control measures so that the surrounding vegetation is not degraded and this species along other plants survive normally in the study area. GHCL shall carryout comprehensive biodiversity monitoring at regular intervals in order to check impact of their project activities on surrounding area and special emphasis shall be given to this species. It is also recommended that company should take up plantation of *Commiphora wightii* by involving local forest department, which has vast experience of carrying out plantation of this specialized plant species. GHCL and the Kutch West Forest Division shall mutually design the plantation activity.

6.3. Conservation Plan for Schedule-I Fauna

Among the fauna, we reported total 14 animal species. As mentioned above, the faunal wildlife species include a species of Reptiles, 8 species of birds and 5 species of mammals.

6.3.1. Reptile/ Indian Flap Shell Turtle

Status: During our study this species of reptile was recorded form the small village ponds in the study area. The species is resident and breeding in the buffer areas. The Indian Flap shell Turtle (*Lissemys punctata*) is a freshwater species of turtles are widespread and common in the South Asian

provinces. They are listed as Schedule-I species under Wildlife Protection Act 1972 and as Least Concerned as per IUCN threat categories.

Impacts: Since this species is an aquatic, it may be subjected to impacts related to water pollution and hydrological impacts arising due to project activities. These may include dusting, pollution, degradation of water sources, soil characteristics, choking of drainages etc. This species is otherwise not hunted or eaten by the people. Therefore, changes of degradation of overall aquatic habitat qualities in the buffer area are likely to affect these species and their distribution.



Recommendations: GHCL shall put all kind of pollution control measures in place so that surrounding area ecological conditions are not degraded. During construction it shall be seen that no drainage, ponds etc. are damaged or altered. GHCL shall carryout biodiversity monitoring at regular intervals in order to check impact of their project activities on surrounding area and special emphasis shall be given to monitoring of surface (drainage, check dams, ponds) water and wetlands in the buffer area.

6.3.2. Reptile/Seaturtle

A coastal beach admeasuring total 23 km lies in the study area on the coast of Bambhdai-Bada-Pachotiya-Bhada–Nana Layja villages. Most part of the coastal area falling in the study area is sandy and has presence of sand dunes of varying height and width. The southern boundary of proposed project site is located near the sea coast of Bada village which covers a stretch of approximately 2.0 km length. The coastal area near project site has narrow beach width and get inundated regularly during high tides. Our field observations, literature review and consultation with local NGOs suggest presence of sporadic nesting activities of 2 species of Seaturtle on 19.5 km long sandy coastal stretch from Bambhdai to Nana Layja. According to literature survey (*Sunderraj et al 2013*) the coastal stretch between Bambhdai –Bada-

Nana Layja has reported density of 1.4 seaturtle nests per kilometre. This density of nests could be considered sporadic in nature compared to mass seaturtle nesting activities occurring on eastern coast of India. Moreover, as per our field survey, we observed that width of supra tidal areas on the coast near the proposed project boundary is narrow and has dense vegetation and steep slope. These conditions may not be very suitable for nesting activities of seaturtle on the coastal stretch of 2.0 km that is located south of the proposed project boundary. However, the proposed project in absence of mitigation measures could result in following impacts on seaturtle.

Direct loss of habitat: The project facilities would include laying of intake and outfall pipelines from the southern boundary of the project area into the Arabian Sea. The laying of seawater intake and outfall pipelines corridors would required to be carried out through the sand dune area and the intertidal area on the coast. The area required/occupied (approximately 50 mtrs width) for laying of pipelines could result in the direct loss of coastal habitat i.e. sand dunes and intertidal areas. This would occupy a very small coastal habitat and resultant impact in terms of loss of habitat could be considered negligible.

Changes in morphology of coast: The activity of laying of intake and outfall pipeline corridors may damage or change the morphology of the sand dunes and the intertidal areas on the coast. This might affect the nesting activities of seaturtle. Moreover, as per CRZ notification sand dunes are classified as ecologically sensitive areas.

It is therefore recommended that laying of intake and outfall pipeline corridors shall be done underground without disturbing the morphology of sand dune, forest area (mostly dominated with *Prosopis juliflora*) or the intertidal area. The pipeline corridors shall be laid underground on entire length of sand dunes and intertidal area i.e. landward end of sand dune to the low tide line in the seaward side. This would ensure no damage, or alteration of the morphology of coastal habitats. Apart from this, if there is any alteration in the coastal habitat caused by construction activities, movement of heavy vehicles etc. shall be restored.

Direct disturbance to nesting: The construction activities would enhance presence of people, machines, lightings etc. These activities may deter the females approaching for nesting on the beach during breeding season. This may affect nesting activity of two species of seaturtle if appropriate mitigation measures are not considered. It is therefore recommended that laying of intake and outfall pipeline corridors on coast shall not be carried out during peak breeding seasons of the two species of the seaturtle.

Increase in artificial illumination on the coast: The proposed project boundary lies near sea coast. The industrial development on the coast also results in higher illumination near beach areas, this is one of the major impacts of coastal development known to disturb and distract seaturtle nesting and hatchlings. The artificial beachfront lighting problem may be the most manageable of the human-caused sea turtle disturbances. Although some beachfront lighting is necessary for safety and security, light management measures can help prevent interference with sea turtle nesting habitat while still addressing human safety concerns. These measures include following.

- Turning off unnecessary lights during the nesting season.
- using a smaller number or lower wattage of lights; repositioning, shielding, redirecting, lowering, or recessing fixtures so light does not reach the beach;
- Moreover, sea turtles are less affected by red, yellow, and low-pressure sodium-vapor lights, which can be substituted for ordinary lights.

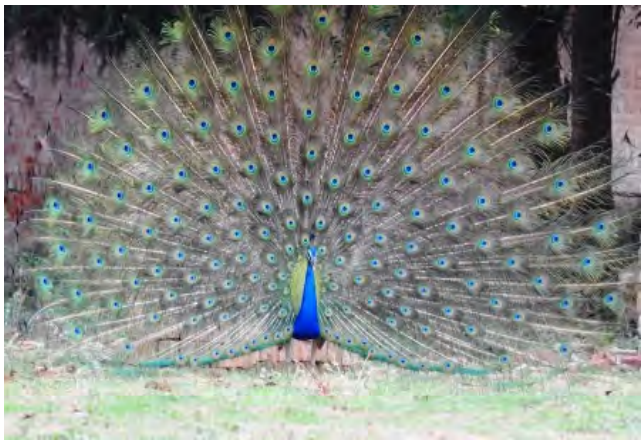
Pollution on Coast: Since the proposed project lies near the coast, the airborne fugitive dusts and other pollutants during construction and operation phases could pollute beach and cause changes in physical and chemical property of natural beach. It is therefore, recommended to control all types of pollution by strictly adhering to pollution control measures. Thick green belt of local hardy species shall be created to control air pollution.

Apart from above mentioned mitigation measures, the project proponent as part of their Corporate Environment Responsibility (CER), shall monitor nearby coast along project area for seaturtle nesting and in case of significant changes, proper mitigation measures shall be taken in consultation with experts and the

forest department. The project proponent though their CER budget shall also financially support research and conservation activities carried out for seaturtle by Gujarat Forest Department.

6.3.3. Birds/ Indian Peafowl

Status: The Indian Peafowl *(Pavo cristatus*) was recorded from the surrounding scrubland, villages, agriculture fields etc. in the buffer area. It is a resident breeder in the Indian subcontinent. The bird was justifiably declared as the national bird of India in year 1963 due to its 'flagship' value founded on its glorious position in mythology and its widespread distribution in the country. The species is found in dry semi-desert, scrub and deciduous forests. It forages and nests on the ground but roosts on top of trees. It eats seeds, insects, fruits, small mammals and reptiles. The Indian Peafowl is a ground nesting bird and it lays a clutch of 4-8 eggs which take 28 days to hatch. The eggs are light brown and are laid every other day usually in the afternoon. The male does not assist with the rearing, and is polygamous. Poaching of peacocks for their feathers and poisoning by feeding on pesticide treated seeds are known threats to wild birds. Under the law, collection of tail feathers is allowed only when the bird sheds them. The Indian peafowl is under various threats that include the demand for feathers and wild meat, conflict with farmers during cropping season, increased use of chemical fertilizers and pesticides and habitat degradation.



Impacts: Our field study reported presence of Indian Peafowl in the buffer areas of project site. The species was observed in the buffer area of 10 km radius particularly near human habitations, villages and agriculture fields. Since our study reported presence of Indian Peafowl in the buffer area, its possibility of nesting in buffer area could not be ruled out. Since Indian Peafowl is a ground nester, several project activitie can have adverse impacts on their nesting

grounds such as pollution, degredation of soil and vegetation from surrounding ara and in the forest areas. Direct disturbance by presence of people, vehicle, their noise, vibrations, lights etc. can potentially disturb most of the bird species.

Recommendations: following actions for the conservation and protection are suggested in wildlife conservation action plan to reduce impacts of project related activities on the species. Based on our field observation on the distribution, behavioral ecology, conservation need, and envisaged impacts of proposed project, we identified several species specific actions that would help reduce the impacts of project activities on Indian Peafowl as under.

i. Since Indian Peafowl is a ground nesting bird, heavy vehicle movement, presence of people, excavation activities could disturb their nesting activities.

ii. Avoid vehicle movement in the area where nesting is found. The movement of vehicles or humans shoul be prohibited in vicinity of the nesting area.

iii. Electric lines shall be designed to minimize the potential for electrocution of indian peafowl and other such large birds.

iv. Lightings within the project area could potentially deter the species presence. Therefore, GHCL shall ensure that minimum illumination comes out from the project area. This can be done by adjusting the angles of the light sources and using low intensity focused bulbs inside the project area.

v. Tree Plantation shall be carried out by GHCL in the surrounding villages and schools etc. in the buffer area. This would help the species and provide them much needed roosting place.

vi. Staff involved in construction activities shall be trained and made aware of Indian Peafowl's status as National Bird of India, and Schedule-I species protected under Indian Wildlife Protection Act 1972. This is important because if there are any casualties with this species occurs

then they should report it to the project authorities and the local forest department to carryout further necessary actions.

vii. Thick green belt of local hardy species shall be created to control air pollution.

6.3.4. Birds/ Schedule-I Raptors

Status: Total 5 bird species i.e. terrestrial Raptors belonging to Schedule-I of Wildlife Protection Act 1972 are reported from the study area. These species are Black shoulder kite, Oriental Honey Buzzard, Marsh Harrier, Shikra and Short-toed Snake Eagle. Of these 5 species of Raptors, none are reported from the core area and all 5 are reported from buffer area. Except Marsh Harriers rest all 4 species of raptors are resident breeders of India, Gujarat and Kutch. Almost all the raptor species are recently added to Schedule-I list through amendment made in year 2013. All the reported species are listed as Least Concerned category by IUCN. Marsh Harrier is migratory raptor species that arrives in this area during winter season.



Impacts: These 5 species of terrestrial raptors are predators and occupies tertiary consumers positions in the food chain and ecological pyramids. Therefore, any change in primary productivity would affect their distribution, density and population in the region. Therefore, project activities resulting in air, water and noise pollution, degradation of vegetation could potentially affect the habitat of these bird species and their population in the study area. Moreover, direct disturbance by presence of people, vehicle, their noise, vibrations, lights etc. can potentially displace most of the raptors species from the project area and its immediate surroundings.

Recommendations: It is recommended that GHCL shall take utmost care in controlling dust, fugitive emissions using state of the art technologies and put in

place all types of pollution control measures during construction and operation phases which would ensure minimum degradation of surrounding vegetation, forest area vegetation and waterbodies. Minimize vehicle movements around the project areas. Adjust lightings within core area and ensure minimum illuminations spreads outside the project area. Keep all the machineries maintained so that minimum noise and vibrations are generated in the surrounding area. Thick green belt of local hardy species shall be created to control air pollution.

6.3.5. CHINKARA (*Gazella bennettii*)

Status: The important herbivore present in the buffer area is Chinkara which is protected as Schedule-I species in Wildlife Protection Act 1972. During our survey, we reported presence of Chinkara through direct sightings in the buffer area in the study area. Indian gazelle is a shy animal and avoids human habitation. It stands at 65 centimetres and weighs about 23 kilograms. It can go without water for long periods and can get sufficient fluids from plants and dew. Although most individuals are seen alone, they can sometimes be spotted in groups of up to four animals. It lives in grasslands and desert areas in India. Its population is on the decline due to it being hunted for game. Narayan Sarovar Wildlife Sanctuary and its surrounding areas in Abdasa Taluka of Kutch are known for Chinkara population. The species is common in landscape of Kutch and North Gujarat. The species is listed as Schedule-I in Wildlife Protection Act 1972 and as 'Least Concerned' by IUCN. The species needs safe, undisturbed arid semi arid plains with open and sparse vegetation.



Impacts: This species is likely to be using open scrubland areas and forest areas for their feeding and breeding. They are also likely to be using waterbodies in the buffer area for their requirement of water. The impacts of project activities on herbivore are likely to be direct as they are primary consumers in the eco-system. Degradation of soil, vegetation and habitat due to

chronic pollution loads, the species would lose its feeding ground and breeding area. Therefore, changes in overall habitat qualities in the buffer area are likely to affect these species. The direct disturbance to these species by vehicle traffic, human intrusion is also issue of some concern.

Recommendations: It is recommended that company shall take up strict pollution control measures (air, water and noise) which would take care of major issue of habitat degradation for the species. Thick green belt of local hardy species shall be created to control air pollution. GHCL shall also support forest department in conducting awareness of local people towards wildlife conservation and law reinforcement and anti poaching activities in the study area. During construction and operation phases, GHCL shall inform their workers and staff not to engage in chasing, teasing or hunting of Chinkara as it is prohibited under wildlife protection act 1972.

6.4. Wildlife & Ecological Mitigation Measures

Based on our field study, information collected and consultation with project proponent, we recommend following mitigation measures as self regulatory, monitoring and compensatory measures for protection, conservation and betterment of wildlife and ecology in the surrounding area of project site.

6.4.1. Regulatory Mitigation Measures & Recommendations

i. Laying of intake and outfall pipeline corridors shall be done underground without disturbing the morphology of sand dune or the intertidal area. This would ensure no damage, or alteration of the morphology of coastal habitats. Even if there is any alteration in the coastal habitats caused by construction activities, movement of heavy vehicles etc. it shall be restored.

ii. Adjust lightings within and outside the project area in such a way so that there is less disturbance and distraction to wildlife. Lighting towards the coastal area boundary shall be adjusted with special care so that seaturtle are not affected.

iii. Strict control on dust pollution using various methods and technologies shall be carried out.
iv. During construction water sprinkling on roads and soil dumps shall be carried out to control dust pollution.
v. During operation phase Air quality standards (emission of pollutants like Particulate Matter) must be maintained as per GPCB/CPCB norms in and around the project site.
vi. Ambient noise pollution and vibrations during construction and operation phases shall be within limits of the standards mentioned.
vii. Plantation of thick green belt on periphery of the project site shall be created using local and hardy species.
viii. Ensure minimum movements of vehicles or people on the coast and no unauthorized movement through the Forest Areas located nearby in the study area.
ix. Ensure safe passage of runoff through drainages located nearby the project area.
x. Ensure no fly ash, sediments, pollutants, or any raw materials are spill out and flow into nearby drainage during construction or operation phase of the project.
xi. GHCL shall ensure that their construction workers and other workers during construction or operational phase shall not be involved in chasing, teasing, poaching and hunting activities of birds, reptiles or mammals around the project site.
xii. All other general measures to keep environmental parameters within permissible standards.

6.4.2. Compensatory Measures & Recommendations

There are few ecologically important habitats and Threatened species of plants and animals are present in the study area. Therefore, GHCL shall take utmost care during construction and operation phases so that these areas and species are not affected by their activities. Following are some of the recommendations that would help in propagation, protection and conservation of such habitats and species in the study area.

xiii. In order to compensate for the potential degradation of *Commiphora wightii* habitats GHCL shall carry out its plantation through Kutch-West Forest Division, Bhuj.

xiv. Sandy coastal stretch of Nanalayja to Bambhdai villages has been identified as an important Seaturtle nesting beach in the study area. Since coast near proposed project area is less likely to support nesting activities of seaturtles, no significant impacts are envisaged. However, GHCL shall ensure that no materials (dust, fly Ash or sediments) form their premises flows through air to the coastal areas and alter the texture of sandy beach. It is recommended that GHCL through their CER budget shall financially support Seaturtle conservation activities being carried out by the forest department.

xv. Since India Peafowl and other Schedule-I bird species are recorded in the study area, GHCL shall carryout tree plantation in the surrounding villages, schools, roads so that these species are provided with more safer roosting places in the study area.

6.4.3. Monitoring Measures & Recommendations

xvi. After commencement of the project GHCL shall carryout ecological & biodiversity monitoring at every 5 years for 10 years and take necessary corrective measures accordingly. GHCL shall bear the cost of third party monitoring. Monitoring of status of biodiversity and wildlife shall be monitored with specific emphasis on status of Seaturtle nesting, sand dunes, *Commiphora wightii*, forest areas, waterbodies in the study area.

6.5. Implementation of Mitigation Plan

Since the project is located outside the protected areas and their eco-sensitive zones in Kutch, most of the wildlife mitigation recommendations are self regulatory for user agency, therefore the implementation of these mitigation measures shall be carried out by the project proponent (GHCL) through their own staff and CER budget. However, there are several recommended activities which would be carried out by Kutch West Forest Division, Bhuj. GHCL shall

provide financial support through their CER budget to Kutch West Forest Division to carry out these recommended ecology/wildlife mitigation activities.

A special emphasis on ecological conservation shall be given by extending special responsibility to senior environment authority within the management of the proposed project authority. A senior ecologist shall be consulted on regular basis to oversee ecological/wildlife conservation activates under CER/CSR. The senior personal responsible for the conservation of ecology shall report directly to the head of the organization.

6.6. Monitoring of Mitigation Plan & Compliances

Though, most of the recommendations are self regulatory for user agency, monitoring of these recommendations and other conditions imposed by various agencies towards wildlife mitigation measures shall be monitored by a third party agency. Third party monitoring would involve ecological/biodiversity study at interval of 5 years for 10 years. These studies shall be carried out to evaluated long term impacts of the proposed project activities on the wildlife, biodiversity, waterbody, ecology and forest areas present in the 10 km periphery of the project site. Therefore, as per guidelines issued by the Principle Chief Conservator of Forests, Wildlife dated 13th August 2018, user agency shall allocate up to 5% of the total cost of mitigation plan as third party monitoring cost. Total Rs. 10.0 Lakh shall be allocated by the GHCL for monitoring of mitigation plan for the period of 10 years.

Since the area falls under the jurisdiction of Kutch West Forest Division, the overall official monitoring of the implementation of mitigation plan would be carried out by the Kutch West Forest Division, Bhuj. Therefore, as per guidelines issued by the Principle Chief Conservator of Forests, Wildlife dated 13th August 2018, user agency shall allocate and pay the monitoring and administrative cost to the forest department. For carrying out overall monitoring activities, user agency shall pay Rs. 10.0 Lakh for monitoring and administrative cost to the Kutch West Forest Division.

6.7. Financial Allocation for Wildlife Conservation Activities

Following is the proposed budget allocation for 10 years after approval from all statutory bodies permitting the construction and commencement of the project (Table-6.3). GHCL shall make financial allocations for taking up wildlife mitigation measures and for contribution to forest department for carrying out activities towards propagation, protection and conservation of wildlife from their CER budget. GHCL shall also carry out several activities through their own budget and staff.

Table-6.3: Proposed financial allocation for mitigation and conservation measures.

S. No	Activity	Implemen-ting Agency	Duration Years	Rate/Year (Lakh)	Total Amount (Lakh)
A	**Implementation Activities**				
1	Carryout Tree plantation in the villages, schools roadsides etc. areas in study area.	GHCL	10 years	5.0	50.0
2	Carryout plantation of *Commiphora wightii* in RF areas and maintenance (to be paid by GHCL)	KWFD	5 yeas	2.0	10.0
3	Contribution to Forest department for Sea Turtle Conservation Activities (to be paid by GHCL)	KWFD	10 years	2.0	20.0
				Subtotal	**80.0**
B	**Monitoring & Compliances Activities**				
6	Ecological & Biodiversity monitoring by third party once every 5 years for 10 years after commencement of project	GHCL	At every 5 year for 10 years	7.5	15.0
7	Monitoring and administrative activity (to be paid by GHCL) by Kutch West Forest Division	KWFD	First year		10.0
8	Documentation and preparation of Annual compliance report. 10 years	GHCL	Annual	2.0	20.0
				Subtotal	**45**
				Total (A=B) Amount in Lakh	**125.0**

7. References

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ANNEXURE R/20 **1331**

No. WLP/32/A/50-54/2023-24

Office of the
Principal Chief Conservator of forests
Block No. B/1, Aranya Bhavan,
Ch-3 Circle, Sector - 10/A,
Gujarat State, Gandhinagar.
Date: 24/04.2023

To,
Sri M.S.Rathore,
Sr. General Manager (Liasion & Admin),
Ahmedabad, Gujarat.

Sub:- Granting of Approval of Conservation Plan of selected scheduled – I species for M/s GHCL.

Ref :- Your letter dated. 10.04.2023

With referece to your letter and subject quoted above, an approval for coscripting and documenting a conservation plan for Flap Shell turtle, Green Sea turtle, Indian Monitor Lizard, Olive Ridley Sea turtle, Black shoulder kite, Eurasian Spoonbill, Indian pea fowl, Marsh Harrier, Oriental Honey buzzrd, Shikra, Short toed Snake Eagle, Chinkara and Gugal-Schedule-I Species prepared by M/s GHCl, Ahmedabad for Industries unit in village – Bada, Taluka- Mandvi, Dist. Kutch, Gujarat. The Conservation Plan of Rs. 136.50 lakhs is duly approved. Kindly note, that this amount will be either deposited in the central fund account (to be opened shortly) or the indicating activities will be executed by GHCL as per the order issued from this office.

(N. Srivastava)
Chief Wildlife Warden
Gujarat State, Gandhinagar

Copy to: The Chief Conservator of Forests, Kutch Circle, Bhuj for information and necessary action.

Copy to: The Deputy Conservator of Forests, Kutch West Division, Kutch for information and necessary action.

Table 8.1: Budget estimate (10 year plan) for Implementation of the Wildlife Conservation Plan for Bada Soda Ash Plant of GHCL

Sl. No.	Conservation Objective	Activities	Location of activities	Implementing Agency	Year of Implementation & Targets										Rate/Cost (In Rupees)	Rs in Lakhs
					1	2	3	4	5	6	7	8	9	10		
1	Habitat Conservation, Protection and Improvement	Plantation & Greenbelt development	Soda Ash Plant area and Periphery of plant (30 ha)	GHCL	LP	10 ha	10 ha	10 ha	GF	GF	GF	GF	GF	GF	Rs. 52000/ha	15.60
			Roadside plantation to minimise pollution& attract birds (20 ha)	GHCL	LP	5 ha	5 ha	10 ha	GF	GF	GF	GF	GF	GF	Rs. 52000/ha	10.40
			Bada, Bambhadai and other RF. (50 ha) (Location will be decided by FD)	FD	LP	20 ha	20 ha	10 ha	GF	GF	GF	GF	GF	GF	Rs. 52000/ha	26.00
		Water hole creation	Reserve forest area (creation of water hole structures)	FD	-	5 St	5 St	5 St	-	-	-	-	-	-	Rs. 100000/ structure	15.00
		Plantation management	**Water tanker* (1) and Tractor* (1) with driver and diesel for 10 years**	FD	-	√	-	-	-	-	-	-	-	-	Rs. 2000000	20.00
			Utility vehicle* (1) with driver and diesel for 10 years	FD	-	√	-	-	-	-	-	-	-	-	Rs. 1200000	12.00
2	Research and Monitoring	Plantation Monitoring	Plantation Area	CCF Kachchh	-	-	√	-	√	-	-	√	-	-	Rs. 100000	1.00
		Wildlife Monitoring	Coastal protection by Paryavaran Mitra	FD	-	-	√	-	√	-	-	√	-	-	Rs. 750000	7.50
			Coastal Hatchery & Research centre	FD	-	-	√	-	√	-	-	√	-	-	Rs. 750000	7.50
3	Education & Awareness	Workshop, NEC, Sign board, etc.	GHCL& Nearby Schools & Colleges	FD	-	√	-	√	-	√	-	√	-	√	Rs. 1000000	10.00
4	Miscellaneous	Contingency	-	2.5 GHCL & 2.5 FD	√	√	√	√	√	√	√	√	√	√	Lump sum	5.00
															Sub-total	**130.00**
	Monitoring of works		Implementation Areas of WCP	FD	-	√	-	√	-	√	-	√	-	√	@5% of total	6.50
															Grand Total	**136.50**

GHCL: Gujarat Heavy Chemical Ltd.; FD: Forest Dept; GUIDE: Gujarat Institute of Desert Ecology; LP: Land preparation; GF: Gap filling; NEC: Nature Education Camp

*Note: Vehicles are required for the efficient management of plantation activities and it will be the asset for the forest department in future.

Chief Wildlife Warden
Gujarat State,
Gandhinagar.

-TRUE COPY-

ANNEXURE R/21

Final Environmental Impact and Risk Assessment Study for "Greenfield Chemical Complex" of GHCL Ltd.

(Light Soda Ash Plant of Capacity 3000 TPD, Dense Soda Ash 1500 TPD, Sodium Bicarbonate 600 TPD with Solid Fuel based Captive Co-generation Power Plant (120 MW capacity), Seawater Intake and Effluent Disposal System)

Village Bada, Taluka Mandvi, District Kutch, Gujarat"

Sponsor:
GHCL Limited,
GHCL House,
Opp. Punjabi Samaj Seva Hall, Navrangpura
Ahmedabad

Schedule: 4(e), Category A
TOR Letter: IA-J-11011/293/2021-IA-II(I)
Baseline Period: December 2019 – February 2020

Council of Scientific and Industrial Research (CSIR)
National Environmental Engineering Research Institute (NEERI)
Nehru Marg, Nagpur 440 020 (Maharashtra)

November 2022

Final Environmental Impact and Risk Assessment Study for "Greenfield Chemical Complex" of GHCL Ltd.

(Light Soda Ash Plant of Capacity 3000 TPD, Dense Soda Ash 1500 TPD, Sodium Bicarbonate 600 TPD with Solid Fuel based Captive Co-generation Power Plant (120 MW capacity), Seawater Intake and Effluent Disposal System)

Village Bada, Taluka Mandvi, District Kutch, Gujarat"

Sponsor

GHCL Limited,
Ahmedabad

Council of Scientific and Industrial Research (CSIR)
National Environmental Engineering Research Institute (NEERI)
Nehru Marg, Nagpur 440 020
(QCI/NABET Accreditation letter no. NABET/EIA/2124/RA0227)

November 2022

GHCL Limited

UNDERTAKING for M/s. GHCL Limited.

I, **Shri NN Radia –** Chief Operating Officer (COO) of **M/s. GHCL Limited** located at Village Bada, Taluka Mandvi, District Kutch, Gujarat **do hereby give undertaking** with reference to MoEF & CC O.M. No. J-11013/41/2006-IA.II.(I) dated 05th October 2011, that the data and information given in the Environmental Impact Assessment (EIA) report are factually correct and we will responsible for any discrepancy in the EIA report.

We also undertake that content including information & data of the EIA report is own by us and data or information not taken from any other EIA report.

The above stated fact is true to the best of my knowledge.

Date: 17.11.2022
Place: Ahmedabad

For M/s. GHCL Limited
Shri NN Radia –
Chief Operating Officer (COO)

National Environmental Engineering Research Institute (NEERI)

I, Dr. R.J. Krupadam, **Senior Principal Scientist, National Environmental Engineering Research Institute (NEERI)** located at Nehru Marg, Nagpur, Maharashtra 440020, **do hereby give undertaking** with reference to MoEF&CC O.M. No. J-11013/41/2006-IA. II. (I) dated 04th August 2009, that we have prepared EIA report M/s. GHCL Limited. located at **Village Bada, Taluka Mandvi, District Kutch, Gujarat** as per Terms of Reference (ToR) prescribed wide letter no.: **No. IA-J-11011/293/2021-IA-II(I)** dated **10th August 2021**. The stated ToR have been complied with and the data mentioned in the EIA report are factually correct. CSIR-NEERI is a NABET accredited for materials manufacturing sector such as chlor-alkali. This undertaking is subjected NABET clearance on this project.

The above stated fact is true to the best of my knowledge.

Date: 29.11.2022
Place: Nagpur

For, M/s. **National Environmental Engineering Research Institute (NEERI)**

Dr. R.J. Krupadam
Senior Principal Scientist &
Project Leader

डॉ. आर. जे. कृपादम
एम.एससी.(टेक), पी.एच.डी., एफ.आर.एस.सी.
वरिष्ठ प्रधान वैज्ञानिक एवं प्राध्यापक
समन्वयक, ए.सी.एस.आई.आर.
सी.एस.आई.आर.-राष्ट्रीय पर्यावरण अभियांत्रिकी अनुसंधान संस्थान(नीरी)
नेहरू मार्ग, नागपुर-440 020 (भारत)

Declaration by Experts Contributing to the *Environmental Impact and Risk Assessment & Risk Assessment Study for Greenfield Chemical Complex of GHCL Ltd. At Village Bada, Taluka Mandvi, District Kutch, Gujarat.*

I, hereby, certify that I was a part of the EIA team in the following capacity that developed the above EIA.

EIA coordinator : **Dr R.J. Krupadam**

Signature & Date : 11.8.2021

Period of involvement : **April 2019 – July 2021**

Contact information : **Senior Principal Scientist,**
CSIR-NEERI, Nehru Marg, Nagpur 440020
Ph: +91 712 2249884, Fax: +91 712 2249896

EIA Co-coordinator : Dr. M. Suresh Kumar

Functional Area Experts/TM :

Sr. No.	Functional Areas	Name of the Expert/s	Involvements (period and task**)	Signature and Date
1	Air pollution Monitoring Prevention and Control (AP)/Air Quality Modeling and Prediction (AQ)	Dr. T.V.B.P.S. Rama Krishna	Air Quality AQ	
2	Water Pollution Monitoring Prevention and Control(WP)	Dr. R. J. Krupadam Er. M. Karthik Mr. Y.J Baseshankar (TM)	Water Quality ETP Evaluation, Water EMP Marine Water Quality Water Quality Monitoring	
3	Noise & Vibration (NV)	Dr. G.L. Bodhe Mr. Guddu Kumar (TM)	Noise Monitoring Prediction of Impacts and EMP	
4	Socio-economic Aspects (SE)	Dr. G.K. Khadse Mr. Sanjay Bodhale	Socio-economic Status Quality of Life	
5	Soil Conservation (SC)and Hydrogeology (Hg)	Dr. R.J. Krupadam Ms. Pravin Naoghare (TM)	Soil Conservation Soil Quality	
6	Land-use & Land cover (LULC)	Dr. Ritesh Vijay	Remote Sensing & GIS for LU/LC	
7	Risk Assessment & Hazard Management (RH)	Dr. R. J. Krupadam Dr. Santosh Ghuge	Risk Assessment Hazard Management	

Declaration by the Head of the accredited consultant organization

I, Dr. Sadhana S. Rayalu, hereby, confirm that the above-mentioned experts prepared the "Environmental Impact and Risk Assessment study for Greenfield Chemical Complex of GHCL Ltd., at Village Bada, Taluka Mandvi, District Kutch, Gujarat State. I also confirm that the consultant organization shall be fully accountable for any mis-leading information mentioned in this statement.

Signature	:	Rayalu 06/10/2021
Name	:	Dr. Sadhana S. Rayalu
Designation	:	Senior Most Scientist/In-charge
Name of the EIA Consultant Organization	:	CSIR-NEERI
NABET Certificate No & Issue date	:	NABET/EIA/1821/SA 0119, 01.07.2021 (Renewal applied)

निदेशक / Director
सी.एस.आई.आर.-राष्ट्रीय पर्यावरण अभियांत्रिकी अनुसंधान संस्थान
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Nehru Marg, Nagpur-440 020 (India)

CSIR-National Environmental Engineering Research Institute

GHCL Officials

GHCL Limited,
Ahmedabad

Shri NN Radia	Chief Operating Officer (COO)
Shri VN Desai	Advisor
Ms. Priyakanchini Gupta	Manager QHSE
Mr. Prayuddh Suthar	Manager Projects
Mr. Sankalp Bhatt	Sr. Manager Projects

Disclaimer

The information contained in the report is based on the scientific analysis of data / information / drawing provided by the sponsor as also collected from other sources during the time of the study. While efforts have been made to ensure accuracy of information in the report, CSIR-NEERI shall not own, in any manner, any legal, financial or consequential responsibility for any event of occurrence of any accident / hazard or direct or indirect damage/loss to any third party or to sponsor due to the use or inability to use the information contained in the report.

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List of Annexures

S.N.	Annexure Title
I.	Terms of Reference issued for Greenfield Chemical Complex by MOEF&CC
II.	CSIR-NIO (RC) Mumbai Report: Marine EIA/EMP for Seawater Intake and Effluent Disposal for Greenfield Chemical Complex off Bada Coast, Arabian Sea.
III.	Ecological Study & Wildlife Conservation Plan for Proposed Greenfield Chemical Complex by Dr. Bharat Jethva NABET Accredited FAE
IV.	Comprehensive Hydrogeological assessment studies and designing of rain water harvesting program by Hydro-Geosurvey Consultants Private Limited, Jodhpur (HCPL).
V.	CRZ map prepared by Institute of Remote Sensing (IRS), Chennai.
VI.	Study on Status Survey and Conservation Plan for Sea Turtles along Mandvi Taluka, Bhuj, Gujarat by Zoological Survey of India (ZSI), Kolkata were attached with this EIA report
VII.	Letter for Lignite Allocation Support letter from GMDC
VIII.	Letter for Use of Fly Ash and under size limestone in cement Industries.
IX.	HSE Policy
X.	Raw Data of AAQ measurement
XI.	Public hearing minutes with action plan

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Executive Summary

"Greenfield Chemical Complex" of GHCL Ltd.

(Light Soda Ash Plant of Capacity 3000 TPD, Dense Soda Ash 1500 TPD, Sodium Bicarbonate 600 TPD with Solid Fuel based Captive Co-generation Power Plant (120 MW capacity), Seawater Intake and Effluent Disposal System)

Village Bada, Taluka Mandvi, District Kutch, Gujarat"

Sponsor

GHCL Limited

Ahmedabad

Council of Scientific and Industrial Research (CSIR)

National Environmental Engineering Research Institute (NEERI)

Nehru Marg, Nagpur 440 020 (Maharashtra)

(QCI/NABET Accreditation letter no. QCI/NABET/EIA/1821/SA 0199)

Executive Summary

1. Introduction

M/s GHCL Limited is an existing reputed soda ash manufacturing chemical company, incorporated in 1983. It operates India's first integrated soda ash plant based on Akzo's dry liming technology at Sutrapada at Dist. Gir Somnath in the Gujarat state. The Sutrapada plant was commissioned in the year 1988 with the production capacity of 4,20,000 tons per annum (TPA) capacity. Over the time, the capacity of the plant has been expanded up to 11,00,000 TPA. With the experience and expertise in soda ash and allied production and also to meet the industrial demand of the country, GHCL Limited proposed a Greenfield Chemical Complex project for soda ash production initially and for salt-based derivatives in future. M/s GHCL Limited, Ahmedabad is proposing to set-up a greenfield chemical complex to produce Light Soda Ash (LSA) of 11,00,000 TPA capacity and 5,00,000 TPA of Dense Soda Ash (DSA) and 2,00,000 TPA Sodium Bicarbonate (SBC) near village Bada, Taluka — Mandvi, District Kutch in the Gujarat state. In this regard, the GHCL Limited is seeking environment clearance (EC-CRZ) from the State/Central environmental ministry.

In the proposed project, along with above products (LSA, DSA and SBC), 120 MW solid fuel based captive cogeneration power plant is proposed to meet the uninterrupted and stable power supply. The entire envisaged capacity of the project will be achieved in phased manner.

As per the EIA notification 2006, the proposed project falls under the "Category A" under Schedule 4(e) - Soda ash industry. M/s GHCL Ltd. has obtained the Terms of Reference (ToR) from MOEF&CC for EIA. The EIA report is prepared based on the Standard ToR issued by MOEF&CC vide letter no. IA-J-11011/293/2021-IA-II(I) dtd. 10th August 2021. In line with requirements of TOR granted by MoEF&CC, the Final EIA report has been prepared for the purpose of EC appraisal. The comments and concerns during Public Consultation shall be addressed suitably in EIA report before submission of Final EIA report to MOEF&CC for Environment Clearance.

The major raw materials are solar salt, chemical grade limestone, Coal, lignite and few others. The process being exothermic large quantity of seawater will be required for cooling purpose. Seawater will be withdrawn from nearby Arabian sea. The other associated utilities will be part of the project. The effluents generated from various process units of entire complex will be discharged through marine outfall system in the Arabian Sea at a location identified by scientific modeling studies. Identification of marine outfall location for effluent disposal using scientific tools and modeling is the integral part of the project, for which, CSIR-NIO (RC Mumbai) has conducted detail study.

M/s GHCL has also applied to MoEF&CC for Forest Diversion of 0.9689 Ha. of Unclass forest land vide' proposal no. FP/GJ/Others/147527/2021 as some part of seawater intake and effluent disposal pipelines are required to be laid through Unclass Forest. Consent To Establish (CTE) for the projects is obtained from Gujarat Pollution Control Board (GPCB). Application to Gujarat Coastal Zone Management Authority (GCZMA) is made for obtaining CRZ recommendations for Seawater Intake and Effluent Disposal System.

1.2 Location of Project

M/s GHCL proposes of setting-up Chemical Complex consists of soda ash and sodium bicarbonate plants with captive cogeneration power plant and other related utilities near Village Bada, Taluka - Mandvi, District -Kutch in Gujarat State. The estimated land for the project proposal is around 1350 acre. The site is well connected to SH 6 and in proximity to availability of raw materials i.e salt, coke, lignite, limestone etc. The site at village Bada of Mandvi Taluka, Bhuj District in Gujarat State is selected based on the environmental and logistic advantages over other four sites evaluated as alternatives. The approximate geographical locations with four corners of the plant site are as follows:

(A) 22°53'53.19"N & 69°09'26.63"E

(B) 22°53'41.63"N & 69°09'58.16"E

(C) 22°52'29.66"N & 69° 8'16.32"E

(D) 22°52'57.10"N & 69°07'33.09"E

The study area of 10 km radius from the project site is primarily located within a rural area with lesser developed and sparsely distributed population / installations. The general environmental features within the study area are given in Table 1.1. Field visits indicated that the soils contain high sand content. Cotton was observed as a standing crop while the other crops grown in this area includes sesame, bajara, castor, and groundnut. Horticulture was observed in few locations with a few crops including pomegranate, papaya, and banana. Due to water scarcity, only rain-fed agriculture is mostly practiced in the region. The project site also falls near the coast of the Arabian Sea.

Table 1.1 Environmental Settings in the 10 km Study Area of the Proposed Project

Sr. No.	Particulars	Details
1	Plant Location	Village Bada, Taluka Mandvi, District Bhuj, State Gujarat
2	Latitude and Longitude	Approx. (A) 22°53'53.19"N & 69°09'26.63"E (B) 22°53'41.63"N & 69°09'58.16"E (C) 22°52'29.66"N & 69° 8'16.32"E (D) 22°52'57.10"N & 69°07'33.09"E
3	Toposheet	F42J1
4	Topography	Undulated terrain
5	Elevation	Varying, 5-20 MSL
6	Nearest villages	Bada, Panchotiya, Bhada, Bhisra
7	Nearest Highway	NH-41 Bada - Bishra – Mota Layja road at Mota Layja Chowkdi
8	Nearest Railway station	Bhuj, ~87 km
9	Nearest Airport	Bhuj Airport, ~85 km

10	Nearest Port	Adani Port, Mundra, ~70 km
11	Nearest Water bodies	Seasonal River Vengadi and Arabian Sea coast
12	National Park / Wildlife Sanctuary	• Marine National Park and Sanctuary, Jamnagar are located at 75 Km aerial distance in south directions • Narayan Sarovar Sanctuary is located at more than 100 km aerial distance in North-West direction
13	Seismic Zone	The proposed project site falls in Seismic Zone – V (Highest Risk Zone) as per Seismic Zones Map of India
14	Wetlands & Important Bird Areas	No Notified wetlands present in study area, No Important Bird area present in Study Area.

1.3 Production Capacity

The proposed project aim to produce light soda ash and dense soda ash with Captive coal/lignite based power plant and allied facilities like RO/DM plant, raw material handling, sea water intake and effluent outfall pipelines and emergency DG sets. The production capacity of the proposed project is given in **Table 1.2**:

Table 1.2: Soda ash Production capacity and other facilities

Sr. No.	Product Name	Proposed Production Capacity
1.	Soda Ash Light Soda Ash Dense Soda Ash Sodium bicarbonate	 11,00,000 TPA 5,00,000 TPA 2,00,000 TPA
2.	Power Steam (CFBC boilers)	120 MW 150 TPH x 6 Nos.
3.	Emergency DG Set (total no. of sets can be 2/3)	5 MVA

The major raw materials required for soda ash production are solar salt and chemical grade limestone. Other raw materials are ammonia, sodium sulphide, coke. For CPP, lignite and/or coal/pet coke will be used as the fuel. Further, a very stable utility i.e. Steam, Power, Air (Instrument and Service), large amount of cooling water (Seawater) and Process Water (Sweet Water) are the essential requirement. The seawater required for the plant of around 16,00,000 m^3/d shall be sourced through adequately sized Seawater Intake system. Total combined effluent estimated for project is 15,80,000 m^3/day. Approximate requirement of treated / process water, for various purposes is approx. 42000 m^3/d for soda ash plant and associated facilities.

1.4 Need for the Project

GHCL Ltd. had signed a memorandum of understanding (M.o.U) with the Government of Gujarat during Vibrant Gujarat Summit 2017 for this project. The proposed development operation is aimed to honour the commitment made in M.o.U. This project will produce additional capacity of soda ash to meet the demand of domestic and global markets.

The primary consumers of soda ash are glass, detergent, laundry soap, sodium silicate, cotton yarn, dyes and dye stuff, paper board and other chemical industries. In India detergent industry is the largest consumer of soda ash. Sodium Bicarbonate (Baking soda) is mainly used by food industry.

The Indian subcontinent is one of the world's fastest growing soda ash markets, driven by India's growing economy. The soda ash per capita consumption in India is 2.8 kg only. If India has to reach the per capita consumption of developed nations which is approximately 17 kg of soda ash than addition of capacity is essential.

2.0 Process Description

Soda Ash: Soda ash is the common name given to anhydrous sodium carbonate (Na_2CO_3). Soda ash is a white, fine crystalline hygroscope powder and moderately soluble in water. The proposed project evaluates both Dry Lime and Wet Lime process for soda ash manufacturing.

The major raw materials required for soda ash manufacturing are: i) Limestone ii) Coke or Briquettes or Anthracite (in Lime kiln) iii) Solar Salt and iv) Lignite /Coal/ Pet-coke (in Boiler fuel).

Solvay process also known as ammonia soda process was developed in 19th century and has been developing since many decades. The Soda Ash sector's experience in investment planning, process design, plant construction, start-up, operation, optimization, shut-down and decommissioning has allowed for building up these steps into plant's life cycle, leading to minimization of cost of production, efficiency of raw material and energy use leading to reduction of pollution loads and impacts. The important Process steps are Brine Preparation & Purification, Lime Kilns and gas cleaning, Lime Grinding, Absorption & Distillation, Carbonation and Compression, Filtration & Calcinations, Densification of Soda Ash, Product storage & handling.

Sodium bicarbonate: Refined sodium bicarbonate manufactured by dissolution of dry soda ash in previously de-carbonated circulating mother liquor and subsequent carbonation of obtained soda solution with compressed CO_2 gas, separation of formed bicarbonate slurry and drying of separated sediment.

Captive Power Plant: Circulating fluidized bed combustion (CFBC) technology for boilers is adopted for the proposed captive power plant. The turbo-alternators will be double extraction cum condensing type. Lignite/Coal/Petcoke will be used as Fuel. Initial

startup power will be by setting up of 66.0 KV substation with Gujarat Electricity Board grid connection.

3.0 Description of the Environment

The baseline environmental quality has been carried out during Winter Season between December 2019 to February 2020 in the study area of 10 km radius from project site for various environment components namely air, water, land, soil, ecology and socio-economics.

3.1 Ambient Air Quality

The PM_{10} concentration range was 19-53 µg/m³ for 24 hourly while $PM_{2.5}$ levels were in the range of 8-17 µg/m³ during the study period. The highest PM_{10} concentration among the monitored locations was found at Bhambdai and Bhishra and lowest at Mota Laysa whereas the highest $PM_{2.5}$ concentration among the monitored locations was found at Mapar and lowest at Mota Laysa and Bada. The particulate matter concentrations observed were below stipulated standards of NAAQS (24 h; PM10=100µg/m^3 and $PM_{2.5}$=60µg/m^3).

The minimum and maximum concentrations of SO_2 were observed in the range of 1-4 µg/m³ and 9-14 µg/m³ respectively. Similarly, for NOx varied in the range of 5-9 µg/m³ and 9-16 µg/m³ respectively. The highest concentration among all the locations of SO_2 was found to be in Bhambdai and Bhada and lowest concentration of SO_2 was found to be in project site area and highest NOx concentration was found in Bhishra and lowest was found in Mota Laysa and Padampur villages. The levels of gaseous pollutants were below the stipulated CPCB standards (24 hourly SO_2 is 80µg/m^3 and for NOx is 80 µg/m^3).

The concentration of total hydrocarbons was ranged between 0.23 – 1.27 µg/m³ during study period. The highest concentration was found in Dedhiya and lowest concentration was found in Bhishra.

The mono-aromatic hydrocarbons like Benzene, Toluene, Ethyl-benzene and Xylene (BTEX) are representative chemicals of volatile organic compounds (VOCs). Among the VOCs, benzene is regarded as carcinogen to humans. The observed concentration range of benzene was 0.11-0.16 µg/m^3 during the study period which is below the NAAQS prescribed limit of 5 µg/m^3.

In addition to the above air pollutants, other parameters were also monitored and given in the EIA report.

3.2 Noise

The equivalent noise levels of villages varied in the range 44-52 dB(A) and 38-44 dB(A) during day and night, respectively.

Noise levels in residential areas were observed to be 46-52 dB (A) in day time and 43-44 dB (A) in night time. The noise levels during the day and night were below the stipulated noise levels in residential areas (day time= 55 and night time 45 dB (A)).

Noise levels in commercial zone, silence zone and Industrial zone were within the CPCB standards for respective areas.

3.3 Water Quality

Six sampling locations were selected to collect surface water samples at 0.25 m depth below the water surface while the groundwater samples collected from dug wells (5-10 m depth)/tube wells/tank water in 11 villages to assess the drinking water quality. In addition, one coastal water sample was also analyzed. The important findings are listed below:

The physico-chemical characteristics of surface water were pH 6.9-7.9, turbidity 17-238 NTU and TSS 28-257 mg/l. Nutrients content in the form of nitrate-nitrogen and total phosphates were found to be 1.44-2.90 mg/l and 0.5-6.0 mg/l respectively. COD was observed in the range 29-86 mg/l, whereas oil and grease concentration was found to be 0.16-0.87 mg/l. Total coliforms count in the surface water was found to be in the range ND-800 CFU/100 ml and there was no faecal contamination.

The physico-chemical characteristics of ground water were pH 6.9-8.9, turbidity 1-34 NTU total dissolved solids (inorganic) 458-4246 mg/l, Nutrient contents in the form of nitrate-nitrogen and total phosphates were found to be 1.61-7.81 mg/l and 0.8-8.8 mg/l respectively. Oil and grease concentration was found to be <1 mg/l. Total coliforms count in surface water was found to be in the range 40-240 CFU/100 ml and the groundwater was free of faecal coliform.

The maximum concentration of heavy metals found in groundwater were as follows: Copper: 0.043 mg/l, Iron: 1.881 mg/l, Manganese: 0.413 mg/l, Molybdenum: 0.148 mg/l, Lead: 0.091 mg/l, Vanadium: 0.204 mg/l and Zinc 0.169 mg/l, while heavy metals cobalt and mercury were not detectable.

3.4 Marine Quality

M/s GHCL Limited engaged Council of Scientific and Industrial Research-National Institute of Oceanography (CSIR-NIO) to carry out Marine EIA/EMP related studies. The study report is separately enclosed. The marine water quality at twelve (12) locations covering nearshore (considered as stations 1, 2A, 4, 4A and 7), toward offshore (considered as stations 2, 3,5,6,8 and 9) and offshore (considered as station 10) were chosen for establishing baseline marine water quality. Intertidal sampling was conducted at 3 transects (TR I – TR III). Water quality recorded during post-monsoon (October 2018) and pre-monsoon (March 2019) seasons. The summary of the findings is as follows reported below:

The physical water quality parameters namely pH, temperature and suspended solids were found in the range 8.3-8.4, 28.5-32.8°C and 25-124 mg/l respectively during the study period. Salinity values were found to vary between 37.5 – 38.2 ppt.

Coastal waters had an average DO in excess of 4 mg/l, the coastal waters were well oxygenated, indicating healthy environment for biological growth. BOD of the coastal waters in the study area was 0.4-3.5 mg/l.

Phosphate (PO_4^{3-}-P), NH_4^+-N and NO_2^--N were found to be 0.1-1.7 μmol/l, 0.3-2.7 μmol/l, and 0.1-0.6 μmol/l respectively, indicating good oxidizing conditions in water.

The results of experimental trawling conducted at the study area indicated very poor catch rate. The region has no established trawling grounds for fishery operations due to uneven

bottom topography associated with rocky zones, hence, the trawlers operated at other areas for fishing

Coastal area of Bada is well protected by well-developed and stable sand dunes dominated by babul and grass

Mangroves were absent along the Mandvi-Bada coast.

No turtle was sighted off Bada during the study period.

Extensive survey was conducted during Oct 2018 - March 2019 in the intertidal region of proposed project area. Corals were not sighted in the project area. No turtles were sighted off Bada during the study period. It is suggested to lay the pipelines without disturbing the dune stretch through tunnelling.

Based on the above studies, it can be concluded that there will not be any significant impact due to seawater intake facilities and minor impacts will be limited to small well-defined area around the intake. Further, due to outfall facilities the water quality of the coastal area off Mandvi would not deteriorate with respect to temperature, salinity and ammonia except in the immediate vicinity of the outfall where, the temperature, salinity and ammonia ccould be relatively high but within the range considered tolerable to marine biota. The impacts of development, mitigation measures and the recommendations for the general monitoring of the area and the parameters to be monitored are incorporated in detailed Marine EIA/EMP report.

CSIR-NIO has recommended suitable seawater intake and effluent disposal locations after carrying out numerical model study and consideration of Sand Dune morphology study carried out by CSIR NIO, Goa.

3.5 Soil Quality

- Ten (10) villages were identified for soil quality assessment.
- The texture of the soil is sandy and sandy loam. The clay contain in the soils of the study area varies from 38-52%.
- The soil being of friable consistency, the bulk density of the soil is in the range 1.00 to 1.60 g/cm^3 whereas the porosity and water holding capacity are in the range of 38.8-66.9% and 18.5-47.2% respectively.
- The pH of the soil in the study area was slightly to moderately alkaline in reaction, having pH in the range 7.4-8.2. EC of the soil extract in the study area ranges from 0.2 to 0.7 dS/m.
- Organic carbon, available nitrogen, and phosphorous of the soil samples were found to be in the range 0.2-0.8%, 25.3-139.2 kg/ha, and 64.1-187.8 kg/ha, respectively. The soil in the study area has poor fertility level with respect to available nitrogen and phosphorus.
- Total viable microbial population per gram of soil varied from $10x10^6$ to $48x10^6$ CFU. Different microflora observed per gram of soil samples were Actinomycetes (22×10^5 - 24×10^6 CFU), fungi (14×10^5 to 60×10^6 CFU), Rhizobium (17×10^5 to 50×10^6 CFU) and Azotobacter (16×10^6 - 54×10^6 CFU).

8.0 Project Benefits

The proposed project has a potential for employment of skilled, semi-skilled and unskilled employees during construction phase as well as operational phase.

The plant will create direct employment in phased manner for about 1200 (operational phase) skilled as well as semi-skilled staff and indirectly large number of unskilled manpower will be engaged for the project.

The project will contribute additional revenue to the State and Central exchequer in the form of royalty, cess and other taxes.

Create opportunities for indirect employment on account of new trucks, company's vehicles and hired vehicles

Create opportunities for indirect employment through stockiest and retailers in Gujarat and also in other states

- Overall, development of area in terms of infrastructure will improve the indirect and direct job opportunities which would finally result in improvement in the quality of life of people in the region and especially in the area around the Bada project site.
- As Soda Ash is used widely in many industries like glass, construction, water treatment, detergents etc. proposed capacities will further cater to the Demand Supply requirements of the nation.

During year 2020-2021 GHCL has spent INR 9.03 Crores towards CSR activities. CSR projects/activities worth INR 19.09 Cr. were implemented. GHCL wide range of CSR projects have touched and benefitted more than 90,200 lives over the years. For the year 2021-2022 total budget for CSR activities under implementations is about 10.06 Cr.

Under CSR, the company aims at strengthening the bond between the project authorities and the local population in the vicinity of the project. At the project site, GHCL would carry out number of community welfare activities in the following areas:

- Health and Family Welfare
- Education
- Social development activities
- Environmental activities
- Sanitation, Water supply and Fodder for animals etc.

9.0 Environment Cost Benefit Analysis

- Proposed plant land near village Bada comprises government waste land and private un-irrigated agricultural land. Most of the private un-irrigated land is used for single crop (seasonal crop).

- The project site supports only a few plant species of lesser conservation significance. The proposed plant and related construction activities may involve removal or thinning of some vegetation which is mainly Prosopis juliflora within the proposed area.
- The forest area required for laying of pipelines mainly consists of prosopis juliflora and scrub vegetation. The pipeline route will be selected in such a way that the removal of important floral species, if any, will be minimal or avoided.
- Besides the tangible benefits, the project also has a number of intangible benefits like energy efficient, water conservative, no adverse impact on environment, socio-economic benefit of the local people and the region. Therefore, the loss to the environment will be negligible.
- The establishment of Soda Ash plant would benefit to the industries and consumers and development of industries, overall development of area and consequent indirect and direct job opportunities.

10.0 Environmental Management Plan

10.1 Construction Phase

- Environmental impacts during the construction phase can be due to the site preparation, civil construction, erection & mechanical fabrication, welding operations, non-destructive testing and other operations and provision of civic amenities to the construction work-force.
- The environmental components impacted during construction phase include deterioration of air quality, contamination of surface water and noise generation.
- The land use change and any associated loss of flora is permanent.
- The construction area to be secured by fencing and only authorized personnel to be allowed to avoid accidents and unto do incidents.
- To arrest resuspension of dust during construction phase, specifically excavation, levelling and other operations, water sprinkling to be practised.
- The runoff water from the construction area to be channelled through sedimentation tanks to remove suspended solids and to avoid contamination of nearby waterbodies.
- Suitable water supply and sanitation facilities to be provided to the labour colonies/housing during the construction work-force. The sanitary waste to be routed to septic tanks and soak pit.
- Well maintained diesel operated construction equipment to be used to minimize the exhaust and subsequent atmospheric pollutants.
- Safety equipment such as earplugs and earmuffs, helmet, face shields, safety goggles and other related gadgets to be provided to workers engaged in high-risk areas.
- All construction equipment shall be properly maintained and greased to minimize noise generation and vibration.
- Development of green belt to be started along with the construction activities itself.

- Adequate supply of fuel to be provided for the construction activities. Required fuels, acetylene cylinders, compressed gases and paint materials shall be stored as per accepted safety standards.
- Strict instructions will be given to contractor/construction agency to maintain construction vehicles and other materials transport vehicles with minimal pollution with proper and up to date PUC certification. Vehicles carrying solid raw materials/fuels should be covered to avoid fugitive dust.
- The medical facility to be adequately provided, in particular, immediate medical aid to the workers and their family members. An ambulance provision to be made to transport injured workers to nearby hospitals during the construction.
- No construction materials like earth, stone, ash or appendage disposed off to prevent any blockage in the flow of water of any water course, and cross drainage channels. Proper drainage system (open or closed) to be prepared.
- All vehicle/machinery and equipment operation, maintenance and re-fuelling will be carried out in such a fashion that spillage of fuels and lubricants does not contaminate the water.
- Contractor will arrange for collection, storing and disposal of oily wastes to the approved disposal sites. All spills and collected petroleum products will be disposed off in accordance with the GPCB guidelines.
- The project area to be protected by proper embankment to prevent flooding.
- During construction phase, the air emissions with reference to dust will be monitored. The surface water quality with reference to total dissolved solids (TDS), pH, oil & grease and faecal coliform will be monitored for the nearby surface water bodies. Noise quality will be measured during construction phase and recorded at 0.5 km and 1 km from the project site. The quantity of paints, oil & grease and other construction materials will be recorded and kept at elevated room to avoid contact with rain water. For this purpose, a new storage room/shed will be constructed. All the parameters of air, water and wastewater and solid/hazardous wastes will be measured using CPCB approved test methods. This monitoring will be conducted by the GPCB approved laboratories for every 6 months during the entire construction period.

10.2 Operational Phase

- To ensure that all the pollution control / environment management systems are commissioned as part of main plant equipment, before the commencement of operation of the project. Regular performance evaluation of the control systems to be undertaken to ensure their optimum performance.
- The EMPs suggested by CSIR-NIO to be strictly followed to mitigate marine impacts due to the project activities.
- The surface water run-off to be collected and used for plant activities; the proposed rain water harvesting near the percolation tank to be constructed.
- The water monitoring results of (terrestrial and marine) to be carefully evaluated to identify significant changes, if any, from the baseline and accordingly, corrective measures to reverse the trend would be necessary.
- Proper solid/hazardous waste handling practices to be followed as [er the Hazardous Wastes Management Rules and its amendments.

- Provision of Personal Protection Equipment (PPEs) need to be arranged and their proper usage should be ensured for protection from high noise for the workers as well as visitors.
- Adopt proper housekeeping procedures and devices, including dedicated (covered) skips for different types of domestic wastes.
- Used/waste oil generated to be carefully handled and stored in an environment friendly manner and disposed-off by way of sale to the reprocessing units approved by the MoEF&CC/GPCB for its further processing and reuse.
- Adequate stack height and SO_2 control measures to be adopted.
- Fly ash utilisation to be implemented as per provision of Fly Ash Notification. Fly Ash will be utilised in Cement Industries. Letter from Sanghi Industries for use of Fly Ash is provided in EIA report.
- Implement Health Safety & Environment (HSE) awareness/information programs for the nearby communities in collaboration with the local administration. Issues to be dealt with may include HSE aspects of project, environmental conservation and sustainable development, personal hygiene and sanitation awareness programs etc.

10.3 Post-Project Monitoring

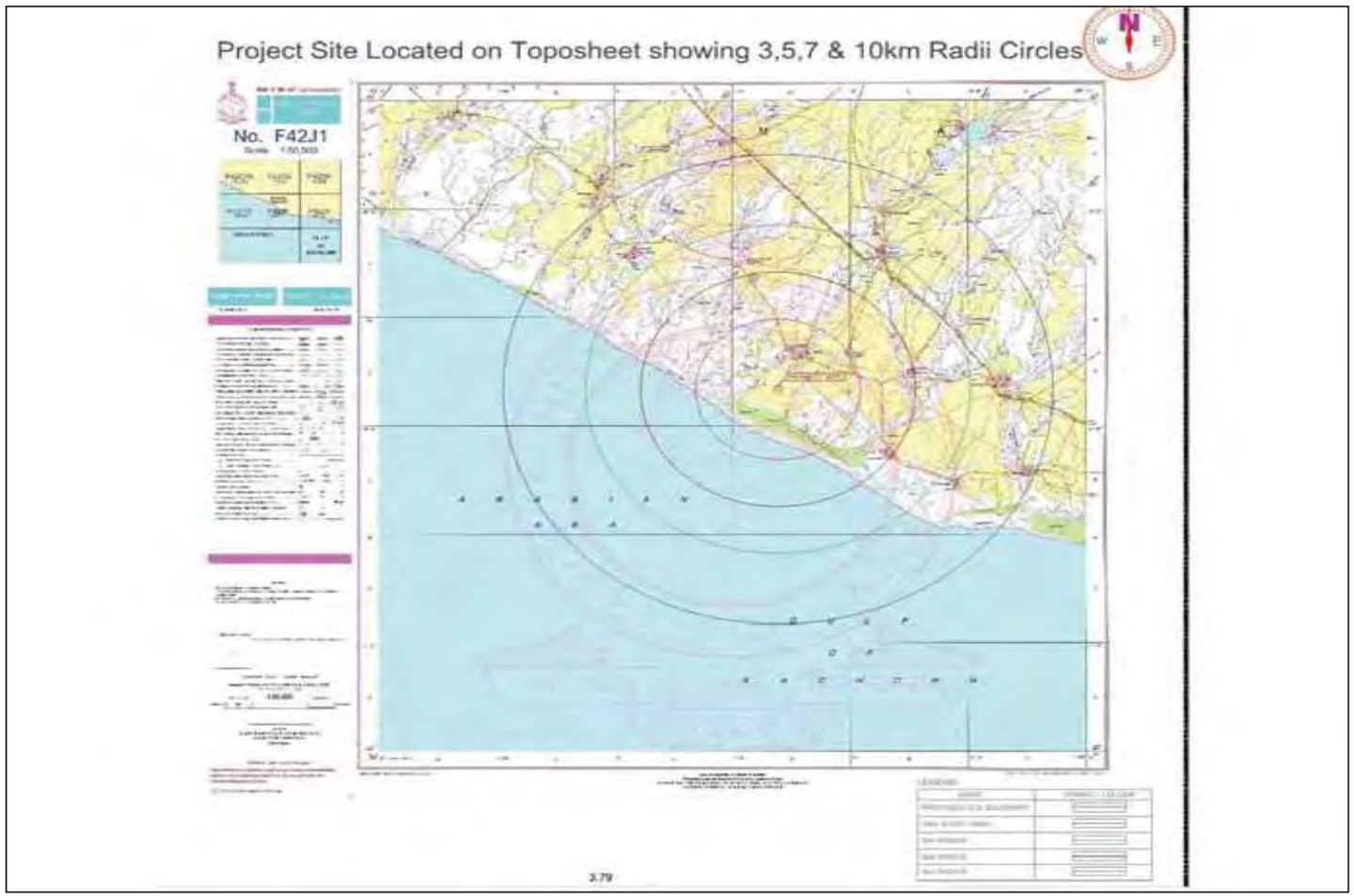
To evaluate the effectiveness of environmental management program, regular monitoring of the important environmental parameters of VECs will be carried out. Monitoring of various environmental parameters will be carried out on a regular basis to ascertain the following;

- Pollution status within the plant and in its vicinity
- Generate data for predictive or corrective purpose in respect of pollution
- Effectiveness of pollution control measures and control facilities
- To assess environmental impacts
- To follow the trend of parameters which have been identified as critical

Monitoring is as an important activity for pollution control, since the efficiency of the control measures can only be determined by monitoring. The schedule, duration and parameters to be monitored will be as per GPCB/MoEF&CC directives. A table showing environmental parameters proposed to be monitored are given in **Table 10.1**

Table 10.1: Post-project Environmental Monitoring

Sr. No.	Environmental Component	Parameters to be analyzed
1.	Meteorology	Wind Speed, Wind direction, Temperature, Relative Humidity, Rainfall
2.	Ambient Air Quality	PM_{10} and $PM_{2.5}$, SO_2 ,NOx,NH_3
3.	Stack Emission	SPM, SO_2, NO_X, NH_3,
4.	Water quality of surface and ground water	Physical and chemical parameters
5.	Ecology	Density and diversity flora and fauna
6.	Liquid effluent	Parameters as per GPCB consent


Project Site Located on Toposheet showing 3,5,7 & 10km Radii Circles
No. F42J1
3.79

789

1367

3.6. Ecology and Biodiversity

3.6.1 Description of the Study Area

For the convenience of the ecology and biodiversity study and the user agencies, the study area was divided in two major parts i.e. (1) core area/project area and (2) buffer area i.e. 10.0 km periphery of the project boundary (**Figure 3.6.1**). Core area is proposed land area for establishing the project which covers about 1350 Acre of private unirrigated agriculture land, Sarkarshree land/Govt. land, near village Bada, of Mandvi Taluka in Kutch District of Gujarat. The proposed project area land does not have dense vegetation. Sparse clumps of thorny scrub mostly in the form of invasive species i.e., *Prosopis juliflora* are scattered in the core area. No major rivers, drainage passes through the project area. Nearest habitation is at about 1.0 km north from the proposed project site.



Fig. 3.6.1. Geographical Location of Core and Buffer Area of the Proposed Soda Ash Plant in Kutch, Gujarat

The Arabian Sea coast is located south of the proposed boundary of the project. The area is located at 6.0 km distance from the National Highway NH-41. No major natural vegetation or any human settlements present within the proposed land, therefore there is no need for rehabilitation of any human settlements from the project site. The project site does not fall in 10.0 km periphery of any National Park or Sanctuary or their eco-sensitive zones.

The Buffer Area mainly consists of revenue areas 20 villages that fall in 10 km periphery of the project site.

Majority of the land of the buffer area is occupied by the private unirrigated agriculture fields, forest area, open scrub vegetation, sandy beach, pond/ reservoir, roads & Canal network, village habitations and wind turbines. Most importantly there are no Wildlife Sanctuaries or National Parks located in the 10.0 Km periphery of the proposed project area. Due to close proximity of Arabian Sea coastal stretch the activities are regulated as per Coastal Regulation Zone.

3.6.2 Methodology

The prediction of impacts of industries on flora and fauna depends on understanding of the proposed activities, its magnitude/extent, scale and ecological conditions in the surrounding area. Collection of comprehensive baseline information on flora and fauna is therefore a prerequisite for assessment of impacts of industrial development activities. It would also help in advance planning and mitigate the impacts and ultimately maintaining the natural habitat and resources. The methodology followed for obtaining baseline of ecology and biodiversity include field surveys, interviews, and reviews of literature.

Field Surveys: Several field visits were carried out between month of October-2018 to January 2019 to understand and assess the impacts of proposed project activities on flora and fauna and natural habitats. We evaluated the distribution and abundance of flora and fauna in project area and in buffer area separately.

Identification of Important Ecological Habitats: The important ecological habitats and features were identified based on our field visits and also mapping of landuse types in the study area. These important ecological habitats and features were then identified on landuse map that is prepared for the study area.

Flora: Assessment of flora was carried out in core project and buffer area during the study period. Study of flora involved simple, systematic and standard techniques. Due to lack of rain in the monsoon, plants such as annual grasses, herbs and few shrub species were located very sparsely. Except some of the common species of trees, shrubs identification of the species was difficult during quadrate sampling. It is therefore, the data of quadrate sampling was not useful in quantifying the species such as grasses and herbs. Therefore, the study was carried out qualitative assessment of flora in the study areas through ad libitum sampling. During surveys, our team continuously searched for plant species and identified them to prepare a checklist of plants in the respective study area. Various habitats of the study area i.e., drainage, ponds, check dams, agriculture fields, coastal area, sand dunes, dense scrubland, and reserve forests were surveyed on foot and qualitative

checklists of plants were made. Information on occurrence of plants, their species names, floral phenotypes, life forms etc. were collected continuously during the field trips in the study area from morning to evening hours. The collected data was then systematically used to synthesize a comprehensive checklist of flora that provides baseline information of the representative vegetation community of the study area.

Fauna: We mainly studied the fauna of higher trophic levels which acts as indicator of the type and health of eco-systems.

Reptiles: Majority of the reptile species are fossorial in habit therefore the assessment of reptiles and their diversity holds special significance for any development projects. We relied on qualitative observations. We carried out study based on interview survey, secondary literature as well as direct observation on road killed reptiles. We randomly looked for various reptiles and their presence i.e. lizards, snakes etc. in the study areas. Therefore, only a check list of reptiles observed during the study period was prepared.

Birds: Birds, occupying higher trophic levels in the ecosystems, respond quickly to the changes in the habitats and therefore serve as one of the best indicators for evaluating the status of the area. Therefore, we created baseline data on birds by systematically and collected data on their occurrence i.e. presence or absence in the buffer and core areas of the study area.

For creating baseline data on birds we randomly walked in the study area during early morning i.e. 6:00 AM to 9AM and 5:00PM to 7:00 PM. These time periods of the day are when maximum bird movements are expected. We walked randomly in the study area carried out sightings of birds ad libitum and recorded species based on their identification. Special reference books for bird species identification were used. Apart from walking randomly, we also relied on specific habitat search for different species i.e., dense bushes, creeks, wetlands, ponds, big trees, and open fallow agriculture areas in order to accomplish the inventorization of the bird species found in the study area. All the bird species are classified based on their conservation status, their schedule under Wildlife Protection Act 1972, their migratory status, habitats and their feeding guilds. This was further used for finding out important bird species in the study area i.e. rare, endangered or species of high conservation significance.

Mammals: Like birds, mammals are also occupying higher trophic levels in many ecosystems and respond quickly to the changes in their habitats therefore, serves as best indicators of the ecosystem health. We therefore, chose to create qualitative baseline information on presence and absence of mammals in the study area. Since the presence of mammalian species is low affecting probability of their sightings, in the study area, it was difficult to estimate their population using line transect method. More importantly, it was difficult to accommodate the sightings of nocturnal and diurnal animals in the study. Therefore, we prepared a qualitative check list of mammals based on their presences and absence using direct and indirect evidences and signs such as footprints, dens, droppings, diggings, scrap marks, etc. in the project area.

Apart from these, search efforts were also made for various signs of important wildlife species in the study area which includes looking for wildlife signs such as dens, diggings, scrap marks, droppings etc. The sites where likelihood of animals is higher such as shady trees, waterholes, dense and undisturbed bushes etc. were surveyed intensively during the survey in the study area. This survey has helped us in identifying various species of mammals in the study area. For mammal inventory, both direct sightings and indirect evidences (like dung, scats, pellets, foot prints, nests, dens etc.) were accounted.

Important Wildlife Habitats and Protected Areas

We assessed the presence and distances of important wildlife habitats and hotspots such as protected areas, breeding and nesting habitats, coastal habitats, important wetlands, and grassland area from core area. These important areas such as Protected areas (National Park, Wildlife Sanctuaries and Conservation Reserves), wetlands of national importance, Ramsar sites, Important bird areas (IBAs) classified by the Birdlife International and other organizations.

Rare, Threatened & Endemic Wildlife Species and Their Corridors

We also assessed the presence of rare, endangered, endemic wildlife species in the project area/core area and buffer area. Special search efforts were made during the field visits to identify any such sensitive species or their corridors in the project area and buffer area. Apart from field visits we relied on interview surveys of local people, consultation with local biologists and naturalists.

Literature Review

Considering the limitation to undertake statistically rigorous data gathering system, study also relied on existing knowledge about the ecology and biodiversity of the region. Importantly, there are few studies undertaken in the past dealing with the impacts of soda ash plants on flora and fauna and other concerns of biodiversity conservation. Literature on Soda Ash projects and associated environmental issues were downloaded and collated through internet. Various relevant literatures were surveyed during the study for collection of baseline information. Maps, reports and documents collected from the project proponent were also reviewed and used in the present study. Books on flora, fauna and wildlife were also studied in order to understand the biology of several species.

Consultations

During the study, series of consultations were made with both technical and non-technical stakeholders to get better picture on the project area/core area and buffer zone habitats. In order to know more about the seasonal presence of several faunal species and their movement, study team informally consulted and discussed with local naturalists and local people, from the villages, herders and farmers who inhabit close to the proposed project area.

Supplementary Information

Other than the above, for the purpose of this study, relevant information was also collected from following sources:

- Research papers and reports on flora and fauna of Kutch, Mandvi coast
- Google imageries/Google Maps
- Project related Maps provided by GHCL Limited
- Communications with subject experts

3.6.3 Ecology and Biodiversity Status

The observations of overall ecological elements were presented in this portion include details of flora, fauna, natural habitats, protected areas, wildlife species and their migration corridors. Such baseline information provides better understanding of the situation and overall ecological importance of the area. This baseline information viewed with reference to proposed project activities help in predicting their impacts on the wildlife and their habitats in the region. Data collected and information gathered from secondary literature on flora, fauna, protected area, natural habitats, and wildlife species were analyzed and results are presented as follow.

3.6.3.1 Biogeographic Zone

The region falls in Indo-Malay Realm (IM 1303) and Deserts and Xeric Shrublands Biome as defined by WWF. The North-western Thorn Scrub Forests [IM1303] ecoregion represents a large expanse of degraded dry forest surrounding the Thar Desert. Neither exceptionally species-rich nor high in endemism, the ecoregion nevertheless harbours viable populations of antelopes.

As per classification of Indian Biogeographic zones by Rodgers et al. (2000), Kutch district falls under Biogeographic Zone 3 - the Indian Desert and the Biogeographic Province Kutch Desert- 3B. The project site also falls on coast which is Biogeographic Zone-8 Coasts.

3.6.3.2 Protected Areas

As per our information and survey there is no Sanctuary, National Park, or notified wildlife corridors within the core area and buffer area (10 km) of the project site. Marine National Park and Sanctuary areas are located at 40 Km distance in south directions, whereas Narayan Sarovar Sanctuary is located at more than 75 km in North-West direction, Kutch Desert Wildlife Sanctuary is situated in the Great Rann of Kutch at more than 85km in North East direction. The Wild Ass Sanctuary is located in the Little Rann of Kutch at more than 150 km distance, Kutch Bustard Sanctuary at more than 50 km in North-West direction and Chari-Dhand Wetland Conservation Reserve is located at beyond 75 Km north. Majority of the protected

areas and their eco-sensitive zones are located beyond 50 km distance from the project site (**Table 3.6.1, Figure 3.6.2)**.

Table 3.6.1. Protected Area and their Distances from Proposed Project Site

No	Protected Areas	Distance	Direction
1	Marine National Park	40 Km	South
2	Marine Sanctuary	40 Km	South
3	Narayan Sarovar Sanctuary	75 Km	North-West
4	Kutch Bustard Sanctuary	50 Km	North-West
5	Wild Ass Sanctuary	150 Km	East
6	Kutch Desert Sanctuary	85 Km	North-East
7	Chhari Dhandh Conservation Reserve	75 Km	North



Fig. 3.6.2. Aerial Distances of Protected Areas in Kutch Region with Reference to Proposed Project Site

3.6.3.3 Important Ecological Habitats

Based on our field visits and literature survey we identified three important ecologically sensitive habitats that are located within 10.0 km buffer zone. They are (i) Forest Areas (ii) Sea-turtle nesting site and (iii) Sand dunes

Waterbodies: Our observation and literature review suggest that there are no major wetlands present within the study area i.e. 10.0 km buffer area of the project site. However, there are total 6 seasonal drainages that run North to South in the study area. These drainages have small check dams built on them which are known to accumulate overflowing runoff water for a short period. Apart from being important hydrological features in the semi-arid area, these check dams provide important habitat for many bird species and water source for wildlife in the region. One such seasonal drain is known as Vengdi River which flows from North to South adjacent to project site in Western side of proposed project site (**Fig.3.6.3**). There is one check dam on this river adjacent to project site boundary of the proposed project site. However, all such drainages are seasonal in nature and flows only during rainy days. These drainages flow water from main land to Arabian sea on Kutch coast. Apart from drainages and check-dams, there are number of ponds located in the study area. These ponds mostly have smaller catchment areas and are located near villages, wastelands, forests, or in the agriculture areas to hold rainwater for domestic use such as drinking for human as well as cattle, washing clothes and irrigation. One of the closest small minor seasonal ponds is located at 250 m in South-East direction from the proposed project boundary. A village pond is located at Bada village in north-east direction. These ponds may not be important hydrological features but they provide crucial source of drinking water for wildlife in the region. The coastal habitats in the region are depicted in **Fig.3.6.4**.

Sea turtle Nesting Beach: The sandy stretches of Kutch district are known for sporadic nesting of two species of sea turtles i.e. Olive ridley (*Lepidochelys olivacea*) and Green Seaturtle (*Chelonia mydas*). Gujarat Ecology Commission a Government of Gujarat Organization has carried out a study as part of World Bank aided Integrated Coastal Zone Management (ICZM) Project titled "*Evaluation of Sea Turtle Nesting Population and Threats to Nesting Beaches: Suggest Conservation and Management Strategies*" (also referred as Sunderraj et al 2013). The study based on secondary data (from Gujarat Forest Department and Sunderraj et al 2002) identified total 10 stretches of Seaturtle nesting beaches on Kutch coast.

The study based on available data sources for 10 stretches (**Table 3.6.2**) concluded that Bada-Layja Nana, Layja Nana-Mandvi Palace and Mandvi Palace-Mandvi beach were found to be the potential beaches on Kutch coast (Sunderraj et al 2013). According to Sunderraj et al 2013, sandy beach between Bada to Layja nana having length of 11.5 km is first rank beach for seaturtle nesting whereas beach between Bambhdai to Bada of 8 km length ranks 3rd most important nesting beach of Kutch coast.



Fig. 3.6.3. Waterbodies in the Study Area

Table 3.6.2. Potential Seaturtle Nesting Beaches Identified on Kutch Coast (*source Sunderraj et al 2013*).

No	Stretch	e (Km)	Nests- 1	(RO)	nests - 2	(RO)	O	
1	Pingleshwer – Kamond	4.0	4	1.0 (3)	1	0.25 (8)	5.5	4
2	Kamond – Suthri	5.6	0		2	0.36 (6)	6.0	5
3	Suthri – Chhachhi	10.5	0		3	0.29 (7)	7.0	6
4	Chhachhi – Bambhdai	10.5	0		1	0.09 (9)	9.0	7
5	Bambhdai – Bada	8.0	0		7	0.87 (5)	5.0	3
6	Bada –Layja Nana	11.5	27	2.35 (2)	21	1.82 (2)	2.0	1
7	Layja Nana – Mandvi Palace	6.0	6	1.0 (3)	11	1.83 (1)	2.0	1
8	Mandvi Palace –Mandvi	6.5	29	4.46 (1)	11	1.69 (3)	2.0	1
9	MandviE– Gundiali	6.0	0		0	0	0	
10	Gundilai – Tragadi	4.0	2	0.50(4)	4	1.0(4)	4.0	2
	Total	**72.6 km**	**68**		**61**	**100**		

Data Sources: 1-GSFD-Kachchh Circle, 2- Sunderraj et al 2002,
Rank Order, MRO-Mean Rank Order, FR-Final Rank

According to above mentioned study, density of seaturtle nests is higher (1.8 to 2.3 nest/km) on the coastal stretch between Bada and Nana Layja villages, however, nest density is relatively lower on the coast of Bada and Bambhdai villages (0 to 0.8/km). This difference in nesting could be due to difference in the beach morphology i.e., available beach width, beach slope, vegetation type, disturbance level, predators etc.

The length of the coast in the study area is 23.0 km East to West. Only 2.0 km area falls near the proposed project site. During our field visits we did not observe direct or indirect signs of nesting of seaturtle on the coast near project site. However, sandy beach on the coast of Bambhdai, Pachotiya, Bhada and Nana Layja are likely to have sea turtle nesting activity due to its suitable morphology and past records.

In general, all sea turtle species tend to nest above the high-water mark to reduce the risk of tidal inundation or egg wash out (Fowler 1979; Mortimer 1982). During our field visits we observed that the open sandy beach width decreases as we travel on the coast from Nana Layja village (east) to Bada village coast (west). Even bare perusal of 'Google Earth' image reveals that the open beach width is higher on the coast of Bhada and Panchotiya villages which decrease on Bada village coast. Moreover, the width of sandy beach in the supra tidal region near proposed project site is very narrow due to presence of dense *Prosopis juliflora* vegetation on stabilized sand dunes. Also, during our visits we observed that there is a steep slope and dense vegetation in the supra tidal region on the beach near proposed project site. Presence vegetation such as *Prosopis juliflora* is seen to hold sand and stabilized sand dunes. We also observed higher presence of predators such as jackals and dogs.

Therefore, our primary observations suggests that the coast near the proposed project site may not be suitable for sea turtle nesting due to narrow supra tidal region, steep slope, dense vegetation and presence of predators such as dogs and jackals. Though, our observations suggests that there may be no or negligible probability of sea turtle nesting, a proper systematic study was carried out by an expert and the report is enclosed in Chapter 8.



Fig. 3.6.4. Coastal Habitats near the Coastal Areas of the Project Study Area

Sand dunes

During our field survey, we observed presence of sand dunes along the Arabian Sea coast. Presence of sand dunes in the study area suggests high energy wave dominated sea coast. The sand dunes are also present southern side of the proposed project site. These sand dunes are formed due to deposition of fine to medium, well sorted sand particles. Sediments of the dunes consist of windblown deposits of fine to very fine sand and silt. Majority of the part of the sand dunes are having dense vegetation in the form of *Prosopis juliflora, Acacia nilotica, Acacia leucophloea, Salvadora persica, Caparis decidua, Ipomoea pes-caprae, Suaeda nudiflora* and other species *with* salt tolerant grasses such as *Cenchrus biflora, Cenchrus Ciliaris, Urochondra setulosus*, *Dactyloctenium*s *indicum, Cynodon dactylon, Aleurops lagopoides* etc.

Presence of dense vegetation suggests stabilized status of sand dunes. The North-South width of the sand dunes varies from 500 mtrs to 200 mtrs The North-South sand dune height profile studied suggest that the height of the dunes varies from 4 mtrs on fore shore area and landward side to 13 mtrs in the central area. The East-West sand dune height profiling suggests that it varies from 5-13 mtrs with undulating deposits. We also observed directs and indirect signs of variety of animals starting from reptiles, birds and mammal species.

3.6.3.4 Floral Diversity and Vegetation Type in Core & Buffer Area

We evaluated biodiversity and abundance parameters of vegetation/plant species in the core area and in the buffer area of the project site. The flora observed in the study area is given in **Table 3.6.3**.

fishing potential due to uneven bottom topography and fishing by trawler is not done. During the course of interaction with the community it has been observed that they are seeking for the health and hygiene facilities as a basic need of daily living. The unavailability of drinking water is the main concern of people interacted during group discussion. There is limited source of water available within the village and the quality of drinking water is not good for their health also.

They are deprived of many Government support schemes like the Sagar Khedut Yojana, which is operative in other talukas of Kachchh District.

Details of interaction with different groups with village speciality and major problems of the villagers are discussed at **Table 3.7.9** Public consultation photographs at **Fig. 3.7.7 to 3.7.12.**

3.7.9.7 Awareness and Opinion of People about the Project

During the visit to villages, some persons from general population, farmers and Gram Panchayat officials were contacted informally to find out their awareness about the soda ash project and attitude towards the project. People in the study area are aware of the coming up of soda ash project but not known about the magnitude of the project. Hence, they are not able to fully assess the possible positive and negative impacts. The similar perception was found from Gram Panchayat official who were aware of the project but not about the likely impact on the local people, cattle and agriculture.

Kuchchhis are known to be progressive. They are hardworking, business minded and believe in self-employment. Generally, all the people contacted welcomed the soda ash project though some of them feared some harm to plantations, land and agriculture due to ash pollution during captive power generation. They are therefore happy about the upcoming soda ash plant, as it will fetch yet more money for the land owned by them, which they can use for some investment and alternative livelihood.

An attempt was made to know the awareness and opinion of the people about the project.

- Some respondents were happy to know about the proposed project and they opined positively because any industrial development activity would definitely contribute to development towards improvement in the local as well as regional economy and creation of job opportunities. Some respondent asked for better health services and better transportation facilities.
- Respondents suggested for local technically qualified persons for job in the plant based on their qualifications and preference should be given to those who lost land and other resources during upcoming of the industry.
- During the survey villagers requested us to recommend prohibitory rules for illegal activities and strict action should be taken for industries.

- Drinking water should be provided by the plant to nearby villages.
- Interaction with respective village Sarpanch/Society Heads/villagers was done to understand the socio-economic issues of the region and their needs.

3.7.10 Conclusion

On the basis of interpretation made above, primary survey (interaction with stakeholders, FGD, community consultation and discussion with influential person of the study area) and secondary sources, the major outcomes specify the following observations and gap in the study area Sanitation and Drainage system is very poor of the study area. Approx.80.05% no drainage system in the study area. Drinking water and employment is major problem seen in the study area.

Livelihood of the most of the people of the study area depends on jobs, fishing, fishing allied, Agriculture, and cattle rearing. Tap water and wells are the source of drinking water in the study area. There are no any chronic or epidemic disease has been reported in the study area except general cases of cough and fever.

The main problem of study area is having higher TDS and saline soil and high chloride water and poor rainfall in past years which impacts the agricultural activities and livelihood dependent on it. In this way, industrial activities provide livelihood and improves the quality of life in the vicinity of the project. For earning daily some people / labour have to go to Mundra daily as they are no such oppurtunities nearby due to lack of industrial activities. The proposed soda ash project in vicinity these people expect better livelihood option and also save money spent for transportation.

Mix opinion about proposed of new plant. People want employment for local people in industry. Benefits from CSR activities for the development to villages both social and economic point of view through the industry-support is desirable. According to villagers, industry will take a proper action to address air, water, noise and land pollution.

Table 3.7.9 Details of Interaction with Different Groups in the Study Area

Sr. No.	Name of Village	Gram Panchayat & Under Villages	Tehsil & District	Brief Information of Village	Major Issues
1)	Bada	Bada	Mandvi, District-Kachchh, Gujarat	Major Drinking water source of well and tap water, Sub post office and ration shop available in the village, PHSC also available, Cotton and Till is major crops. Masjid and Shiv temple is ancient.	Water, Health problems and Employment etc.
2)	Bhinsara	Bhinsara	Mandvi, District-Kachchh, Gujarat	Village dominant caste is Gadvi(OBC) , major occupation of the village of agriculture and Labour work. Major Drinking water source of well and tap water, Sub post office and ration shop available in the village, SPO also available, Cotton, Groundnut and Till is major crops	Drinking water, Healthcare facilities and employment etc.
3)	Panchatiya	Panchatiya	Mandvi, District-Kachchh, Gujarat	Village dominant caste is Gadvi(OBC) , major occupation of the village of agriculture and Labour work. Major Drinking water source of well and tap water, Sub post office and ration shop available in the village, Cotton, Groundnut and Till is major crops	Water, Health problems and Employment etc.
4)	Layja Mota	Layja Mota	Mandvi, District-Kachchh, Gujarat	Village dominant caste is Gadvi(OBC) and Muslim, major occupation of the village of agriculture and Labour work. Major Drinking water source of well and tube well, ration shop available in the village, SPO and PHSC also available, Cotton is major crops	Drinking water, Employment, etc.
5)	Layja Nana	Layja Nana	Mandvi, District-Kachchh, Gujarat	Village dominant caste is Gadvi(OBC), major occupation of the village of agriculture and Labour work. Major Drinking water source of well and tube well, ration shop available in the village, SPO also available, Cotton is major crops	Transportation, School, Drinking water, Employment, Health Care Facilities, Communication Facilities etc.

Sr. No.	Name of Village	Gram Panchayat & Under Villages	Tehsil & District	Brief Information of Village	Major Issues
^6)	Bhada	Bhada	Mandvi, District-Kachchh, Gujarat	Village dominant caste is Gadvi(OBC), major occupation of the village of agriculture and Labour work. Major Drinking water source of borewell and well, ration shop available in the village, SPO also available, Cotton is major crops	Water, Cattelyard, Employment and Transportation facilities etc.
7)	Bayath	Bayath	Mandvi, District-Kachchh, Gujarat	Village dominant caste is Gadvi(OBC), major occupation of the village of agriculture and Labour work. Major Drinking water source of borewell and well, ration shop available in the village, SPO also available, Cotton is major crops	College problem, Educational facilities problem, Power Supply, Communication facilities, Employment, Sanitation and Drinking water etc.
8)	Mapar	Mapar	Mandvi, District-Kachchh, Gujarat	Village dominant caste is SC, major occupation of the village of agriculture and Labour work. Major Drinking water source of tap water, only SPO also available, Cotton is major crops, Motiyabad temple is famous here which was Lord Krishna	Educational facilities(Teacher) problem, Communication facilities, Employment and Drinking water etc.
9)	Bambhadai	Bambhadai	Mandvi, District-Kachchh, Gujarat	Village dominant caste is Koli, major occupation of the village of fishing and Labour work. Major Drinking water source of tap water, only SPO also available,	Transportation, Drinking Water, Health, and Employment etc.
10)	Padamapar	Padamapar	Mandvi, District-Kachchh, Gujarat	Village dominant caste is SC, major occupation of the village of agriculture and Labour work. Major Drinking water source of tap water, ration shop and bank also available, Cotton is major crops,	Wildlife, Drinking Water, Health, and Employment etc.



Fig. 3.7.8. Interaction with Village Sarpanch/Leader

breed in the region. Moreover, unlike birds most of the mammals except bats are terrestrial in habits, therefore, terrestrial land environment i.e. their habitats is of utmost importance to them. Hence, degradation of air, soil and water quality would lead to degradation of vegetation and the overall quality of their habitats. Increased noise levels and disturbance levels would also result in their displacement form the core area and its immediate surroundings. Direct disturbance by presence of people, vehicle, their noise, vibrations, lights etc. can potentially displace most of the mammalian species. It is noticed, that construction workers also sometime engage in poaching of wild animals particularly the chinkara, Nilgai, hare, pigs etc. using various methods.

The impact of proposed project on mammals also involves displacement of the mammalian species occurring in the core area. We recorded the presence of Nilgai, Common Mongoose, Wild Pig and Long eared Hedgehog within the core area of the proposed project site. These species would be displaced from the project core area during the project operation. These species are most common mammalian species which are found throughout semiarid, non-forested, open scrubland, non protected areas and even in the periphery of most of the villages in Kutch region.

No Threatened or Schedule-I species were observed in the core area of the project site. There is only one Schedule-I species of mammals, namely Chinkara (*Gazella bennettii* or Indian Gazelle) was directly sighted in the study area, during our field visit. According to local people and local cattle herders, this species has scattered presence in the most part of the Kutch region. Since Chinkara is a Schedule-I mammal species which exist in the entire study area, it requires attention of the project authority to ensure minimum impacts are caused to the species. Project proponent shall ensure that all types of impacts due to project construction and operation on the surrounding vegetation and the forest areas are minimized through strict pollution control measures. Details of the conservation actions for the species are mentioned in the forth coming chapter.

Impacts on Sea turtles

A coastal beach, admeasuring total 23 km, lies in the study area on the coast of Bambhdai-Bada-Pachotiya-Bhada–Nana Layja villages. Most part of the coastal area falling in the study area is sandy and has presence of sand dunes of varying height and width. The southern boundary of proposed project site is located near the sea coast of Bada village which covers a stretch of approximately 2.0 km length. The proposed project boundary is near and along the nearby coast. Our field observations, literature review and consultation with local NGOs suggest presence of sporadic nesting activities of 2 species of Sea turtle on 19.5 km long sandy coastal stretch from Bambhdai to Nana Layja. According to literature survey (*Sunderraj et al 2013*) the coastal stretch between Bambhdai –Bada-Nana Layja has reported density of 1.4 sea turtle nests per kilometre. This density of nests could be considered sporadic in nature compared to mass sea turtle nesting activities occurring on eastern coast of India. Moreover, as per our field survey, we observed that width of supra tidal areas on the coast near the proposed project boundary is narrow and has dense vegetation and steep slope. These conditions may not be very suitable for nesting activities of sea turtle on the coastal stretch of 2.0 km that is located south of

the proposed project boundary. However, the proposed project in absence of mitigation measures could result in following impacts on sea turtle.

4.5.4 Direct Loss of Habitat

The project facilities would include laying of intake and outfall pipelines from the southern boundary of the project area into the Arabian Sea. The laying of seawater intake and outfall pipelines corridors would require to be carried out through the coastal forest (mainly *Prosopis juliflora*) patch, sand dune area and the intertidal area on the coast. The area required/occupied (approximately 50 m width) for laying of pipelines each for intake and effluent disposal corridor could result in the direct loss of coastal habitat i.e. sand dunes and intertidal areas if not planned properly.

4.5.5 Changes in Morphology of Coast

The activity of laying of intake and outfall pipeline corridors may involve use of heavy machines that may damage or change the morphology of the sand dunes and the intertidal areas on the coast. This might affect the nesting activities of sea turtle.

4.5.6 Direct Disturbance to Nesting

The construction activities would enhance presence of people, machines, lightings etc. These activities may deter the females approaching for nesting on the beach during breeding season. This may affect nesting activity of two species of sea turtle if appropriate mitigation measures are not considered.

4.5.7 Increase in Artificial Illumination on the Coast

The proposed project boundary lies north off the Bada Village coast. The industrial development on the coast also results in higher illumination near beach areas; this is one of the major impacts of coastal development known to disturb and distract sea turtle nesting and hatchlings.

4.5.8 Pollution on Coast

Since the proposed project lies near the coast, the airborne fugitive dusts and other pollutants during construction and operation phases could pollute coast and cause changes in physical and chemical property of coast. The summary of impacts and their mitigation measures are given in **Table 4.5.1**.

Table 4.5.1: Impacts and Mitigation Matrix on Ecology & Biodiversity in the Project Area

Issues		Risk level	Reason/Status in relation to project site	Suggestions
Species	Rare/ Threatened	Med	species (Green Sea turtle (EN), Olive Ridley Turtle(VU) and *Commiphora wightii*) (CR) are reported from the study area.	▪ Ensure no damage or disturbance is caused to these species and their habitats by project activities or people involved in project. ▪ Take up conservation, protection and propagation measures for these species in the study area. ▪ Periodically monitor these areas for their status as part of comprehensive biodiversity monitoring plan.
	Endemic Species	Low	No endemic species of any fauna or flora were recorded during study in the core area and buffer area.	Nil
Important Natural Habitats	Protected Areas	Nil	No protected area present in close vicinity	Nil
	Eco-sensitive zone identified by government	Nil	No protected area or their eco-sensitive zones are present within 10 km periphery of the proposed project site	Nil
	Important Bird Areas	Nil	No Important Bird Area (Birdlife International) is present in core or buffer area.	Nil
	Ramsar site	Nil	No Ramsar sites present in Kutch	Nil
	Wetlands of National Importance	Nil	Great Rann, Little Rann of Kutch and Chharidhandh are located at more than 75 km distances	Nil

Issues		Risk level	Reason/Status in relation to project site	Suggestions
	Wetlands of international Importance	Nil	No wetlands of international importance present in 70 km periphery of the project site	Nil
	Wildlife Corridors	Nil	No notified or officially identified wildlife corridor present in and around project site.	Nil
	Forest Area	Med	Patches of open tropical thorn forest or scrub forest are present in the buffer area of the proposed project site.	▪ Ensure no damage is caused to forest area due to pollution, dust, movement of vehicle, people through forest areas. ▪ Ensure thick green belt on project site periphery to control pollution.
	Mangroves	Nil	No mangroves are present on the coast due to sandy beach. In the study area.	Nil
	Corals	Nil	No coral reef area present on the coast falling in the study area.	Nil
	Breeding/ nesting areas	Med	Sandy beach stretch between Nana Layja to Bambhdai falling in the buffer area /study area is known for sporadic nesting of two species of Sea turtles.	▪ Ensure no damage, disturbance is caused due to any of the project activities, pollution, dusting, material flow etc. during construction or operation phase. ▪ Promote conservation, protection and propagation of these species . ▪ Monitor status of this habitat as part of comprehensive biodiversity monitoring plan.

4.6 Socio-economic Impacts

Socio-economic Impact Assessment (SIA) is an instrument used to analyse social issues and solicit stakeholder views for the design and development of projects. SIA helps in making the project responsive to social development concerns, including options that enhance benefits for poor and vulnerable people while mitigating risk and adverse impacts. It analyses distributional impacts of intended project benefits on different stakeholder groups, and identifies differences in assets and capabilities to access the project benefits. Development of Proposed project will have positive impact on study area due to generation of direct and indirect employment oppurtunities.

The project may change the surrounding area and it is necessary to study the impacts due to the project activity. The project may bring positive as well as negative impact on the study area. To know the impacts due the proposed project primary data collected from the field and impacts assessed are presented in the **Table 4.6.1**.

Table 4.6.1: Prediction of Impacts

Aspect	Pre-construction phase	Construction phase	Operation phase
Employment	Labourers will be needed for the site cleaning, tree cutting, leveling and others	Direct indirect employment opportunities in the form of skilled, unskilled and semi skilled	It is expected that skilled workforce will be needed during operation phase
Land acquisition	Land acquisition of private land (agricultural, barren etc.) will be performed. Number of land loser will increase in the study area.	-	During operational phase, land loser may get employment opportunity in the plant
Migration	In pre-construction activities only labourers are required for cleaning, tree cutting, leveling etc.	It may be possible that special skilled manpower migrates for the project work	Special skilled labour requirement may lead to possible migration of workers from other places
Demand & Supply	No impact	No impact	Project would fulfill the demand of soda ash
Labour camp	Local labourers will	Due to migration of	No labour camp/

Chapter 5
Analysis of Alternatives

M/s GHCL Limited, Ahmedabad is proposing to set-up a greenfield chemical complex with 120 MW Captive Power plant (CPP), RO-DM Plant , seawater intake and effluent disposal system and associated infrastructure near village Bada, Taluka – Mandvi, District Kutch in the state of Gujarat. With this respect, the GHCL Limited is seeking environmental clearance (EC) from the State/Central environmental ministries.

Consideration of alternatives to a project proposal is a requirement of the EIA process. During the scoping, alternatives to a proposal in terms of project site and technologies can be considered or refined, either directly or by reference to the key issues identified. A comparison of alternatives helps to determine the best options to achieve the project development minimum environmental impacts and sustainability of the project. This exercise will able to identify the most environmentally friendly and cost-effective option from the available options. The alternatives analysis is one of the pre-requisite for EIA reports. In this project the following alternatives were examined and reported the best option based on the environment friendly process, ecologically suitable site and process technology which use low energy, low emissions and cost-effective.

- Alternative project site analysis (e.g. advantage of proposed site, details of any other sites, if explored)
- Technology alternatives (e.g. feasibility of different technologies available and advantage of proposed technology)
- Requirement of raw materials and inputs

After analysis of the various options, the project site was selected based on the least environmental impact envisaged during project construction and operation and the process technology was chosen based on the least energy demand, low consumption of raw materials, efficient process and technical feasibility of the process. In this Chapter, various scenarios is examined and alternatives, if any, are discussed.

5.1 No Project Scenario

With no project scenario, dependence of the country on import of soda ash and allied products worsen foreign exchange and many detergents and glass industry sector in India demanding the soda-ash based products. In recent reports from Government of India indicated the need of high soda ash and allied products. It is welcoming decision of the project proponent, GHCL Ltd., to come forward to establish Soda ash chemical complex in Bada village, Mandvi Taluka, Kutch district of Gujarat. The project is essentially needed to meet the increasing demand on soda ash products to reduce stress in the Indian context.

5.2 Alternative Location for the Project

M/s GHCL proposes of setting-up Chemical Complex mainly consists of soda ash and sodium bicarbonate plants with captive cogeneration power plant and other related utilities near Village Bada, Taluka - Mandvi, District -Kutch in Gujarat State (**Fig.5.1**). The approx. geographical locations with four corners of the plant site are as follows:

(A) 22°53'53.19"N & 69°09'26.63"E

(B) 22°53'41.63"N & 69°09'58.16"E

(C) 22°52'29.66"N & 69°8'16.32"E

(D) 22°52'57.10"N & 69°07'33.09"E

The Ministry of Environment formulated guidelines for siting industries; and three important criterions applicable to the proposed chemical complex project. They are:

(i) There are no metropolitan cities nearby the new proposed plant site

(ii) Availability of raw materials and transport systems are very favourable

(iii) Environmentally sensitive areas/zones such as mangroves, protected wildlife is not in the plant site and

(iv) Plant site will need EC from regulatory agencies before establishment of industry.

During the site selection, the alternative sites considered for setting-up of the proposed chemical complex project are given below and the locations were depicted in **Figure 5.2**:

- Site 1 – Village Pingleswar, Taluka – Abdasa, Dist. Kutch
- Site 2 – Village Suthri, Taluka – Abdasa, Dist. Kutch
- Site 3 – Village Bambhdai, Taluka – Mandvi, Dist. Kutch
- Site 4 – Village Bada, Taluka – Mandvi, Dist. Kutch
- Site 5 – Village Modhva, Taluka Mandvi, Dist. Kutch

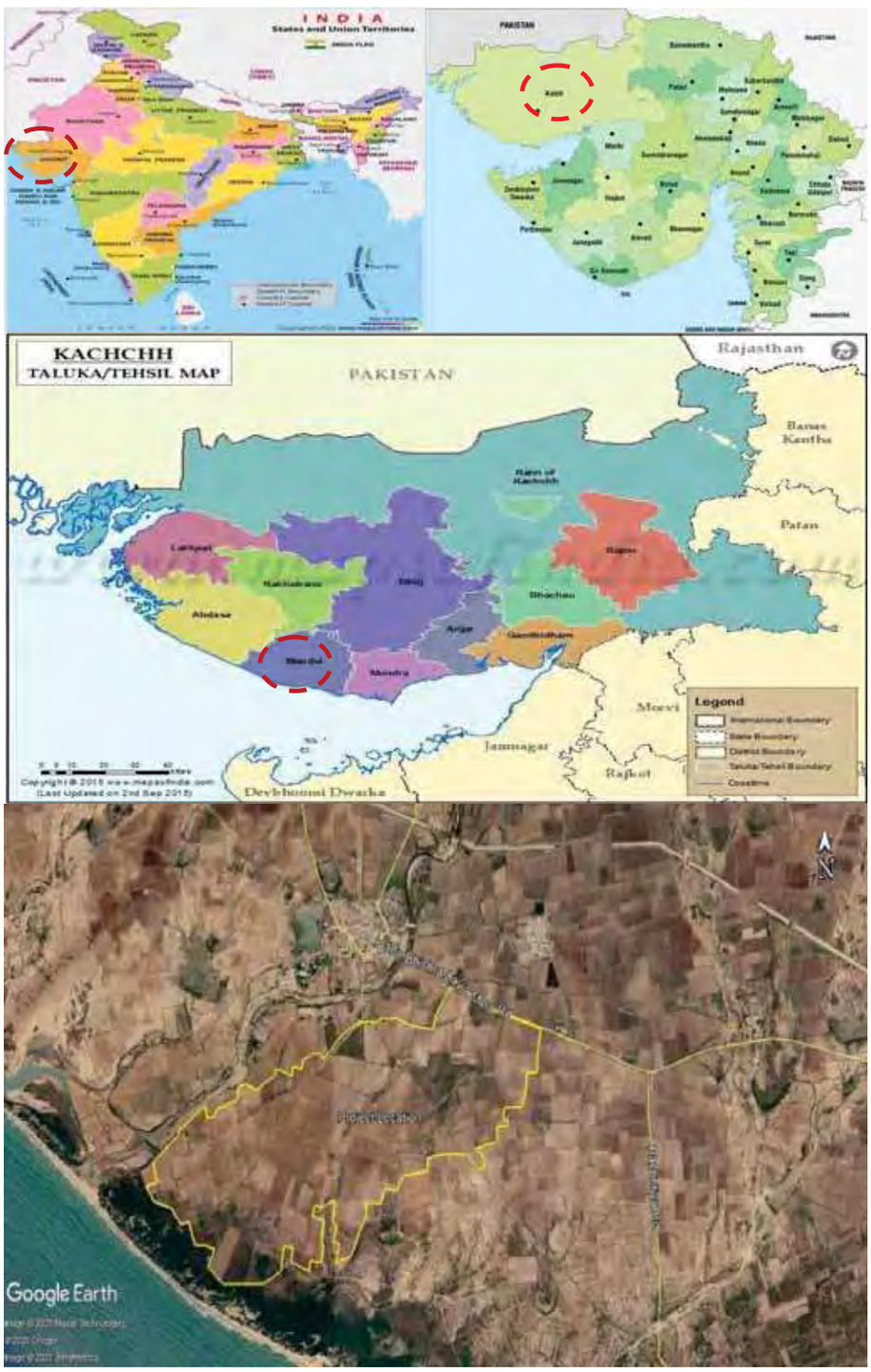

INDIA
States and Union Territories
PAKISTAN
KACHCHH
TALUKA/TEHSIL MAP
PAKISTAN
Rajasthan
Banas Kantha
Patan
Morvi
Jamnagar
Rajkot
Devbhoomi Dwarka
Legend
Google Earth

Figure 5.1: Proposed Project Location



Figure 5.2: Alternative analysis of selection of Project Site

Based on the comparative alternative site analysis given below, the site at Bada village in the Taluka - Mandvi, Dist - Kutch in the State of Gujarat is selected for establishing Greenfield Chemical Complex project.

Table 5.1: Comparative Statement of Project Site Selection

Sr. No.	Environmental & Social Dimensions	Pingleshwar	Suthri	Bambhdai	Bada	Modhva
Location		Taluka: Abdasa, District: Kutch	Taluka: Abdasa, District: Kutch	Taluka: Mandvi, District: Kutch	Taluka: Mandvi, District: Kutch	Taluka: Mandvi, District: Kutch
Coordinates		1) 23°06'23.03"N 68°44'21.83"E 2) 23°07'22.66"N 68°45'31.14"E 3) 23°06'48.34"N 68°46'20.38"E 4) 23°06'16.27"N 68°46'17.92"E 5) 23°04'36.30"N 68°46'53.33"E	1) 22°59'41.12"N 68°58'31.97"E	1) 22° 56'3" N 69°04'55.1"E 2) 22° 55'57" N 69°05'48.8"E 3) 22° 55'27" N 69°05'47"E 4) 22° 55'17" N 69°05'46"E 5) 22° 55'17" N 69°05'42"E 6) 22° 55'02.0" N 69°05'42"E 7) 22° 54'32.4" N 69°05'45.1"E 8) 22° 54'20" N 69°05'10"E 9) 22° 54'43" N 69°05'02"E	1) 22°53'53.19"N 69° 9'26.63"E 2) 22°53'41.63"N 69° 9'58.16"E 3) 22°52'29.66"N 69° 8'16.32"E 4) 22°52'57.10"N 69° 7'33.09"E	1) 22°47'06.02"N 69°28'44.14"E 2) 22°49'24.26"N 69°30'17.58"E 3) 22°48'25.27"N 69°26'30.78"E 4) 22°48'08.36"N 69°25'26.10"E
1.	Presence of ecologically sensitive areas/zone					
	Mangroves	Scattered locally	Nil	Nil	Nil	Nil

Sr. No.	Environmental & Social Dimensions	Pingleshwar	Suthri	Bambhdai	Bada	Modhva
	Turtle /nesting ground or hatchery / Sand dune	Turtle hatchery near Pingleshwar Beach	Sandy beach and hence turtle / Sand dune studies may be necessary	Sandy beach and hence turtle / Sand dune studies may be necessary	Sandy beach and hence turtle / Sand dune studies may be necessary. Presence of rocks in intertidal and subtidal region creates unfavorable approach towards shore.	Sandy beach and hence turtle / Sand dune studies may be necessary
	Wild life sanctuaries and distance from plant site	Kutch Bustard Sanctuary is located about 6 km.	No wild life sanctuary within 10 km of plant site	No wild life sanctuary within 10 km of plant site	No wild life sanctuary within 10 km of plant site	Nesting ground of flamingos in winter
	Rivers/Riverlets/Stream within plant.	Nairo Seasonal River	Nil	One River and stream	Nil	Nil
	Forest/ Any Reserve forest	Yes, Rapar Ghadvali, 2-2.5 Km, Ashirwandh, 10-15 Km scrub forest	Reserve Forest ~ 1 km.	Reserve Forest near about 0.5 km	Near by but outside plant boundary. Unclass forest	Reserve Forest ~ 1 km
	Distance from Sea	~ 1 km	1 km (Further there is in between creek also)	1.5 km (Further there is in between creek also)	~ 0.8 km	~ 1.2 km
2.	Cultural Attributes					
	Religious structures, Ancient buildings identified by Archaeological Society of India	Pingleshwar Temple located at 7 km distance	Small mosque is located about 0.5 km	Shiva Temple ~ 0.5 km	Vipassana Centre ~ 0.6 km	Nil

Sr. No.	Environmental & Social Dimensions	Pingleshwar	Suthri	Bambhdai	Bada	Modhva
3	Public Utilites					
	Highways	- GJ SH 6 at 110 km away - NH41 at 15 km,	- GJ SH 6 at 110 km away - NH41 at 2-3Km.	- GJ SH 6 50 km - NH41 at 11 km,	- GJ SH 6 at 6km - NH41 at 6 km	- GJ SH 6 at 7 km
	Port	Jakhau Port ~30 km	Mundra Port ~ 97 km	Mundra Port ~ 80 km	Mundra Port ~ 55 km	Mundra Port ~ 50 km
	Railway station	Adipur ~ 138 km Bhuj ~ 108 km	Adipur ~ 116 km Bhuj ~ 100 km	Adipur ~ 100 km Bhuj ~ 97 km	Adipur ~ 116 km Bhuj ~ 66 km	Adipur ~ 92 km Bhuj ~ 62 km
	Power station/Sub station	~ 8 km	~ 10 km	~ 15 km	~ 10 km	~ 15 km
	Nearby Village, distance from the plant site, km	~ 2 km	~2 km	~ 1.2 km	~ 1 km	~ 2 km
	Fishing	No	Yes	No	No	Yes
	Any dams/check dams	~ 1 km	Check dam Sandhog River ~ 3 km	Two check dam and & culverts in northern side	Salinity ingress protection – Check dam of Vengadi (seasonal river) within 0.5 km from northern boundary.	No
	Approx. proximity to nearest City (Bhuj), km	100	120	90	70	90
4	Mineral deposits and mining activities	River sand	No	No	No	No

Sr. No.	Environmental & Social Dimensions	Pingleshwar	Suthri	Bambhdai	Bada	Modhva
	General Soil/Appearance	Intertidal / sandy /expansive alluvial	Expansive alluvial nature soil	Dry and Alluvial nature soil	Sandy Loamy	Dry, Marshy suitable for Salt work expansive of alluvial soil.
5	Plant site Classification as per Land Records of Gujarat State	Private Land of GEDA and Govt. Land	Private Land / Waste land / Gauchar/ Forest Land	Private Land/ Sarkar shree land/ Govt waste/ Santhali land	Private unirrigated agriculture land/ Shri Sarkar land/Govt Land	Private Land & Govt. Land

The estimated land for the project proposal is around 1350 acre. The site at village Bada is considered favourable based on the environmental and logistic advantages over other four sites. The merits of the selected site are as follows:

- Availability of adequate and continuous land parcel for setting up of soda ash, bicarbonate plant, captive cogeneration power plant, other salt derivative plants in future, establishing sea water/ effluent disposal facilities, along with other essential associated facilities. The land is comprised of Government land /Sarkarshree/ and private unirrigated agricultural land.
- No notified ecologically sensitive area within radius of 10 km. The unclassforest area (outside the plant boundary) is mainly covered with *Prosopis juliflora* and there is no significant vegetation of ecologically sensitive found in the study area.
- No mangroves vegetation near the project site coastline
- Sparsely populated surroundings, nearest village Bada has population of 2719 as per Census, 2011.
- No forest land within identified project site. However for seawater intake and outfall, pipeline will pass through adjoining forest land. Prior to undertake any permanent nature construction activities necessary permissions / approval shall be obtained.
- Arabian Sea is located at a distance of around 0.8 km of western side of the proposed project site.
- No perennial river within the vicinity, only seasonal river 'Vengadi' near North/West boundary of plant land.
- State Highway No 6 is appx. 6 km from proposed project site and easily accessible.
- Proximity to availability of raw material i.e. salt, coke, lignite, limestone etc.

In summary, the ecologically sensitive zones/areas such as wildlife sanctuaries are not located in the plant site and the site is barren land with scatter shrubs. Regulated CRZ buffer will be maintained. Sea water intake and outfall systems are permitted activity as per CRZ notification, 2011 & 2019. There are no habitants in the plant site. The available raw materials such as limestone, salt, lignite/coal and coke can be easily transported and required quantity of seawater can be drawn from the Arabian sea due to its proximity. There is no issue of rehabilitation and resettlement as there is no habitation in the plant site.

Based on above merits, 'Bada' site has been chosen as the most suitable for setting up of proposed Chemical Complex.

5.3 Process Technologies

Standard Solvay and modified Solvay are the basic processes for the manufacture of synthetic Soda Ash. These two processes are basically same except for the utilization/recovery of the ammonia.

In the standard Solvay process, ammonia is recovered from the ammonium chloride produced in the process and recycled back to the process, while in the modified Solvay process, ammonium chloride is recovered as a co-product of Soda Ash. Modified Solvay process is economical, if the co-product ammonium chloride can be successfully sold as fertilizer. Under the present agricultural and fertilizer scenario in the country, the use of ammonium chloride as a fertilizer is very limited. Further, the modified Solvay process works out economical only when carbon dioxide gas and ammonia, two important inputs, are available regularly at reasonable price from a nearby plant/source. Plants with independent facilities for producing carbon dioxide and ammonia are not economical.

In conventional Solvay process, lime is slaked to produce milk of lime. For the release of ammonia from ammonium chloride, directly milk of lime is added in pre-limer. Thus conventional Solvay process uses more heat energy as compared to dry lime process.

Dry lime process uses powdered lime directly in pre-limer for the release of ammonia from ammonium chloride. Thus, in pre-limer, heat of hydration and saving in lime slaking water makes the process energy efficient. Direct slaking by use of mother liquor enables considerable volume reduction in effluent.

The schematic showing the process of soda ash manufacturing is depicted in **Figure 5.3**. The steam and water consumption in case of Wet lime process is more in comparison to Dry lime process whereas power consumption in Dry lime is more than wet lime. It appears that total diluted effluent which is discharged at sea is about 5 to 10% less in Wet lime process in comparison to Dry Lime process.

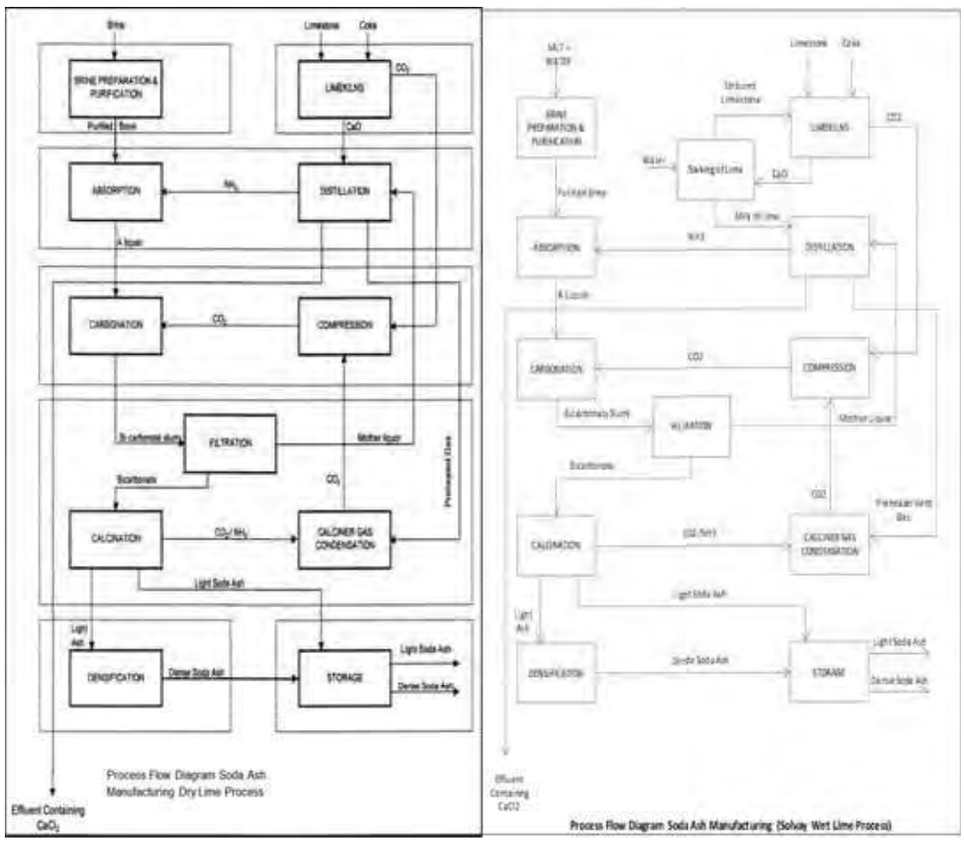


Figure 5.3: Schematic Diagram of Soda Ash Manufacturing Process (Dry and Wet Lime Process)

The above discussed dry lime, wet lime process and other reported processes in the literature are compared in terms of water consumption, energy requirement, and raw materials requirement. Presently there is no plant in the world manufacturing soda ash through Le-Blanc Process. Thus the Leblanc process is of only historical importance only and therefore not considered. Based on the available data from industries and experience of the Soda ash processing plants, the following conclusions were derived and are reported in the below **Table 5.2**.

Table 5.2: Comparison of Soda Ash Manufacturing Processes Reference to Resources Consumption

Natural Resources/ Parameter	Solvay Process	Dry Lime Process	Dual Process (Modified Solvay Process)
Water consumption, m^3	10.4	8.3	Data not available for Per Ton Soda ash, as Dual Process is an integrated process along with Mfg of Ammonium chloride.
Energy requirement, MT *Over all steam Consumption including Aux. & Utilities*	3.6-4.1	3.5 - 4	5.5 (for steam generation)
Raw materials / ton of product	▪ Salt : 1.8 MT ▪ Lime Stone : 1.8 Ton /Ton ▪ Coke (for Lime Kiln) - 116 kg ▪ Make up Ammonia – appx - 1 to 3 kgs	▪ Salt : 1.8 MT ▪ Lime Stone : 1.8 Ton /Ton ▪ Coke (for Lime Kiln)- 116kg ▪ Make up Ammonia – Appx 2 to 3 kgs	▪ Salt : 1.3 MT ▪ Lime Stone: Lime Stone is not required as CO2 is sourced externally. ▪ Make up Ammonia – 335 kg /Ton (Note : Large quantity required due to consumption for producing Ammonium Chloride)
Remarks	▪ Steam consumption in Soda ash-Wet lime process is approx. 15-20% higher than compared to Dry Lime Process.	▪ Steam consumption in Dry Lime Process is lesser then Wet Lime process. This is due to heat of hydration of Lime is utilized in Dry Lime process in ammonia recovery.	▪ In Modified Solvay process (Dual Process) the ammonium chloride is recovered as co-product of Soda ash. This is economical only in case co-product i.e. Ammonium chloride is sold as fertilizer. ▪ Further there should be some fertilizer plant in nearby vicinity to provide NH_3 & CO_2 on continuous basis. ▪ The plant with independent facility of NH_3 & CO_2 are not economical

5.4 Conclusion

- This project is of national importance as it contributes to address the demand of soda ash and allied products. The project will generate revenue to Gujarat State and Government of India and also create about 3000 jobs directly and indirectly.
- Project site at Bada Village in Mandvi taluka of Kutch district of Gujarat is ideal based on important criteria, such as, away from urban areas, availability of resources (e.g., sea salt from Arabian Sea) and not in proximity to ecologically sensitive locations.
- Use of alternative technology with low emissions/ low generation of wastes and better energy efficiency and commercially available based on experience of soda ash industry in India.
- The process technology adoption depends on various parameters like ease of operation/maintenance, cost, pollution control, space available, equipments reliability and process optimization, supply chain, etc. We have evaluated both Solvay ammonia i.e Wet Lime process and Modified Solvay process i.e Dry Lime process, it appears that Wet Lime process has an upper edge over Dry Lime process as the former comparatively uses lesser resources and has lower pollution potential mainly in terms of effluent discharge.

In addition, M/s GHCL Limited will consider all possible options to ensure that the project site will be environment friendly and technically feasible and also support local public to improve their quality of life.

Chapter 9
Environmental Cost Benefit Analysis

GHCL Ltd is a reputed Soda Ash manufacturing chemical unit, incorporated in 1983 which is located at Sutrapada at Dist. Gir Somnath in the State of Gujarat. This was India's first integrated Soda Ash plant based on Akzo's Dry Liming Technology. The Sutrapada plant was commissioned in the year 1988 with the production capacity of 4,20,000 tons per annum (TPA) capacity. Over the time, the capacity has been expanded up to 11,00,000 TPA. It caters to almost 25% of the country's annual domestic demand. It has a clear competitive advantage due to its captive raw material sources. Its lignite mines, located at Khadsaliya in the Bhavnagar District of Gujarat supply the raw material needed for the production of Soda ash. Limestone mines at Sutrapada, Veraval and Talala Taluka of Gir-Somnath District have an average production 45 MT to 500 MT per day of chemical grade limestone. GHCL Soda Ash is available in 2 categories-Light Soda Ash, Dense Soda Ash. It also produces Sodium Bicarbonate and these products are marketed in India under the brand name 'LION'. Soda ash an important raw material in the production of soaps, detergents, glass, pulp and paper, chemicals, textiles and a host of other industries. GHCL's commitment towards the development of weaker sections of society has been a continuous initiative for more than two decades. Through its "GHCL Foundation Trust", GHCL has upgraded its CSR activities to cover a larger section of the society to provide support to the downtrodden, needy and marginalized citizens and also to create a social infrastructure for their sustenance.

GHCL, is now proposing to set-up a Greenfield Chemical Complex to produce Light Soda Ash Plant of 11,00,000 TPA capacity and 5,00,000 TPA of Dense Soda Ash and 2,00,000 TPA Sodium Bicarbonate, 120 MW Captive Co gen power plant and associated infrastructure near village Bada, Taluka – Mandvi, District Kutch in Gujarat state. Along with above products, salt based derivative plants will also be planned in future. The Soda Ash process requires uninterrupted and stable power supply, which will be met from the proposed 120 MW solid fuel

based captive cogeneration power plant. This project is proposed to execute in phased manner.

Proposed plant land near village Bada comprises government waste land and private un-irrigated agricultural land. Most of the private un-irrigated land is used for single crop (seasonal crop). The proposed project site falls in the semi-arid

climatic condition. No mangrove eco-system and notified ecologically sensitive places are falling in the plant area.

The project site supports only a few plant species of lesser conservation significance. The proposed plant and related construction activities may involve removal or thinning of some vegetation which is mainly *Prosopis juliflora* within the proposed area. As such *Prosopis juliflora* is being removed from main road sides across the country to produce charcoal. Further, it grows on its own even after removal. There are no rare, endangered or conservation concern plant species present in the close vicinity of the project area in the buffer zone. Hence there will be negligible impact on the floral species. Some of the scattered trees falling in the plant site area may be required to be cut or relocated in the exclusion zone of the project area. This will minimize the impact in terms of net productivity of the project area.

Further, seawater Intake and effluent disposal pipelines may pass through forest area for which Right of Use (RoU) /Right of Way (RoW) may be required. The forest area required for laying of pipelines mainly consists of prosopis juliflora and scrub vegetation. The pipeline route will be selected in such a way that the removal of important floral species, if any, will be minimal or avoided.

Therefore, the loss to the environment will be negligible. The same will be enhanced by development of Greenbelt/plantation which in turn will mitigate the environmental impact on the area.

The cost of the project and expenditure on the implementation of the environment protection measures are presented in **Chapter 10** of the report. Besides the tangible benefits, the project also has a number of intangible benefits like energy efficient, water conservative, no adverse impact on environment, socio-economic benefit of the local people and the region. The details of the same are given in **Chapter 8.** The establishment of Soda Ash plant would benefit to the industries and consumers and development of industries, overall development of area and consequent indirect and direct job opportunities which would finally result in improvement in the quality of life of people in the region.

Chapter 10
Environmental Management Plan

10.1 Introduction

In **Chapter 4** of this EIA report, impacts assessed during the construction and operations phases of the project have been identified, predicted and evaluated. Where potential sources of environmental impacts are discussed and impacts could not be managed as per the prevailing procedures /mitigation measures then the control measures are required to address the adverse impacts of the project. In this Chapter, project specific Environmental Management Plan (EMP) is proposed to enlist those measures; they are either of an organization, procedural or technical/instrumental nature to minimize the magnitude of adverse environmental impacts.

The primary object of EMP is to ensure a safe and clean environment in the project area/region. The desired results from the environmental mitigation measures proposed in the project may not be obtained without a management plan to assure its proper implementation and function. The EMP envisages the plans for the proper implementation of mitigation measures to reduce the adverse impacts arising out of the project activities. EMP has been prepared addressing the issues like:

- Pollution control/mitigation measures for abatement of the undesirable impacts caused during the construction and operation phase of the project.
- Details of management plans (landscape plan, solid waste management plan etc.).
- Institutional set up identified/recommended for implementation of the EMP.
- Post project environmental monitoring programme to be undertaken
- Expenditures for environmental protection measures and budget for EMP.

The EMP is prepared for construction phase, post-construction phase (commissioning) and for post-project phase. The EMP implementation will minimize the impact of atmospheric emissions, liquid effluents, solid wastes and noise generation on the surrounding environment. The social upliftment and improving the quality of the life of people living nearby the industry are proposed by allocating sufficient funds under CSR program of the GHCL Improvement Fund.

10.2 Environmental Management for Construction Phase

10.2.1 Summary of Potential Impacts

Environmental impacts during the construction phase can be due to the site preparation, civil construction, erection and mechanical fabrication, welding operations, non-destructive testing and other operations and provision of civic amenities to the construction work-force.

The environmental components impacted during construction phase include deterioration of air quality, contamination of surface water and noise generation.

The land use change and any associated loss of flora are permanent.

10.2.2 Mitigation Measures

- The construction area shall be secured by fencing and only authorized personnel will be allowed to avoid accidents and unto do incidents.
- To arrest resuspension of dust during construction phase, specifically excavation, levelling and other operations, water sprinkling will be practiced.
- The runoff water from the construction area shall be channelled through sedimentation tanks to remove suspended solids and to avoid contamination of nearby waterbodies.
- Suitable water supply and sanitation facilities shall be provided to the labour colonies/housing during the construction work-force. The sanitary waste shall be routed to septic tanks and soak pit.
- Well maintained diesel operated construction equipment shall be used to minimize the exhaust and subsequent atmospheric pollutants.
- Safety equipment such as earplugs and earmuffs, helmet, face shields, safety goggles and other related gadgets shall be provided to workers engaged in high-risk areas.
- All construction equipment shall be properly maintained and greased to minimize noise generation and vibration.
- Development of green belt shall be started along with the construction activities itself.
- Adequate supply of fuel shall be provided for the construction activities. Required fuels, acetylene cylinders, compressed gases and paint materials shall be stored as per accepted safety standards.
- Strict instructions will be given to contractor/construction agency to maintain construction vehicles and other materials transport vehicles with minimal pollution with proper and up to date PUC certification. Vehicles carrying solid raw materials/fuels should be covered to avoid fugitive dust.

- The medical facility shall be adequately provided, in particular, immediate medical aid to the workers and their family members. An ambulance provision shall be made to transport injured workers to nearby hospitals during the construction.
- No construction materials like earth, stone, ash or appendage disposed off to prevent any blockage in the flow of water of any water course, and cross drainage channels. Proper drainage system (open or closed) shall be prepared.
- All vehicle/machinery and equipment operation, maintenance and re-fuelling will be carried out in such a fashion that spillage of fuels and lubricants does not contaminate the water.
- Contractor will arrange for collection, storing and disposal of oily wastes to the approved disposal sites. All spills and collected petroleum products will be disposed off in accordance with the GPCB guidelines.
- The project area shall be protected by proper embankment to prevent flooding.

10.2.3 Monitoring Plan

- During construction phase, the air emissions with reference to dust will be monitored. The surface water quality with reference to total dissolved solids (TDS), pH, oil & grease and faecal coliform will be monitored for the nearby surface water bodies. Noise quality will be measured during construction phase and recorded at 0.5 km and 1 km from the project site. The quantity of paints, oil & grease and other construction materials will be recorded and kept at elevated room to avoid contact with rain water. For this purpose, a new storage room/shed will be constructed. All the parameters of air, water and wastewater and solid/hazardous wastes will be measured using CPCB approved test methods. This monitoring will be conducted by the GPCB approved laboratories for every 6 months during the entire construction period.

10.2.4 Resource allocation and Responsibility

- The resource such as human resources, financial assistance and other resource will be provided by GHCL for implementation of EMP during construction phase. The construction phase is a temporary activity and the environmental impacts are time-bound in nature.
- The responsibility of execution of EMP is under the guidance of GHCL management.

10.2.5 Schedule of Action

- The construction phase spread for about 1-2 years and the EMP will be implemented during this period.

10.3 Environmental Management for Operational Phase

10.3.1 Summary of potential impacts

10.3.1.1 Air Quality

The emissions from the stacks of proposed project are likely to contain pollutants gases such as PM_{10}, $PM_{2.5}$, NO_x, SO_2 and NH_3.

Atmospheric emissions may be either due to point sources, e.g., utility stacks, process stacks or due to fugitive emissions from storage tanks and process leaks.

- Fugitive/dust emission during raw materials transport during manufacturing process
- Vehicles used for raw materials and product transport.

10.3.1.2 Water Quality

- Contamination of surface waterbodies
- Contamination of groundwater resources
- Process wastewater treatment and disposal
- Sewage treatment plant to address the domestic wastewater

10.3.1.3 Solid & Hazardous Wastes

- Solid waste generation from the proposed soda ash complex and captive power plant mainly consists of undersized limestone from the lime kilns, sludge from brine purification plant, flyash/bottom ash from boilers which use coal/lignite as fuel and waste/used oil.
- Sludge, if any generated will have no hazardous characteristic and the same is used for filling the low-lying areas.
- The ash (fly ash and bottom ash) from boilers using coal as fuel will be sold/used for cement manufacturing/ brick manufacturing. If, from lignite only, it will be used for road making, pavement and flooring.
- Hazardous waste such as oil & grease, paints and varnishes, spent catalysts other chemicals will be stored at an elevated room until disposed off into the nearby TSDF

10.3.1.4 Noise

The design of the project should be such that the sound pressure level in the work area will not exceed 90 dB(A).

Noise generated during equipment operation will be designated as rrestricted areas, where it is not reasonably practicable to reduce the noise level below the work area limit.

- The equipment will be chosen in such a way that the above noise limit will not be exceeded.

- Green belt/green cover will be developed around the periphery of the plant to control noise levels.
- The noise levels at the nearest habitation after proposed project commissioned will be less than the stipulated standards of GPCB/CPCB

10.3.1.5 Ecology & Biodiversity

In the project area, no tthreatened and eendangered species are present but they are present in the study area of the proposed project.

Though there are no major direct impacts envisaged on these species, however on the long run such large scale project may have some cumulative impacts on them.

These impacts on above mentioned species are less likely to be severe to affect their populations in the region.

10.3.1.6 Socio-economic Aspects

The average QoL index value for the study area is leading to satisfactory level due to satisfactory status like, educational facilities, roads also availability of basic needs viz., food, clothing & housing. Medical and communication facilities were not adequate in the study area; Improvement in these fields will help to increase quality of life of the study area.

10.3.2 Mitigation Measures

10.3.2.1 General

The process technology selected for the industry is low-emission and low waste generating category and subsequent environmental impacts during the operational phase are at the lowest level possible.

The best available technology-based pollution prevention and control shall used to meet the regulatory standards and these pollution control systems will be commissioned before commencement of operation of the project. Wherever possible, the control systems shall be interlinked with the operational units, so that failure of the control system shall shut down the respective operational unit.

- Regular performance evaluation of the control systems shall be undertaken to ensure their optimum performance. As per the guidelines of Gujarat State Pollution Control Board energy and environmental audits will be conducted.
- Preventive maintenance is an important management strategy which will be implemented to control systems matching with that of the respective operational unit.
- Regular monitoring for various components of environment shall be undertaken to ensure effective functioning of pollution control measures as well as to safe guard against any unforeseen changes in environment.

10.3.2.1 Air Quality

- The pollutants in stack emission will observe the norms and as such GLC in surrounding areas will not be adversely affected. However, in order to improve the ambient air quality, GHCL will implement greenbelt /plantation program to ameliorate the pollutants and improve the aesthetics and ambient air quality.
- High efficiency ESPs shall be provided in the flue gas path of the CFBC boilers for control of particulate matter.
- Finely ground limestone will be added to the boiler combustion zone together with coal/lignite to arrest the SO_2 formed during combustion. Lime stone dozing system to the furnace to be designed to achieve higher than 90% capture of SO_2. Monitoring system of air pollutants SO_2, NO_x, NH_3, PM_{10} and $PM_{2.5}$ will be implemented.
- A stack of 130 m height has been considered for CPP to meet the present GPCB/CPCB emission norms of air pollutants. Stacks of sufficient dimensions shall be provided for process emissions control and effective atmospheric dispersion.
- All conveyor transfer points will be identified and properly sealed to prevent fugitive dust emissions.
- Raw materials and product handling places will be provided with proper dust management systems with appropriate capacities. The dust collected in the extraction system shall be recycled to the process based on the dust characteristics.
- Mechanical seals shall be provided for all transfer points. Preventive maintenance of valves and other equipment shall be undertaken as per pre-defined schedule. All critical storage tanks shall be subjected to regular non-destructive testing to ensure the integrity of containment.
- The control measures (maintenance) and good housekeeping will considerably reduce the fugitive emissions; and hence high priority will be given for good housekeeping practices as per the Industry-specific standards.
- Regular monitoring of shop floor environment is to be carried out to control the fugitive emissions as well as shop floor safety.
- Leakages (gases / liquids/ dust) should be checked and promptly attended.
- Vehicles carrying solid raw materials / fuels should be covered to avoid fugitive dust. Internal unpaved roads and transportation roads will be sprayed with water to minimize dust reborn in to the atmosphere.
- Tree plantation in and around the project site shall be carried out to reduce the dust emissions and minimize adverse aesthetic impacts. The greenbelt also helps to attenuate noise pollution.

- Monitoring of the operational performance of the various mitigation /enhancement measures shall be carried out as a part of this project.
- Air pollution control devices shall be regularly checked for effective performance to reduce the emissions.
- The air quality monitoring will be carried out on regular basis by approved agencies by CPCB/GSPCB and the air quality data will be used to assess efficiency of the pollution control devices and to check the effectiveness of EMP.

10.3.2.3 Water Quality

- During operational phase the water requirement will be met from Arabian sea. No ground water will be used to meet the plant requirement.
- The probability of water pollution is negligible, as all relevant effluent streams from the proposed units shall be treated/diluted suitably before disposal.
- The surface water run-off will be collected and used for plant activities; the proposed rain-water harvesting near the percolation tank should be constructed. Further, roof top rainwater harvesting structures will be constructed on main buildings /offices of plant to recharge groundwater.
- Proper seawater intake and treated effluent disposal (ensure maximum dilution) shall be done as per Marine EIA report prepared by NIO.
- It is necessary to verify the predicted environmental changes from the pre-project baseline apart from ascertaining and periodically checking the efficiency of the diffuser through periodic monitoring.
- The water monitoring results of (surface and groundwater and marine) should be carefully evaluated to identify significant changes, if any, adverse change from the baseline accordingly, corrective measures will be taken to ensure the sustenance of water quality.

10.3.2.4 Solid/Hazardous Waste

- Proper handling practices to be followed in line with the Hazardous Waste Management Rules 2016 and its amendments.
- Fly ash and bottom ash will be disposed in identified areas shall be sprinkled with water to control dust emission. The same shall be utilized for bund preparation, road making and brick manufacturing and cement manufacturing.
- The used oil likely to be generated from the proposed plant is required to be carefully handled and stored in an environment friendly manner. Such oil needs be finally disposed-off by way of sale to the reprocessing units approved by the Ministry of Environment, Forests and Climate Change, Govt. of India/GPCB for its further processing

and reuse. GHCL will adhere to the 'Authorisation' granted by GPCB for disposal of hazardous waste.

- Provisions shall be made for periodic monitoring of soil and sub-soil characteristics in and around the plant area. The important physico-chemical and biological parameters of the soil will be monitored to evaluate the impact on the soil quality and land environment.
- Land environment related management plan pertains to plantations on various sites such as green belt around the project, around the workshop, administrative wing along the roads within and outside the project premises.
- A certificate from the TSDF will be procured for disposal of hazardous waste. An M.o.U for use of fly ash in cement manufacturing and road networks will be obtained.

10.3.2.5 Noise Management

- The major areas of concern for noise generation shall be identified and adequately addressed by considering better control equipment during procurement of the machinery from vendors at project implementation stage.
- Project proponent will consider procurement of low noise generating equipment, wherever feasible, for proposed project
- Either Acoustic barriers/ shelter shall be developed in noisy workplaces or acoustic enclosures shall be provided for the high noise generating equipment
- The operator's cabins (control rooms) will be properly acoustically insulated with special automatic doors and observation windows.
- Monitoring job and location specific noise levels for compliance with HSE regulations will be undertaken.
- Periodic audiometric tests for employees working close to equipments with high noise levels, such as compressors, turbines, blowers etc. will be undertaken.
- Provision of Personal Protection Equipments (PPEs) need to be arranged and their proper usage should be ensured for protection from high noise for the workers as well as visitors.
- Noise generating sources in the plant areas should be monitored regularly. Monitoring of ambient noise levels should also be carried out regularly at the periphery of the complex.

10.3.2.6 Ecology & Biodiversity

- GHCL will ensure in implementation of mitigation measures and environmental management/conservation plans reported separately captioned "Biological Assessment and Wildlife Conservation Plan"

prepared by Dr. Bharat Jethva, Approved QCI-NABET Functional Area Expert (FAE) for Ecology.

10.3.2.7 Socio-economic aspects

In order to mitigate the adverse impact likely to arise in social, cultural and economic aspects in the surrounding region and the expansion of the project is expected to contribute towards enlistment of local people quality of life; certain line of action should be adopted related to:

- Preference shall be given to local people for employment, considering their skills and abilities
- Health camps in surrounding villages, Health services through mobile dispensary, free medicine to BPL, vulnerable population
- Timely valued different awareness programs (sanitation, health, education) must be arranged by the project proponent based on the common health problems caused in the region that may help to reduce the lower status of the study area
- Try to minimize the disturbance to the local community by the construction activities, Apply safe measures during loading-unloading of the construction material
- Try to minimize the transportation activities in day time, ensure roads would not be affected due to heavy transportation
- Appoint local workers in both construction and operation phase as much possible, proper training to workers about safety and technical issues during operation
- Regular meetings, discussions with village Sarpanch, Villagers by Project Proponent in

The responsibility of project proponents to 'internalize' the full environmental costs of development proposals is now widely accepted under "Polluter Pay" principle. In addition, many proponents have found that good design and impact management can result in significant savings applying the principles of cleaner production to improve their environmental performance. The predicted adverse environmental as well as social impacts for which mitigation measures are required were identified and quantified the impact wherever possible. Each mitigation measure is briefly described with reference to the impact of significances to which it relates and the conditions under which it is required.

10.3.3 Monitoring Compliance

- The monitoring of all valued environmental components will be monitored as per the norms prescribed by GPCB/CPCB and the time-to-time guidelines issued for soda ash manufacturing industry.
- Generally, annual environmental quality reports will be submitted to GPCB and also on-line display indicating environmental pollution status will be planned near the proposed project site.

- Monitoring will be performed as per the guidelines given by GPCB and parameters prescribe in Consent of Operation.

10.3.4 Resource allocation and Responsibility

- The resource such as human resources, financial assistance and other resource will be provided by GHCL for implementation of EMP during operational phase. The EMP will be overseen by the Environmental management Cell of the Industry. All programs related environmental protection will be taken care by the Cell and this Cell reports to highest management of the industry. GHCL should formulate and implement well laid Environment Policy for the proposed project to meet the requirement of statutory compliances and effective implementation of EMP objectives and making business more sustainable and safe.
- The responsibility of execution of EMP is for Environmental Management Cell under the guidance of GHCL management.

10.3.5 Schedule of Action

- As per the compliance prescribed by the GPCB/CPCB, timely reports will be submitted.

10.4 Post-Project Monitoring

To evaluate the effectiveness of environmental management program, regular monitoring of the important environmental parameters will be done. Monitoring of various environmental parameters will be carried out on a regular basis to ascertain the following;

- Pollution status within the plant and in its vicinity
- Generate data for predictive or corrective purpose in respect of pollution
- Effectiveness of pollution control measures and control facilities
- To assess environmental impacts
- To follow the trend of parameters which have been identified as critical.
- The environmental monitoring activities should be recorded, hence, the following documents are suggested for record maintenance:
- Log sheets for operation and maintenance of pollution control facilities/ equipment
- Instruction manuals for operation and maintenance of pollution control facilities/ equipment
- Manuals for monitoring of air, water and soil quality in and around factory
- Manuals for monitoring of water, solid and gaseous discharges from the factory

- Statutory records as per the environment related legislations
- Monthly and annual progress report
- Bi-annual compliance statement for Regional office, MoEF&CC, Government of India.
- Annual Environmental audit statements and compliance to NOC conditions for State Pollution Control Board

10.4.1 Air Environment

- Ambient Air Quality monitoring will be done regularly for monitoring PM_{10}, $PM_{2.5}$, NO_x, SO_2 and ammonia
- Ambient air quality monitoring to be carried out in nearby villages as per the recommendations of GPCB/MOEF&CC.
- Sampling and analysis shall be carried out in accordance with Indian legislative requirements and Group control framework requirement.

10.4.2 Water Environment

Effluent will be monitored for all parameters as stipulated by Gujarat Pollution Control Board (GPCB).

10.5 Waste-minimization, Recycle / Reuse / Recover Techniques, Energy Conservation and Natural Resource Conservation

The following practices will be adopted towards waste-minimization, recycle/reuse/recover techniques, eenergy conservation and natural resource conservation:

- The under-size limestone reject from the plant will be used for desulphurisation of flue gases and surplus will be used for road making.
- The limestone dust extracted through efficient air pollution control system such as bag filters will be recovered and the recovered limestone dust will be used in boilers for desulphurisation of the gases.
- Coke/coal dust extracted will be recovered and used in the boilers/kilns.
- Fly ash will be used in pavements/flooring/cement industries /brick manufacturing units.
- Sweep soda from the soda handling section will be used in the brine treatment.
- Rain water storage pond will be built for harvesting rainwater. Roof top rain water harvesting will be done in major buildings with RCC structures for groundwater recharge.
- Good housekeeping practices will be adopted.

- Paper waste will be minimized by adopting intra-office network and the waste paper will be sold to authorized vendors.
- Sufficient workspace and proper lighting will be provided, wherever possible solar lighting will be provided.

10.6 Greenbelt/Plantation Development Plan

An important aspect of a greenbelt is that the plants should have their varied tolerance limit towards the air pollutants. A green belt is effective when the pollution sink only within the tolerance limit of constituent plants. Planting few, known pollutant sensitive species along with the tolerant species within a green belt however, do carry out an important function of indicator species Apart from function as pollution sink, greenbelt would provide other benefit like aesthetic improvement of the area and providing suitable habitats for birds and animals.

The efficiency of greenbelt in pollution abatement mainly depends on the width of the green belt and height of the tree. Further, the distance and direction of source of pollution as well as the focal points of noise emitting plant/machinery Installations are also considered for the preparation of Greenbelt Plan.

As per the guidelines, GHCL will develop green belt in 33% of total plant area in and around the plant in a phased manner. The plantation will be done all along the periphery of the plant and on the sides of internal roads. The local forest authorities, experts of horticulture and other experts will be consulted. The efforts shall be made to plant local plant species. The green belt development requires first soil top layer treatment / replacement and also treated water for irrigation. GHCL to plant the species which are tolerant and having scavenging potential and suitable to the soil and climate of the area with the availability of rain water from the harvesting ponds. It is a gradual process and will be developed in a planned manner.

GHCL, if required, will establish a full-fledged nursery with necessary infrastructure facilities water availability, covered shade-net etc. Saplings will be prepared in polythene bags at nursery. Saplings of various indigenous plants and ornamental plants to be developed in the nursery for the purpose of plantation in and around project site.

At least 100 m wide area on periphery of project site boundary may be developed for creation of greenbelt plantation of local species. The plantation will be done in parallel linear lines running along the periphery of the plant area. 2500 plants will be planted per ha. At least 75% survival of the plantation will be maintained.

Criteria for selection of species for greenbelt will include fast growing, thick canopy cover, perennial and evergreen, high sink potential, wind breaking, etc. Combination of local species such *Acacia Senegal, Euphorbia, Salvadora persica,* and *Butea monospermeaw* would be planted. These species are more dust tolerant and would easily grow in dry region even with shallow soil depth. The green belt of these species would also stop the spread of dust as well as act as wind barrier.

Table 10.1: List of Greenbelt Development Plants*

1	Acacia leucophloea	9.	Ficus bengalensis
2	Acacia senegal	10	Moringa oleifera
3	Azadirachta indica	11	Phoenix sylvestris
4	Balanites aegyptica	12	Pithecellobium dulce
5	Butea monospermea	13	Prosopis cineraria
6	Cocus nucifera	14	Salvadora persica
7	Ficus relegiosa	15	Salvadora oleoides
8.	Tamarindus indica	16	Casuarina equisetifolia

Other herbs/trees will be considered during development and establishment of greenbelt circumference of the project.

Further, minimum of two rows of plants will be developed on roadsides to minimize the pollution effects. While planting, care should be taken to ensure that plants in second row fall in between the two plants of first row.

Protection & Precautionary Measures:

- Barbed wire fencing around the plantation area may be provided to protect the plants during grazing of animals.
- Plantation activity will be carried out in monsoon season.
- The height of plants should not be less than 1 ft.
- Plants must be watered daily in initial stages; watering 2-3 times a week and this will be followed.
- Compost / manure will be added for each pit before plantation.
- To ensure better growth and survival of plants, surface should have sufficient soil.
- Continuous monitoring of plant growth, immediate replacement of causalities, supplementation of nutrients, rescheduling watering regime are important aspects for survival of the plantation will be strictly followed.

Green Belt/Plantation Development Plan (Five-year Plan)

Year	Area to be Planted (ha)	Number of Plants/ Saplings
I	30	75000
II	30	75000
III	30	75000
IV	30	75000
V	30	75000
VI	30	75000
	180	450000

10.7 Health, Safety and Environmental (HSE) Management System

This procedure will be aimed at line managers, company personnel, HSE advisers and contractor personnel working under direct control and influence of the company. The procedure will be applicable for the operational activities of the company at project site. The company will implement the Environment Policy duly signed by the Director, GHCL Limited.

The actions, activities and responsibilities concerning environmental officials of GHCL will be assigned and sufficient funds will be allocated on priority basis. The legal compliance involved in operating the plant, must be clearly understood and properly undertaken so as to ensure compliance for effective environmental management. The following are the areas of activity in which there are environmental risks which require particular actions, activities and responsibilities to be understood and undertaken as part of the day-to-day operation of the plant:

- Operation of the chemical plant
- Once through circulation of sea water
- Operation of boilers/turbines
- Operation of effluent disposal
- Operation of the waste segregation & storage area
- Diesel unloading and
- Maintenance of the plant drainage system

The Environment Management Cell must be empowered by all the agencies at the plant site to address pollution issues. The cell must co-ordinate with the contractors for waste minimization and identification of buyers for recycling of waste material.

The issues such as green belt development, oil spill management; health and safety will be coordinated by this nodal agency thus being solely responsible for the environmental quality.

Environmental monitoring in the plant area shall be undertaken by the cell of the company. Annual monitoring of air, water and sediment quality shall be carried out on regular basis.

- Treated wastewater, air emissions shall be sampled and tested in conformance with the permits granted by various Regulatory Authorities and all relevant records shall be maintained by the Laboratory In-charge / Ops. Dept. The same shall be made available to the HSE dept. to enable them for reporting into the Regulatory authorities.
- For the waste categories, the records related to type and quantity of waste generated, stored at site, transported / disposed as per the Authorization granted by GPCB should be maintained.

- The site clinic shall maintain the records of medical wastes generated and transported for disposal at designated site and shall communicate to the HSE dept.
- The waste management procedure shall be made available to the company and contractor staff and the HSE manager shall make them aware about individual responsibility in-line with the procedure.

Any non-compliance/violations of environmental norms noticed by the HSE cell will bring to the notice of plant head through the functional operation/unit head along with necessary documents. Plant head will have power and be responsible to take necessary corrective steps to attend the non-compliance /violations on immediate basis. The non-compliance/violation and action taken report will be reported to Directors on quarter basis.

10.8 Environmental Management Cell

A full-fledged Environment Management Cell is proposed with multidisciplinary team of professionals, technical staffs and all necessary infrastructures. This team will be also be responsible for all environment management activities including environmental monitoring, greenbelt development, ensuring good housekeeping, ensuring statutory compliance as well as creating environmentally aware work-forces for proposed project. The organizational chart of Environment Management Cell is shown in **Figure 10.1**. The said team will be responsible for:

- Monitoring and analysis of air quality, noise levels, meteorology, water quality and other environmental parameters.
- Implementation and monitoring of the pollution control and protective measures/ devices etc.
- Co-ordination of the environment related activities within the project as well as with outside agencies.
- Collection of health statistics of the workers and population of the surrounding villages.
- Green belt development.
- Monitoring the progress of implementation of the environmental management programme.
- Identifying measures to prevent or reduce the wastes itself in the factory.
- Compliance to statutory provisions, norms of State Pollution Control Board, Ministry of Environment and Forests and the conditions of the environmental clearance as well as the consents to establish and consents to operate.

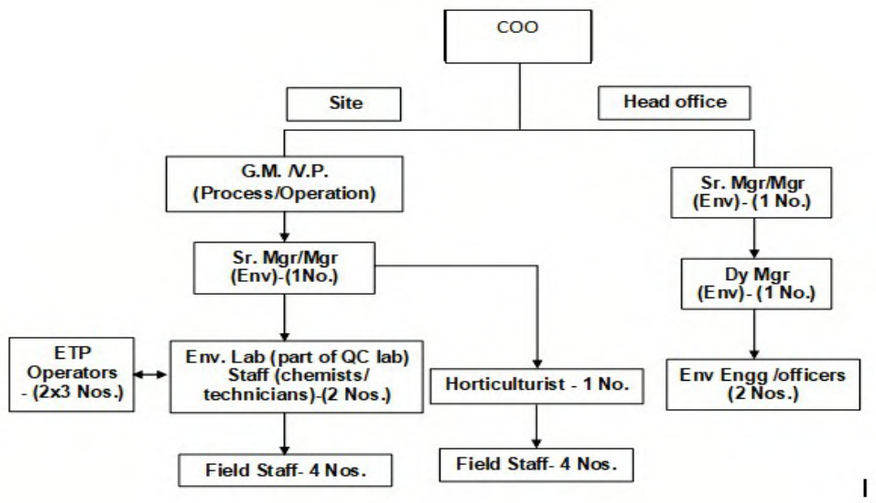


Figure 10.1: Environmental Cell for Proposed Soda Ash Project

10.9 Budget Allocation for EMP

The total capital cost / investment on environmental protection/ improvement measures is envisaged to be around Rs. 200 Cr. The budget will be used for various installations for Air Pollution (ESPs, Scrubbers, Dust extraction and suppression systems, Stacks), Water Pollution, Noise Control (Acoustic enclosures), Greenbelt Development, Occupational Health and Safety and other related activities. The annual recurring cost during the operations will be around 3% of operating cost.

Table 10.2: Budget Allocation for EMP

Aspect of Environmental Management	Cost in Crore [Rs.]	Recurring Cost (Crore /Annum) [Rs.]	Remarks
Air Pollution	**89.28**	**1.50**	Capital cost would include air pollution control devices like ESPs, Scrubbers, Dust extraction and suppression systems, Stacks, Dry Fog system, Wind screen and the recurring cost would include operation and maintenance of pollution control devices
Water Pollution	**14**	**0.12**	Capital cost would include cost of ETP, STP and recurring cost would include operation and maintenance of pollution control devices
Noise Pollution	**2.9**	**--**	Capital cost would include providing adequate sound enclosures for TG, CO- compressor, DG Set

Aspect of Environmental Management	Cost in Crore [Rs.]	Recurring Cost (Crore /Annum) [Rs.]	Remarks
Hazardous / Solid Waste Management	**1.05**	**1.0**	Capital cost would include expense for providing storage area for hazardous waste and membership charges of TSDF/CHWIF Site and recurring cost would be for solid/ hazardous waste disposal charges and Sampling & analysis charges of solid waste.
Environmental monitoring Programme	**3.4**	**0.95**	Capital cost would include expense OCEMS, Online weather station, online pH, NH3-N, Temp meter and recurring cost would include monitoring and analysis of noise level., Sample analysis charges & ambient air & fugitive emission sampling & analysis charges etc., Fresh water & wastewater sample analysis charges etc. Soil: recurring cost would be for Soil Sample analysis., Marine area environment monitoring
Green Belt	**20**	**0.5**	Capital cost would include development of green belt within the project premises and recurring cost would include maintenance charges and manpower salary etc.
Fire safety & Occupational Health & Safety	**3.4**	**0.35**	Capital cost would include cost of OHS center, PPEs, fire & safety instruments and recurring cost would include maintenance charges and training, audit & health check-up etc.
Miscellaneous	**53**	**2.56**	Miscellaneous activity such as development of rain water harvesting system, Drainage Network for rain water, Environmental laboratory, Environmental Management system, miscellaneous study, statutory application fees, audit, training cost etc. and recurring cost would include biodiversity management plan, hiring of EMC and Conservation Plan for Schedule 1 species.
CER	**18.04**	**--**	Capital cost would include cost of CER activities such as promoting renewable energy, skill development Programme, Organic farming, water conservation (like village pond deepening), forestry etc and develop infrastructure of schools, health facilities, Fishing activities, roads in nearby villages
Total (EMP + CER)	**205.07**	**6.98**	

implementation. The proponent will form short-term and long-term plans for environmental issues, which require monitoring and effective implementation.

11.10.4 Budget Allocation for EMP

- The total capital cost/investment on environmental protection/ improvement measures is envisaged to be around Rs. 200 Cr. The budget will be used for various installations for Air Pollution (ESPs, Scrubbers, Dust extraction and suppression systems, Stacks), Water Pollution, Noise Control (Acoustic enclosures), Greenbelt Development, Occupational Health and Safety and other related activities. The annual recurring cost during the operations will be around 3% of operating cost.
- CSIR NIO recommended a provision of Rs. 10.0 million to be earmarked for the biodiversity management plan to be implemented in the project area during construction phase and operation phase.
- For periodic monitoring of the marine area environment during project construction phase (considering 2 years), a provision of Rs. 5.0 million to be earmarked. For operation phase, Rs. 3.0 million per year to be kept provision for the monitoring.

11.11 Conclusion

In view of state-of-the-art technology adopted for manufacturing processes, present status of the environment established through field studies (primary data) and secondary sources, and the control/mitigation measures proposed for environmental management during construction and operation phases, it is concluded that the project will not have any significant negative impact on environment. All best available technology for process, effluent treatment, air pollution control or any other environmental pollution control will be implemented in the plant for creating better environment in the plant and nearby environment. All emissions, discharges and disposals will be in conformity with the statutory norms. Further, in view of creation of direct as well as indirect additional employment opportunities during construction and operation phase, the project would have positive impact on the economy of the area, the state, the nation and the company.

Public Hearing Minutes and Action Plan are attached in Public Hearing Section (section-1) of Parivesh Portal of Part-C

ANNEXURE R/22

GHCL Limited

10.01.2023

Dr. Pradeepkumar
Sugumar ,Scientist 'B',

IA-II (Industry-III) and
IPCC & NATCOM,Vayu
Wing, 2nd Floor, V-233
(Cabin),

Ministry of Environment, Forest &
Climate Change,Government of
India,

Indira Paryavaran
Bhavan,Jorbagh Road,

New Delhi-110003.

Subject: Response of GHCL Limited to the Complaint Letters dated 30.10.2022 and 01.11.2022 of Mr. Bharat Gangji and Ms. Dhwani Shah against the proposed Soda Ash Plant of GHCL at Bada Village, Mandvi, Gujarat.

Dear Sir,

This is in reference to your email dated 23.12.2022 stating that Mr. Bharat Gangji and Ms. Dhwani Shah (hereinafter referred as the 'Complainants'), have submitted Complaint Letters dated 30.10.2022 and 01.11.2022 to your good office objecting to the grant of Environment Clearance to the proposedSoda Ash Plant of GHCL Limited (hereinafter referred as the 'Undersigned') at Bada Village, Taluka Mandvi, Distt Kutch, Gujarat. The Undersigned was also directed by you to submit their representation/clarification regarding the issues raised in the Complaint Letters.

Accordingly, the Undersigned seeks to submit a comprehensive response on behalf of the Greenfield Chemical complex GHCL Limited to the queries/issues raised by the Complainants vide their letters dated 30.10.2022

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and 01.11.2022 addressed to your good office, clarifying that the Undersigned has ensured strict compliance with the Environment Impact Assessment Notification, 2006 , among other environment laws.

I. Background of the Project

The present project for establishment of a Soda Ash Plant at Bada Village, Taluka Mandvi in the Kutch District of Gujarat is being undertaken in pursuance of the Memorandum of Understanding signed with the Government of Gujarat during the Vibrant Gujarat Summit of 2017 for setting up a Greenfield Chemical Complex in the District of Kutch, Gujarat for increasing production of soda ash to meet the demand in the domestic and international markets. The Project envisages to establish a greenfield chemical complex to produce Light Soda Ash of 11,00,000 TPA capacity, 5,00,000 TPA of dense soda ash and 2,00,000 TPA Sodium Bicarbonate near Bada village, Mandvi Taluka in the Kutch District of Gujarat over an area of 1350 acres (about 546 ha) .

The Undersigned undertook alternative site assessment studies by CSIR-NEERI In line with provisions of EIA Notification2006 and subsequent amendments, GHCL Ltd. had applied for Terms of Reference (TOR) for the project on 28th July , 2021 and after making reply to EDS generated by MOEFCC, TOR had been granted by MOEFCC on 10th August, 2021

Accordingly, the Undersigned initiated the compliance with each condition of the Standard as well as the Specific Terms of Reference listed in the letter dated 10.08.2021. The cover letter submitted to MOEFCC and Essential Details Sought dated: 06th Aug, 2021 for seeking grant of proposed Terms of Reference mentioned about the engagement of consultants and additional studies.

The Undersigned had engaged Council for Scientific & Industrial Research – National Environmental Engineering Research Institute (CSIR-NEERI), a NABET-QCI accredited institution for undertaking the Environment Impact Assessment of its Project. Additionally, CSIR – National Institute of Oceanography was engaged for conducting a Marine Impact Assessment. The Undersigned also engaged domain experts such as Dr. Bharat Jethwa for conducting Ecological and Wildlife Conservation Study and Hydro-Geo Survey Consultants for conducting the hydrological assessment studies to

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supplement the findings in the EIA Report ofCSIR-NEERI, and also engaged domain experts such as the Zoological Survey of India for undertaking detailed study of the presence of turtle habitats and nesting at the Project site .

The comprehensive EIA Report along with the Studies conducted by domain experts was placedbefore the public during the public hearing on 17.10.2022 . The Public Hearing for the project of the Undersigned took place for eleven hours, where the concerns raised herein in the Complaint Letters, were duly addressed by the Undersigned and the Consultants. The Undersigned received 1154 written submissions from the public and has responded to each andevery submission.

Subsequently, the Minutes of the Public Hearing along with the written submissions of the public, the response of the Undersigned and the CD of the proceedings were submitted to your good office. However, the Complainant has now raised similar issues again by writing a representation dated 30.12.2022 and 1.11.2022 to your good office. The Undersigned at the outset submits that the Complainant has raised issues that have been duly addressed by the Consultants well as the Undersigned during the public hearing. Further, the Complainant has supressed certain developments such as the Judgment of the High Court of Gujarat upholding the validity of the public hearing conducted by the Undersigned, which the Undersigned will be addressing in its subsequent response to the issues raised by the Complainant in his Complaint Letters.

The Undersigned has identified the common issues highlighted in the Complaint Letters dated 30.12.2022 and 01.11.2022 and accordingly submitting a comprehensive response to each issue along with supporting documents.

II. Comprehensive Response of GHCL Ltd. to the Complaint Letters dated 30.10.2022 and 01.11.2022.

Issue I

The Complainant alleges that the Public Hearing was organised in violation of the EIA Notification

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Response of Undersigned:

The Complainant in his letters has wrongly alleged violation of the Environment Impact Assessment Notification, 2006 by the Undersigned. Subsequent to the grant of the Terms of Reference by the Ministry of Environment, Forest & Climate Change on 10.08.2021 and preparation of the EIA Report, Marine Assessment Study and Wildlife and Biodiversity Studies, the Undersigned wrote to the Gujarat Pollution Control Board (GPCB) for finalisation of the date and time of the Public Hearing. The Gujarat Pollution Control Board in consultation with the District Administration had finalised the venue and the date for the Public Hearing of the Project as 06.04.2022. However, due to the large number of letters, representations , including threats of creating public disturbance if the public hearing is organised, the hearing was postponed by the District Authorities due to unavoidable circumstances during public hearing as mentioned in Minutes of Meeting. Minutes of Public Hearing dated 06.04.2022 is enclosed herewith as **Annexure I.**

Thereafter, on 26.09.2022, the Member Secretary of the Gujarat Pollution Control Board issued the Public Notice for re-scheduling of the Public Hearing on 17.10.2022 for the Project of the Undersigned at 11am at the Project Site, Survey No. 432, Village Bada, Mandvi Taluka, District Kutch. The Notice of the public hearing was also published in Divya Bhaskar on 30.09.2022 and the Times of India on 01.10.2022 to ensure compliance with Appendix IV of the EIA Notification, 2006 which requires the Project Proponent to issue advertisement of the Public Hearing fifteen days prior to the date of the scheduled Hearing.

Subsequently, the Undersigned has submitted copy of the Draft Environment Impact Assessment Report in English and Gujarati along with the Executive Summary of the Project to the Offices of the -

a) District Collector Office, Bhuj District, Kutch

b) District Development Office, Bhuj, Distinct Kutch

c) District Industry Centre, Bhuj, District Kutch

d) Taluka Development Office, Mandvi, District Kutch

e) Regional Officer, Integrated Regional Office, Ministry of Environment,

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Forest & ClimateChange

f) Regional Office, Gujarat Pollution Control Board.

The Executive Summary of the Project was also shared with the Mantri of the twelve villages and announcement of public hearing was made through loudspeakers and banners on auto rickshaws on 15.10.2022 and 16.10.2022 by GPCB, in compliance with the requirements under the EIA Notification, 2006.

The Public Hearing was conducted on 17.10.2022, which was presided over by the Sub Divisional Magistrate and Deputy Collector, Mundra along with the Mr. T.C. Barmada Regional Officer, Gujarat Pollution Control Board who was also present along with the Undersigned, the EIA consultant , representatives from CSIR - NEERI and CSIR - NIO. Due to the large number of threats received prior to the conduct of the public hearing and having experience of earlier Public Hearing, the District Administration deemed it fit to ensure appropriate presence of a certain number of police officials for preventing any untoward incidents. A Copy of the threats received prior to the Public Hearing for cancellation of the said hearing is annexed herein as **Annexure II.**

The District Administration had ensured enough arrangements to combat any untoward incidents that may occur in view of the large number of threats received for cancellation of the said hearing. The role of the Undersigned was limited to discussion regarding the proposed project and answering the queries raised by the public.

The public hearing was continued for over eleven hours, giving sufficient time to the public to raise their queries, seek clarifications or submit grievances against the project. The Sub- Divisional Magistrate had also clarified that the public can seek further clarification through written representations or submissions from the Undersigned. The written submissions made bythe public prior to and during the public hearing are also available on the website of the Gujarat Pollution Control Board clearly establishing that all the submissions were duly considered and included in the Minutes of the Public Hearing.

That the said Public Hearing was also challenged before the Hon'ble High Court of Gujarat in Writ Petition (PIL) No. 85/2022 titled ' Bharat Gangji

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Gala and Others v. Gujarat Pollution Control Board and Others', wherein Mr. Bharat Gangi and Ms. Dhwani Shah, the present Complainants herein alongwith two other person raised the same grievance in October, 2022. The Hon'ble High Court vide its Order dated 18.10.2022 had dismissed the said Writ Petition, imposing a cost of Rs. 50,000 on the Complainants Mr. Bharat Gangji, Ms.Dhwani Shah and two others for misusing the process of law to stall the public hearing and suppressing the Amendments made to the Environment Impact Assessment Notification, 2006 with respect to the time period of giving prior notice of Public Hearing.

Hon'ble Gujarat High Court in its said order categorically made certain observations against the Petitioner No. 4 i.e. Ms Dhwani Shah, a complainant herein.

Despite the said observations of the Hon'ble High Court of Gujarat, the Complainant has approached your good office, by suppressing the said Order of the Gujarat High Court which categorically held that the public hearing on 17.10.2022 was conducted in accordance with the EIA Notification, 2006. A Copy of the Order dated 18.10.2022 is marked and annexed herein as **Annexure III.**

The undersigned has received numerous positive responses from general public as well the Sarpanchs, apprising the setting up of the Project by the Undersigned and highlighted therein numerous advantages to the area by such Project specially improvement in employment, economic and industrial activities which will certainly uplift the social & economic level of the residents of so many villages. The undersigned has received at least 390 no. of such letters from concern stakeholders, copies of which are annexed herein as **Annexure IV.**

Issue II

The Complainant alleges that the Environment Impact Assessment Report, the Terrestrial Impact Assessment Report and the Marine Impact Assessment Report has failed to identify the presence of scheduled species near the proposed site of the project, especially presence of Turtles and Dolphins on the Bada Coast.

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Response of the Undersigned:

The Standard TOR granted by MoEF&CC to the Undersigned on 10.08.2021 required the Undersigned to submit a detailed description of the flora and fauna existing in the Study Area and preparation of Wildlife Conservation Plan only if there is presence of any Schedule I species in the Study Area. Environment Impact Assessment Report by CSIR NEERI and the Ecological and Wildlife Conservation Plan prepared by Dr. Bharat Jethwa clearly states that there is no Protected Area (National Park, Wildlife Sanctuary) within ten kms of the Project site of the Undersigned. The Complainant has also misrepresented the distance of the Ghorad Bird Sanctuary from the Project of the Undersigned as 25 km when in fact it is 50 km away as per the EIA Report and the Wildlife Conservation Study and will not impact the Great Indian Bustard.

The Wildlife Conservation Study/Plan has listed the thirteen species (twelve species of animalsand one species of plant) that are Schedule I species as per the Wildlife Protection Act, 1972. Out of the twelve species , the green sea turtle is classified as Endangered and the Olive Ridley sea turtle is classified as vulnerable. Further, the Ecological and Wildlife Conservation Study also records that the coast near the project site of the Undersigned may not be suitable for sea turtle nesting due to narrow supra tidal region, steep slope, dense vegetation and presence of predators such as jackal. ZSI report also mentions We did not encounter any sea turtle and fresh/old nests or crawl marks of turtles on the beach.

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Table-6.1: Schedule-I fauna and Critically Endangered plant species reported from the study area.

No.	Taxa	Name of Species		IWPA Status	IUCN Status
		Common Name	Scientific Name		
1	Reptile	Flap shell Turtle	*Lissemus punctatea*	Sch-I	LC
2	Reptile	Green Seaturtle	*Chelonia mydas*	Sch-I	EN
3	Reptile	Indian monitor lizard	*Varanus bengalensis*	Sch-I	LC
4	Reptile	Olive Ridley Seaturtle	*Lepidochelys olivacea*	Sch-I	VU
5	Bird	Black shoulder kite	*Elanus caeruleus*	Sch-I	LC
6	Bird	Eurasian Spoonbill	*Platalea leucorodia*	Sch-I	LC
7	Bird	Indian Peafowl	*Pavo cristatus*	Sch-I	LC
8	Bird	Marsh Harrier	*Circus aeruginosus*	Sch-I	LC
9	Bird	Oriental Honey Buzzard	*Pernis ptilorhyncus*	Sch-I	LC
10	Bird	Shikra	*Accipiter badius*	Sch-I	LC
11	Bird	Short-toed Snake Eagle	*Circaetus gallicus*	Sch-I	LC
12	Mammal	Chinkara	*Gazella bennettii*	Sch-I	LC
13	Plant	Gugal	*Commiphora wightii*	--	CR

Further, specifically for sea turtles, the Undersigned had engaged the Zoological Survey of India to carry out a detailed assessment of the presence of sea turtles at the project site and the impact of the Project. The Study also relies upon the observations of Wesley Sundderaj and CS Bhaskar to record that there is Sporadic nesting takes place throughout the year along Gujarat coast. During the Study period, not a single turtle nesting, at the site of the proposed Project of the Undersigned, was recorded by the Zoological Survey of India.

The Zoological Survey Report in Section 5.1 at Page No. 10 clarifies that - "*the beach between Layja Nana – Mandvi Palace reported high threatened value and gained nesting site rank 1.0 and therefore it secured top conservation rank and given high conservation priority (Sunderrajet al 2013). The findings of Sunderraj et a. 2013 is mentioned and it is also mentioned "due to data deficiency and discrepancy, Sunderraj et al (2013) could not ascertain on species specific nesting for Kachchh coast.*

Moreover both the site Bambhdai to Bada and Bada to Layja Nana have been reported as Medium Site for conservation priority. (Evaluation of Sea Turtle, Gujarat Ecology Commission Govt. of Gujarat)."

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The Undersigned has engaged another expert for conducting study of sea turtles nesting in furtherance of the suggestion in the Ecological and Wildlife Conservation Plan and take appropriate ecological measures, as recommended.

Further, with respect to sighting of Dolphins, the EIA Report clarifies that the same have been sighted offshore and not in the vicinity of the proposed project of the Undersigned. However, the Undersigned has prepared a comprehensive Conservation Plan for Schedule I species , including the mitigation measures that will be adopted by the Undersigned to reduce the impact of the project on the wildlife recorded in the said area.

It is pertinent to highlight that Proof No-1 in complaint letter dated 01.11.2022 does not provide proof of the presence of Caracal, Hyena etc. as it does not mention the names of the species northe location in the said letter. Further, the allegations of presence of Ratel (Ghorkhodiyu) have not been substantiated by any credible proof in the Complaint letters

Proof No. 7 annexed in complaint letter dated 01.11.2022 stating the presence of porcupines is a geographical location outside the project boundary of the Undersigned. The location mentionedin the photograph lies two km beyond the South-East boundary of the Project of the Undersigned.

None of the said species mentioned in the Complaint Letters were found during the assessment of wildlife in the study period and area in the Ecological and Wildlife Conservation Plan. Even the representation does not provide proofs of species that are not mentioned in the Wildlife Conservation Plan. However, it must be added that the Undersigned Project proponent would undertake every possible measure to mitigate any impact on wildlife. In fact, the Undersigned has decided that it will be allocating Rs. 125 lakhs for implementation of mitigation and conservation measures for conservation of wildlife residing in the vicinity of the project site. Thus, the concerns of the Complainant are duly addressed in the Environment Impact Assessment Report and the Studies undertaken by the Zoological Survey of India and the Ecological and Wildlife Conservation Plan by Dr. Bharat Jethwa. It is pertinent to note that the Undersigned had written to the Principal Chief Conservator of Forest (PCCF) & Chief Wildlife Warden, Gujarat on 09.11.2022 , seeking their approval for the Conservation Plan prepared for

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Schedule I species by Dr. Bharat Jethwa. The PCCF has duly accorded his acknowledgement for the same on 19.11.2022.

Table-6.3: Proposed financial allocation for mitigation and conservation measures.

S. No	Activity	Implemen -ting Agency	Duration Years	Rate/Year (Lakh)	Total Amount (Lakh)
A	Implementation Activities				
1	Carryout Tree plantation in the villages, schools roadsides etc. areas in study area.	GHCL	10 years	5.0	50.0
2	Carryout plantation of *Commiphora wightii* in RF areas and maintenance (to be paid by GHCL)	KWFD	5 yeas	2.0	10.0
3	Contribution to Forest department for Sea Turtle Conservation Activities (to be paid by GHCL)	KWFD	10 years	2.0	20.0
				Subtotal	80.0
B	Monitoring & Compliances Activities				
6	Ecological & Biodiversity monitoring by third party once every 5 years for 10 years after commencement of project	GHCL	At every 5 year for 10 years	7.5	15.0
7	Monitoring and administrative activity (to be paid by GHCL) by Kutch West Forest Division	KWFD	First year		10.0
8	Documentation and preparation of Annual compliance report. 10 years	GHCL	Annual	2.0	20.0
				Subtotal	45
			Total (A=B) Amount in Lakh		125.0

Issue III

The Complainant in his letter dated 01.11.2022 has alleged submission of misleading information on the baseline data, presence of sand dunes, distance of the Project from the Arabian Sea by the Undersigned with respect to its Application and Form I

Response of the Undersigned:

a) Baseline data

The Complainant has wrongly suggested that the baseline data submitted is more than three years old . At the time of submission of the data in November 2021 to the Gujarat Pollution Control Board for conducting public hearing, the collection period was valid. However, due to unavoidable circumstances & numerous threats received from the public for cancellation of public hearing, the Public Hearing initially scheduled for 06.04.2022 was postponed and subsequently conducted on 17.10.2022. This does not render the baseline data as

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invalid,as it was submitted within the timelines prescribed. The Public Hearing was conducted within validity of TOR which is in compliance to MOEFCC O.M dtd. 8th June 2022.

b) According to some maps provided in the EIA report, there are sand dunes present along the Southern boundary of the plant. Any development in this close proximity of the sand dunes will hamper them.

The CRZ Map prepared by IRS Anna University shows presence of sand dunes as CRZ IA outside the boundary of the project site of the Undersigned. The Undersigned will be maintaining the regulated distances mentioned as per the CRZ map to ensure minimum impact on the sand dunes located outside the project boundary. Further, the Undersigned has carried out a detailed assessment of the Project on the sand dunes in the EIA Report and the Marine Impact Assessment Report. To ensure preservation of sand dunes as per the Marine Impact Assessment Report, pipelines will be established through tunnelling to ensure avoidance of any disturbance to sand dunes

Accordingly, the Undersigned will involve geotechnical and tunnelling experts for establishing pipelines. Further, the treated effluent release from the Plant of the Undersigned will ensure strict adherence to the standards specified by CPCB for soda ash industry thus the release of effluent will not impact the sand dunes in the vicinity of the project. There is no activity proposed on top of the sand dunes.

c) As per the .kml file downloaded by us from the Ministry's website as on the date of drafting this letter, the boundary of the project is less than 300 meters away from the sea.

The distance is varying as the project boundary is irregular in shape. However details is submitted as per final EIA submission. Please note that the regulated CRZ distance will be maintained.

d) The project boundary runs along Vengadi Nadi along the western side. There is no distance maintained from the river.

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In Form I, the Undersigned has mentioned that the Vengadi Nadi is at a distance of 0.5 km North West and further to the seaside it runs near to the plant boundary. The Hydrological Assessment Studies also mention that the Project site is located 50m to 300m East of the Vengadi river. This explains that towards the sea side, the distance narrows down and it runs parallel to the project boundary. It is pertinent to note that the Undersigned will not release even treated wastewater in the Vengadi River. Along the boundary of the project , an effective Green belt will be developed. Green Belt area willbe 33% of the total project area. Further, the regulated distance as per CRZ map from River Vengadi will be maintained.

e) **Presence of streams within the plant area has not been addressed.**

The Complainant has alleged that the Undersigned will be undertaking diversion of seasonal streams which could impact the water availability in a semi-arid region such as Kutch. The Hydrological Assessment Studies clarifies that there is one stream that is originating from outside the plant area but would pass through the northern corner of theplant. The said stream carries limited surface runoff water during rainfall. During and post the construction of the project of the Undersigned, if the surface runoff is generatedin the said stream, it is proposed that the water will be collected in a drain outside the plant area and released in the Vengadi River. Therefore, there will be no impact on the seasonal streams that are generated outside the plant area of the Undersigned.

f) **The Complainant states that the presence of alternative site of Modhwa village has not been taken into consideration for establishment of the Project since the Port is closer to Modhwa Village compared to Bada Village.**

The Undersigned had undertaken examination of five alternatives/alternate sites during 2017-2018. Modhwa village was not considered appropriate due to the area being a nesting ground for flamingos in winter. Further, near Modhwa two Mega power plants are operating and their seawater intake channels and outfall points

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were in close proximity. The village of Bada was selected as the impact on ecology, biodiversity and wildlife was least compared to the rest of the sites available forthe establishment of the soda ash plant.

g) **Pollution from the project will impact the Bada Coast**

CSIR -NIO have undertaken impact assessment studies of the proposed project of the Undersigned through field observations, drogue study and simulation modelling exercise.The results of the study show that there will not be any significant impact due to treated effluent release as adequate dispersion is available in the discharge point and the released effluent achieves ambient conditions within 300 m distance. During operation phase of the proposed plant the standards for discharge of effluent and emissions specified by CPCB will be complied with and also taken in to design considerations.

Issue IV

The Complainant has alleged that the Environment Impact Assessment Report, Marine Impact Assessment Report, Zoological Survey of India and Hydrological Assessment Studies have not been carried out by Accredited Consultants.

Response of the Undersigned:

The Complainant in his Letter dated 30.10.2022 has questioned the accreditation of the following Consultants for conducting the Environment Impact Assessment and the accompanying Studiesannexed in the Assessment Report –

a) **CSIR – National Institute of Oceanography (NIO) does not have a NABET Accreditation for undertaking the Marine Environment Impact Assessment.**

CSIR-National Institute of Oceanography ('NIO') has conducted the Marine EIA for assessing the impacts of the project on marine ecology. It is pertinent to mention that the Minutes of the 73rd Accreditation Committee Meeting of

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NABET and QCI dated 20.03.2012 record that NABET will identify specialised functional areas, such as marine ecology, which are relevant for specific EIAs and would notify it on the QCI website within 6 months. Thereafter, NABET conveyed the same to NIO vide letter dated 21.05.2012. In the interim, it was stated that NIO may allow its scientists to take up the marine component of EIAs in association with an accredited EIA consultant organisation. Thus, the said latest communication dated 21.05.2012 permitted NIO to take up marine assessments even though it has not yet formally been accredited by NABET, as a functional area expert. In furtherance of the same, the task has been carried outby NIO under the aegis of CSIR-NEERI, which is an accredited government agency, without compromising on the quality or any parameter of the EIA. A Copy of the letter dated 21.05.2012 of NABET permitting NIO to undertake marine impact assessment is marked herein as **Annexure V.**

b) CSIR NEERI has undertaken terrestrial impacts of the Project. As per the NABET Accreditation, NEERI does not have any accreditation for assessing the impacts of a Soda Ash Plant

The draft EIA reports have been prepared by the Council of Scientific and Industrial Research - National Environment Engineering (CSIR-NEERI) Institute, Nagpur and CSIR National Institute of Oceanography (CSIR-NIO), Mumbai, both of which are of national repute . Their names were mentioned in the Technical Guidance Manual of Soda Ash Industry prepared for MoEF&CC.

CSIR-NEERI, Nagpur was requested to conduct a terrestrial EIA/EMP on 20.11.2017 for the proposed GHCL soda ash Plant in the Taluka Mandvi of the Kutch District of Gujarat. There was no NABET accredited consultant for the soda ash sector at the time the Undersigned had contacted CSIR-NEERI for undertaking the environment assessment. CSIR-NEERI was accredited for chlor alkali and there was no accreditation for soda ash as of August 2017. It is pertinent to note that soda ash accounts for 50-60% of the chlor alkali industry. Specific accreditation for soda ash was introduced by NABET later in July 2019.

A similar dispute related to accreditation has been adjudicated by the Hon'ble

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NGT in the case of Akhil Bhartiya Jeev Raksha v. Union of India & Others (2018 SCC OnLine NGT 2030), wherein the challenge to the absence of accreditation of the EIA consultant for nuclear sectors was rejected by the Hon'ble Tribunal. Since at the time of the engagement of the Consultant, there were no parameters/requirements on the website of NABET for nuclear sectors, the said EIA Report was held to be valid.

Similarly, in the present case, in the absence of specific accreditation for soda ash, no objections can be raised against the accreditation of CSIR-NEERI for conducting environment impact assessment for the Project of the Undersigned. This is apart from the fact that CSIR – NEERI is a highly acclaimed government institution for such studies and often relied upon by the Hon'ble Supreme Court on numerous cases for technical opinions.Union Ministry of Environment, Forest and Climate Change took secondary source of data from institutes like NIO and NEERI for preparation of its Technical EIA Guidance Manual for the Soda Ash Industry, based on their experience of conducting EIA

It is pertinent to mention, that the current Project Proponent seems to be targeted by the Complainant as many soda ash industries have been granted environmental clearance and whose EIA studies have done by institutions which are not specifically accredited for soda ash. Without prejudice these include, Tata Chemicals, Nirma, RSPL among others but the Complainant seems to be targeting only the Undersigned.

It is clear that CSIR-NEERI has, over the years, conducted EIA studies for the Soda Ash Industry which have been accepted by the concerned authorities before successfully granting an Environmental Clearance. In keeping with CSIR-NEERI's recognised expertise, they were engaged to carry out the EIA study for GHCL's proposed project. Such appointment was duly communicated with MoEFCC on 23rd Nov 2017 and also while securing the TOR approval for the instant project when theTOR application was submitted on 28th July, 2021. The cover letter of the Application clearly specified that GHCL had appointed CSIR-NEERI and CSIR-NIO for carrying out terrestrial andmarine environment impact assessment, respectively.

c) Objection to Hydro-Geosurvey Consultants Pvt. Ltd. for conducting the Comprehensive Hydrological Assessment Studies and designing of rain water harvesting program

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The Hydrogeological assessment studies were mentioned under additional Study in EIA report prepared by CSIR-NEERI and the complete report is submitted as Annexure IV of the said EIAreport.

Hydro-Geosurvey Consultants Pvt. Ltd. has been accredited for conducting Groundwater studies.The SCS Enviro Services Pvt. Ltd. is another laboratory which is NABL accredited and which further prepared the Groundwater report. The Certificate of Accreditation has been clearly reflected in the EIA Report, as submitted.

The said Consultants were engaged given their specialisation in groundwater assessment to ensure that the establishment of the Project of the Undersigned near Bada Village will not adversely impact the availability of water at the site or in the vicinity of the Project, especially on groundwater. It is surprising that the Complainant has raised objections to the hydrological assessment studies, which have been carried out by the Undersigned as an additional measure, apart from the assessment that had been undertaken by CSIR-NEERI in their Impact AssessmentReport, to capture all possible impact of the project of the Undersigned on the ecology of the area.

d) Mr. Bharat Jethwa does not have accreditation for preparing EIA Report for projects under Item 4(e) of the Schedule of the Environment Impact Assessment Notification, 2006;

Dr. Bharat Jethwa, is an accredited category A - Functional Area Expert for Ecology & Biodiversity with Bhagwati Enviro Limited since 2013 and was engaged as a functional expert to carry out an additional study for the ecology and the wildlife prevalent at the site of the proposed project of the Undersigned . The Study by Dr. Bharat Jethwa was meant to supplement the Environment Impact Assessment Report prepared by CSIR- NEERI, which also includes portions on the impact of the project on wildlife and ecology of the area.

Bhagawati Enviro Limited is an accredited organisation and the latest NABET Certificate extending its accreditation till 19.12.2021 is marked and annexed herein as **Annexure VI.** Thus, the Complainant has wrongly suggested that Dr. Bharat Jethwa has carried out the preparation of EIA Report without valid accreditation . It is pertinent to note that the Undersigned

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had written to the Principal Chief Conservator of Forest (PCCF) & Chief Wildlife Warden, Gujarat on 09.11.2022 , seeking their approval for the Conservation Plan prepared for Schedule I species by Dr. Bharat Jethwa. The PCCF has duly accorded his acknowledgment for the same on 19.11.2022. A Copy of the Letter dated 09.11.2022 with the stamp of the PCCF is marked and annexed hereinas **Annexure VII.**

e) **Zoological Survey of India has undertaken Study on Status Survey and Conservation Plan for Sea Turtles along Mandvi Taluka of Bhuj, Gujarat . NABET accreditation of ZSI has not been submitted.**

The Zoological Survey of India (ZSI) is a nationally reputed Organisation under the aegis of the MoEF&CC, Government of India. They had been engaged by the Undersigned in 2018 to carry out a Status Survey and Conservation Plan for Sea Turtles to adjudge the ecological significanceof the area for the proposed project of soda ash plant. It may also be noted that the above Study through ZSI has been mentioned as an additional study in the TOR submission to MoEF&CC vide application dated 28th July 2021.

The Undersigned could have engaged the services of only CSIR-NEERI for completing the Impact Assessment of its Project. However, specialised organisation and functional experts of national and international repute were engaged to ensure that all possible impacts of the project on the ecology, biodiversity and wildlife of the area can be captured before proceeding with the establishment of the Project. However, the Complainant has been questioning the veracity of all the Studies undertaken to supplement the Impact Assessment undertaken by CSIR-NEERI without any substantial basis by raising frivolous grounds of lack of accreditation. It is pertinentto note that there is no restriction on submission of additional studies apart from Impact Assessment Report prepared by accredited organisations, especially if the Studies have been prepared by organisations considered to be functional and domain experts at the National and international level. It is pertinent to add that there have been no comment on the merit of the reports which clearly hints that the Complaints's motive has got nothing to do with the substantial question of environment.

Issue V:

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The Complainant in its Complaint letter dated 01.11.2022 has challenged the findings in the EIA Report on numerous grounds to state that it fails to provide authentic information.

Response of the Undersigned:

a) **Presence of Lalira Lake in the middle of the Proposed Project Site**

The lake mentioned 'Lalira' is positioned outside the project boundary and does not fall within the project site. However it is recommended in Hydrogeological assessment report that GHCL proposes to take up a rainwater harvesting program as part of its CSR activities by deepening the existing village ponds to store surplus surface runoff.

b) **The Report shows misleading concentration levels of SO2 and NOx in the area**

The National Ambient Air Quality Standards (2009) states that ambient concentration of SO2 and NOx shall be below 80 µg/m3. The concentration of SO2 and NOX reported in the EIA report are well below the said standard. Even at the operation stage of the Project, there would be only a marginal increase in ground level concentration up to 25 µg/m3 which is far below than the 80 ug/m3, as prescribed in the standard. Recommended Stack height of 130 m for efficient dispersion of stack emissions will be maintained by the Undersigned.

The Undersigned has also submitted an Environment Management Plan where a budget of approximately Rupees Two Hundred Crores has been earmarked for adopting and implementingmeasures to ensure strict compliance with the standards of SO2 and NOx among other emissions standards during the establishment and operational stage of the Plant.

c) **Use of Ammonia in the production process - potential leak of Ammonia during transportation may severely impact the environment. Further, the effluent discharged would also contain high concentration of Ammonia. The local population in the village would be impacted due to the presence of such harmful chemicals .**

Ammonia consumption in the process is as per the stoichiometric chemical reaction and as a high value chemical, it cannot be used more than required

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quantities. It will be stored in specially designed tanks where sensors for rapid detection will be provided as per normal industrial practices to address ammonia leaks. Also, fire hydrants will be provided as special precautions.

Ammonia will be stored in line with the requirements of the Hazardous Waste Management Rules, 2016. Water curtain and spray system shall also be provided by the Undersigned. An Automatic Ammonia Detection System will also be installed.

Further, only treated effluent will be discharged at the recommended effluent discharge locationas mentioned in the EIA report. The results of the study show that there will not be any significant impact due to treated effluent release as adequate dispersion is available in the discharge point and the released effluent achieves ambient conditions within 300 m distance. The RTI information procured by the Complainant about Modhwa and Tragdi and Bhadreshwar has no relation with this project activity. It is also pertinent to note that the concentration of ammonia

in the proposed effluent is much less than the effluent discharge standard set by CPCB, i.e., 50 mg/L.

As per the risk assessment studies carried out as part of EIA, the level of risk is found to be acceptable as per the international standards. The F/N curves for storage tanks are also within acceptable region. The Disaster Management Plan is also detailed to mitigate and minimize the risk. The Undersigned shall also implement Health Safety & Environment (HSE) awareness/information programs for the nearby communities in collaboration with the local administration.

d) There will be an increase in the level of PM 10 and PM 2.5 due to coal transportation

Coal will be transported by using tarpaulin covers to prevent particulate emission. Further, the emissions from the proposed captive cogeneration power plant will be kept within the standards specified by CPCB with the selection of applicable air pollution control measures.

e) Presence of Mangroves not recorded in the EIA Report.

There is no project activity proposed in the indicated area as mangroves in the photograph (proofno 5). They shall be maintained as such and utilised only in

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accordance with law.

f) **There will be increase in poaching activity due to increased presence of migrantLaborers**

Although this is a socially and legally an unacceptable allegation or presumption, the Undersigned will be undertaking specific awareness programs among the labourers both from within or other states and a proper security system shall be implemented to avoid any such events.

g) **Kachchh district experiences frequent earthquakes. It is a Seismic Zone 5 area (highprobability of earthquake).**

The Undersigned will be designing the structures as per IS code for Earthquake Resistant structures.

h) **The EIA report underplays the impact on migratory and local birds in the area.**

Apart from the EIA Report, a detailed Ecological and Wildlife Conservation Study has also been included as one of the Annexures in the EIA Report, which records in detail the studies undertaken for recording the local and migratory birds in the area. The Wildlife Conservation Study also does not record any significant impact on the bird species of the area.

It is pertinent to note that there is a Soda Ash project operating since a long time in Porbandar and it is located near the 'Porbandar Bird Sanctuary' and Chhaya Rann Wetland. Thousands ofmigratory birds and Flamingos feed and roost in these wetlands without any disturbance and impacts.

The annual festival known as the "Pink Festival" is organized in Porbandar by a local NGO tocelebrate the onset of the breeding season of flamingos in this area. This area is located near theboundary of an operational Soda Ash project in Porbandar. However, the operation of the soda ash plant has not impacted the birds or their habitat.

i) **The EIA report shows the coastal area as Stoney when it comes to impact on local fishermen but shows the area as soft-muddy-land when it comes to release of effluent from the proposed factory -**

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This has been done with malafide intention as effluents do more harm in stony areas compared to soft-muddy area

The impact of effluent release has been done for the entire study area and the Study has considered the bathymetry for Flow simulation model. The seabed shows very irregular features and gives an impression of the presence of hard strata. The effluent will be discharged to the sub tidal area which has uneven bottom topography associated with rocky zones as resulted from bathymetry study. The sediment texture in the mentioned inter tidal area is sandy (98%). The sub tidal sediment has largely varied grain size or texture and mostly dominated with silt content. Details of sediment texture for sub tidal and inter tidal area are provided in EIA report. However, the treated effluent discharged locations achieves adequate dispersion and dilution.

j) **Project mentions that the factory will require a significant amount of fresh-water which will be obtained from ground-water. As mitigation efforts, the report asks for rain-water harvesting. However, Kachchh is a drought prone area and even when it rains the total amount of rain-fall is small. Hence, rainwater harvesting will not provide enough water to compensate for uptake by the factory**

The project will not use any ground water for its fresh water requirement. It is proposed to use seawater RO system for project requirement. There is no water withdrawal from the mentioned lake 'lalira' and groundwater. The said lake is outside the project boundary as mentioned in pointno. 7 above.

GHCL proposes to take up rainwater harvesting as part of its CSR activities by deepening existing village ponds to store surplus runoff from its catchment area and to recharge the groundwater basin which will dilute salinity and raise the water level thereby also resisting sea water ingress.

k) **The buffer zone shown in the EIA report includes 1840 hectares of reserve forest which hosts numerous wild-life, a large number of them include endangered species. The project will increase noise pollution because of the use of machinery, population and traffic in the area. This will result in either migration or destruction of wildlife in the reserved forest in nearby villages.**

There is no project activity planned over reserve forest area. Forest area in the

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Head Office : GHCL House, B- 38, Institutional Area, Sector - 1, Noida, Uttar Pradesh - 201301, India. Ph. : +91-120-2535335, 3358000, Fax : +91-120-2535209

10 km study area is only 4.15 % (1779 Ha.). Further, noise studies by using FHWA model reported that 70 db(A) and 66 dB(A) noise levels were found at 10 m and 20 m from the noise generating sources. Thus, any adverse impact outside the plant premises is not envisaged. A robust peripheral Green belt has also been proposed to attenuate noise levels, among other mitigation measures as delineated in the Environment Impact Assessment Report.

l) The ecology study in the report is done without consulting local environmental or wildlife experts

The Complainant had wrongly alleged that local environmental and wildlife experts have not been consulted. During the Ecology and Wildlife Conservation study, a series of consultations were made with both technical and non-technical stakeholders to get better picture on the project area/core area and buffer zone habitats. In order to know more about the seasonal presence of several faunal species and their movement, study team informally consulted and discussed with local naturalists and local people, from the villages, herders and farmers who inhabit close to the proposed project area.

m) Region around Bada and in the buffer zone contains a very pristine and clean environment. Such an area has a large potential to be developed as a tourist destination and should not be allowed pollution.

The Undersigned will ensure that the local ecology and biodiversity in Bada Village is not adversely impact by the Project of the Undersigned. It is for this reason that the Undersigned has earmarked a sum of Rs. 200 crores for implementing environmental mitigation measures along with Rs. 125 lakhs specifically for implementing wildlife conservation plan.

n) Company has only acquired 600 acres out of 1300 acres of land for the proposed project. Until the company acquires sufficient land, environmental hearing should not be done.

The Undersigned is in the process of acquiring/buying the land in accordance with law and at the moment the Industries Commissioner has granted in-principle approval for allotment of the remaining area of the land required for the project of the Undersigned. It is pertinent to note that the procedure for Environment Impact Assessment is under a separate legislation and the procedure of acquiring/buying of land is under a different legislation. Further,

GHCL LIMITED

Works : Sutrapada, Dist. Gir-Somnath, Gujarat - 362275, India. Tel. +91-02876-263401-03, 263551-56 Fax : +91-02876-263480-83
CIN : L24100GJ1983PLC006513, E-mail : ghclinfo@ghcl.co.in , Website : www.ghcl.co.in

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Undersigned has applied for diversion of 0.9689 ha of unclassed forest land and the same is pending appraisal before the requisite competent authority.

o) **The factory will release a large amount of greenhouse-gas. World-wide greenhouse gasses are causing global warming and climate change. Kachchh is one of those vulnerable regions of the globe that will have a large negative impact of global warming.**

It is submitted that the best available technology considering economic feasibility will be adopted for the project to mitigate Green House gases and reduce temperatures. It is reiterated that a sum of Rs. 200 crores has been earmarked for implementing the Environment Management Plan. Further, the Undersigned will ensure strict compliance with the emission standards and periodic reporting of the same to the Gujarat Pollution Control Board, as required by law.

p) **EIA Annexure Part 3 mentions the area is having arid and barren lands and groundwater is too saline to do agriculture. This is not factually correct information. Bada village has several irrigated horticulture farms and huge harvest of fresh-dates, mangoes, guava, pomegranate, sapodilla, java plum is taken every year. Under such circumstances, cost-benefit analysis will not favour setting up a factory in the eco- sensitive zone.**

The complainant is mixing information under different segments of the EIA Report . The EIA Report has comprehensively recorded the presence of horticulture farms around the project site of the Undersigned. However, the presence of Horticulture farms does not categorise the area as an Eco-Sensitive Zone. To facilitate agricultural activities, the Undersigned has committed three crores for promotion of environment friendly farming activities and development of nature basedsolutions for enhancing productivity of farmers. It also covers capacity building measures on farming techniques, provision of high-quality seeds/manure, efficient irrigation solutions, among other activities.

In view of the above mentioned responses, it may be concluded that the Undersigned has ensured strict compliance with the Environment Impact Assessment Notification, 2006 and has gone a step further by engaging nationally reputed organisations for conducting detailed studies on ecological,

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Gmail

RAJESH KUMAR <rajeshrohilla00@gmail.com>

Fwd: Urgent-Serious violation by GHCL proposed greenfield chemical complex at Village Bada, taluka Mandvi, District Kutch, Gujarat

2 messages

Dr. Ramesh M <ramesh.motipalli@nic.in> Mon, Oct 31, 2022 at 8:46 AM
To: BHAWANA KAPKOTI NEGI <bhawana.knegi@gov.in>
Cc: rajeshrohilla00 <rajeshrohilla00@gmail.com>

with regards,

Dr. M. Ramesh,
Scientist 'E' & MS, EAC (Industry-III),
MoEF&CC,
A-233, IPB, Jorbagh,
New Delhi-110003.
Tel. 011-20819249

From: "bharat gala127" <bharat.gala127@gmail.com>
To: "Bhupender Yadav" <mefcc@gov.in>, "bhogendra.prasad" <bhogendra.prasad@gov.in>, "Dr. Ramesh M" <ramesh.motipalli@nic.in>, "Dr Pradeepkumar Sugumar" <pradeep.ks22@gov.in>, "Ashwini Kumar Choubey" <mos.akc@gov.in>, "Ms Leena Nandan" <secy-moef@nic.in>, "BHAWANA KAPKOTI NEGI" <bhawana.knegi@gov.in>, "ab pandit" <ab.pandit@ictmumbai.edu.in>, ashoksaxena1159@gmail.com, "snupadhyay che" <snupadhyay.che@iitbhu.ac.in>, dwivedisuneet@rediffmail.com, suneetdwivedi@gmail.com, santoshgo@gmail.com, "pkmishra che" <pkmishra.che@itbhu.ac.in>, drpkm18@gmail.com, vmoholkar@iitg.ac.in, spcppri@gmail.com, tmkarne@gmail.com, "Dinabandhu Gouda" <dinabandhu.cpcb@nic.in>, "Sanjay Bist" <sanjay.bist@imd.gov.in>, "Rakesh kushwaha" <kushwaha-cgwb@gov.in>, "Dr. Harendra Kharkwal" <h.kharkwal@nic.in>, "Dr. NOBI E. P" <nobi.ep@nic.in>, "TUNTUN KUMAR SINGH" <tk.singh@gov.in>, spiderconch@gmail.com, sukumaranjeyakrishnan@gmail.com, negims84@hotmail.com, "sham wagh" <sham.wagh@gmail.com>, kharemukesh@yahoo.co.in, pachauri1945@gmail.com, drvkjain@hotmail.com, "hota manoranjan" <hota.manoranjan@gmail.com>, "jeepkm cpcb" <jeepkm.cpcb@nic.in>, "R P S VERMA" <rpsverma-cwc@nic.in>, "Coastal Management Directorate, CWC, New Delhi" <cedte@nic.in>, ramana2865@gmail.com, "Nirmalendu Kumar" <nirmalendu.soi@gov.in>, "Dr. Neeraj Sharma" <neeraj.crri@nic.in>, dhwanins92@gmail.com
Sent: Sunday, October 30, 2022 4:51:39 PM
Subject: Urgent-Serious violation by GHCL proposed greenfield chemical complex at Village Bada, taluka Mandvi, District Kutch, Gujarat

Respected Sirs and Ma'am,
Greetings of the day,

We are writing this email to bring to your urgent **attention** the various **violations that have taken place** with regards to the **proposed greenfield chemical complex** at Bada Village, taluka Mandvi, District Kutch, Gujarat.

We request you to kindly look into the matter and take necessary action immediately. We request you to kindly grant us a hearing to be able to make a presentation pertaining to the same before you.

We request you to kindly acknowledge this email.

Thank you.
Regards,
Bharat Gala
Contact : +91 799 061 6557

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Dr. Ramesh M <ramesh.motipalli@nic.in> Mon, Oct 31, 2022 at 8:46 AM
To: BHAWANA KAPKOTI NEGI <bhawana.knegi@gov.in>
Cc: rajeshrohilla00 <rajeshrohilla00@gmail.com>

with regards,

Dr. M. Ramesh,
Scientist 'E' & MS, EAC (Industry-III),
MoEF&CC,
A-233, IPB, Jorbagh,
New Delhi-110003.
Tel. 011-20819249

From: dhwanins92@gmail.com
To: "Bhupender Yadav" <mefcc@gov.in>, "bhogendra.prasad" <bhogendra.prasad@gov.in>, "Dr. Ramesh M" <ramesh.motipalli@nic.in>, "Dr Pradeepkumar Sugumar" <pradeep.ks22@gov.in>, "Ashwini Kumar Choubey" <mos.akc@gov.in>, "Ms Leena Nandan" <secy-moef@nic.in>, "BHAWANA KAPKOTI NEGI" <bhawana.knegi@gov.in>, "ab pandit" <ab.pandit@ictmumbai.edu.in>, ashoksaxena1159@gmail.com, "snupadhyay che" <snupadhyay.che@iitbhu.ac.in>, dwivedisuneet@rediffmail.com, suneetdwivedi@gmail.com, santoshgo@gmail.com, "pkmishra che" <pkmishra.che@itbhu.ac.in>, drpkm18@gmail.com, vmoholkar@iitg.ac.in, spcppri@gmail.com, tmkarne@gmail.com, "Dinabandhu Gouda" <dinabandhu.cpcb@nic.in>, "Sanjay Bist" <sanjay.bist@imd.gov.in>, "Rakesh kushwaha" <kushwaha-cgwb@gov.in>, "Dr. Harendra Kharkwal" <h.kharkwal@nic.in>, "Dr. NOBI E. P" <nobi.ep@nic.in>, "TUNTUN KUMAR SINGH" <tk.singh@gov.in>, spiderconch@gmail.com, sukumaranjeyakrishnan@gmail.com, negims84@hotmail.com, "sham wagh" <sham.wagh@gmail.com>, kharemukesh@yahoo.co.in, pachauri1945@gmail.com, drvkjain@hotmail.com, "hota manoranjan" <hota.manoranjan@gmail.com>, "jeepkm cpcb" <jeepkm.cpcb@nic.in>, "R P S VERMA" <rpsverma-cwc@nic.in>, "Coastal Management Directorate, CWC, New Delhi" <cedte@nic.in>, ramana2865@gmail.com, "Nirmalendu Kumar" <nirmalendu.soi@gov.in>, "Dr. Neeraj Sharma" <neeraj.crri@nic.in>
Cc: "gpi 12765" <gpi_12765@yahoo.co.in>, tusharkgada@yahoo.in
Sent: Sunday, October 30, 2022 7:47:06 PM
Subject: Re: Urgent-Serious violation by GHCL proposed greenfield chemical complex at Village Bada, taluka Mandvi, District Kutch, Gujarat

Respected Sirs and Ma'am,

We are writing to bring to your urgent notice some important violations that took place during
1. The Public Hearing that was held on 17th October 2022
2. The EIA Reports being prepared by EIA Consultants not accredited by NABET
2. The public hearing was held on the draft EIA reports prepared by non-accredited EIA consultants on the baseline data that was older than 3 years at the time the public hearing was held.

Below are the submissions we make. I request you to kindly take an urgent note of the same, acknowledge the receipt of this email and take necessary action at the earliest.

We would also like to request you to kindly grant us some time to present before you our concerns pertaining to the issue.

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Looking forward to hearing from you positively.

Yours faithfully,

Dhwani Shah
Independent Environmental Researcher

30th October 2022

To,

The Hon'ble Minister,
Ministry of Environment, Forests and Climate Change
Indira Paryavaran Bhawan,
Jorbagh Road, New Delhi – 110 003.

The Chairman and Members
Expert Appraisal Committees – EAC Industry-3, EAC Industry-2 and EAC Infra-1
Ministry of Environment, Forests and Climate Change
Indira Paryavaran Bhawan,
Jorbagh Road, New Delhi – 110 003

Subject – Serious violations by Gujarat Heavy Chemicals Limited (GHCL) of the environmental laws for proposed Greenfield Chemical Complex for soda ash production in village Bada, Taluka Mandvi, District Kutch, State - Gujarat

Reference – Proposal No. IA/GJ/IND3/222096/2021
File No. IA-J-11011/293/2021-IA-II(I)
Project name – Greenfield Chemical Complex

Existing GHCL's company in Sutrapada

Respected Sirs,

We are the aggrieved villagers of Bada and surrounding villages where GHCL has proposed a Greenfield Chemical Complex. The proposed GHCL' Greenfield Chemical Complex with Soda Ash (11,00,000TPA) Dense Soda Ash (5,00,000TPA), Sodium bi-carbonate (2,00,000TPA) and the proposed (120MW) power plant, sea water intake and outfall channels, RO-DM system and associated infrastructure. The company proposes to take sea water through submarine pipelines. It is proposed to **intake 1600000m^3/d (approx. 160 crore liters of water daily)** for cooling and for desalination to meet the sweet water requirement. It is proposed that **1580000 m3/day (approx. 158 crore liters of water per daily) will be released** back into the sea.

The public hearing held on 17th October 2022 amid police force, water cannons, teargas shells, barbed metal wire fencing, guns and lathis, gave us a feeling of **Jallianwala Bagh** where there was only one entry and one exit. We are grateful that there was no untoward incident or a natural disaster that would have caused stampede and/or loss of life.

The proposed project has witnessed strong opposition from the villagers as the project threatens our lives, livelihoods and the environment. We are convinced that this project by a private company

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has done good to the village. This project is only for the private profit of the company. The company has purposefully conducted the public hearing based on **invalid data and EIA reports** prepared by the EIA Consultants that are not NABET accredited. We request you to kindly consider this matter as urgent and important and take necessary action.

We request you to kindly grant us a hearing to present before you the various concerns pertaining to the proposed project in detail. A small representative team would like to present before you, our concerns and seek redressal.

We would like to provide you point wise details of the violations for your kind consideration and necessary and strict action against the company.

Violations during public hearing and EIA Process –

1. The public hearing was held on the draft EIA reports prepared by consultants **not having NABET Accreditation**. The same was brought to the notice of the SDM and GPCB but no action was taken. Instead, the SDM and GPCB's role seemed to be protecting the company and not ensuring that the concerns and questions raised by the affected people were addressed appropriately. At many instances the **SDM and the GPCB's officials favored the company**.

    a. **CSIR National Institute of Oceanography** does not have NABET Accreditation and has done Marine EIA for assessing the impacts of the project on marine ecology. Comptroller and Auditor General (CAG) in its report published on 8th August 2022 addresses the concern that the proposed project did not have NABET Accreditation. Through this the NIO and project proponent, both have compromised the quality of the EIA and violated the provisions of the EIA Notification, 2006.

    b. **CSIR NEERI** has assessed the Terrestrial impacts of the project. As per the NABET Accreditation, NEERI does not have any accreditation to assess the impacts of a soda ash plant that falls in sector 4(e) as per the EIA Notification. NEERI's certificate and relevant excerpts from the NABET website is attached for your reference. Annexure 1 and 2.

    c. **Dr. Bharat Jethwa** has undertaken the Ecological Study and Wildlife Conservation Plan for the Proposed Greenfield Chemical complex. Dr. Bharat Jethwa did not attach his NABET Accreditation certificate with the EIA Report. However, NABET Accreditation Certificate of **Bhagwati Enviro Care Limited** has been attached with the Draft EIA report. When the same was checked on the website of NABET, we observed that Bhagwati Enviro Care Limited has no accreditation to assess soda ash plant that falls in sector 4(e). Further, Dr. Bharat Jethwa, with due respect, has been accredited to study the impacts of projects that fall in sector 1(b) i.e. Offshore oil and gas exploration, development and production. The relevant excerpts from the NABET website is being attached with this letter for your reference. On a close reading of the report, we can observe that the findings and mitigation measures suggested by Dr. Bharat Jethwa are very generic and not site specific.

    d. Comprehensive Hydrogeological assessment studies and designing of rain water harvesting program was undertaken by **Hydro-Geosurvey Consultants Private Limited, Jodhpur (HCPL)**. This company has not been accredited by NABET as an **EIA Consultant**. However, the company has NABET Accreditation certificate as Ground Water Consultant Organization. It is not clear if this company was eligible to undertake Hydrogeological assessment for a project that will be taking sea water, dealing with high salinity water and will release the same back into the sea and where the land use of a dryland ecology will be permanently changed by the construction of the company. Further, the project proponent proposes to divert a seasonal stream into the river. It is not clear if this company has expertise and technology to assess the

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hydrogeography of this entire region. Further, HCPL has sent samples for testing to another NABL accredited laboratory **SCS Enviro Services Private Limited**. This laboratory is also not NABET Accredited.

e. Study on Status Survey and Conservation Plan for Sea Turtles along Mandvi Taluka of Bhuj, Gujarat was undertaken by **Zoological Survey of India (ZSI).** The NABET Accreditation certificate for ZSI not attached with report. It is not clear if this study could be used and relied upon by the project proponent as ZSI is not accredited. Further, the report by ZSI has been attached as Annexure VI to the EIA report. The disclaimer from ZSI clearly states that "**there is no legal binding on the result of the report by ZSI submitted to GHCL, Ahmedabad**". ZSI is not even willing to back their own findings based on which the EIA report has been prepared and the Authorities would decide whether to grant Environment Clearance to a project or not.

2. The baseline data for marine EIA was collected during the period October 2018 to March 2019. The public hearing was held on 17th October 2022. The public hearing was held over the reports for which the **baseline data used was more than three years old.**

3. The public hearing was **declared as completed by the SDM who was convening the public hearing despite 100s of persons telling the SDM that they have several questions**. This is in violation of the EIA Notification 2006.

4. The SDM **did not read the Summary** of the public hearing proceedings which is a violation of the para 6.4 of Appendix IV of EIA Notification 2006.

5. During the public hearing signatures of those who attended the public hearing were not taken.

6. There was no expert knowing the EIA reports who could answer our questions that were raised during the public hearing.

Concerns with regards to the application and form-1 submitted by the project proponent –

A. The project proponent submitted the application for consideration of the Ministry on the 6th August 2021 and the ToRs were granted on 10th August 2021. While submitting the application, the project proponent did not disclose that the baseline data for the said project was already collected and EIA study was undertaken by the consultants.

B. The Form 1 contains confusing and in some places misleading information. The details are as follows –

i. In section III of Environmental Sensitivity, the project proponent states the following –

2. Coastal Sand Dunes CRZ I A towards South along the coast Arabian Sea: 0.8 km South, Seasonal river/stream: Vengadi Nadi: 0.5 km NW, further to seaside it runs near to plant boundary. Unclass Forest: outside project boundary south.

a) Sand dunes, according to some maps provided in the EIA report are along the Southern boundary of the plant. Any development in this close proximity of the sand dunes will hamper them.

b) By stating that Arabian Sea is 800 meters away from the southern boundary of the project, the proponent has also misled the Ministry. As per the .kml file downloaded by us from the Ministry's website as on the date of drafting this letter, the boundary of the project is less than 300 meters away from the sea.

c) The project boundary runs along Vengadi Nadi along the western side. There is no distance maintained from the river.

ii. In point 1.22 under the section II Activity of the form 1 clearly states that

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"There is no stream within the plant area. The first order stream of Janakpur village will be diverted by constructing proper peripheral drains around the plant boundary."

The project proponent has created confusion in the document by stating this. The stream that the project proponent in the second statement states will be diverted passes through the middle of the proposed project area and had water even on the day of the public hearing. This stream will be diverted into Vengadi nadi according to the project proponent through nalas and gutters. The presence of this stream has not been addressed anywhere else by the project proponent.

iii. Even in point no. 1.24 of the form 1, the project proponent states that there is no waterbody in the plant boundary. Since Kutch or Kachchh is an arid and semi-arid region, the drains may be seasonal but hold significant importance to support the ecosystems of the region. The stream that passes from the project boundary has a well-defined flow route and ecological importance.

Details pertaining to the Existing project of GHCL at Sutrapada

A. The existing project of GHCL is located at Sutrapada and is polluting the sea every day. Untreated slurry is being released on the coast day in and day out through open channels. Photos and videos of the same are attached with this letter/ email for your reference.

B. The company has also been storing slurry and waste in the CRZ area in open.

C. The locals had filed complaint against the same to the GCZMA and GPCB. The GCZMA along with GPCB and forest department conducted a joint site visit on the 29th and 30th of August 2022. The report of the same is not available in public domain. However, in the minutes of the 63rd meeting of the Gujarat Coastal Zone Management Authority that was held on 5th September 2022, the following was noted –

"3. Complaint received against M/s GHCL, Sutrapada for discharging of slurry in CRZ areas and also storing of solid waste in CRZ areas, violating CRZ Notifications. A Committee was formed earlier, where Committee visited concerned siste on 29/08/22 & 30/8/22, observing violations of CRZ notifications. The final report preparation is under progress.

The Authority was appraised that a committee was constituted for this purpose consisting of the Officials from Directorate Environment, RO, GPCB, Junagadh and Forest Officer. The said Committee visited the site during 29th August 2022 and 30th August, 2022 and informed authority about various violations that have been observed. It was further appraised that the report is under preparation.

The Authority authorized the MS, GCZMA to take suitable actions based in the report in consultation with ACS, FED and Chairman, GCZMA."

D. Several show cause notices have also been issued by the Gujarat Pollution Control Board in the past. Another show cause notice was issued to the company by the GPCB on 19th October 2022 stating that the company had not provided information pertaining to the ammonia leak incident that happened in the company. The effluent discharged did not meet the required standards as well. The show cause notice is also attached with this email/ letter.

Details pertaining to the Public Hearing

1) The first public hearing was organized on 6th April 2022 which was convened by the Collector but was declared as cancelled due to the strong opposition from the people.

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2) The public hearing was later reorganized on the 17th October 2022 and the procedure followed was as follows –

a) The public hearing was announced wide news paper notices just 20 days prior to the scheduled public hearing.

b) We came to know about the public hearing only when our gram panchayat received the notice and the notice was displayed outside the gram panchayat offices in Bada village as well as surrounding villages.

c) Out of the 20 affected villages, only 12 village's gram panchayats were informed about the public hearing by the GPCB.

d) The notice was served only 13 days prior to the public hearing to the 12 gram panchayats. We were not given sufficient notice for the public hearing.

3) The day of the public hearing –

a) The entire premise where the public hearing was to be held was cordoned off by erecting metal barbed fence.

b) The entry and exit to the pavilion premise was the same for general public. This gave us all a feeling of Jallianwala Bagh.

c) The entry and exit for the Collector or his representative were separate and was on the other side of the pavilion.

d) The police were equipped with teargas shells, guns, lathis and also water cannons.

e) The SDM and the general public were separated by steel fence which was 6 feet tall and the distance between the authorities and people was approximately 30-40 feet.

f) There was no arrangement made for the officials to take written submissions from the public as all the officials were made to sit on the other side of the fence.

g) No signatures from the people who attended the public hearing was taken.

h) The public hearing could have witnessed law and order concerns as the company was constantly trying to provoke the people who were opposing the project.

4) The public hearing was not held in a free and fair manner.

<u>OUR DEMANDS</u>

WE DEMAND THAT –

A. Strict action against the project proponent should be taken for providing misleading information and all the documents submitted by the project proponent should be thoroughly checked.

B. The EIA consultants and other agencies that have undertaken the EIA study without appropriate accreditation should be black listed and the EIA reports along with other studies should be declared invalid.

C. The public hearing conducted without abiding by the provisions of the EIA Notification 2006 and in a forced manner should be declared as null and void.

D. Proper enquiry should be undertaken to assess the public hearing process and the role of the SDM and the GPCB officials.

E. The project should be delisted and rejected as our area contains ecologically sensitive geomorphological features, is home to protected species of flora and fauna.

F. Our villages (Bada and 20 other villages within 10 km radius) will be severely affected by the project. Especially, Bada and Janakpur villages are located at a distance of less than 600 meters approx. from the plant boundary. Locating a chemical project so close to our villages will severely impact our health, lives and livelihoods. The company's proposal to establish the project should be rejected using powers vested in the Expert Appraisal Committee by the EIA Notification 2006.

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G. After years of waiting, Mother Narmada's water has reached our village this year through canals. We are sure that this company will affect our soil. We, therefore, do not wish this company to be established in this region.

H. Bada and Mandvi coast is the motherland of the endangered and protected Green Sea turtles, Scheduled species under Wildlife Protection Act, 1972. Sadly, the reports prepared by the project proponent have been misleading stating that this region is not suitable for turtle nesting. Data from the forest department show that approximately 5000 turtle hatchlings have been released from the coast in the last 5 years. The company has mislead the Ministry and the people through their unauthorized reports. The proposal of the company should be rejected.

I. The technology being used by the project proponent and proposed in the project is old. The project proponent has made no effort to protect and secure the environment. Their only intention is to earn money and make profit out of our pristine environment and natural resources. We request the authorities to kindly ensure our environment is protected and the proposed project is delisted.

J. GHCL's work in Sutrapada is a mirror of its environmental concerns and way of working. We do not wish our motherland to face the same fate as Sutrapada has! We request the EAC to kindly take a note of the same and conduct enquiry into the present working and functioning of the project.

We say no to GHCL.

We request you to kindly give us a hearing and help us protect our environment.

Thanking you in hope and anticipation with joined hands and hope that our prayers will be addressed.

Yours faithfully,

Villagers of affected villages as undersigned

Address for Correspondence – Bharat Gala - 501/502 Haveli Co op hsg society, Gulmohar Road, opp. Aviskar tower, Borivali (west), Mumbai 400092

Copy to - National Accreditation Board for Education and Training (NABET) for necessary action against the agencies that have misused their accreditation, conducted EIA studies without accreditation and have prepared misleading studies.

Address - National Accreditation Board for Education and Training (NABET), ITPI Building, 6th Floor, 4 - A, Ring Road, I P Estate, New Delhi – 110002

Annexure 1 – CSIR NEERI Certificate of Accreditation

Annexure 2 – CSIR NEERI Certification details as per the NABET Website retrieved on 28th October 2022

Annexure 3 – Bhagwati Enviro Care Pvt. Limited's NABET Certification related sections from NABET website retrieved on 26th October 2022

Annexure 4 – Bhagwati Enviro Care Pvt. Limited's NABET accredited FAE lists indicating association of Dr. Bharat Jethwa and the sector of EIA he is authorized to cater to.

Annexure 5 – Some Photos of Sutrapada site

Annexure 6 – Show cause notice issued by the GPCB on 19th October 2022

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On Sun, Oct 30, 2022 at 4:52 PM Bharat Gala <bharat.gala127@gmail.com> wrote:

> Respected Sirs and Ma'am,
> Greetings of the day,
>
> We are writing this email to bring to your urgent **attention** the various **violations that have taken place** with regards to the **proposed greenfield chemical complex** at Bada Village, taluka Mandvi, District Kutch, Gujarat.
>
> **We request you to kindly look into the matter and take necessary action immediately.** We request you to kindly grant us a hearing to be able to make a presentation pertaining to the same before you.
>
> We request you to kindly acknowledge this email.
>
> Thank you.
> Regards,
> Bharat Gala
> Contact : +91 799 061 6557

11 attachments



GHCL Sutrapada_Existing plant (1).JPG
3876K



GHCL Sutrapada_Existing plant (2).JPG
3848K



GHCL Sutrapada_Existing plant (4).JPG
3617K

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GHCL Sutrapada_Existing plant (5).JPG
4231K



GHCL Sutrapada_Existing plant (3).JPG
6025K



GPCB_Show Cause Notice_19102022.jpeg
135K

Letter of violations_GHCL_30102022.pdf
1688K

EIA Accreditation_Bhagwati Enviro Care_Accredited consultants_as on October 20 2022.pdf
551K

EIA Accreditation_Bhagwati Enviro Care as on October 20 2022.pdf
182K

160720193G3W6YT8_NEERI.pdf
254K

NABET_CSIR NEERI.pdf
206K

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29th October 2022

To,

The Hon'ble Minister,
Ministry of Environment, Forests and Climate Change
Indira Paryavaran Bhawan,
Jorbagh Road, New Delhi – 110 003.

The Chairman and Members
Expert Appraisal Committees – EAC Industry-3, EAC Industry-2 and EAC Infra-1
Ministry of Environment, Forests and Climate Change
Indira Paryavaran Bhawan,
Jorbagh Road, New Delhi – 110 003

Subject – Serious violations by Gujarat Heavy Chemicals Limited (GHCL) of the environmental laws for proposed Greenfield Chemical Complex for soda ash production in village Bada, Taluka Mandvi, District Kutch, State - Gujarat

Reference – Proposal No. IA/GJ/IND3/222096/2021
File No. IA-J-11011/293/2021-IA-II(I)
Project name – Greenfield Chemical Complex

Existing GHCL's company in Sutrapada

Respected Sirs,

We are the aggrieved villagers of Bada and surrounding villages where GHCL has proposed a Greenfield Chemical Complex. The proposed GHCL' Greenfield Chemical Complex with Soda Ash (11,00,000TPA) Dense Soda Ash (5,00,000TPA), Sodium bi-carbonate (2,00,000TPA) and the proposed (120MW) power plant, sea water intake and outfall channels, RO-DM system and associated infrastructure. The company proposes to take sea water through submarine pipelines. It is proposed to **intake 1600000m^3/d (approx. 160 crore liters of water daily)** for cooling and for desalination to meet the sweet water requirement. It is proposed that **1580000 m3/day (approx. 158 crore liters of water per daily) will be released** back into the sea.

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The public hearing held on 17th October 2022 amid police force, water cannons, teargas shells, barbed metal wire fencing, guns and lathis, gave us a feeling of **Jallianwala Bagh** where there was only one entry and one exit. We are grateful that there was no untoward incident or a natural disaster that would have caused stampede and/or loss of life.

The proposed project has witnessed strong opposition from the villagers as the project threatens our lives, livelihoods and the environment. We are convinced that this project by a private company is of no good to the village. This project is only for the private profit of the company. The company has purposefully conducted the public hearing based on **invalid data and EIA reports** prepared by the EIA Consultants that are not NABET accredited. We request you to kindly consider this matter as urgent and important and take necessary action.

We request you to kindly grant us a hearing to present before you the various concerns pertaining to the proposed project in detail. A small representative team would like to present before you, our concerns and seek redressal.

We would like to provide you point wise details of the violations for your kind consideration and necessary and strict action against the company.

Violations during public hearing and EIA Process –

1. The public hearing was held on the draft EIA reports prepared by consultants **not having NABET Accreditation**. The same was brought to the notice of the SDM and GPCB but no action was taken. Instead, the SDM and GPCB's role seemed to be protecting the company and not ensuring that the concerns and questions raised by the affected people were addressed appropriately. At many instances the **SDM and the GPCB's officials favored the company**.
    a. **CSIR National Institute of Oceanography** does not have NABET Accreditation and has done Marine EIA for assessing the impacts of the project on marine ecology. Comptroller and Auditor General (CAG) in its report published on 8th August 2022 addresses the concern that the proposed project did not have NABET Accreditation. Through this the NIO and project proponent, both have compromised the quality of the EIA and violated the provisions of the EIA Notification, 2006.
    b. **CSIR NEERI** has assessed the Terrestrial impacts of the project. As per the NABET Accreditation, NEERI does not have any accreditation to assess the impacts of a soda ash plant that falls in sector 4(e) as per the EIA Notification. NEERI's certificate and relevant excerpts from the NABET website is attached for your reference. Annexure 1 and 2.

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c. **Dr. Bharat Jethwa** has undertaken the Ecological Study and Wildlife Conservation Plan for the Proposed Greenfield Chemical complex. Dr. Bharat Jethwa did not attach his NABET Accreditation certificate with the EIA Report. However, NABET Accreditation Certificate of **Bhagwati Enviro Care Limited** has been attached with the Draft EIA report. When the same was checked on the website of NABET, we observed that Bhagwati Enviro Care Limited has no accreditation to assess soda ash plant that falls in sector 4(e). Further, Dr. Bharat Jethwa, with due respect, has been accredited to study the impacts of projects that fall in sector 1(b) i.e. Offshore oil and gas exploration, development and production. The relevant excerpts from the NABET website is being attached with this letter for your reference. On a close reading of the report, we can observe that the findings and mitigation measures suggested by Dr. Bharat Jethwa are very generic and not site specific.

d. Comprehensive Hydrogeological assessment studies and designing of rain water harvesting program was undertaken by **Hydro-Geosurvey Consultants Private Limited, Jodhpur (HCPL)**. This company has not been accredited by NABET as an **EIA Consultant**. However, the company has NABET Accreditation certificate as Ground Water Consultant Organization. It is not clear if this company was eligible to undertake Hydrogeological assessment for a project that will be taking sea water, dealing with high salinity water and will release the same back into the sea and where the land use of a dryland ecology will be permanently changed by the construction of the company. Further, the project proponent proposes to divert a seasonal stream into the river. It is not clear if this company has expertise and technology to assess the hydrogeography of this entire region. Further, HCPL has sent samples for testing to another NABL accredited laboratory **SCS Enviro Services Private Limited**. This laboratory is also not NABET Accredited.

e. Study on Status Survey and Conservation Plan for Sea Turtles along Mandvi Taluka of Bhuj, Gujarat was undertaken by **Zoological Survey of India (ZSI).** The NABET Accreditation certificate for ZSI not attached with report. It is not clear if this study could be used and relied upon by the project proponent as ZSI is not accredited. Further, the report by ZSI has been attached as Annexure VI to the EIA report. The disclaimer from ZSI clearly states that "**there is no legal binding on the result of the report by ZSI submitted to GHCL, Ahmedabad**". ZSI is not even willing to back their own

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findings based on which the EIA report has been prepared and the Authorities would decide whether to grant Environment Clearance to a project or not.

2. The baseline data for marine EIA was collected during the period October 2018 to March 2019. The public hearing was held on 17th October 2022. The public hearing was held over the reports for which the **baseline data used was more than three years old.**
3. The public hearing was **declared as completed by the SDM who was convening the public hearing despite 100s of persons telling the SDM that they have several questions**. This is in violation of the EIA Notification 2006.
4. The SDM **did not read the Summary** of the public hearing proceedings which is a violation of the para 6.4 of Appendix IV of EIA Notification 2006.
5. During the public hearing signatures of those who attended the public hearing were not taken.
6. There was no expert knowing the EIA reports who could answer our questions that were raised during the public hearing.

Concerns with regards to the application and form-1 submitted by the project proponent –

A. The project proponent submitted the application for consideration of the Ministry on the 6th August 2021 and the ToRs were granted on 10th August 2021. While submitting the application, the project proponent did not disclose that the baseline data for the said project was already collected and EIA study was undertaken by the consultants.

B. The Form 1 contains confusing and in some places misleading information. The details are as follows –

   i. In section III of Environmental Sensitivity, the project proponent states the following –

   2. Coastal Sand Dunes CRZ I A towards South along the coast Arabian Sea: 0.8 km South, Seasonal river/stream: Vengadi Nadi: 0.5 km NW, further to seaside it runs near to plant boundary. Unclass Forest: outside project boundary south.

      a) **Sand dunes, according to some maps provided in the EIA report are along the Southern boundary of the plant. Any development in this close proximity of the sand dunes will hamper them.**

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b) **By stating that Arabian Sea is 800 meters away from the southern boundary of the project, the proponent has also misled the Ministry. As per the .kml file downloaded by us from the Ministry's website as on the date of drafting this letter, the boundary of the project is less than 300 meters away from the sea.**

c) **The project boundary runs along Vengadi Nadi along the western side. There is no distance maintained from the river.**

ii. In point 1.22 under the section II Activity of the form 1 clearly states that "There is no stream within the plant area. The first order stream of Janakpur village will be diverted by constructing proper peripheral drains around the plant boundary."

The project proponent has created confusion in the document by stating this. The stream that the project proponent in the second statement states will be diverted passes through the middle of the proposed project area and had water even on the day of the public hearing. This stream will be diverted into Vengadi nadi according to the project proponent through nalas and gutters. The presence of this stream has not been addressed anywhere else by the project proponent.

iii. Even in point no. 1.24 of the form 1, the project proponent states that there is no waterbody in the plant boundary. Since Kutch or Kachchh is an arid and semi-arid region, the drains may be seasonal but hold significant importance to support the ecosystems of the region. The stream that passes from the project boundary has a well-defined flow route and ecological importance.

Details pertaining to the Existing project of GHCL at Sutrapada

A. The existing project of GHCL is located at Sutrapada and is polluting the sea every day. Untreated slurry is being released on the coast day in and day out through open channels. Photos and videos of the same are attached with this letter/ email for your reference.

B. The company has also been storing slurry and waste in the CRZ area in open.

C. The locals had filed complaint against the same to the GCZMA and GPCB. The GCZMA along with GPCB and forest department conducted a joint site v[illegible] the 29th and 30th of August 2022. The report of the same is [illegible]vailable [illegible]blic domain. However, in the minutes of the 63rd meeting of th[illegible]arat Coastal Zone

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Management Authority that was held on 5th September 2022, the following was noted –

"3. Complaint received against M/s GHCL, Sutrapada for discharging of slurry in CRZ areas and also storing of solid waste in CRZ areas, violating CRZ Notifications. A Committee was formed earlier, where Committee visited concerned siste on 29/08/22 & 30/8/22, observing violations of CRZ notifications. The final report preparation is under progress.

The Authority was appraised that a committee was constituted for this purpose consisting of the Officials from Directorate Environment, RO, GPCB, Junagadh and Forest Officer. The said Committee visited the site during 29th August 2022 and 30th August, 2022 and informed authority about various violations that have been observed. It was further appraised that the report is under preparation.

The Authority authorized the MS, GCZMA to take suitable actions based in the report in consultation with ACS, FED and Chairman, GCZMA."

D. Several show cause notices have also been issued by the Gujarat Pollution Control Board in the past. Another show cause notice was issued to the company by the GPCB on 19th October 2022 stating that the company had not provided information pertaining to the ammonia leak incident that happened in the company. The effluent discharged did not meet the required standards as well. The show cause notice is also attached with this email/ letter.

Details pertaining to the Public Hearing

1) The first public hearing was organized on 6th April 2022 which was convened by the Collector but was declared as cancelled due to the strong opposition from the people.
2) The public hearing was later reorganized on the 17th October 2022 and the procedure followed was as follows –
   a) The public hearing was announced wide news paper notices just 20 days prior to the scheduled public hearing.
   b) We came to know about the public hearing only when our gram panchayat received the notice and the notice was displayed outside the gram panchayat offices in Bada village as well as surrounding villages.
   c) Out of the 20 affected villages, only 12 village's gram panchayats were informed about the public hearing by the GPCB.

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d) The notice was served only 13 days prior to the public hearing to the 12 gram panchayats. We were not given sufficient notice for the public hearing.

3) **The day of the public hearing –**
   a) The entire premise where the public hearing was to be held was cordoned off by erecting metal barbed fence.
   b) The entry and exit to the pavilion premise was the same for general public. This gave us all a feeling of Jallianwala Bagh.
   c) The entry and exit for the Collector or his representative were separate and was on the other side of the pavilion.
   d) The police were equipped with teargas shells, guns, lathis and also water cannons.
   e) The SDM and the general public were separated by steel fence which was 6 feet tall and the distance between the authorities and people was approximately 30-40 feet.
   f) There was no arrangement made for the officials to take written submissions from the public as all the officials were made to sit on the other side of the fence.
   g) No signatures from the people who attended the public hearing was taken.
   h) The public hearing could have witnessed law and order concerns as the company was constantly trying to provoke the people who were opposing the project.
4) The public hearing was not held in a free and fair manner.

OUR DEMANDS

WE DEMAND THAT –

A. Strict action against the project proponent should be taken for providing misleading information and all the documents submitted by the project proponent should be thoroughly checked.
B. The EIA consultants and other agencies that have undertaken the EIA study without appropriate accreditation should be black listed and the EIA reports along with other studies should be declared invalid.
C. The public hearing conducted without abiding by the provisions of the EIA Notification 2006 and in a forced manner should be declared as null and void.
D. Proper enquiry should be undertaken to assess the public hearing process and the role of the SDM and the GPCB officials.

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E. The project should be delisted and rejected as our area contains ecologically sensitive geomorphological features, is home to protected species of flora and fauna.

F. Our villages (Bada and 20 other villages within 10 km radius) will be severely affected by the project. Especially, Bada and Janakpur villages are located at a distance of less than 600 meters approx. from the plant boundary. Locating a chemical project so close to our villages will severely impact our health, lives and livelihoods. The company's proposal to establish the project should be rejected using powers vested in the Expert Appraisal Committee by the EIA Notification 2006.

G. After years of waiting, Mother Narmada's water has reached our village this year through canals. We are sure that this company will affect our soil. We, therefore, do not wish this company to be established in this region.

H. Bada and Mandvi coast is the motherland of the endangered and protected Green Sea turtles, Scheduled species under Wildlife Protection Act, 1972. Sadly, the reports prepared by the project proponent have been misleading stating that this region is not suitable for turtle nesting. Data from the forest department show that approximately 5000 turtle hatchlings have been released from the coast in the last 5 years. The company has mislead the Ministry and the people through their unauthorized reports. The proposal of the company should be rejected.

I. The technology being used by the project proponent and proposed in the project is old. The project proponent has made no effort to protect and secure the environment. Their only intention is to earn money and make profit out of our pristine environment and natural resources. We request the authorities to kindly ensure our environment is protected and the proposed project is delisted.

J. GHCL's work in Sutrapada is a mirror of its environmental concerns and way of working. We do not wish our motherland to face the same fate as Sutrapada has! We request the EAC to kindly take a note of the same and conduct enquiry into the present working and functioning of the project.

We say no to GHCL.

We request you to kindly give us a hearing and help us protect our environment.

Thanking you in hope and anticipation with joined hands and hope that our prayers will be addressed.

Yours faithfully,

Villagers of affected villages as undersigned

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Address for Correspondence – Bharat Gala - 501/502 Haveli Co op hsg society, Gulmohar Road, opp. Aviskar tower, Borivali (west), Mumbai 400092

1. Bharat Gangji Gala BADA Bharat Gangji
2. Bhavna Bharat Gala BADA Bhavna B Gala
3. Vishanji Gangji Gala BADA
4. Vinit Bharat Gala BADA
5. Aayushi Vinit Gala BADA Aayushi V. Gala

Note* - More signatures of the concerned communities and members is also attached with this letter.

Copy to - National Accreditation Board for Education and Training (NABET) for necessary action against the agencies that have misused their accreditation, conducted EIA studies without accreditation and have prepared misleading studies.

Address - National Accreditation Board for Education and Training (NABET), ITPI Building, 6th Floor, 4 - A, Ring Road, I P Estate, New Delhi – 110002

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P.G. Gala.

Dr Urvi Savla.

Kusum Chhadeea

Pushpa M. Chhadva.

P. T. Gada

Mrudula L. gala

D. N. Savla

Dr Urvi Savla.

Sachin. N. Chheda.

Rasila J. Kusuma

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Gmail

RAJESH KUMAR <rajeshrohilla00@gmail.com>

Fwd: Pls don’t give any clearance to GHCL GREEN FIELD PROJECT at BADA Taluka Mandvi kutch Gujrat

1 message

Dr. Ramesh M <ramesh.motipalli@nic.in> Tue, Nov 1, 2022 at 5:40 PM
To: BHAWANA KAPKOTI NEGI <bhawana.knegi@gov.in>
Cc: rajeshrohilla00 <rajeshrohilla00@gmail.com>, HARSHULIKA <harshulika.singh@govcontractor.in>

with regards,

Dr. M. Ramesh,
Scientist 'E' & MS, EAC (Industry-III),
MoEF&CC,
A-233, IPB, Jorbagh,
New Delhi-110003.
Tel. 011-20819249

----- Forwarded Message -----
From: "Sujit Kumar Bajpayee" <sujit.baju@gov.in>
To: "Dr. Ramesh M" <ramesh.motipalli@nic.in>
Sent: Tuesday, November 1, 2022 5:30:25 PM
Subject: Fwd: Pls don’t give any clearance to GHCL GREEN FIELD PROJECT at BADA Taluka Mandvi kutch Gujrat

Sujit Kumar Bajpayee
Joint Secretary
Govt. of India
Ministry of Environment, Forest & Climate Change
135, Prithvi Wing, Ist Floor
Indira Paryavaran Bhawan
Jor Bagh Road, New Delhi-110003
Office Tel: 011-20819398

----- Forwarded Message -----
From: "Atul Singh Bisht" <atul.bisht@gov.in>
To: "Sujit Kumar Bajpayee" <sujit.baju@gov.in>
Sent: Tuesday, November 1, 2022 4:14:29 PM
Subject: Fwd: Pls don’t give any clearance to GHCL GREEN FIELD PROJECT at BADA Taluka Mandvi kutch Gujrat

O/o Additional Secretary (TK) & Addl. Charge Chairman, CPCB
M/o Environment, Forest & Climate Change
Tel.No.20819211, 20819176
I.Com, 2519, 2520, 2522

----- Forwarded Message -----
From: "Ms Leena Nandan" <secy-moef@nic.in>
To: "Tanmay Kumar" <tanmay.kumar-rj@gov.in>
Sent: Tuesday, November 1, 2022 4:09:44 PM
Subject: Fwd: Pls don’t give any clearance to GHCL GREEN FIELD PROJECT at BADA Taluka Mandvi kutch Gujrat

O/o Secretary
M/o Environment, Forest & Climate Change
Tel.No.20819308/20819408
Fax No.20819238

----- Forwarded Message -----
From: "bharat gala127" <bharat.gala127@gmail.com>

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To: "Bhupender Yadav" <mefcc@gov.in>
Cc: "Ms Leena Nandan" <secy-moef@nic.in>
Sent: Tuesday, November 1, 2022 3:56:22 PM
Subject: Pls don't give any clearance to GHCL GREEN FIELD PROJECT at BADA Taluka Mandvi kutch Gujrat

Sent from my iPhone

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application_to_gpcb_against_GHCL_eng.docx
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Application to deny Environmental Clearance for GHCL's SodaAsh project near Bada, Mandvi, Kachchh.

Name of Applicant:
Bharat Gangji

Residence Address:
Village: Bada
Taluka: Mandvi, Kachchh
Pin Code: 370475
Mobile No .: 79906 16557

To
Member Secretary
GPCB Board, Gandhinagar

Subject: *Application to deny environment clearance for GHCL's SodaAsh project near Bada Village in Mandvi Taluka, Kachchh District.*

With due respect, I am writing to request for denial of environmental clearance to the project proposed by GHCL company for SodaAsh production near Bada Village, Mandvi, Kachchh. I wish to mention that I have read the EIA (Environment Impact Assessment) report available on the GPCB website for this project and have noticed many inaccuracies and misinformation in the report. I earnestly request that based on this report, the project should not be given environmental clearance. Please find below the details of inconsistencies and misinformation in the EIA that came to my notice. In support of my claims or in opposition of statements in the EIA report I have gathered necessary evidence and have attached with application.

1. **Terrestrial Environmental Impact Assessment Executive Summary (TEIA-ES) Page No. 3 Point No. 1.2 (Location of Project) as well as Page No. 16 Point Number 5.0 (Analysis of Alternatives)**

According to the report, the company weighed five alternative areas on the basis of environmental impact. In my view, the site near Modhwa village was a better option for this project because there are already industrial activities near Modhwa village and hence it is not an environmentally pristine region as Bada village. Also, the project would have benefitted logistically from the nearby port and other infrastructural facilities. Compared to Modhwa village, the coast and area near Bada village are highly sensitive in terms of environmental impact and host a fragile ecosystem. There is currently no land, water or air pollution near Bada. The village has a reserve forest in the vicinity. Ghorad Bird Sanctuary is just 25 km from Bada. Ghorad (Great Indian Bustard) is an endangered bird species and in all of Asia, it is found only here. The project may cause the extinction of Ghorad.

The Chapter 5 in Terrestrial Environmental Assessment report contains wrong distances from the port for Bada village and Modhwa village. Modhwa village is about 40 km from the Mundra port whereas Bada village is about 73 km from Mundra Port, however, the report mentions distance 50 and 55 km respectively. Also, Chapter 5 of the report mentions there is no century hosting endangered species near Bada village. This is factually wrong information. The Ghorad (Great Indian Bustard) bird century is just 25 km from Bada village. I think the misinformation is given with malafide intention to justify selection of Bada village over Modhwa village.

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2. TEIA-ES Page 8, point 3.4 (Quality of seawater of Bada)

The report clearly states in point no. 3.4 of page no. 8 that the water quality of the sea near the Bada coast is good, contains a significant amount of oxygen and is supportive of marine life. In the entire coast of Kachchh district which stretches from Kandla to Jakhau, only part from Mandvi to Pingleshwar has remained clean. Bada coast is right in the middle of Mandvi to Pingleshwar stretch. In this coastal area marine creatures such as sea-turtles and dolphins live. These marine creatures are Schedule 1 protected species under wildlife protection act. They will be harmed by seawater pollution from the project. Any project that causes sea water pollution will be environmentally harmful if set near or area west of Bada.

3. TEIA Point No. 6.2 (of SeawaterUse)

The report mentions that the sea-side of the proposed project site has sand-dunes on its entire stretch. Sand dunes are a fragile ecosystem and protected under CRZ rules. CRZ rules make it amply clear that no activity to be permitted that threatens sand-dunes in any part of the country. Sand-dunes provide protection against tsunamis and cyclones from affecting coastal population and environment. The report states that there is no natural water way to bring sea-water for use in the factory. Which means the factory will require digging in sand-dunes. The sand dunes at the coast of Bada are less than 1 km wide which is low compared to other villages and even a small disturbance may prove fatal for them. The company proposes to lay pipes using an underground tunnel below sand-dunes to dump hot liquid waste in sea. This activity will cause damage to sand-dune structures as soil is not hard to hold weight above the tunnel and as the temperature rises below sand-dunes it will destroy plantations on top of it. Also, pipes carrying waste can leak and cause land-pollution right in the sand-dunes. If the vegetation above the sand-dunes is destroyed, the sand-dunes will also be destroyed due to air and water erosion. Thus, the proposed project violates CRZ laws and poses a serious threat to the fragile sand-dune ecosystem.

4. TEIA-ES Report (Fauna)

The report mentions that the proposed project site is not inhabited by animals or birds protected under various schedules of the wild-life protection act. This is factually wrong information. We have overwhelming evidence that in the core area and in the buffer zone around the proposed project site, there are several species of animals, birds and plants that are protected under the wild-life protection act. The table below shows a list of species found in this area and their protection status under the wild-life protection act.

Table 1: List of terrestrial animals and birds found in this area and their protection status under wildlife protection act.

Sr. No.	Common name of species	Scientific Name of species	Schedule number under wild-life protection act.
1.	Chinkara	Gazella bennettii	Schedule 1
2.	Hyaenas	Hyaena hyaena	Schedule 3
3.	Honey-badger	Mellivora capensis	Schedule 1
4.	Caracals	Caracal caracal	Schedule 1
5.	Indian Fox		Schedule 2

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7.	Porcupine	Hystrix indica	Schedule 4
8.	Peacock	Pavo cristatus	Schedule 1
9.	Spiny-tailed Lizard	Uromastix hardwickii	Schedule 2
10.	Indian Monitor Lizard		Schedule 1
11.	Common Crane		Schedule 4
12.	Lesser Flamingo		Schedule 4
13.	Black-shoulder Kite		Schedule 1
14.	Marsh Harrier		Schedule 1

The area around the project site is home to India's National Bird peacock. More than 1500 peacocks live in the 10 km radius around the project site. Flocks of peacocks containing more than 100 males and females can be seen anytime of the year at Bada Vipassana Center, at Panchotiya Village and Temple of Astrai-vada-pir. Core area of the proposed project site is breeding and nestling ground of peacocks during the rainy season.

We provide the following evidence to show that these animals and birds are found in this area.

- It is public knowledge that a couple of years back the Forest Department carried out exercises to stop/prevent hunting of Chinkara in the area around Bada.
- Information obtained through RTI from the Forest Department about rescue and release of Hyena in the core area of the project. (Proof No. 1)
- Information obtained through RTI from the Forest Department about compensation to Maldharis (Shepherd) for their domestic animals killed by Caracal in the area around the project site. (Proof No. 1)
- Photographs of peacocks using a GPS enabled camera in the area. (Proof No. 2)
- Photographs of footmarks of porcupines using GPS enabled cameras in the area. (Proof. 7)
- Photographs of a burrow made by porcupines using a GPS enabled camera in the project area. (Proof. 7)
- Photographs of foot marks and holes of Lizards. (Proof. 4)

5. MEIA (Marine Environmental Impact Assessment) Report Page 9:

The report states that during field visits sea-turtles were not sighted, implying they may not be nestling at the Bada beach. The report's claim is misleading as the field visits for the report were carried out before and after the rainy season but not during the rainy season. Sea-turtles are frequently visiting Bada beach. Females of Green-Sea-Turtle and Olive-Ridley species lay eggs during the rainy season and that too only during night. In spite of inherent difficulty to track and count nestling by sea-turtles, the Forest Department in Mandvi Forest Range has rescued more than 8548 eggs between 2011 and 2021 based on information from local fisherman and successfully hatched 6905 baby turtles and released them back into sea. The Mandvi Forest Range covers the area only between Modhwa and Bambhdai villages. I provide the following evidence.

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1. Information obtained through RTI act from Forest Department stating number of eggs of sea-turtle rescued and hatched by the department. (Proof No. 3)

6. EIA Report Point No. 4.5 (Impacts and mitigation measures for Ecology and Biodiversity)

The report in its point No. 4.5 (Impacts and mitigation measures for Ecology and Biodiversity) and sub-point "Impacts on Sea-Turtles mentions that 2 km coastal stretch south of proposed project site may not be suitable for nestling of sea-turtles. This claim is contrary to the study by Westley Sunderrraj and team reported in Potential Nesting Beach in Kutch.

Westley Sunderraj and his team have reported that the stretch of 11.5 km from Nana Laija to Bada is the first (1) ranked potential nesting beach for sea-turtles and from Bada to Bambhdai stretch is 3rd ranked potential nesting site. In spite of the fact that the proposed project site is west of Bada that is toward Nana Laija, author of the EIA report mentions the 3rd potential nesting site. I believe this is done with malafide intention to underplay impact on sea-turtles. The proposed project site is within the stretch Nana Laija to Bada and it is ranked 1 potential nesting/breeding site for the sea-turtles. I include the following evidence.

- Copy of map of potential nestling sites reported in Sunderraj et al.

Further to this aspect from the entire stretch of sea-coast of Kachchh, the stretch between Mandvi to Pingleshwar is the only stretch that does not have industrial activity and sea-turtles can lay eggs. If this stretch too will be polluted, sea-turtles will have no place to go.

7. EIA Summary Page no. 15 Issue no. 4.5 (Ecology and Biodiversity) The

The summary of the report states that the effects on reptiles may be minimal as no rare or highly protected species of reptiles are present in the core area. This is factually wrong information. A lake known as Lalira Tadav in Bada village is right in the middle of proposed project site and the area around this lake in 2 km radius is inhabited by varieties of reptiles including Spiny-tailed Lizard and Indian Monitor Lizards which is an endangered species included in Schedule 2 and 1 respectively. It is estimated that more than 500 reptiles live in this area.

- Photographs of spiny-tailed lizards using a GPS enabled camera showing its presence in the core area of the project. (Proof No. 4).

8. Present concentration levels of SO_2 and NO_X.

The report shows about 10 µg m^{-3} on average concentration of SO_2 in this area. These numbers are too high and untrustworthy since such a high concentration is not found in mega cities such as Ahmedabad (see Mallik et al. 2012, doi: 10.1007/s11356-014-2795-x). The area has no known source of SO_2 and the vehicular traffic is very low to cause any significant NO_X concentration in the area. I believe such high concentrations of these pollution species are given with malafide intention to show future pollution from the project low in comparison to existing pollution.

The project will burn coal which releases SO_2 and NO_X in the atmosphere. SO_2 will cause acid rain in nearby villages and NO_X will increase ozone amount in the atmosphere leading to health issues and reduction in crop yield (Lal et al., 2017, doi: 10.1007/s11356-017-9729-3). The pollution will also have a negative impact on nearby reserve forest and the bird century. An independent study of pollution levels needs to be conducted in this area.

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9. The EIA report states that the project will use large amounts of ammonia (NH_3) gas in the production process. Ammonia gas is highly toxic and harmful to the environment and health. Not only its amount in effluent is worrisome but leaks during transportation, storage, factory use and accidents are too dangerous and potential environmental disasters.

10. Transportation of coal will increase particulate pollution PM2.5 and PM10 not only in project areas but in all the villages enroute between coal mine and factory.

11. Burning of coal releases heavy metals such as mercury in the atmosphere and water. Even a trace amount of these heavy metals is dangerous for humans and animals. However, the EIA report does not discuss its impact.

12. The report states that the area around the proposed project site has no mangroves. However, this is factually wrong information. I include the following evidence to show mangrove in the area.

- Photographs of mangrove obtained using a GPS enabled camera. (Proof No. 5)

13. The project will bring migrant laborers which will lead to increased poaching activity in the area and destruction of shrubs and trees. The area is home to the Indian Monitor Lizard which is an endangered species and often poached for oil and meat. The project will put them in grave danger.

14. The EIA report on its page no. 12 states that the project will use sea water. Sea-water will be fetched using underground pipelines with water flow by gravity. Kachchh district experiences frequent earthquakes. It is a Seismic Zone 5 area (high probability of earthquake). The land around the project site does not have weight bearing capacity and during earthquakes tunnels can collapse and pipes can break. If this happens, it will lead to environmental disaster as sea-water will intrude deep inland and waste from the factory will spill over the fragile ecosystem.

15. Sand-dunes south of the project site are part of the reserve forest and have green-cover of shrubs. Digging for laying pipes will lead to destruction of the green cover which in turn will destroy sand-dunes by wind and water erosion.

16. The EIA report underplays the impact on migratory and local birds in the area. Every year between October and February, thousands of common cranes, which are migratory birds, visit this area. They will be disturbed by noise, pollution and illegal poaching if the project comes here. Besides, common cranes, lesser flamingos which are also migratory birds visit this area. I have seen these birds myself. I have attached following evidence

- Photographs of common cranes and lesser flamingos in this area. (Proof. 6)

The report mentions presence of Black-shoulder Kite only in buffer zone. Black-shoulder kite is protected species under schedule 1 and found in core area of the project. Besides black-shoulder kite, marsh-harrier which is also a protected species under schedule 1 are found in core area of the project.

17. The EIA report on its page 14 mentions that endangered mammal species live away from the project. This is factually wrong information. The project site is adjacent to the reserve forest and several mammal species like Chinkara, Hyena, Caracal, Fox, Porcupine, Honey-Badger live in the core project area or in nearby reserve forest. They will be disturbed by noise, pollution and human interference. I have included the following evidence.

- Photographs of footmarks of porcupines using GPS enabled cameras in the area. (Proof. 7)
- Photographs of a burrow made by porcupines using a GPS enabled camera in the project area. (Proof. 7)

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18. The proposed factory will release hot water brine containing a significant amount of ammonia in the sea-water. This will significantly increase the temperature of sea water in the area and will have a negative effect on marine life. Current summertime sea temperatures are around 14 deg C which will rise to 28 deg C if the hot water brine from the factory is released.

Hot water releases from power plants and ports in the sea near the coast of Modhwa, Tragadi and Bhadreshwar have completely destroyed fishing stock in a 40 km stretch. Between 2019 and 2022, seven sea-turtles were found dead ashore in the area impacted by pollution. The number should be read while keeping in mind that typical sea-turtle life is 300 years.

Similar ecological disasters will happen in this area too, if release of hot water is allowed in the sea. Following evidence is attached

- Information obtained through RTI from forest department confirming finding of dead sea-turtle ashore. (Proof. 3)

19. The EIA report shows the coastal area as stoney when it comes to impact on local fishermen but shows the area as soft-muddy-land when it comes to release of effluent from the proposed factory. I think this is done with malafide intention as effluents do more harm in stony areas compared to soft-muddy area. As a local resident, I confirm that the area is stoney and the release of effluent will have a significant impact on marine life.

20. Project mentions that the factory will require a significant amount of fresh-water which will be obtained from ground-water. As mitigation efforts, the report asks for rain-water harvesting. However, Kachchh is a drought prone area and even when it rains the total amount of rain-fall is small. Hence, rainwater harvesting will not provide enough water to compensate for uptake by the factory. If the company uses ground-water, it will deplete the ground water reservoir and increase salinity. Ground-water reservoirs are a lifeline for the local population. The lake known as Lalira Tadav which is situated in the middle of the proposed project site is the only water source for a nearby wild-life. Destroying this lake or constructing wall around the lake will have disastrous impact on wildlife.

- Photograph of water body with GPS enabled camera. (Proof 8).

21. The buffer zone shown in the EIA report includes 1840 hectares of reserve forest which hosts numerous wild-life, a large number of them include endangered species. Wild-life is sensitive to noise pollution. The project will increase noise pollution because of the use of machinery, population and traffic in the area. This will result in either migration or destruction of wildlife in the reserved forest in nearby villages.

22. The ecology study in the report is done without consulting local environmental or wildlife experts. And without any basis report describes the area proposed for the project as not containing endangered or sensitive species needing protection under wildlife act. I have presented several pieces of evidence contrary to this assertion. The report is not trustworthy in assessing the environmental impact and hence based on this report environmental clearance to the project should not be issued.

23. EIA Annexure Part 3 mentions the area is having arid and barren lands and ground water is too saline to do agriculture. This is not factually correct information. Bada village has several irrigated horticulture farms and huge harvest of fresh-dates, mangoes, guava, pomegranate, sapodilla, java plum is taken every year. Besides horticulture, other crops such as cotton, ground-nut, jewar, bajara, castor seed, etc. are also regularly grown in this region. The land is also used to grow fodder for domestic animals. Consider the following evidence.

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- Photographs of horticulture farms using GPS enabled cameras. (Proof 9).
- One can also obtain Form 7/12 from the revenue department of Gujarat for the land acquired by the company.

Lot of wildlife depends on agricultural activity for their food and shelter. Destruction of agricultural activity will also have a negative impact on wildlife in the nearby area. Also, the canal construction work to bring Narmada water to this area is in its final phase. Once canal water is made available, agricultural activity will increase manyfold. Under such circumstances, cost-benefit analysis will not favor setting up a factory in the eco-sensitive zone.

24. The report mentions that the area does not host any protected plant/tree species. This is factually wrong information. The plant species such as Gugar (Commiphora wightii), Campylanthus ramosissimus, Citrullus colocynthis, Helichrysum cutchicum, Heliotropium rariflorum, Ipomoea kotschyana, corallocarpus conocarpus, Pavonia ceratocarpa, Heliotropium Bacciferum which are protected under schedule 1 are found in the area aplenty. Gujarat Ecology Society has published a report on Conservation of Rare and Endangered Biodiversity of Gujarat (Final Report June 2002). The list of species mentioned above are based on this report and An organization named GUIDE has done a survey of plant species found in this area.

25. Region around Bada and in the buffer zone contains a very pristine and clean environment. Such an area has a large potential to be developed as a tourist destination and should not be allowed pollution. See following evidence.

- Photographs of the area showing cleanliness of environment (Proof 10)

Compared to Bada, one of the alternatives for the project site near Modhwa village doesn't have as pristine environment as Bada village, has nearby port and power stations and it is far away from any wildlife century compared to Bada. The report in its Chapter 5 goes not giving wrong distances from port for the alternative sites and hiding information on proximity to Ghodar (Great Indian Bustard) bird century near Bada village.

26. The report on its page 17 as a part of assessment of dangers shows the factory will have storage of liquid ammonia, ammoniated brine, diesel, etc. Such dangerous chemicals should be stored far away from population but the project site is just 200 meter from the Bada village and within 5 km from Bhinshra, Panchotia, Janakpar and Mota Layja villages. Looking at the danger to the population from accidental release of chemicals, the project should not be given clearance.

27. The report mentions that the project requires about 1300 acres of land. To the best of my knowledge, the company is able to obtain only 600 acres of land. The land around the proposed project site is mostly of private ownership and acquiring such a land may prove a time consuming process. In spite of the fact that the company has not acquired enough land, I wonder why the environmental hearing is scheduled on 6th April 2022. Until the company acquires sufficient land, environmental hearing should not be done.

28. The factory will release a large amount of greenhouse-gas. World-wide greenhouse gasses are causing global warming and climate change. Kachchh is one of those vulnerable regions of the globe that will have a large negative impact of global warming. Several countries including India have agreed to reduce greenhouse gas emissions. The project should also be evaluated for its greenhouse gas emissions and impact on global warming, besides its environmental impact and until such assessment is completed, the environmental clearance to the project should not be given.

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Keeping in view danger to human population, environment, wildlife and climate, I earnestly request not to give environmental clearance to this project. We are currently having a clean environment and I request not to allow it pollute. Your denial of clearance will be akin to giving a new lease of life to wildlife in the area. Global warming is humanity's biggest calamity and we should not be part of the problem by allowing such a project. We hope to receive your kind cooperation and scientific understanding of the problem.

Jay Hind.

Yours truly and wildlife lover

Bharat Gangji

Mobile No.: 079906 16557

Copy to:

(1) District Magistrate, Kachchh District, Gujarat
(2) Ministry of Environment, Forest and Climate Change.
(3) Local GPCB Office, Bhuj

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ANNEXURE R23 (Colly)

भारत सरकार
GOVERNMENT OF INDIA
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय
MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE
क्षेत्रीय कार्यालय, गांधीनगर/ **Regional Office, Gandhinagar**

ए विंग- **407** एवं **409**, "अरण्य भवन ", सी.एच.-**3** सर्किल के समीप, सेक्टर-**10**ए, गांधीनगर-**382010** / A wing-407 & 409, "**ARANYA BHAWAN**", Near CH-3 Circle, Sector-10A, Gandhi Nagar-382010
Email: iro.gandhingr-mefcc@gov.in

दिनांक:**04th** जनवरी, **2024**

To
अपर मुख्य सचिव (वन)/**The Additional Chief Secretary (Forests)**
गुजरात सरकार/**Govt. of Gujarat**
ब्लॉक नं. **14**, आठवां तल, न्यू सचिवालय
Block No. 14, 8th Floor, New Sachivalaya
गांधीनगर, गुजरात/**Gandhinagar, Gujarat.**

(Online Proposal No: FP/GJ/Others/147527/2021)

Sub: Final (Stage-II) approval of Central Government under Forest (Conservation) Act, 1980 for proposed diversion of 0.9689 ha Un-Class forest for laying part of Seawater intake and effluent disposal pipeline and passage for related construction equipment movement in Kachchh District in favour of Chief Operating Officer, GHCL Ltd., Ahmedabad- reg.

Sir,

This refers to letter No. FED/FLP/e-file/6/2022/1377/F dated 16.05.2023 of the State Govt. of Gujarat on the above mentioned subject seeking prior approval of the Ministry of Environment, Forest & Climate Change under section-2 of Forest (Conservation) Act, 1980. After due consideration of the proposal of the State Government, the 'In-Principle/Stage-I' approval of the Central Government for the diversion of the said forest land was accorded vide this office letter No. FC-6/GJB-57/2023-GNR dated 18.07.2023 subject to fulfillment of certain conditions. The State Government of Gujarat vide their letter No. FED/FLP/e-file/6/2022/1377/F dated 28.12.2023 have furnished compliance report in respect of the relevant conditions stipulated in the In-principle approval for grant of final approval.

In this connection, on the basis of the compliance report under reference and confirmation of receipt of compensatory levies from National Authority of CAMPA vide online e.portal transaction dated 11.10.2023, the **Final/Stage-II approval** of the Central Government under Section-2 of Forest (Conservation) Act, 1980 is hereby accorded for diversion of 0.9689 ha Un-Class forest for laying part of Seawater intake and iffluent disposal pipeline and passage for related construction equipment movement in Kachchh District in favour of Chief Operating Officer, GHCL Ltd., Ahmedabad subject to the following general and standard conditions:

1. Legal status of the forest land shall remain unchanged.
2. Compensatory afforestation shall be taken up by the Forest Department over 2.00 ha de-graded forest land at Village- Dhokda, Taluka- Mandvi, District-Kutch of Gujarat at the cost of the user agency. As far as possible, a mixture of local native species shall be planted and mono-culture of any species, especially non-native species should be avoided.

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3. No tree felling shall be involved in the implementation of this project.
4. The State Government should ensure submission of FRA certificate in proper format along with all the enclosures i.e. proceedings of DLC, SDLC & Gram Sabha Resolution by the User Agency before issuing the orders for diversion by the State Government.
5. The KML files of diverted area and CA area are to be uploaded on the e.Green Watch Portal before issuing the orders for diversion by the State Government.
6. The pipeline shall be laid down 1.5 meter below the ground and after lying down of pipeline the ground will be leveled.
7. The layout plan of the proposal shall not be changed without prior approval of Central Government.
8. No labour camp shall be established on the forest land.
9. Sufficient firewood, preferably the alternate fuel, shall be provided by the User Agency to the labourer after purchasing the same from the State Forest Department or the Forest Development Corporation or any other legal source of alternate fuel.
10. The boundary of the diverted forest land shall be suitably demarcated on ground at the project cost, as per the directions of the concerned Divisional Forest Officer.
11. No additional or new path will be constructed inside the forest area for transportation of construction materials for execution of the project work.
12. The period of diversion under this approval shall be co-terminus with the period of lease to be granted in favour of the user agency or the project life, whichever is less.
13. The forest land shall not be used for any purpose other than that specified in the project proposal.
14. The forest land proposed to be diverted shall under no circumstances be transferred to any other agencies, department or person without prior approval of Govt. of India.
15. The User Agency shall submit the annual self compliance report in respect of the above stated conditions to the State Government and Integrated Regional Office, Gandhinagar by the end of March every year.
16. The User Agency shall comply with all the provisions of the all Acts, Rules, Regulations, Guidelines, Hon'ble Court Order (s) and NGT Order (s) pertaining to this project, if any, for the time being in force, as applicable to the project.
17. All the conditions of Stage-I approval shall be strictly complied.
18. Violation of any of these conditions will amount to violation of Forest (Conservation) Act, 1980 and action would be taken as per the MoEF&CC Guideline F. No. 11-42/2017-FC dt 29/01/2018.
19. Any other condition that the Ministry of Environment, Forests & Climate Change may stipulate from time to time in the interest of conservation, protection and development of forests & wildlife.

As has been mentioned at Para-2 of this final approval, this approval for diversion of forest land is subject to the fulfillment of stipulated conditions mentioned in this approval letter. Therefore, in the event of non-compliance of any of the conditions laid out in this approval letter, the Regional Office of Ministry of Environment, Forest and Climate Change may withdraw the said approval for the

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diversion of the forest land and stop the non-forest activity being carried out in the forest land besides initiating the legal action as per provisions of Forest (Conservation) Act, 1980.

भवदीय,

04/01/2024

(श्रवण कुमार वर्मा/**Shrawan Kumar Verma**)
क्षेत्रीय अधिकारी/ **Regional Officer**
क्षेत्रीय कार्यालय, गांधीनगर/
Regional Office, Gandhinagar.

Copy to:

1. The Inspector General of Forests (Central), ROHQ Division, Ministry of Environment Forest and Climate Change, Indira paryavaran Bhawan, Jor Bagh Road, New Delhi- 110003.
2. The APCCF & Nodal Officer (FCA), Aranya Bhawan, Sector- 10A, Gandhinagar, Gujarat.
3. The Dy. Conservator of Forests, Forest Division Kutch- West, Bhuj, Gujarat.
4. The Chief Operating Officer, GHCL Limited, GHCL House, Opposite Punjabi Hall, Navrangpura, Ahmedabad, Gujarat.
5. Guard File.

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GOVERNMENT OF GUJARAT

Forests & Environment Department

Block No. 14, 8th Floor, New Sachivalaya, Gandhinagar, Gujarat- 382010, Tel: 079-23251071, Fax: 079-23252156

No. FED/FLP/e-file/6/2022/1377/F

Subject: Diversion of **0.9689 ha.** Un-Class forest land for laying part of Seawater intake & effluent disposal pipeline and passage for related construction equipment movement in Kachchh District in favour of Chief Operating Officer, GHCL Ltd, Ahmedabad.

Ref. (1) Regional Officer, IRO-Gandhinagar Letter No. FC-6/GJB-57/2023-GNR dated 04.01.2024

(2) GHCL Limited dated 07.03.2025

MEMORANDUM:-

The Regional Officer, IRO-Gandhinagar has given formal approval of Diversion of **0.9689 ha.** Un-Class forest land for laying part of Seawater intake & effluent disposal pipeline and passage for related construction equipment movement in Kachchh District in favour of Chief Operating Officer, GHCL Ltd, Ahmedabad vide letter dated 04.01.2024 referred at Sr. No.(1) above.

The undersigned is pleased to convey the formal approval of the Government under section 2 of the Forest (Conservation) Act, 1980, subject to the following conditions:-

1. Legal status of the forest land shall remain unchanged.
2. Compensatory afforestation shall be taken up by the Forest Department over 2.00 ha de-graded forest land at Village- Dhokda, Taluka- Mandvi, District-Kutch of Gujarat at the cost of the user agency. As far as possible, a mixture of local native species shall be planted and mono-culture of any species, especially non-native species should be avoided.
3. No tree felling shall be involved in the implementation of this project.
4. The State Government should ensure submission of FRA certificate in proper format along with all the enclosures i.e. proceedings of DLC, SDLC & Gram Sabha Resolution by the User Agency before issuing the orders for diversion by the State Government.
5. The KML files of diverted area and CA area are to be uploaded on the e.Green Watch Portal before issuing the orders for diversion by the State Government.
6. The pipeline shall be laid down 1.5 meter below the ground and after lying down of pipeline the ground will be leveled.
7. The layout plan of the proposal shall not be changed without prior approval of Central Government.
8. No labour camp shall be established on the forest land.
9. Sufficient firewood, preferably the alternate fuel, shall be provided by the User Agency to the labourer after purchasing the same from the State Forest Department or the Forest Development Corporation or any other legal source of alternate fuel.
10. The boundary of the diverted forest land shall be suitably demarcated on ground at the project cost, as per the directions of the concerned Divisional Forest Officer.
11. No additional or new path will be constructed inside the forest area for transportation of construction materials for execution of the project work.
12. The period of diversion under this approval shall be co-terminus with the period of lease to be granted in favour of the user agency or the project life, whichever is less.
13. The forest land shall not be used for any purpose other than that specified in the project proposal.
14. The forest land proposed to be diverted shall under no circumstances be transferred to any other agencies, department or person without prior approval of Govt. of India.
15. The User Agency shall submit the annual self compliance report in respect of the above stated conditions to the State Government and Integrated Regional Office, Gandhinagar by the end of March every year.
16. The User Agency shall comply with all the provisions of the all Acts, Rules, Regulations, Guidelines, Hon'ble Court Order (s) and NGT Order (s) pertaining to this project, if any, for the time being in force, as applicable to the project.
17. All the conditions of Stage-I approval shall be strictly complied.
18. Violation of any of these conditions will amount to violation of Forest (Conservation) Act, 1980 and action would be taken as per the MoEF&CC Guideline F. No. 11-42/2017-FC dt 29/01/2018.
19. Any other condition that the Ministry of Environment, Forests & Climate Change may stipulate from time to time in the interest of conservation, protection and development of forests & wildlife.

Any other condition, Which the Nodal Officer (FCA) may stipulated from time to time.

Signature valid
Signed by: Maulik[illegible]en S Shah
Deputy Secretary
Date: 2025[illegible] 13:30:04 +05:30

File No: FED/FLP/e-file/6/2022/1377/F Section
Approved By: Deputy Secretary,F Section,FED

Open the document in Adobe Acrobat DC to verify the E-sign

Scanned with CamScanner

Letter No: FED/0256/03/2025 Approved Date: 21-03-2025

(Maulika Shah)
Deputy Secretary

Forest & Environment Department

Copy to:-

1. Regional Officer, IRO-Gandhinagar, Ministry of Environment, Forest & Climate Change, A-407 & 409, Aranyan Bhavan, CH-3 Circle, Sector-10/A, Gandhinagar.
2. Prin. Chief Conservator of Forests (Land) and Nodal Officer (FCA), Pr. Chief Conservator of Forest's office, Aranya Bhavan, Sector-10/A, Gandhinagar.
3. Dy. Conservator of Forest, kachchh (West) Forest Division, Arihant Nagar, Bhuj-370001, Gujarat.
4. Chief Operating Officer, GHCL Ltd, GHCL House, Swastik Society, Opp. Panjabi Hall, Navrangpura, Ahmedabad- 380009.
5. Select File

- TRUE COPY-

Signature valid
Signed by:Maulik[illegible]en S Shah
Deputy Secretary
Date: 2025[illegible] 13:30:04 +05:30

File No: FED/FLP/e-file/6/2022/1377/F Section
Approved By: Deputy Secretary,F Section,FED

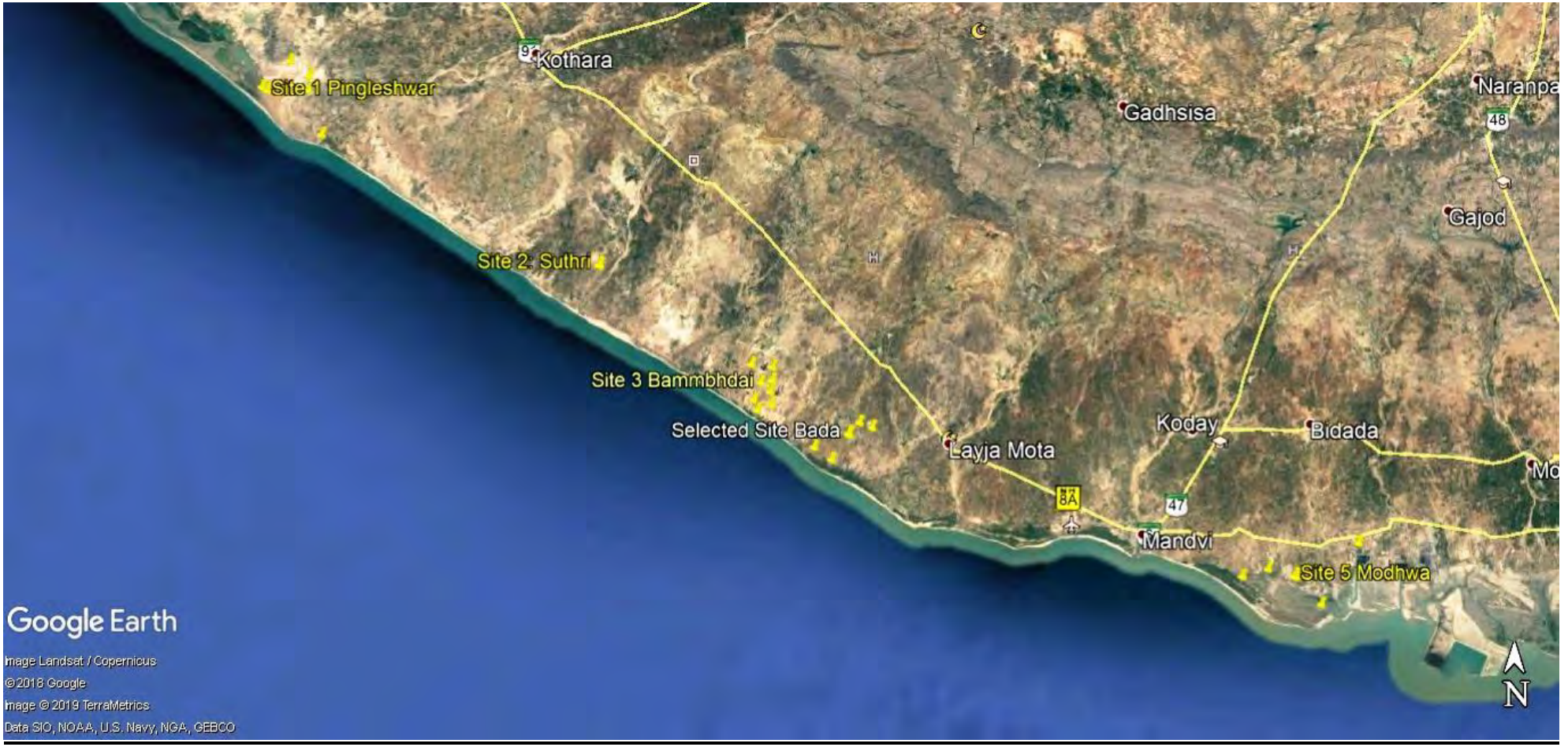
Open the document in Adobe Acrobat DC to verify the E-sign

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The alternative analysis of sites discussed below. The alternative sites considered for setting-up of the proposed Chemical Complex Soda ash project are given below:

- Site 1 – Village Pingleswar, Taluka – Abdasa, Dist. Kutch
- Site 2 – Village Suthri, Taluka – Abdasa, Dist. Kutch
- Site 3 – Village Bambhdai, Taluka – Mandvi, Dist. Kutch
- Site 4 – Village Bada, Taluka – Mandvi, Dist. Kutch
- Site 5 – Village Modhva, Taluka – Mandvi, Dist. Kutch


INDIA
States and Union Territories
INDIA FLAG
KACHCHH
TALUKA/TEHSIL MAP
PAKISTAN
Rajasthan
Banas Kantha
Patan
Rann of Kachchh
Lakhpat
Nakhatrana
Bhuj
Abdasa
Anjar
Bhachau
Gandhidham
Mandvi
Mundra
Rapar
Morvi
Jamnagar
Rajkot
Devbhoomi Dwarka
Legend
International Boundary
State Boundary
District Boundary
Taluka/Tehsil Boundary
Coastline
Pingleshwar
Suthri
Bambhdai
Bada
Modhwa
Google Earth



Site1: Pingleshwar, Site 2: Suthri, Site 3: Bambhdai, Site 4: Bada (selected) and Site 5: Modhwa

Based on the comparative alternative site analysis given below, the site at Bada village in the Taluka - Mandvi, Dist - Kutch in the State of Gujarat is selected for establishing Greenfield Chemical Complex project.

Sr. No.	Environmental & Social Dimensions	Pingleshwar	Suthri	Bambhdai	Bada	Modhva
Location		Taluka: Abdasa, District: Kutch	Taluka: Abdasa, District: Kutch	Taluka: Mandvi, District: Kutch	Taluka: Mandvi, District: Kutch	Taluka: Mandvi, District: Kutch
Coordinates		1) 23°06'23.03"N 68°44'21.83"E 2) 23°07'22.66"N 68°45'31.14"E 3) 23°06'48.34"N 68°46'20.38"E 4) 23°06'16.27"N 68°46'17.92"E 5) 23°04'36.30"N 68°46'53.33"E	1) 22°59'41.12"N 68°58'31.97"E	1) 22° 56'3" N 69°04'55.1"E 2) 22° 55'57" N 69°05'48.8"E 3) 22° 55'27" N 69°05'47"E 4) 22° 55'17" N 69°05'46"E 5) 22° 55'17" N 69°05'42"E 6) 22° 55'02.0" N 69°05'42"E 7) 22° 54'32.4" N 69°05'45.1"E 8) 22° 54'20" N 69°05'10"E 9) 22° 54'43" N 69°05'02"E	1) 22°53'53.19"N 69° 9'26.63"E 2) 22°53'41.63"N 69° 9'58.16"E 3) 22°52'29.66"N 69° 8'16.32"E 4) 22°52'57.10"N 69° 7'33.09"E	1) 22°47'06.02"N 69°28'44.14"E 2) 22°49'24.26"N 69°30'17.58"E 3) 22°48'25.27"N 69°26'30.78"E 4) 22°48'08.36"N 69°25'26.10"E
1.	Presence of ecologically sensitive areas/zone					
	Mangroves	Scattered locally	Nil	Nil	Nil	Nil

Sr. No.	Environmental & Social Dimensions	Pingleshwar	Suthri	Bambhdai	Bada	Modhva
	Turtle /nesting ground or hatchery / Sand dune	Turtle hatchery near Pingleshwar Beach	Sandy beach and hence turtle / Sand dune studies may be necessary	Sandy beach and hence turtle / Sand dune studies may be necessary	Sandy beach and hence turtle / Sand dune studies may be necessary. Presence of rocks in intertidal and subtidal region creates unfavorable approach towards shore.	Sandy beach and hence turtle / Sand dune studies may be necessary
	Wild life sanctuaries and distance from plant site	Kutch Bustard Sanctuary is located about 6 km.	No wild life sanctuary within 10 km of plant site	No wild life sanctuary within 10 km of plant site	No wild life sanctuary within 10 km of plant site	Nesting ground of flamingos in winter
	Rivers/Riverlets/Stream within plant.	Nairo Seasonal River	Nil	One River and stream	Nil	Nil
	Forest/ Any Reserve forest	Yes, Rapar Ghadvali, 2-2.5 Km, Ashirwandh, 10-15 Km scrub forest	Reserve Forest ~ 1 km.	Reserve Forest near about 0.5 km	Near by but outside plant boundary	Reserve Forest ~ 1 km
	Distance from Sea	~ 1 km	1 km (Further there is in between creek also)	1.5 km (Further there is in between creek also)	~ 0.8 km	~ 1.2 km
2.	Cultural Attributes					
	Religious structures, Ancient buildings identified by Archaeological Society of India	Pingleshwar Temple located at 7 km distance	Small mosque is located about 0.5 km	Shiva Temple ~ 0.5 km	Vipassana Centre ~ 0.6 km	Nil
3	Public Utilites					

Sr. No.	Environmental & Social Dimensions	Pingleshwar	Suthri	Bambhdai	Bada	Modhva
	Highways	- GJ SH 6 at 110 km away - NH41 at 15 km,	- GJ SH 6 at 110 km away - NH41 at 2-3Km.	- GJ SH 6 50 km - NH41 at 11 km,	- GJ SH 6 at 6km - NH41 at 6 km	- GJ SH 6 at 7 km
	Port	Jakhau Port ~30 km	Mundra Port ~ 97 km	Mundra Port ~ 80 km	Mundra Port ~ 70 km	Mundra Port ~ 50 km
	Railway station	Adipur ~ 138 km Bhuj ~ 108 km	Adipur ~ 116 km Bhuj ~ 100 km	Adipur ~ 100 km Bhuj ~ 97 km	Adipur ~ 116 km Bhuj ~ 87 km	Adipur ~ 92 km Bhuj ~ 62 km
	Power station/Sub station	~ 8 km	~ 10 km	~ 15 km	~ 10 km	~ 15 km
	Nearby Village, distance from the plant site, km	~ 2 km	~2 km	~ 1.2 km	~ 1 km	~ 2 km
	Fishing	No	Yes	No	No	Yes
	Any dams/check dams	~ 1 km	Check dam Sandhog River ~ 3 km	Two check dam and & culverts in northern side	Salinity ingress protection – Check dam of Vengadi (seasonal river) within 0.5 km from northern boundary.	No
	Approx. proximity to nearest City (Bhuj), km	100	120	90	70	90
4	Mineral deposits and mining activities	River sand	No	No	No	No
	General Soil/Appearance	Intertidal / sandy /expansive alluvial	Expansive alluvial nature soil	Dry and Alluvial nature soil	Sandy Loamy	Dry, Marshy suitable for Salt work expansive of alluvial soil.

Sr. No.	Environmental & Social Dimensions	Pingleshwar	Suthri	Bambhdai	Bada	Modhva
5	Plant site Classification as per Land Records of Gujarat State	Private Land of GEDA and Govt. Land	Private Land / Waste land / Gauchar/ Forest Land	Private Land/ Sarkar shree land/ Govt waste/ Santhali land	Private unirrigated agriculture land/ Sarkarshree land/Govt Land	Private Land & Govt. Land

The estimated land for the project proposal is around 1481.48 acre. The site at village Bada is considered favourable based on the environmental and logistic advantages over other four sites. The merit of the selected site is as follows:

- Availability of adequate and continuous land parcel for setting up of soda ash, Bicarbonate plant, captive Cogeneration power plant, establishing sea water/ effluent disposal facilities along with other essential associated facilities. The land is comprised of Government land /Sarkarshree/ and private unirrigated agricultural land.
- No notified ecologically sensitive area within radius of 10 km.
- No mangroves vegetation near the project site coastline/estuary.
- Sparsely populated surroundings, nearest village Bada has population of 2719 as per Census, 2011.
- No forest land within identified project site. However for seawater intake and outfall, pipeline will pass through adjoining forest land (outside plant boundary). Prior to undertake any permanent nature construction activities necessary permissions / approval shall be obtained.
- Proximity to Arabian Sea.
- No perennial river within the vicinity, only seasonal river 'Vengadi' outside North/West boundary of plant land.
- State Highway No 6 is appx. 6 km from proposed project site and easily accessible.
- Proximity to availability of raw material i.e. salt, coke, lignite, limestone etc.

In summary, the ecologically sensitive zones/areas such as wildlife sanctuaries are not located in the plant site and the site is barren land with scatter shrubs. Regulated CRZ buffer will be maintained. Sea water intake and outfall systems are permitted activity as per CRZ notification, 2011. There are no habitants existences in the plant site. The available raw materials such as limestone, salt, coal and coke can be easily transported and required quantity of seawater can be drawn from the Arabian sea due to its proximity. There is no issue of rehabilitation and resettlement as there is no habitation in the plant site.

Based on above merits, 'Bada' site has been chosen as the most suitable for setting up of proposed Chemical Complex – Soda Ash manufacturing and associated utilites/facilites.

-TRUE COPY-

ANNEXURE R/25

GHCL Limited

Date: 05/01/2023

To,
Director and Member Secretary (Industry III),
Ministry of Environment, Forest & Climate Change,
3rd Floor, Vayu Wing, Indira Paryavaran Bhavan,
Jor Bagh Road, Ali Ganj,
New Delhi- 110003.

Subject: Submission of EDS reply for obtaining Environmental Clearance for proposed Greenfield project of M/s. GHCL Limited
Ref.: EDS sought by MoEF & CC dated on 07/12/2022 (attached as Annexure – 1)
Proposal no.: IA/GJ/IND3/408164/2022

Respected Sir,
It is requested to note that point wise reply of EDS sought by MoEF&CC dated on 07/12/2022 is given as follows:

Sr. no.	EDS sought by MoEF&CC	EDS reply
1.	Please submit all the requisite documents as per CRZ Notification, 2011 and the recommendations of SCZMA.	It is requested to note that CRZ application is under scrutinization at GCZMA. We have submitted replies of the additional information sought by GCZMA in the Technical Committee presentation dated 17-01-2022 and reply of the same has been submitted to GCZMA on 29th November, 2022 along with Final EIA report. Reference of the same is attached here as **Annexure-2** for your ready reference. We will furnish GCZMA recommendations once the same is obtained.
2	Please submit the Stage-I FC for the forest land.	Online application for Forest clearance was made on 21-09-2021 under Forest (Conservation) act, 1980 to MOEFCC for diversion of 0.9689 ha Unclassified Forest land for laying seawater intake and outfall pipeline vide proposal no. FP/GJ/Others/147527/2021. The online status of the aforesaid application is "Proposal is pending at DFO due to EDS raised by State Government". Once the Stage I forest Clearance is obtained, we will submit the same. The online status be referred as **Annexure-3**. Query received from DFO seeking geotagged drawing requirement through DILR study. Proof of the same is attached as **Annexure-4.** It is under process.
3	Please upload Copy of duly signed Proceedings of Public Hearing in English in the relevant section.	We have noted your suggestion, However Proceeding size greater than 5 MB is not accepted by online portal. So, we have submitted 93 parts of proceeding into the portal. In addition to that, we have attached here Google drive link to see the sequential public hearing proceeding for your ready reference. It is attached as **Annexure-5.** Signed copy of proceeding is attached as **Annexure-6.**
4	Under Part-A, please revise Whether QCI/NABET Accredited EIA Consultant engaged?	During online proposal submission CSIR NEERI name was not appearing in drop down list so NO was selected. The proposed project "Greenfield Chemical Complex" was envisaged and conceptualized during Vibrant Gujarat Summit 2017, Govt. of Gujarat. During MOU GHCL Ltd. has committed to set up Greenfield Soda Ash facility in District Kutch, Gujarat. At the time of planning of execution of project, there was no NABET accredited Consultant for soda ash sector available. List of ACO is attached as **Annexure-7** for your reference. M/s. GHCL limited has appointed institutes of National repute like CSIR NEERI, Nagpur based on their past experience of EIA for similar nature of Greenfield Soda Ash project at Gujarat coast. The proof of the work order is attached as **Annexure-8.**

GHCL Limited

<table>
<tr><td></td><td></td><td>M/s. GHCL Limited has informed to MoEF&CC regarding the appointment of EIA consultants (CSIR NEERI) Vide Letter no. GHCL/AHD/ENV/MOEF/VND/17-18/07 dated 23-11-2017. The same is attached as Annexure-9.

It is also requested to note that all the EIA study of Soda ash industry was earlier carried out by only Chlor Alkali Approved consultant and Environmental Clearance was granted by MoEF&CC. The list of Projects is given below for reference.

<table>
<tr><th>Name of Company</th><th>Chlor Alkali accredited consultant engaged</th><th>EC granted by MoEF&CC - Date</th></tr>
<tr><td>RSPL</td><td>NEERI</td><td>12th Nov-2015</td></tr>
<tr><td>TATA chemical</td><td>J. M. EnviroNet Pvt Ltd</td><td>5th July-2019</td></tr>
<tr><td>Nirma Limited</td><td>San Envirotech Pvt Limited & Kadam Environmental Consultant</td><td>6th Aug-2021</td></tr>
</table>

After that CSIR-NEERI and GHCL Limited has also started site alternatives for the proposed Greenfield chemical complex, we have examined 5 site alternatives for proposed Greenfield chemical complex and this activity has taken significant time to finalize the proposed site and after that we have started collection of Baseline monitoring. We intended to commission plant activities at earliest but due to COVID 19 the project activities got seriously impacted and delay has been affected.

GHCL Ltd. had made an online proposal during July 2021 to MOEFCC for obtaining TOR proposal for the aforesaid project, in Covering letter of the proposal mentioned status about appointment of CSIR NEERI (Annexure-10). At the time of submission of TOR proposal, the baseline data was near completion. Hon'ble MOEFCC has raised EDS for TOR proposal. During reply of EDS we have again indicated the name of hired EIA consultant (CSIR NEERI). TOR was granted for the project on August 2021 after reply of EDS.

Based on previous preceding, we request you to consider our case and proceed for Environmental Clearance.</td></tr>
<tr><td>`5</td><td>Please upload all the QCI-NABET accreditation certificates of the Consultant for sector 4 (e) for the entire period of engagement for this EIA & EMP.</td><td>It is requested to note that CSIR NEERI consultant has been engaged during entire course of time for preparation of EIA/EMP report for category 4(e).
Looking into condition NEERI was the only organisation to carry out the study in 2017 as they were accredited for Chlor Alkali, so we have appointed them as they have carried out studies previously for similar Soda Ash plant.

List of agencies engaged is mentioned below:
<table>
<tr><th>Scope of work</th><th>Agencies</th><th>Accreditation/ Institution/ Professional expertise</th></tr>
<tr><td>EIA/EMP Study</td><td>CSIR-NEERI</td><td>Attached as Annexure-A</td></tr>
<tr><td>Marine EIA</td><td>CSIR-NIO Mumbai</td><td>Attached as Annexure-B</td></tr>
<tr><td>CRZ Mapping</td><td>IRS, Chennai</td><td>Attached as Annexure-C</td></tr>
</table></td></tr>
<tr><td>6</td><td>Please upload the NABL accreditation certificates of the laboratory for the entire study period.</td><td>Accreditation is attached as Annexure-11.</td></tr>
<tr><td>7</td><td>Please also crosscheck and ensure that all the</td><td>Undertaking is attached as Annexure-12.</td></tr>
</table>

GHCL Limited

	information and documents in the CAF & Proposal are filled/uploaded and are factually correct.	

If any confusion, feel free to contact us.

Thanking You.
Yours faithfully,
For GHCL ltd.

[N N Radia - Chief Operating officer]

Enclosure:
Annexure-1 EDS
Annexure-2 Submission proof of GCZMA requirements
Annexure-3 Online status of the proposal of Forest Clearance as on date
Annexure-4 Query Generated by DFO regarding DILR study.
Annexure-5 Google link for Public Hearing minutes
Annexure-6 Signed copy of Proceeding
Annexure-7 List of Accredited consultant organisation
Annexure-8 Work order given to CSIR NEERI
Annexure-9 Letter by GHCL Limited to MoEF&CC regarding appointment of CSIR NEERI as EIA consultant
Annexure-10 Covering letter of proposal stating CSIR NEERI as EIA consultant for the project
Annexure-11 NABL Accreditation certificate
Annexure-12 Undertaking by GHCL stating data are factually correct.

Annexure-A NABET accreditation certificate of CSIR NEERI
Annexure-B Letter from NABET to NIO
Annexure-C Notification of accredited CRZ mapping agencies

10

Search

S. No	Proposal No.	Project	SW No.	Date	Remarks	Document	Action
1	IA/GJ/IND3/408164/2022	"Greenfield Chemical Complex" of GHCL Ltd.	SW/107658/2022	Dec 7, 2022	{"last_remarks":"1. Please submit all the requisite documents as per CRZ Notification, 2011 and the recommendations of SCZMA. 2. Please submit the Stage-I FC for the forest land 3. Please upload ?Copy of duly signed Proceedings of Public Hearing in English? in the relevant section. 4. Under Part-A, please revise ?Whether QCI/NABET Accredited EIA Consultant engaged?? 5. Please upload all the QCI-NABET accreditation certificates of the Consultant for sector 4 (e) for the entire period of engagement for this EIA & EMP 6. Please upload the NABL accreditation certificates of the laboratory for the entire study period 7. Please also crosscheck and ensure that all the information and documents in the CAF & Proposal are filled/uploaded and are factually correct. ","additional_document":"http://environmentclearance.nic.in/writereaddata/Online/EDS/"}	Download	Update

Showing 1 to 1 of 1 entries

« ‹ 1 › »

GHCL Limited

Date: 29/11/2022

To,
Director(Environment) & Member Secretory,
Gujarat Coastal Zone Management Authority (GCZMA)
Forest & Environment Department,
Gandhinagar, Gujarat

Subject: Reply of Additional details required for CRZ Clearance for Greenfield Chemical Complex Seawater Intake and Effluent disposal facilities at Village- Bada, ta- Mandavi
Ref.: Email from GCZMA dated on 01/02/2022 (Annexure-1)

Respected Sir,

	Suggestion	Answer
1.	Submit final EIA report.	It is requested to note that Final Environment Impact Assessment Report with Public hearing minutes and Action plan has been submitted to Ministry of Environment, Forest and Climate Change. Acknowledgment Slip, Final EIA Report and Report of Part-C which is generated after Final EIA submission is attached as **Annexure-2.**
2.	Submit Public Hearing details.	It is requested to note that the public hearing was completed on 17-10-2022 at 11.00 Hrs. Venue: Project Site, Survey no . 432, Village: Bada, Taluka: Mandvi, District: Kutch, Gujarat. Public hearing minutes is attached as **Annexure-3** and the same have been forwarded to MOEFCC.
3.	Forest land involve in the proposed project, submit status of Forest Clearance.	It is requested to note that there is no forest land within the boundary of proposed project site. However, some part of the unclassed forest area located south of the project site outside boundary. Sea water intake and outfall pipeline will pass through underground micro tunnel in specific corridor to cross forest area. M/s GHCL has applied to MoEF & CC for Forest Diversion of 0.9689 Ha. of un-class forest land vide' proposal no. FP/GJ/Others/147527/2021. The Current status of Forest Clearance application is pending at State level. Proof of status and Forest clearance application is attached as **Annexure-4.**
4.	Submit Olive Ridley Turtle conservation plan approved from Forest Department.	GHCL Ltd have submitted Conservation Plan for Olive Ridley Turtle to CWLW department of Gujarat. Conservation plan prepared by Zoological Survey of India and Dr Bharat Jethava – QCI NABET approved expert as well as Submission proof are attached as

M.V 6/12/2022
Forests & Environment Dept.
Govt. of Gujarat Sachivalaya
New Sachivalaya, Gandhinagar

GHCL Limited

		Annexure-5.
5.	Submit sand dunes conservation plan	Conservation plan of Sand Dunes is prepared by CSIR- National Institute of Oceanography, Mumbai which is attached as **Annexure-6.**
6.	Based on submission of above details team of official will visit the site.	Noted.

We kindly request you to consider the same and do the needful for CRZ Clearance to our above stated project proposal

Thanking You.
Yours truly,

For, **M/s. GHCL Ltd**

Enclosure:

Annexure-1 Email dated 01/02/2022
Annexure-2 Part-C, Final EIA Report and Acknowledgement Slip of Final EIA submission
Annexure-3 Public Hearing Minutes
Annexure-4 Forest Clearnce application and its status
Annexure-5 Conservation plan of Olive Ridley Turtle and its submission proof
Annexure-6 Conservation plan of Sand dunes

Annexure-3

TimeLine Details

Proposal received date at each stage of flow.

A. General Details

(i). Proposal No. : FP/GJ/Others/147527/2021

(ii). Name of Project for which Forest Land is required : Greenfield Chemical Complex - Seawater intake & effluent disposal pipelines and passage for equipment movement.

(iii). Short narrative of the proposal and Project/scheme for which the forest land is required : Diversion of 0.9689 hectare of Forest Land for Seawater intake & effluent disposal pipelines and passage for equipment movement for Greenfield Chemical complex at Village : Bada of Taluka Mandavi, District Kutch.

(iv). State : Gujarat

(v). Category of the Project : Others

(vi). Shape of forest land proposed to be diverted : Linear

(vii). Area of forest land proposed for diversion(in ha.): 0.9689

B. Time Line

Proposal No.	Submitted by User Agency	Query for Shortcoming(if any) by Nodal Officer	Resubmission of Proposal by User Agency	Query by Nodal Officer for submitting Hard Copies	Uploading(by U.A.) of copies of receipt received from DFO & DC	Division	Circle	Nodal Office	State Government	Regional Office	Stage-I Approval on	Stage-II Approval on
FP/GJ/Others/147527/2021	21/09/2021	aa		24/09/2021	06/10/2021	**Kutch-West** :06/10/2021	**Kutch Circle** : 07/01/2022 (**Kutch-West**)	**Gujarat** : 28/01/2022	**Gujarat**: 04/02/2022			

C. Essential Details Sought History

Communication between Regional Office & State Government	Communication between State Government & Nodal Officer	Communication between Nodal Officer & Circle	Communication between Circle & Division	Communication between Division & User Agency
	Query raised by State Government (Gujarat) on:**08/12/2022**	Query raised by Nodal Officer (Gujarat) on:**15/12/2022**	Query raised by Circle (Kutch Circle) on:**11/01/2022** Replied by DFO (Kutch-West) on:**24/01/2022** Query raised by Circle (Kutch Circle) on:**19/12/2022** Replied by DFO () on:	Query raised by DFO (Kutch-West) on:**11/10/2021** Replied by UA on :**26/10/2021** Query raised by DFO (Kutch-West) on:**26/10/2021** Replied by UA on :**18/11/2021** Query raised by DFO (Kutch-West) on:**25/11/2021** Replied by UA on :**15/12/2021** Query raised by DFO (Kutch-West) on:**02/01/2023** Replied by UA on :

NOTE:- Proposal is pending at **User Agency** due to EDS raised by **State Government** .

1497

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ક્રમાંક:અ/જમન/૨.૧૧/3૬૬૮/૨૦૨૨-૨૩
નાયબ વન સંરક્ષકશ્રીની કચેરી,
કચ્છ પશ્ચિમ વન વિભાગ,
અરિહંતનગર રોડ, ભુજ.
ફોન નં.-૦૨૮૩૨ ૨૩૧૫૨૭
e-mail: dcfwest@gmail.com
તા.૦૮/૧૧/૨૦૨૨.

પ્રતિ,
ચીફ ઓપરેટીંગ ઓફીસરશ્રી,
જી.એચ.સી.એલ.લીમીટેડ,
જી.એચ.સી.એલ હાઉસ,સ્વસ્તિક સોસાયટી,
પંજાબી હોલ સામે,નવરંગપુરા,અમદાવાદ
ગુજરાત-૩૮૦ ૦૦૯

વિષય:- Diversion of 0.9689 hectare of Forest land for laying part of Seawater intake and effluent disposal pipelines and passage for related construction equipment movement in kachchh District in favour of Chief operating Officer,GHCL,Ahmedabad.

સંદર્ભ:- અધિક અગ્ર મુખ્ય વન સંરક્ષકશ્રી,જમીન,ગુ.રા.,ગાંધીનગરના પત્રાંક:જમન/૨૯-બી/બ/૫૬૬૩-૬૪ તા.૧૧/૧૦/૨૦૨૨ (નકલ સામેલ)

જય ભારત સાથે ઉપરોક્ત વિષયે જણાવવાનું કે,અધિક અગ્ર મુખ્ય વન સંરક્ષકશ્રી,જમીન, ગુ.રા., ગાંધીનગરના સંદર્ભ દર્શિત પત્રથી મળેલ સુચના મુજબ તેઓના માંગણીવાળા વિસ્તારનો અક્ષાંક્ષ-રેખાંશ સાથેનો ડી.આઇ.એલ.આર.શ્રી દવારા અધિકૃત કરેલ માપણીશીટ તેમજ કે.એમ.એલ.ફાઇલ સાથેનો વિગતવાર અહેવાલ અત્રે સાદર કરવા જણાવવામાં આવે છે.

બિડાણ:- ઉપર મુજબ

(વાય.એસ.ઝાલા)
નાયબ વન સંરક્ષક
કચ્છ પશ્ચિમ વન વિભાગ,ભુજ

નકલ રવાના: રેન્જ ફોરેસ્ટ ઓફીસરશ્રી,માંડવી તરફ જાણ તથા ઉપરોક્ત બાબતે જરૂરી કાર્યવાહી સારૂ.

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GUJARAT POLLUTION CONTROL BOARD

Regional Office : Kutch - West

Katira Complex-1, Manglam Char Rasta, Sanskar Nagar, Bhuj-Kutch : 370 001.
Ph. No. 02832-250620. email : ro-gpcb-kutw@gujarat.gov.in xgn site:gpcbxgn.gujarat.gov.in

NO: GPCB/RO-KUTCH (WEST)/PH/T-27(110)/765 Date: 24 NOV 2022

To,
The Member Secretary,
Gujarat Pollution Control Board,
"Paryavaran Bhavan", Sector 10-A,
Gandhinagar -382010. **(Kind Attn: Smt.D.P.Shah, Senior Environment Engineer)**

Sub: Proceeding of Public Hearing for "**M/s GHCL Limited for 11,00,000 TPA Light Soda Ash, 5,00,000 TPA Dense Soda Ash, 2,00,000 TPA Sodium Bicarbonate, 120 Captive Co-Generation Power Plant, at Village. Bada, Ta. Mandvi, Dist. Kutch**" covered under project **Category "A"** as mentioned in their request application.

Ref: GPCB HO letter No. GPCB/PH/2022-23/Kutch (West)-184/681152, dated. 23/08/2022.

Respected Sir,

In context to the above mentioned subject and reference, the Public Consultation of M/s GHCL Limited for 11,00,000 TPA Light Soda Ash, 5,00,000 TPA Dense Soda Ash, 2,00,000 TPA Sodium Bicarbonate, 120 Captive Co-Generation Power Plant, at Village. Bada, Ta. Mandvi, Dist. Kutch, project category 'A' was scheduled to be held on 06/04/2022 at 11:00 Hrs, Venue: GHCL Project Site, Survey No. 432, Village: Bada, Taluka: Mandvi, Dist. Kutch. Public hearing is time being postponed due to unavoidable circumstances and now the Public Hearing was held on 17/10/2022 at 11.00 hrs, Venue: GHCL Project Site, Survey No. 432, Village: Bada, Taluka: Mandvi, Dist. Kutch. Please find enclosed herewith the proceeding of Public Consultation. This is for your information and necessary action please.

Thanking you.

Yours Sincerely,

T.C. Barmeda

(T.C. Barmeda)
Regional officer

Encl:

Two sets of proceeding along with,
(1) Annexure-A, B & B1, C-1 to C-1154 (English & Gujarati), D-1 to D-1154 (English & Gujarati).
(2) Video CD of Public Consultation.
(3) CD of all Documents.

GUJARAT POLLUTION CONTROL BOARD
Regional Office –Kutch (West)
Katira Complex-1, Magalam Char Rasta, Sanskar Nagar,
Bhuj- 370001, Phone: (02832) 250620
E- mail: ro-gpcb-kutw@gujarat.gov.in

PUBLIC HEARING PROCEEDING

As per the provision of Notification No. S.O.1533 (E) dated 14/09/2006 and its subsequent amendment thereof, Ministry of Environment, Forest & Climate Change, Government of India, New Delhi, Public Hearing has been conducted for M/s. GHCL Limited for Proposed the Soda Ash Plant (1) Light Soda Ash Plant – 11,00,000 TPA, (2) Dense Soda Ash Plant @ 5,00,000 TPA, (3) Sodium Bicarbonate @ 2,00,000 TPA with solid fuel based Captive Cogeneration Power Plant @ 120 MW capacity at Village: Bada, Taluka: Mandvi, District: Kutch, covered under Project category "A" as mentioned in their request application.

The Public Hearing was scheduled to be held on 06/04/2022 at 11:00 Hrs, Venue: Project Site, Survey No. 432, Village: Bada, Taluka: Mandvi, Dist. Kutch. Public hearing was time being postponed due to unavoidable circumstances and now the Public hearing is scheduled to be held on 17/10/2022 at 11:00 Hrs, Venue: Project Site, Survey No. 432, Village: Bada, Taluka: Mandvi, Dist. Kutch.

A copy of the Draft Environment Impact Assessment report and Executive Summary of Draft Environment Impact Assessment report both in English and Gujarati were sent to the following authorities or offices to make available the draft EIA report for inspection to the public during normal office hours, till the Public Hearing is over.

1. The District Collector Office, Bhuj, Dist. Kutch
2. District Development Office, Bhuj, Dist.: Kutch
3. District Industry Centre, Bhuj, Dist.: Kutch
4. The Taluka Development Office, Ta. Mandvi, Dist. Kutch
5. Regional Officer, Integrated Regional Office, Ministry of Environment, Forests and Climate Change (MoEF & CC), Room No. 407, Aranya Bhavan, Near CH-3 Circle, Sector – 10A, Gandhinagar, Gujarat – 382010.
6. Regional Office, Gujarat Pollution Control Board (Kutch-West), Katira Complex – 1, Near Mangalam Char Rasta, Sanskarnagar, Bhuj, Kutch – 370001.

Also, Executive Summary in Gujarati language was send to Talaticum Mantri of 12 villages for widespread publicity of Public Hearing. Other concerned person having plausible stake in environmental aspects were requested to send their responses in writing to the concern regulatory authorities.

Announcement of Public Hearing was also made through loudspeaker and banners on auto rickshaws and the rickshaw was also rotated in the villages of the study area before the Public Hearing on dated 15/10/2022 & 16/10/2022.

The advertisement was published in earlier Gujarati Newspapers **"Divya Bhaskar"** on dated 03/03/2022 and in English Newspaper **"The Times of India"** on dated 04/03/2022. Re advertisement was published on Gujarati Newspapers **"Divya Bhaskar"** on dated 30/09/2022 and in English Newspaper **"The Times of India"** on dated 01/10/2022.

GUJARAT POLLUTION CONTROL BOARD
Regional Office –Kutch (West)
Katira Complex-1, Magalam Char Rasta, Sanskar Nagar,
Bhuj- 370001, Phone: (02832) 250620
E- mail: ro-gpcb-kutw@gujarat.gov.in

Shri. Chetan Misan (G.A.S), Sub Divisional Magistrate and Deputy Collector, Mundra, Kutch supervised and presided over the entire Public Hearing process.

A statement showing list of participants present during the Public Hearing is enclosed as **Annexure A.**

A statement showing salient points highlighting issues raised by the participants and responded by the representative of the applicant during the Public Hearing in English language is enclosed as **Annexure B** and in Gujarati language is enclosed as **Annexure B1.**

Statement showing responses and comments received in written, with respect to aforesaid public notice before and during the Public Hearing are enclosed as **Annexure C (C-Q-1 to C-Q-1154)** and replies given by project proponent with respect to these response and comments received in writing are enclosed as **Annexure D (D-A-1 to D-A-1154).**

Annexure E (E1 to E4) contains the advertisement published in Gujarati Newspapers **"Divya Bhaskar"** and in English Newspaper **"The Times of India"**. It also contains acknowledgement copies of EIA Report and Executive Summary submitted to authorities and Executive Summary submitted to village panchayat offices and photographs of announcement on microphone in the affected villages falling within 10 km radius of the proposed project area.

Place:
Project site,
Survey No. 432,
Village: Bada,
Taluka: Mandvi,
District: Kutch

Date: 17.10.2022

T. C. Barmeda
Regional Officer
GPCB Kutch (West) as
Representative of the Member
Secretary, GPCB

Chetan Misan (G.A.S)
Sub Divisional Magistrate &
Deputy Collector,
Mundra-Kutch

Encl.:

1. Annexure A, B, B1, C, D & E as above.
2. Video DVD containing videography of Public Hearing.
3. CD containing PDF file of Minutes of Meeting (MOM) of the PH proceeding and Annexures.

List 'A' – Accredited EIA Consultant Organizations complying with Version 3 of the Scheme - as on August 08, 2017 (#)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
1	**Aadhi Boomi Mining and Enviro Tech Private Limited** (formerly known as Suriya Mining Services) **Address:**3/216, K.S.V.Nagar, Narasothipatti, Salem-636004 **Email:**suriyakumarsemban@gmail.com **Tel.:**09842729655, 09443290855 *Conditions apply*	1	Mining of minerals – opencast only	A	1 (a) (i)
			Mining of minerals – underground only	B	
		38	Building and construction projects	B	8(a)
2	**Aakhivi Consultants** **Address:**57 C, Block E5, Shatabdi Vihar, Sector 52, Noida, UP - 201 308 **Email:**aakhivi.2016@gmail.com	4	Thermal power plants	A**	1 (d)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Tel.:08409580043; 07210434847 *** Though the EIA Coordinator for this sector was found suitable for Cat. A, the organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment. They can take up projects in this sector only for Cat. B as an organization.* *Conditions apply*				
3	**Aarvee Associates Architects Engineers & Consultants Pvt. Ltd.** **Address:** 8-2-5, Ravula Residency Srinagar Colony, Hyderabad **E.mail:** aarvee@aarvee.net, kprasad@aarvee.net, water@aarvee.net **Tel.:** 040-23737633	1	Mining of minerals including opencast/ underground mining	A	1 (a) (i)
		3	River Valley projects	A	1 (c)
		4	Thermal power plants	A	1 (d)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2 & 3 of	B	6 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Conditions apply		MSIHC Rules 1989 amended 2000)		
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes	B	7 (c)
		34	Highway	A	7 (f)
4	**ABC Techno Labs India Private Limited** (formerly known as ABC Environ Solutions Pvt. Ltd.) **Address:** # 400, 13th Street, SIDCO Industrial Estate (North Phase), Ambattur, Chennai - 600098 **E-mail:**abc@abctechnolab.com, info@abctechnolab.com **Tel.:** 044-26161123/24/25/26 91 95660 55555 and 91 95660 67777 *Conditions apply*	1	Mining of minerals - Opencast only	A	1 (a) (i)
			Mining of minerals – Underground only	B	
		2	Offshore and onshore oil and gas exploration, development & productions	A	1 (b)
		3	River Valley projects - Irrigation projects only	A	1 (c)
		4	Thermal power plant	A	1 (d)
		7	Mineral beneficiation	B	2 (b)
		8	Metallurgical industries (secondary ferrous only)	B	3 (a)
		10	Petroleum refining industry	A	4 (a)
		15	Leather/skin/hide processing industry	A	4 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		16	Chemical Fertilizers	A	5 (a)
		18	Petro-chemical complexes (industries based on processing of petroleum fractions & natural gas and /or reforming to aromatics)	A	5 (c)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		22	Distilleries	A	5 (g)
		25	Sugar Industry	B	5 (j)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/sanctuaries/ coral reefs/ecologically sensitive areas including LNG terminal	A	6 (a)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		29	Air ports	A	7 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes	B	7 (c)
		33	Ports, harbours, jetties, marine terminals, break waters and dredging	A	7(e)
		34	Highways	A	7 (f)
		36	Common effluent treatment plants (CETPs)	B	7 (h)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
5	**Aditya Environmental Services Pvt. Ltd.** **Address:** 107, Hiren Light Industrial Estate, Mogul Lane, Mahim, Mumbai – 400016 **Email:**rajiv@aespl.co.in **Tel:** 022- 24456473/ 42127500, 09821513367	1	Mining of minerals including opencast/ underground mining	A	1 (a) (i)
		4	Thermal power plants	A	1 (d)
		9	Cement Plants	A	3(b)
		17	Pesticides industry and pesticide specific intermediates (excluding formulations)	A	5 (b)
		20	Petrochemical based processing (processes other than cracking &	A	5 (e)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Conditions apply		reformation and not covered under the complexes)		
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		31	Industrial estates/ parks/ complexes/ Areas, export processing Zones (EPZs), Special economic zones (SEZs), Biotech Parks, Leather Complexes	A	7 (c)
		32	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	A	7 (d)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		34	Highways	A	7 (f)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
6	**AECOM India Pvt. Ltd.**	1	Mining of minerals including Open	A	1 (a) (i)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Address: 9/F, Infinity Tower – 'C', DLF Cyber City, DLF Phase – II, Gurgaon – 122002 **E-mail:** Somnath.Mukherjee@aecom.com **Tel.:** 0124-2816000/36, 09810502990 *Conditions apply*		cast/ Underground mining		
		2	Offshore and onshore oil and gas exploration, development & productions	A	1 (b)
		3	River Valley projects	A	1 (c)
		4	Thermal power plants	A	1 (d)
		9	Cement plants	A	3 (b)
		16	Chemical Fertilizers	A	5 (a)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		29	Air ports	A	7 (a)
		31	Industrial estates/ parks/ complexes/ Areas, export processing Zones (EPZs), Special economic zones (SEZs), Biotech Parks, Leather Complexes	A	7 (c)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		34	Highways	A	7 (f)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
7	**Allied Engineering and Consultancy Services** **Address:** 95/S, Kankulia Road, Kolkata-700029 **E-mail:** spsengupta13@gmail.com **Tel.:** 94333-48858	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		6	Coal Washeries	A	2 (a)
		7	Mineral beneficiation including pelletisation	A	2 (b)
8	**Amaltas Enviro Industrial Consultants Ltd.** **Address:** B-1/1244, Vasant Kunj, New Delhi-110 070 **E-mail:** amaltascon@gmail.com , dev.env81@gmail.com	1	Mining of minerals including Open cast/ Underground mining	B	1 (a) (i)
		4	Thermal power plants	B	1 (d)
		9	Cement plants	B	3 (b)
		34	Highways	A	7 (f)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Tel.: 011-41848475/4188476/+919873991919 *Conditions apply*				
9	**Anacon Laboratories Pvt. Ltd.** **Address:** 60, Bajiprabhu Nagar, Nagpur – 440033 **E-mail:** anaconngp@gmail.com **Tel.:** 0712 – 2242077, 09373104416 *Conditions apply*	1	Mining of minerals - Open cast only	A	1 (a) (i)
		3	River Valley projects	B	1 (c)
		4	Thermal power plants	A	1 (d)
		6	Coal Washeries	A	2 (a)
		8	Metallurgical industries (ferrous only)- both primary & secondary	A	3 (a)
		9	Cement plants	A	3 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		22	Distilleries	B	5 (g)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		29	Air ports	A	7 (a)
		34	Highways	A	7 (f)
		36	Common effluent treatment plants (CETPs)	B	7 (h)
		38	Building and construction projects	B	8 (a)
10	**Anand Consultants** **Address:** 16, Everest Tower, B/h Jain Temple, Nr. Ankur Society, Ahmedabad – 380013 **E-mail:** environment@dataone.in pollutioncontrol@dataone.in	4	Thermal power plants	A	1 (d)
		9	Cement Plant	A	3(b)
		17	Pesticides industry and pesticide specific intermediates (excluding formulations)	A	5 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding	A	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Tel.: 09825011748 *Conditions apply*		drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)		
		38	Building and construction projects	B	8 (a)
11	**Apex Mintech Consultants** **Address:** 21, Ravindra Nagar Opp. Working Women Old Hostel, 'C' – Class, Pratapnagar, Udaipur **E-mail:** rkminerals_udr@yahoo.com **Tel.:** 0294- 2490760/ 2490803 09829161803, 09352995558 *Conditions apply*	1	Mining of minerals (Open cast only)	A	1 (a) (i)
12	**Aplinka Solutions & Technologies Private Limited** **Address** -A-48, Ground Floor, Sector-64, Noida -201301	1	Mining of minerals (opencast only)	A	1 (a) (i)
		31	Industrial estates/ parks/ complexes/areas, export processing Zones (EPZs), Special Economic Zones	B	7 (c)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	E-mail: director@aplinka.in info.aplinkasolutions@gmail.com **Tel.:** 0120-4540584 Mobile: +91-8375955991 *Conditions apply*		(SEZs), Biotech Parks, Leather Complexes		
		34	Highways	A	7 (f)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
13	**Aracadis India Pvt limited** (Formerly known as Senes Consultants India Pvt. Ltd.) **Address:** 1st Floor Tower B, Logix Techno Park, Plot No. 5, Sector 127, Noida **e. mail:** mhazra@senesindia.com **Tel.:** 0120 – 4368400 09810881710	2	Offshore and onshore oil and gas exploration, development & production	A	1 (b)
		3	River Valley Projects	A	1 (c)
		4	Thermal power plants	A	1 (d)
		9	Cement plants	A	3 (b)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/ coral reefs/ ecologically sensitive Areas including LNG terminal	A	6 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Conditions apply	31	Industrial estates/ parks/ complexes/Areas, export processing Zones(EPZs), Special economic zones(SEZs), Biotech Parks, Leather Complexes	A	7 (c)
		33	Ports, harbors, break waters and dredging	A	7(e)
		34	Highways	A	7 (f)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
14	**Ascenso Enviro Private Limited** (Earlier known as Ascenso Management & Consulting Services Pvt. Ltd.) **Address:**D-79, 2nd Floor, Sector - 6, Noida - 201 301 **E-mail:** purushottam@amcgroup.co.in	1	Mining of minerals - Open cast only	A	1 (a) (i)
		6	Coal washeries	B	2 (a)
		7	Mineral beneficiation including pelletisation	B	2 (b)
		9	Cement Plants	A	3 (b)
		22	Distilleries	A	5 (g)
		34	Highways	A	7 (f)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Tel.: 99581 49985 *Conditions apply*	38	Building and construction projects	B	8 (a)
		39	Townships and Area Development projects	B	8 (b)
15	**Asian Consulting Engineers (Pvt.) Ltd.** **Address:** 66, Hemkunt Colony, 2nd Floor, New Delhi – 110048 **e. mail:** amahajan@asianconsulting.org **Tel.:** 011- 41634926 09312693905 *Conditions apply*	2	Offshore and onshore oil and gas exploration, development & production	A	1 (b)
		3	River valley projects	A	1 (c)
		7	Mineral beneficiation including pelletisation	A	2 (b)
		8	Metallurgical industries - (ferrous & nonferrous) - both primary & secondary	A	3 (a)
		16	Chemical Fertilizers	A	5 (a)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		34	Highways	A	7 (f)
		38	Building and construction projects	B	8 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
16	**Aqura Enviro Projects Pvt. Ltd** (formerly Known as Aqura Labs Pvt. Ltd.) **Address:** Suit 414, 4th Floor, North Block Tower-1,World Trade Park, J.L.N. Marg, Malviya Nagar, Jaipur-302017 Tel::0141-2728123, 2728051 **E. mail**:prashant.wagh@aquralabs.com *Conditions apply*	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		3	Irrigation projects only	B	1 (c)
		4	Thermal Power Plant	B	1 (d)
		8	Metallurgical industries (ferrous & nonferrous)- both primary & secondary	B	3 (a)
		9	Cement Plants	A	3 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	B	5 (f)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		33	Ports, harbours, break waters and dredging	A	7(e)
		34	Highways	A	7 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
17	**B. S. Envi – Tech (P) Ltd.** **Address:**12-13-1270/71/73, 'Amity Ville', 4th Floor, St. Ann's Road, Tarnaka, Secunderabad – 500017 **e. mail:** bsenvitech@gmail.com **website:**www.bsenvitech.com **Tel.:** 040-49783062/27016806 **Fax :**040-49783063 *Conditions apply*	1	Mining of minerals including Open cast & Underground mining	A	1 (a) (i)
		4	Thermal power plants	A	1 (d)
		7	Mineral Beneficiation including pelletisation	A	2 (b)
		8	Metallurgical industries (ferrous & non-ferrous) - both primary and secondary	A	3 (a)
		9	Cement plants	A	3 (b)
		11	Coke oven plants	B	4 (b)
		12	Asbestos milling and asbestos based products	A	4 (c)
		22	Distilleries	A	5 (g)
		25	Sugar Industry	B	5 (j)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
18	**Bhagavathi Ana Labs Pvt. Limited**	1	Mining of minerals including Open cast/ Underground mining	A	1 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Address: Plot No. 7-2-C14, Industrial Estate, Sanath Nagar, Hyderabad-500018, Telangana **e.mail:** shyam.sundar@in.bureauveritas.com bhavna.polimera@in.bureauveritas.com **Tel.:** 91-40-23803800, +91-40-23803808, +91-40-23803813; 09391116139 *Conditions apply*	2	Offshore and Onshore oil and gas exploration, development & production	A	1 (b)
		4	Thermal power plants	A	1 (d)
		6	Coal washeries	B	2 (a)
		7	Mineral beneficiation including pelletisation	A	2 (b)
		8	Metallurgical industries (ferrous & non ferrous) - both primary and secondary	A	3 (a)
		9	Cement plants	A	3 (b)
		10	Petroleum refining industry	A	4 (a)
		11	Coke oven plants	B	4 (b)
		16	Chemical fertilizers	A	-
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including	A	6 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			LNG terminal		
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes	A	7 (c)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
19	**Bhagwati Enviro Care Pvt. Ltd.** **Address:** 28, 29, 30, Parmeshwar Estate – II, Phase I, GIDC Estate, Vatva, Ahmedabad – 382445 **E-mail:** bhagwatienvirotech5@gmail.com bhagwatienviro@yahoo.com **Tel.:** 079- 40083051/ 25834567 09824051541 *Conditions apply*	1	Mining of Minerals- Open Cast only	B	1 (a) (i)
		8	Metallurgical industries (ferrous & non-ferrous)	B	3 (a)
		17	Pesticides industry and pesticide specific intermediates (excluding formulations)	A	5 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		38	Building and construction projects	B	8 (a)
20	**Building Environment (India) Pvt. Ltd.** **Address:** Office no. 401, 4th Floor, Dakshana Building, Near Raigad Bhavan, Sector 15, CBD Belapur, Navi Mumbai 400 614. **E-mail:** hkolatkar@buildingenvironmentindia.com **Tel.:** 022-27578554 09820522779 *Conditions apply*	2	Offshore and Onshore oil and gas exploration, development & production	A	1 (b)
		4	Thermal power plants	A	1 (d)
		9	Cement plants	B	3 (b)
		10	Petroleum refining industry	A	4 (a)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	B	5 (f)
		24	Pulp & paper industry excluding manufacturing	A	5(i)
		25	Sugar Industry	B	5(j)
		31	Industrial estates/ parks/ complexes/ Areas, export processing Zones (EPZs), Special economic zones (SEZs), Biotech Parks, leather Complexes	A	7 (c)
		33	Ports, harbours, break waters and dredging	A	7(e)
		34	Highways	A	7 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
21	**Center for Environment, Health and Safety** **Address:** Department of Civil Engineering Faculty of Engineering and Technology Annamalai University, Annamalai Nagar – 608002 **E-mail:** centreforehs@gmail.com nehrukumar.v.158@annamalaiuniversity.ac.in **Tel:** 04144-238731, 09443223091 *Conditions apply*	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		3	River Valley Projects	A	1 (c)
		9	Cement plants	A	3 (b)
		22	Distilleries	A	5 (g)
		31	Industrial Estates/ parks/ complexes/ Areas, export processing Zones (EPZs), Special economic zones (SEZs), Biotech Parks, Leather Complexes	A	7 (c)
		32	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	A	7 (d)
		33	Ports, harbours, break waters and dredging	B	7 (e)
		36	Common effluent treatment plants (CETPs)	B	7 (h)
22	**Central Institute of Mining and Fuel Research**	1	Mining of minerals including Open	A	1 (a) (i)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			cast/ Underground mining		
	Address: Barwa Road, Dhanbad, Jharkhand- 826015 **E.mail:** kbsingh.cimfr@gmail.com **Tel.:** 0326-2296023, 2296021 09431910845 *Conditions apply*	6	Coal Washeries	A	2 (a)
23	**Central Mine Planning & Design Institute Limited** **Address:** Gondwana Place, Kanke Road, Ranchi, Jharkhand – 834031 **E-mail:** gmenv.cmpdi@yahoo.co.in **Tel.:** 0651- 2230055/ 2792339 09934010057 *Conditions apply*	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		4	Thermal Power Plants	A	1(d)
		6	Coal Washeries	A	2 (a)
24	**Centre for Envotech and Management Consultancy Private Limited**	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
			Mining of minerals- open cast only	A	1 (a) (i)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Address: Plot No-N5/305, IRC Village, Nayapalli, Bhubaneswar – 751015 **E-mail:** cemc_consultancy@yahoo.co.in **Tel.:** 0674-2556444 09861032826 *Conditions apply*	3	Irrigation projects only	A	1 (c)
		4	Thermal power plants	A	1 (d)
		6	Coal Washeries	A	2 (a)
		7	Mineral beneficiation including pelletisation	A	2 (b)
		8	Metallurgical industries (ferrous & nonferrous) – both primary and secondary	A	3 (a)
		9	Cement plants	A	3 (b)
		33	Ports, harbours, break waters and dredging	B	7 (e)
		34	Highways	A	7 (f)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
25	**Chandigarh Pollution Testing Laboratory –EIA Division** **Address:** E-126, Phase VII, Industrial Area, Mohali (Punjab), Pin- 160055 **E-mail:** cptleia@gmail.com cptle126@gmail.com	8	Metallurgical industries (ferrous only)	B	3 (a)
		9	Cement plants	B	3 (b)
		16	Chemical fertilizers	A**	5 (a)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates **excluding** drug formulations; synthetic rubbers; basic organic chemicals, other	B	5 (f)

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		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Tel.: (+91) 0172 – 4669295, 5090312; Mobile: 99885-77295/99881-27295 *Conditions apply* *** Though the EIA Coordinator for these sectors were found suitable for Cat. A, the organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment. They can take up projects in these sectors only for Cat. B as an organization.*		synthetic organic chemicals and chemical intermediates)		
		22	Distilleries	A**	5 (g)
		24	Pulp & paper industry excluding manufacturing of paper from wastepaper and manufacture of paper from ready pulp without bleaching	A**	5 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8(b)
26	**Cholamandalam MS Risk Services** **Address:** Dare House, IInd Floor, 2-NSC Bose Road, Chennai- 600001 **e.mail:**subbaraoNV@cholams.murugappa.com **Tel.:** 044-30445620 09840018455	1	Mining of minerals Open cast mining only	B	1 (a) (i)
		4	Thermal power plants	A	1 (d)
		9	Cement plants	A	3 (b)
		10	Petroleum refining industry	A	4 (a)
		16	Chemical Fertilizers	A	5 (a)
		18*	Petro-chemical complexes (industries based on processing of petroleum fractions & natural gas and/or reforming to aromatics)	A	5 (c)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Conditions apply	21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		24	Pulp & paper industry excluding manufacturing of paper from waste paper and manufacture of paper from ready pulp without bleaching	A	5 (i)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		38	Building and construction projects	B	8 (a)
27	**Cognizance Research India Pvt. Ltd.** **Address:** GT – 20, Sector-117, Noida **E-mail**: criplindia@gmail.com **Tel.:** 9958486431,9953843815 *Conditions apply* *** Though the EIA Coordinator for these sectors*	1**	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		6**	Coal washeries	A	2 (a)
		7**	Mineral Beneficiation	A	2 (b)
		34	Highways	B	7 (f)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	were found suitable for Cat. A, the organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment. They can take up projects in these sectors only for Cat. B as an organization.				
28	**Consulting Engineers Group Ltd.** **Address:** B-11(G), Malviya Industrial Area, Jaipur-302 017 **E-mail**: ceg@cegindia.com **Tel.:** 0141-2751801, 2751802 *Conditions apply*	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		3	River Valley, Hydel, Drainage and Irrigation projects	A	1 (c)
		8	Metallurgical industries (non-ferrous) – both primary and secondary	B	3 (a)
		34	Highways	A	7 (f)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
29	**Creative Engineers & Consultants** **Address:** 9 B/4, Bharathwajar Street, East Tambaram, Chennai – 600059 **E-mail:** cecgiri@yahoo.com	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		4	Thermal power plants	A	1 (d)
		7	Mineral beneficiation including pelletisation	A	2 (b)
		9	Cement plants	A	3 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Tel.: 044- 22395170 09444133619 *Conditions apply*				
30	**Creative Enviro Services** **Address:** SR – 4, Shri Ram Kunj, E – 8 Bharat Nagar, Shahpura, Bhopal (MP) – 462039 **E-mail:** creative5@rediffmail.com creative.bpl@gmail.com umeshmishra70@rediffmail.com **Tel.:** 0755 – 4299319, 4243510 09425009319 *Conditions apply*	1	Mining of minerals Underground mining	A	1 (a) (i)
		4	Thermal power plants	B	1 (d)
		7	Mineral Beneficiation	B	2 (b)
		8	Metallurgical industries (ferrous & nonferrous) – both primary and secondary	A	3 (a)
		9	Cement plants	A	3 (b)
		16	Chemical Fertilizers	B	5 (a)
		22	Distilleries	A	5 (g)
		38	Building and construction projects	B	8 (a)
31	**Crystal Consultants** **Address:** Kshitij, Kashyap Vihar, Opp. Ashok Nagar, Road No. 3, Ranchi-834002 **E-mail:**shishirkumar18@gmail.com;	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		34	Highways	A	7 (f)
		36	Common Effluent Treatment Plants (CETPs)	B	7 (h)

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		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	crystalconsultants2006@gmail.com Tel.: 09661806121 *Conditions apply*	37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
32	**Desein Private Limited** **Address:** Consulting Engineers, Desein House, Greater Kailash – II, New Delhi - 110048 **E-mail:** pjha@deseinindure.com **Tel.:** 011 – 41891456 09810218464 *Conditions apply*	4	Thermal power plants	A	1 (d)
33	**Detox Corporation Pvt. Ltd.** **Address:** 3rd Floor, K. G. Chamber, Opp. Gujarat Samachar Press, Udhana Darwaja, Ring Road, Surat – 395002	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		2	Offshore & Onshore Oil and gas exploration, development & production	A	1 (b)
		4	Thermal power plants	A	(d)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	e. mail: info@detoxcorp.com **Tel.:** 0261 – 2351248 09824102866 *Conditions apply*	8	Metallurgical industries (Ferrous only) – both primary & secondary	A	3 (a)
		18	Petro-chemical complexes (industries based on processing of petroleum fractions & natural gas and/or reforming to aromatics)	A	5 (c)
		19	Manmade fibers manufacturing	A	5 (d)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	B	5 (f)
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes	A	7 (c)
		32	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	A	7 (d)
		33	Jetties and dredging	A	7 (e)
		36	Common effluent treatment plants (CETPs)	B	7 (h)
		38	Building and construction projects	B	8 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		39	Townships and Area development projects	B	8 (b)
34	**Development Consultants Private limited** **Address:** 24 Park Street, Kolkata – 700016 **E-mail:**swapanc@in.dclgroup.com; arindas@in.dclgroup.com **Tel.:** 033-4012-5448, 09830558701 *Conditions apply*	1	Mining of minerals - Open cast only	A	1 (a) (i)
		4	Thermal power plants	A	1 (d)
		8	Metallurgical industries (ferrous and non-ferrous) - both primary & secondary	B	3 (a)
		9	Cement plants	B	3 (b)
		18	Petro-chemical complexes (industries based on processing of petroleum fractions & natural gas and/or reforming to aromatics)	A	5 (c)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		38	Building and construction projects	B	8 (a)
35	**Dr. Subbarao's Environment Centre** (formerly Known as Water and waste water research Centre) **Address:** "Arundhati", MSEB Rd, Opp., Sahyognagar, Vishrambag, Sangli- 416415	21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other	A	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	E-mail: bssubbarao@yahoo.com **Tel.:** 02332301857,09372109522 *Conditions apply*		synthetic organic chemicals and chemical intermediates)		
		22	Distilleries	A	5 (g)
		24	Pulp & paper industry excluding manufacturing of paper from wastepaper and manufacture of paper from ready pulp without bleaching	A	5 (i)
		25	Sugar Industry	B	5 (j)
36	**Earthcare Labs Private Limited** **Address:** "Nisarg", First Floor, Plot No. 16, Prashant Nagar, Near Ajni Square, Wardha Road, Nagpur – 440015 **E-mail:**earthcarelabs@rediffmail.com **Tel.:** 0712- 2251470 09822203750 *Conditions apply*	1	Mining of minerals	B	1 (a) (i)
		3	River Valley projects	B	1 (c)
		4	Thermal power plants	B	1 (d)
		8	Metallurgical industry (Ferrous only)	B	3 (a)
		9	Cement plants	B	3 (b)
		36	Common Effluent Treatment Plants (CETPs)	B	7 (h)
		39	Townships and Area development projects	B	8 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
37	**Earth Protection Group Environmental Consultants Pvt Ltd.** **Address:** 4-D/620 B, Sector 4, Gomti Nagar Extension, Lucknow- 226010 **E-mail:** epgec@yahoo.co.in; epgec1@gmail.com **Tel.:** 09415011152 *Conditions apply*	15	Leather/ skin/ hide processing industry	A	4 (f)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		38	Building and construction projects	B	8 (a)
		40 (i)	Automobile and Auto Components	-	-
38	**Eco Chem Sales & Services** **Address:** Office Floor, Ashoka Pavillion-A, Opp. Kapadia Health Club, New Civil Road, Surat – 395001 **E-mail**: eco@ecoshripad.com **Tel.:** 0261 – 2231630, 2236223 09227934111	1	Mining of minerals (Open Cast only)	A	1 (a) (i)
		2	Offshore and onshore oil and gas exploration, development & production	A	1 (b)
		4	Thermal power plants	A	1 (d)
		8	Metallurgical industries (ferrous & nonferrous)	A	3 (a)
		9	Cement plants	B	3 (b)
		13	Chlor-alkali industry	A	4 (d)
		16	Chemical Fertilizers	A	5 (a)

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		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Conditions apply	17	Pesticides industry and pesticide specific intermediates (excluding formulations)	A	5 (b)
		19	Manmade fibers manufacturing	A	5 (d)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		22	Distilleries	A	5 (g)
		23	Integrated paint industry	A	5 (h)
		24	Pulp & paper industry excluding manufacturing of paper from wastepaper and manufacture of paper from ready pulp without bleaching	A	5 (i)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/ coral reefs/ ecologically sensitive Areas including LNG terminal	A	6 (a)
		28	Isolated storage & handling of hazardous chemicals (As per	B	6 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			threshold planning quantity indicated in column 3 of Schedule 2 & 3 of MSIHC Rules 1989 amended 2000)		
		32	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	A	7 (d)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		34	Highways	A	7 (f)
		36	Common Effluent Treatment Plants (CETPs)	B	7 (h)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
39	**Eco Foot Forward Environmental Consultancy & Engineers Pvt. Ltd**	1	Mining of minerals including opencast/ underground mining	B	1 (a) (i)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk	A	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Address: D/318, Neelkanth Business Park, Ramdev Nagar, Vidyavihar (W), Mumbai – 400086 **E-mail:** amey@ecofootforward.com **Tel.:** 022-25144129; +91-9892814129 *Conditions apply*		drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)		
		33	Ports, harbours, break waters and dredging	B	7 (e)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
40	**Eco Services India Private Limited** **Address:** 1/134, Dhanakotiraja Street, Sundar Nagar, Ekkaduthangal, Guindy, Chennai – 600032 **E-mail:**	21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	B	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	kalaiselvan@ecoservices.in **Tel.:** 044- 30683067/ 43102232 09383999109 *Conditions apply*	31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes	B	7 (c)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development Projects	B	8 (b)
41	**Eco Tech Labs Pvt. Ltd.** **Address:** No.4, Manjolai 1st Main Road, Ekkaduthangal, Guindy, Chennai-600032 **E-mail:** dhamo@ecotechlabs.in **Tel**.: 044 – 22251228/43534036 09789906200/9600661191	4	Thermal power plants	B	1 (d)
		9	Cement plants	B	3 (b)
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes	B	7 (c)
		38	Building and construction projects	B	8 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	*** The organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment.* *Conditions apply*	39	Townships and Area development Projects	B	8 (b)
42	**Ecomen Laboratories Pvt. Ltd.** **Address:** Flat No. 8, 2nd Floor, Arif Chamber – V,Sector –H, Aliganj, Lucknow – 226024 **E-mail:** ravi.bhargava@gmail.com **Tel**.: 0522 – 2761885 09335205453 *Conditions apply*	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		4	Thermal power plants	B	1 (d)
		6	Coal washeries	A	2 (a)
		7	Mineral beneficiation including pelletisation	A	2 (b)
		9	Cement plants	B	3 (b)
		12	Asbestos milling and asbestos based products	A	4 (c)
		38	Building and construction projects	B	8 (a)
43	**EIA Project, Gauhati University** **Address:** C/o Department of Chemistry Gauhati University, Guwahati -781014	10	Petroleum refining industry	A	4 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	E-mail:bijoysgoswami@gmail.com **Tel.:** 0361-2570599/535, +919435368473 *Conditions apply*				
44	**Engineers India Limited** **Address:** Research & Development Complex, Sector – 16, Gurgaon - 122001 **e. mail:** rb.bhutda@eil.co.in **Tel.:** 0124 – 2391416 *Conditions apply*	1	Mining of minerals – Opencast only	A	1 (a) (i)
		2	Offshore and onshore oil and gas exploration, development & production	A	1 (b)
		4	Thermal power plants	A	1 (d)
		8	Metallurgical industries (non - ferrous only) - both primary & secondary	A	3 (a)
		10	Petroleum refining industry	A	4 (a)
		16	Chemical Fertilizers	A	5 (a)
		18	Petro-chemical complexes (industries based on processing of petroleum fractions & natural gas and/or reforming to aromatics)	A	5 (c)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		28	Isolated storage & handling of	B	6 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2& 3 of MSIHC Rules 1989 amended 2000)		
		29	Air ports	A	7 (a)
		32	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	A	7 (d)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		39	Townships and Area development projects	B	8 (b)
45	**Enkay Enviro Services Pvt. Ltd.** (formerly known as Enkay Enviro Services) **Address:** # 24-B, Dadu Marg, Gopal Bari, Jaipur – 302001 **e.mail:** info@enkayenviro.com **Tel.:** 0141 – 4023996 09314363996	1	Mining of minerals - Open cast only	A	1 (a) (i)
			Mining of minerals - Underground mining	B	
		3	Irrigation and drainage projects only	A	1 (c)
		4	Thermal power plants	B	1 (d)
		7	Mineral beneficiation	A	2 (b)
		8	Metallurgical industries (ferrous & nonferrous) – both primary and secondary	A	3 (a)
		9	Cement Plants	A	3 (b)
		12	Asbestos milling and asbestos based products	A	4 (c)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Conditions apply	16	Chemical Fertilizers	A	5 (a)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2 & 3 of MSIHC Rules 1989 amended 2000) storage & handling of hazardous chemicals	B	6 (b)
46	**Enpro Envirotech & Engineers Pvt. Ltd.** **Address:** 306, Royal Park, Near Deepa Complex, Adajan Road, Surat-395009 **E-mail:** pareshmevawala@enpro.co.in **Tel.:** 0261-3295244 *Conditions apply*	8	Metallurgical Industries (ferrous & nonferrous)	A	3(a)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		32	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	A	7(d)
		36	Common Effluent Treatment Plants (CETPs)	A	7 (h)
		37	Common Municipal Solid Waste Management Facility (CMSWMF)	B	7 (i)
47	**ENV Developmental Assistance Systems (India) Pvt. Ltd.** **Address:** D-2247 Indira Nagar, Lucknow-226006 **E-mail:** admin@dasindia.org business@dasindia.org **Tel.:**0522 4007470/4107624 *Conditions apply*	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		3	Irrigation Projects only	A	1 (c)
		9	Cement plants (Grinding units only)	B	3 (b)
		22	Distilleries	A	5 (g)
		24	Pulp & paper industry excluding manufacturing of paper from wastepaper and manufacture of paper from ready pulp without bleaching	A	5 (i)
		34	Highways	A	7 (f)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
48	**Enviro Infra Solutions Pvt. Ltd.** **Address:** 301-302 & 305 – SRBC Complex, Plot No. INS-12, Sector – 9, Vasundhra, Ghaziabad - 201012 **E-mail:** eis.enviroinfra@gmail.com **Tel.:** 0120-4151183; 09654793036 *Conditions apply*	1	Mining of minerals - Open cast only	B	1 (a) (i)
		2	Onshore oil and gas exploration, development & production	A	1 (b)
		3	River Valley projects	A	1 (c)
		4	Thermal power plants	A	1 (d)
		8	Metallurgical industries (ferrous only)	B	3 (a)
			Metallurgical industries (Non-ferrous only)	A	3 (a)
		9	Cement Plants	A	3 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		22	Distilleries	A	5 (g)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		33	Ports, harbours, break waters and dredging	B	7 (e)
		34	Highways	A	7 (f)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
49	**Enviro Techno Consult Pvt. Ltd.** **Address:** 68, Mahakali Nagar – 2, Near Manewada Square, Nagpur – 440024 **E.mail**: etcpl@envirotechnoconsult.in **Tel.:** 09595220277, 09326466633 *Conditions apply*	4	Thermal Power Plants	A	1 (d)
		9	Cement Plants	A	3 (b)
		19	Textile- cotton and manmade fibres	B	5 (d)
50	**Enviro Analysts & Engineers Pvt. Ltd.** **Address:**B-1003, Enviro House	21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding	B	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Western Edge II, Behind Metro Mall Western Express Highway Borivali (E),Mumbai – 400066 **E-mail:** info@eaepl.com, consent@eaepl.com, hkdesai5@gmail.com **Tel. No.:** 022- 28541647-49/67/68, 09820280155, 9324430071 *Conditions apply*		drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)		
		24	Pulp & paper industry excluding manufacturing of paper from wastepaper and manufacture of paper from ready pulp without bleaching	A	5 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development Projects	B	8 (b)
51	**Envirocare Technocrats Pvt. Ltd.** (formerly known as Enviro Care Engineers & Consultant) **Address:**201, New Opera house, Nr. Gurdev Petrol Pump & Harish Digg., Khatodara, Surat – 395002 **E.mail:** env_consultant@yahoo.co.in, info@envirocare.net.in **Tel.:** 0261-2630781/82, 09825125122 *Conditions apply*	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		2	Offshore & Onshore Oil and gas exploration, development & production	A	1 (b)
		7	Mineral beneficiation	A	2 (b)
		19	Manmade fibers manufacturing	A	5 (d)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and	A	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			chemical intermediates)		
		38	Building and construction projects	B	8 (a)
52	**Enviro Care India Private Limited** **Address:**43, 2nd street, First floor Harvey nagar, Madurai 625016 **E.mail:** eci@envirocareindia.com **Tel.:** 9843052103 *Conditions apply*	4	Thermal power plants	B	1 (d)
		8	Metallurgical industries (ferrous & nonferrous) – both primary and secondary	B	3 (a)
		22	Distilleries	B	5 (g)
		38	Building and construction projects	B	8 (a)
53	**Envirotech East Pvt. Ltd.** **Address:** Bengal Ambuja Coml. Complex, UN-F-13, 1050/1, Survey Park, Kolkata -700075 e. mail: eeplkol@gmail.com eeplkol2@gmail.com **Tel. :** 033-24188127/ 24188128 09331026867	7	Mineral beneficiation including pelletisation	A	2 (b)
		4	Thermal power plants	A	1 (d)
		8	Metallurgical industries (ferrous & nonferrous) - both primary & secondary	A	3(a)
		9	Cement plants	A	3 (b)
		10	Petroleum refining industry	A	4 (a)
		11	Coke oven plants	A	4 (b)
		20	Petrochemical based processing (processes other than cracking &	A	5 (e)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Conditions apply		reformation and not covered under the complexes)		
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	B	5 (f)
		22	Distilleries	A	5 (g)
		24	Pulp & paper industry excluding manufacturing of paper from waste paper and manufacture of paper from ready pulp without bleaching	A	5 (i)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		38	Building and Construction Projects	B	8 (a)
		39	Townships and Area development Projects	B	8 (b)
54	**Environment Protection & Training Research Institute** **Address:** Sy. No. 91/4, Gachibowli, Hyderabad - 500032	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		3	River Valley projects	A	1 (c)
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones	A	7 (c)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	E-mail: sudhakargifs@yahoo.com **Tel.:** 040 – 23005628 09701420086 *Conditions apply*		(SEZs), Biotech parks, Leather complexes		
		38	Building and construction projects	B	8 (a)
55	**Environmental Health and Safety Consultants Private Limited** **Address:** # 13/2, 1st Main Road, Near Fire Station, Industrial Town, Rajajinagar, Bangalore – 560010 **E.mail:** ehscblr@yahoo.com ehscblr1974@gmail.com **Tel.:** 080-23012100/01, 09448094164 *Conditions apply*	3	River Valley, Hydel, Drainage and Irrigation projects	A	1 (c)
		8	Metallurgical industries - Secondary ferrous only	B	3 (a)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		22	Distilleries	A	5 (g)
		25	Sugar Industry	B	5 (j)
		34	Highways	A	7 (f)
		38	Building and construction projects	B	8 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		39	Townships and Area development projects	B	8 (b)
56	**Environmental Engineers & Consultants Pvt. Ltd.** **Address:** A1-198, Janak Puri, New Delhi – 110058 Branch Office Address: - M/s Environmental Engineers & Consultants Pvt. Ltd. Apartment No. 306, Kanchanjunga Apartments, Palarivattom, Kochi, Ernakulam, Kerala-682025. **E-mail:** eecnewdelhi@yahoo.in eecnewdelhi@gmail.com **Tel.:** 011 - 25507190 09350873385 09811080469 *Conditions apply*	1	Mining of minerals – Opencast only	B	1 (a) (i)
		4	Thermal Power Plants	B	1 (d)
		17	Pesticides industry and pesticide specific intermediates (excluding formulations)	B	5 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	B	5 (f)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		38	Building and construction projects	B	8 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		39	Townships and Area development Projects	B	8 (b)
57	**Environmental Research & Analysis** **Address:** 315, First Floor, Sahara Shopping Center, Near Lekhraj Crossing, Faizabad Road, Lucknow – 226016 **E-mail:**eraenvcle@gmail.com; info@eraconsultancy.in **Tel.:** 0522-4078000, 8423500351 **The organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment.* *Conditions apply*	1	Mining of minerals – opencast only	B	1 (a) (i)
58	**Environmental System Consultants & Ambiente Lab Solutions Pvt. Ltd.** **Address:** New No 14/Old No 7, Shanmuga Naicker Street, K.K.Nagar West, Chennai – 600 078	1	Mining of minerals (Open cast only)	A	1 (a) (i)
			Mining of minerals including Open cast/ Underground mining	B	1 (a) (i)
		4	Thermal power plants	A	1 (d)
		9	Cement plants	A	3 (b)
		31	Industrial Estates/ parks/ complexes/	A	7 (c)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	E-mail: ensyscon@gmail.com ambientelab@gmail.com **Tel.:** 044-23643663, 09444990516 *Conditions apply*		Areas, export processing Zones (EPZs), Special economic zones (SEZs), Biotech Parks, Leather Complexes		
		33	Ports, harbours, break waters and dredging	A	7 (e)
		38	Building and construction projects	B	8 (a)
59	**Envirogreen Consultants (India) Pvt. Ltd** **Address:** 1-B, Macchla Marg, New Patel Circle, Hiren Magri, Udaipur- 313002 **Email:** egcipl@yahoo.co.in, **Tel.:**9352239829 *** Though the EIA Coordinator for this sector was found suitable for Cat. A, however, the organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment. They can take up projects in this sector only for Cat. B as an organization.*	1**	Mining of minerals - Open cast only	B	1 (a) (i)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
60	**Envisafe Environmental Consultants** **Address:**3rd floor, Akash Ganga Complex, Near Parimal Railway Underpass, Beside Suvidha Shopping Center, Paldi, Ahmedabad-380007. **Email:**envisafe@gmail.com , pushpinshah@gmail.com **Tel.:** 9825125278,9328961241 *Conditions apply*	1	Mining of minerals including Open cast/ Underground mining	B	1 (a) (i)
		4	Thermal power plants	B	1 (d)
		8	Metallurgical industries (ferrous & non-ferrous)	B	3 (a)
		9	Cement plants	A	3 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		34	Highways	B	7 (f)
		38	Building and construction projects	B	8 (a)
61	**En-vision Environmental Service** **Address:** 201 & 301, Union Trade Center (UTC), Nr. Apple Hospital, Udhana Darwaja Surat 395 002	19	Manmade fibers manufacturing	B	5 (d)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other	A	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Tel .: 0261-2344773, 2344774,9428001862 **Email:** shah.kunal@gmail.com , info@en-vision.co.in *Conditions apply*		synthetic organic chemicals and chemical intermediates)		
		32	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	A	7 (d)
		36	Common effluent treatment plants (CETPs)	B	7 (h)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development Projects	B	8 (b)
62	**Envision Enviro Technologies Pvt. Ltd.** **Address:** 2nd Floor, Shree Ram Complex, Above Bank of India, Near Kargil Chowk, Surat Dumas Road, Piplod, Surat- 395007 **Tel. No.:** +91 2612223003,2224004 **Email:** envision.surat@gmail.com *Conditions apply*	2	Offshore and onshore oil and gas exploration, development & productions	A	1 (b)
		8	Metallurgical industries (ferrous only)- both primary & secondary	A	3(a)
		9	Cement Plants	B	3 (b)
		17	Pesticides industry and pesticide specific intermediates (excluding formulations)	A	5 (b)
		18	Petro-chemical complexes (industries based on processing of petroleum fractions & natural gas and/or reforming to aromatics)	A	5 (c)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		20	Petrochemical based processing (processes other than cracking & reformation and not covered under the complexes)	A	5 (e)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		22	Distilleries	A	5 (g)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		32	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	A	7 (d)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		36	Common effluent treatment plants (CETPs)	B	7 (h)
		38	Building and construction projects	B	8 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		39	Townships and Area development Projects	B	8 (b)
63	**EQMS India Pvt. Ltd.** **Address:** 304-305, III Floor, Rishabh Towers, Plot No. 16, Community Centre, Karkardooma, Delhi – 110092 **e. mail:** eqms@eqmsindia.org skjain@eqmsindia.org **Tel.:** 011- 30003200/ 30003219 09810297612 *Conditions apply*	1	Mining of minerals – Open cast only	A	1 (a) (i)
		3	River Valley projects	A	1 (c)
		4	Thermal power plants	A	1 (d)
		8	Metallurgical industries(ferrous & nonferrous) - both primary & secondary	B	3 (a)
		9	Cement plants	A	3 (b)
		16	Chemical Fertilizers	A	5 (a)
		17	Pesticides industry and pesticide specific intermediates (excluding formulations)	A	5 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates **excluding** drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2 & 3 of	B	6 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			MSIHC Rules 1989 amended 2000)		
		31	Industrial estates/ parks/ complexes/Areas, export processing Zones(EPZs), Special economic zones(SEZs), Biotech Parks, Leather Complexes	A	7 (c)
		33	Ports, harbours, break waters and dredging	B	7 (e)
		34	Highways	A	7 (f)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
64	**Equinox Environments (India) Private Limited** **Address:** F-11, Namdev Nest, 1160- B, "E" Ward, Skyes Extension, Opp. Kamala College, Kolhapur-416001 **e.mail:**projects@equinoxenvi.com, eia@equinoxenvi.com, eeipltd@equinoxenvi.com, **Tel.:** 0231-2531231/ 2526337 09822045083, 09881121522	1	Mining of minerals including opencast / underground mining	A	1 (a) (i)
		4	Thermal power plants	B	1 (d)
		8	Metallurgical industries(ferrous only) - both primary & secondary	B	3 (a)
		12	Asbestos milling and asbestos based products	B	4 (c)
		13	Chlor-alkali industry	A	4 (d)
		20	Petrochemical based processing (processes other than cracking &reformation and not covered under the complexes)	A	5 (e)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Conditions apply	21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates **excluding** drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		22	Distilleries	A	5 (g)
		25	Sugar Industry	B	5 (j)
		32	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	B	7 (d)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
65	**ERM India Private Limited** **Address:** Building No. 10,Tower A, Fourth Floor, DLF Cyber City, Gurgaon - 122002 **e. mail:** subir.gupta@erm.com **Tel.:** 0124-4170300	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		2	Off shore and on-shore oil and gas exploration, development & production	A	1 (b)
		3	River valley Projects	A	1 (c)
		4	Thermal power plants	A	1 (d)
		8	Secondary Steel only	B	3 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	09810068161 *Conditions apply*	9	Cement plants	A	3 (b)
		13	Chlor-alkali industry	A	4 (d)
		16	Chemical Fertilizers	A	5 (a)
		17	Pesticides industry and pesticide specific intermediates (excluding formulations)	A	5 (b)
		18	Petro-chemical complexes (industries based on processing of petroleum fractions & natural gas and/or reforming to aromatics)	A	5 (c)
		20	Petrochemical based processing (processes other than cracking &reformation and not covered under the complexes)	A	5 (e)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates	A	5 (f)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including	A	6 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			LNG terminal		
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		29	Air ports	A	7 (a)
		31	Industrial estates/ parks/ complexes/Areas, export processing Zones(EPZs), Special economic zones(SEZs), Biotech Parks, Leather Complexes	A	7 (c)
		32	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	A	7 (d)
		34	Highways	A	7 (f)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
		40 (i)	Automobile and Auto Components	-	-
66	**Excel Enviro Tech**	1	Mining of minerals- Open Cast only	B	1 (a) (i)
		4	Thermal Power Plant	B	1 (d)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Address: TF-2, Sun House, Nr. Old High Court, Off. Ashram Road, Ahmedabad -380009 **Email:** excelenviro@yahoo.co.in **Tel.:**9825588910/9428592837 *Conditions apply*	6	Coal Washeries	B	2 (a)
		8	Metallurgical industries (ferrous)-secondary only	B	3 (a)
		9	Cement plants	B	3 (b)
		11	Coke oven plants	B	4 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates	B	5 (f)
		38	Building and construction projects including	B	8 (a)
67	**Feedback Infra Pvt. Ltd.** **(Formerly known as Feedback Infrastructure Services Private Limited)** **Address:** 15th Floor, Tower 9B, DLF Cyber City, Phase-III, Gurgaon 122 002 **Email:** rajeev.bhatnagar@feedbackinfra.com	4	Thermal Power Plants	B	1 (d)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Tel. 0124- 4316100, 0124- 4316693 *Conditions apply*	28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		34	Highways	A	7 (f)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
68	**Fulgro Environmental & Engineering Services India Pvt. Ltd.** **Address-** 27,Ashok Vatika, Khatipura Road, Jhotwara, Jaipur, 302012, Rajasthan	1	Mining of minerals including Open cast/ Underground mining	A**	1 (a) (i)
		4	Thermal Power Plants	B	1 (d)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Email: fulgro.manish@gmail.com, ceo@fulgro.in **Mob.-** 094144 06025 *Conditions apply* ***Though the EIA Coordinator for this sector was approved for Cat. A. The organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment. They can take up projects in this sector only for Cat. B as an organization.*	9	Cement Plants	B	3 (b)
		34	Highways	A**	7(f)
		38	Building and construction projects	B	8(a)
69	**Gaurang Environmental Solutions** **Address-** 501, Soni's Paris Point, Collectorate Circle, Bani Park, Jaipur, Pin- 302016 E-mail: gaurangenviro@gmail.com; vipul.environ@gmail.com **Tel.:** 0141-4029115; 09782074776	1	Mining of minerals including Open cast/ underground mining	A	1 (a) (i)
		4	Thermal power plants	B	1 (d)
		8	Metallurgical industries(ferrous & nonferrous) - both primary & secondary	B	3 (a)
		9	Cement plants	B	3 (b)
		22	Distilleries	B	5 (g)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated	B	6 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Conditions apply		in column 3 of Schedule 2 & 3 of MSIHC Rules 1989 amended 2000)		
		29	Air ports	A	7 (a)
		32	Common hazardous waste treatment, storage and disposal facilities	B	7 (d)
		34	Highways	B	7(f)
		36	Common Effluent Treatment Plants (CETPs)	B	7 (h)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8(a)
		39	Townships and Area development projects	B	8 (b)
70	**Geological Exploration & Mining Solutions** **Address:** 95/1, Brindavan Road, 4th Cross East, Fairlands, Salem – 636 016. Tamilnadu. **E. mail:** ifthiahmed@gmail.com	1	Mining of minerals - Open cast only	A**	1 (a) (i)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Tel.: +91 – 427 - 2431989 Mobile: +91 94422 78601 *Conditions apply* ***Though the EIA Coordinator for this sector was approved for Cat. A. The organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment. They can take up projects in this sector only for Cat. B as an organization.*				
71	**Geogreen Enviro House Pvt. Ltd.** **Address:** 403, Aiman Apartments 29 Chandralok Colony, Aliganj, Lucknow, U.P.226024 **e. mail:** vkm.geo@gmail.com **Tel.:** 05222 339000; 09415215163 *Conditions apply*	1	Mining of minerals - Open cast only	A	1 (a) (i)
		38	Building and construction projects	B	8(a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
72	**Ghosh, Bose & Associates (P) Ltd.** **Address:** 8, Harrington Mansion, 8, Ho Chi Minh Sarani, Kolkata – 700071 **e. mail:** ghoshbos@cal.vsnl.net.in **Tel.:** 033- 22827152/ 22827036 09831072110 *Conditions apply* ***Though the EIA Coordinators for these sectors were approved for Cat. A. The organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment. They can take up projects in this sector only for Cat. B as an organization.*	1**	Mining of minerals including Open cast/ underground mining	B	1 (a) (i)
		4**	Thermal power plants	B	1 (d)
		8**	Metallurgical industries(ferrous & nonferrous) - both primary & secondary	B	3 (a)
		31**	Industrial estates/ parks/ complexes/Areas, export processing Zones(EPZs), Special economic zones(SEZs), Biotech Parks, Leather Complexes	B	7 (c)
		33**	Ports, harbours, break waters and dredging	B	7 (e)
		34**	Highways	B	7 (f)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
73	**GreenCIndia Consulting Private Limited** (formerly known as GIS Enabled Environment & Neo-graphic Centre)	1	Mining of minerals including opencast/ underground mining	A	1 (a) (i)
		3	River valley, Hydel, Drainage and Irrigation Projects	A	1 (c)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Address: 905, 908, Devika Appartment, Sector – 4, Vaishali, NCR, Ghaziabad – 201012 **e. mail:** greenc.india@gmail.com nandini@greencindia.com **Tel.:** 0120 – 4568731 09891906015 *Conditions apply*	4	Thermal power plants	A	1 (d)
		6	Coal Washeries	A	2 (a)
		8	Metallurgical industries (ferrous & non-ferrous)	A	3 (a)
		9	Cement plants	A	3 (b)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		29	Air ports	A	7 (a)
		31	Industrial estates/ parks/ complexes/areas, export processing Zones(EPZs), Special Economic Zones(SEZs), Biotech Parks, Leather Complexes	A	7 (c)
		34	Highways	A	7 (f)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
74	**Green circle Inc.**	1	Mining of minerals – opencast only	B	1 (a) (i)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Address: Green Empire (Anupushpam), Above Axis bank, Near Yash Complex, Gotri Main Road, Vadodara, Gujarat – 390021 **E.mail:** pradeep.joshi@gccipl.net; info@greencircleinc.com **Tel.:** 0265- 2371269	4	Thermal power plants	B	1 (d)
		8	Metallurgical industries (ferrous & non-ferrous)	B	3 (a)
		9	Cement plants	B	3 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		22	Distilleries	B	5 (g)
		25	Sugar Industry	B	5 (j)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development	A	8 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			projects		
75	**GLOBAL Environment & Mining Services** **Address:** "Devakinandan", Opp. PLD Bank, Venkateshwara Talkies Road, Patel Nagar, Hospet Bellary **Email:**gems_hpt@yahoo.com **Tel.:** 09448479433,08394223755 *Conditions apply*	1	Mining of minerals- Open Cast only	A	1 (a) (i)
		7	Mineral beneficiation including pelletisation	A	2 (b)
76	**Global Enviro Labs** **Address:** 2-2-1075/ 14/ A/ 1, Thilaknagar "X" Roads, Baghamberpet, Hyderabad – 500013 **E-mail:**globalelabs@rediffmail.com **Tel.:** 040- 65582886/ 27407969 09849039741 *Conditions apply*	1	Mining of minerals including Open cast/ underground mining	A	1 (a) (i)
		4	Thermal power plants	B	1 (d)
		7	Mineral beneficiation including pelletisation	B	2 (b)
		8	Metallurgical Industry (Ferrous only)	A	3 (a)
		9	Cement plants (Grinding units only)	B	3 (b)
		16	Chemical Fertilizers (SSP only)	B	5 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
77	**Global Management and Engineering Consultants International** **Address:** Saharan Tower, 308, Officers Campus Extension, Sirsi Road, Khatipura (Near Sanskar School), Jaipur – 302012 (Rajasthan) **Email:** info@gmecinternational.com / saharan@gmecinternational.com **Tel.:** 0141-2353241 Mobile: 9928599571 / 9928793002 / 9414071334 *Conditions apply*	1	Mining of minerals including opencast/underground mining	A	1(a) (i)
		2	Offshore and onshore oil and gas exploration, development & production	A	1 (b)
		4	Thermal power plants	B	1 (d)
		8	Metallurgical Industry (ferrous & non- ferrous)	B	3 (a)
		9	Cement plants	A	3 (b)
		12	Asbestos milling and asbestos based products	A	4 (c)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		33	Ports, harbours, break waters and dredging	A	7(e)
		34	Highways	A	7(f)
		36	Common Effluent Treatment Plants (CETPs)	B	7 (h)
		38	Building and construction projects	B	8 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		39	Townships and Area development projects	B	8 (b)
78	**GLOBALTECH Enviro Experts Pvt. Ltd.** **Address:** C- 23, BJB Nagar, Bhubaneshwar – 751014 **E-mail:** manojnayak333@yahoo.com globalexperts@rediffmail.com **Tel.:** 0674 – 2436853 09437033487 09937133487	1	Mining of minerals- Open cast only	A	1 (a) (i)
		4	Thermal power plants	B	1 (d)
		7	Mineral beneficiation including pelletisation	B	2 (b)
		8	Metallurgical industries(ferrous only) - both primary & secondary	A	3 (a)
		9	Cement plants	B	3 (b)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
79	**Goldfinch Engineering Systems Private Limited** (Formerly known as - Waste Encare (India) Pvt. Ltd.) **Address:** Plot no. A- 288, Road No. 16-Z, Thane Industrial Area, MIDC (Wagle Estate), Thane (West)-400604	1	Mining of minerals – open cast only	B	1 (a) (i)
		3	Irrigation projects only	B	1 (c)
		4	Thermal power plants	B	1 (d)
		8	Metallurgical industries (ferrous and non-ferrous)	B	3 (a)
		17	Pesticides industry and pesticide	A	5 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	E-mail: anand.apte@goldfinchengg.com; info@goldfinchengg.com **Tel.:** 022-25801529, 9821812132 *Conditions apply*		specific intermediates (excluding formulations)		
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		22	Distilleries	A	5 (g)
		36	Common effluent treatment plants (CETPs)	B	7 (h)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
80	**Grass Roots Research and Creation India (P) Ltd.** **Address:** F- 375, Sec – 63, Noida – 201301 **e. mail:** md@grc-india.com, info@grc-india.com **Tel.:** 0120 – 4044630, 4044660 09811554031, 09818184005 *Conditions apply*	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		2	Offshore and onshore oil and gas exploration, development & production	A	1 (b)
		3	River Valley projects	A	1 (c)
		4	Thermal power plants	A	1 (d)
		6	Coal Washeries	A	2 (a)
		7	Mineral beneficiation including pelletisation	A	2 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		8	Metallurgical industries(ferrous and non-ferrous) - both primary & secondary	A	3 (a)
		9	Cement plants	A	3 (b)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes	A	7 (c)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
81	**Gujarat Environment Management Institute** **Address:** 3rd floor, Block No. 13 Dr. Jivraj Mehta Bhavan, Old Sachivalaya, Sector 10B, Gandhinagar,	21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other	A	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Gujarat 382010 **E-mail:** paresh.gemi@gmail.com, info@gemi-india.org **Tel.:** 079-23240964 *Conditions apply*		synthetic organic chemicals and chemical intermediates)		
		30	All ship breaking yards including ship breaking units	A	7 (b)
		32	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	A	7(d)
		33	Ports, harbours, break waters and dredging	A	7(e)
		36	Common Effluent Treatment Plants (CETPs)	A	7(h)
82	**Hubert Enviro Care Systems** **Address:** No. 18, 92nd Street, 18th Avenue, Ashok Nagar, Chennai – 600083 **e. mail:** moses@hecs.in ceo.hecs@gmail.com **Tel.:**044 – 42985511, 09884390811 *Conditions apply*	1	Mining of minerals including Opencast/ Underground mining	A	1 (a) (i)
		2	Offshore and onshore oil and gas exploration, development & production	A	1 (b)
		4	Thermal power plants	A	1 (d)
		8	Metallurgical industries (ferrous & non-ferrous)	B	3 (a)
		9	Cement plants	B	3 (b)
		10	Petroleum refining industry	A	4 (a)
		18	Petro-chemical complexes (industries based on processing of petroleum fractions & natural gas and/or	A	5 (c)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			reforming to aromatics)		
		20	Petrochemical based processing	A	5 (e)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes	B	7 (c)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
83	**Idma Laboratories Limited** **Address:** 391, Industrial Phase 1 , Panchkula-	1	Mining of minerals including Open cast/ Underground mining	B	1 (a) (i)
		22	Distilleries	B	5 (g)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	134113, Haryana **E-mail:** testing@idmagroup.co.in **Tel.:** 0172- 5064827 09888002605 **Though the EIA Coordinator for this sector was approved for Cat. A. The organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment. They can take up projects in this sector only for Cat. B as an organization.* *Conditions apply*	27*	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		36	Common effluent treatment plants (CETPs)	B	7 (h)
		38	Building and construction projects	B	8 (a)
84	**Indomer Coastal Hydraulics (P) Ltd** **Address:** 63, Gandhi Road Alwar Thirunagar, Chennai 600 087 **Tel**:+91-44-2486 2482 to 84	27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal.	A	6 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	099401 41650 **E mail:** indomercoastalhydraulics@gmail.com *Conditions apply*	33	Ports, harbours, break waters and dredging	A	7 (e)
85	**In Situ Enviro Care** **Address:** 20-B, Zone-II, M.P. Nagar, Bhopal (M.P.) **E-mail:** admin@insituenvirocare.com ajay.mohan@insituenvirocare.com **Tel.:** 07555- 2577143/ 3914807 09425012465, 08878698002 *Conditions apply*	1	Mining of minerals - opencast only	B	1 (a) (i)
		4	Thermal power plants	B	1 (d)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (B)
86	**Ind Tech House Consult** **Address:**G-8/6, Ground Floor, Sector 11, Rohini, Delhi – 110 085 **E-mail:** suman.ithc@gmail.com, ithconsult@hotmail.com **Tel.:** 011-64607252,	1	Mining of minerals including Open cast/ Underground mining	B	1 (a) (i)
		2	Offshore and onshore oil and gas exploration, development & production	A	1 (b)
		3	River valley, hydel, Drainage and Irrigation projects	A	1 (c)
		27	Oil & gas transportation pipeline	A	6 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	09958499554 *Conditions apply*		(crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal		
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes	A	7 (c)
		33	Ports, harbours, break waters and dredging	A	
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (B)
87	**IRG Systems South Asia Pvt. Ltd.** **Address:** E-16, 3rd Floor, Main Market, Hauz Khas, New Delhi – 110 016	3**	River valley projects	B	1 (c)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	E-mail: amit@irgindia.com, ssanjeev@irgssa.com **Tel.:** 011-45974597, 9990418899, 9818518899 *** Though the EIA Coordinator for this sector was found suitable for Cat. A. The organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment. He can take up projects in this sector only for Cat. B as an organization.* *Conditions apply*				
88	**Intercontinental Consultants & Technocrats Pvt. Ltd.** **Address:** A- 8, Green Park, New Delhi **E-mail:** pkapila@ictonline.com **Tel.:** 011 – 40863010 *Conditions apply*	29	Air ports	A	7 (a)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		34	Highways	A	7 (f)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
89	**J. M. Environet Pvt. Ltd.** **Address:** 1st& 2nd Floor, SCO 16, Sector 10-A, Pace City, Gurgaon-122001 **e. mail:** jmenviron@hotmail.com, jmpkdeepa@hotmail.com **Tel.:**0124-4141926/ 3206559 09910494521 *Conditions apply*	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		4	Thermal power plants	A	1 (d)
		6	Coal Washeries	A	2 (a)
		7	Mineral beneficiation including pelletisation	A	2 (b)
		8	Metallurgical Industries (Ferrous & non ferrous)	A	3 (a)
		9	Cement plants	A	3 (b)
		11	Coke oven plants	A	4 (b)
		19	Manmade fibers manufacturing	A	5 (d)
		22	Distilleries	A	5 (g)
		24	Pulp & paper industry excluding manufacturing of paper from wastepaper and manufacture of paper from ready pulp without bleaching	A	5 (i)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones	B	7 (c)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes		
		33	Ports, harbours, break waters and dredging	A	7 (e)
		37	Common Municipal Solid Waste Management Facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development	B	8 (b)
90	**JV Analytical Services** **Address:** Samay Building, Bhau Patil Road, Bopadi, Pune – 20 **E.mail**: jvlabpune@gmail.com; **sales@jvanalyticalservices.com** **Tel.:** 91- 7350658988,9921107215 *** Though the EIA Coordinator for these sectors was found suitable for Cat. A, the organization as a*	1**	Mining of minerals - Open cast only	A	1 (a) (i)
		3**	Irrigation Projects only	A	1 (c)
		4**	Thermal power plants	A	1 (d)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	B	5 (f)
		22**	Distilleries	A	5 (g)
		33**	Ports, harbours, break waters and dredging	A	7 (e)
		38	Building and construction projects	B	8 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment. They can take up projects in these sectors only for Cat. B as an organization. *Conditions apply*	39	Townships and Area development	B	8 (b)
91	**Kadam Environmental Consultants** **Address**: 871/B/3, GIDC Makarpura, Vadodara-390010,Gujarat **e. mail:** sangram@kadamenviro.com kadam@kadamenviro.com **Tel.:** 0265-6131000 09714861611 *Conditions apply*	1	Mining of minerals- Open cast only	A	1 (a) (i)
			Mining of minerals including Open cast/ Underground mining	B	
		2	Offshore and onshore oil and gas exploration, development & production	A	1 (b)
		4	Thermal power plants	A	1 (d)
		8	Metallurgical industries (ferrous only-Secondary metallurgy)	A	3 (a)
		10	Petroleum refining industry	A	4 (a)
		13	Chlor-alkali industry	A	4 (d)
		16	Chemical Fertilizers	A	5 (a)
		17	Pesticides industry and pesticide specific intermediates (excluding formulations)	A	5 (b)
		18	Petro-chemical complexes (industries	A	5 (c)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			based on processing of petroleum fractions & natural gas and/or reforming to aromatics)		
		19	Manmade fibers manufacturing	A	5 (d)
		20	Petrochemical based processing (processes other than cracking & reformation and not covered under the complexes)	A	5 (e)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		22	Distilleries	A	5 (g)
		23	Integrated paint industry	B	5 (h)
		24	Pulp & paper industry excluding manufacturing of paper from wastepaper and manufacture of paper from ready pulp without bleaching	A	5 (i)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs	A	6 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			/ecologically sensitive Areas including LNG terminal		
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		30	All ship breaking yards including ship breaking units	A	7 (b)
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes	B	7 (c)
		32	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	B	7 (d)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		36	Common effluent treatment plants (CETPs)	B	7 (h)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area Development projects	B	8 (b)
92	**Kalyani Laboratories Private Limited**	1	Mining of minerals including Open	B	1 (a) (i)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			cast/ Underground mining		
	Address: Plot no. 1867, Bomikhal, Bhubaneswar **E-mail:** kalyanilab@yahoo.co.in, klaboratories@rediffmail.com **Tel.:** 0674-2585026/0674-2581992,09437306091 *The organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment. They can take up projects in these sectors only for Cat. B as an organization.* *Conditions apply*	4	Thermal power plants	B	1 (d)
		6	Coal Washeries	B	2 (a)
		7	Mineral beneficiation including pelletisation	B	2 (b)
		8	Metallurgical industries (ferrous & non ferrous)	A	3 (a)
		11	Coke oven plants	A	4 (b)
		38	Building and construction projects	B	8 (a)
93	**KITCO Ltd.** **Address:** Femith's PB No. 4407,Puthiya Road, NH Bypass, Vennala, Kochi- 682028 **E-mail:** mail@kitco.in, sindhunt@kitco.in **Tel.:** 0484-4129000/ 2805033	29	Air ports	A	7 (a)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		34	Highways	A	7 (f)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Conditions apply				
94	**KKB Envirocare Consultants Pvt. Ltd.** **Address:** Tarun Plaza, First Floor, 3-5-244, NFC Main Road, Krishna Nagar Colony, Moula Ali, Hyderabad- 500040 **E-mail:** kkbenviro@gmail.com **Tel.:** 040-65547107/ 39127107, 09391013686 *Conditions apply*	1	Mining of minerals- Open cast only	B	1 (a) (i)
		4	Thermal Power Plants	B	1 (d)
		8	Metallurgical industries (non-ferrous only)	B	3 (a)
		17	Pesticides industry and pesticide specific intermediates (excluding formulations)	A	5 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes	A	7 (c)
		37	Common Municipal Solid Waste Management Facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area Development projects	B	8 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		40 (v)	Food Processing	-	-
95	**Kratin Solutions Pvt. Ltd.** **Address:** 47,B 2-1st Floor, Lambent IT Park, Harinagar, Besa Nagpur-440037 **E-mail:** snkatiyar@kratinsolutions.com, infor@kratinsolutions.com **Tel.:** 07103-281291 , Mob. No. 9881727702 *Conditions apply*	1	Mining of minerals including opencast/underground mining	A	1 (a) (i)
		6	Coal washeries	A	2 (a)
		7	Mineral beneficiation including pelletisation	A	2 (b)
96	**L & T Infrastructure Engineering Ltd.** **Address:** House No. 6-3-1192/1/1, 5th Floor, Block No. 3, White House, Kundan Bagh, Begumpet, Hyderabad – 500016 **E-mail:** Intielhyd@lntiel.com; cvs@intiel.com **Tel.:** 040 – 40354444, 040 - 40354431 09491035051	1	Mining of minerals- Open cast only	A	1 (a) (i)
		2	Offshore and onshore oil and gas exploration, development & production	A	1 (b)
		3	River valley, hydel, Drainage and Irrigation projects	A	1 (c)
		4	Thermal power plants	A	1 (d)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding	A	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Conditions apply		drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)		
		29	Air ports	A	7 (a)
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes	A	7 (c)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		34	Highways	A	7 (f)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
97	**Louis Berger Consulting Pvt. Ltd.** **Address:** Plot No. 3, 5th Floor, Tower B, Surinder Jakhar Bhavan (IFFCO), Sector 32, Gurgaon – 122001 **E-mail:** mdave@louisberger.com	29	Air ports	A	7 (a)
		34	Highways	A	7 (f)
		38	Building and construction projects	B	8 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Tel.: 0124-4044755/ 4578200 09717699584 *Conditions apply*				
98	**LEA Associates South Asia Pvt. Ltd.** **Address:** B-1/ E-27, Mohan Cooperative Industrial Estate **E-mail:** Chandra@lasaindia.com **Tel.:** 011 – 41678150 09910060789 *Conditions apply*	1	Mining of minerals - opencast only	A	1 (a) (i)
		3	River Valley projects	A	1 (c)
		34	Highways	A	7 (f)
		38	Building and construction projects	B	8 (a)
		39	Townships and area development projects	B	8(b)
99	**M. N. Dastur and Company (Pvt.) Ltd.** **Address:** P – 17, Mission Row Extension, Kolkata – 700013 **E-mail:** sandip.m@dasturco.in	1	Mining of minerals- Open cast only	A	1 (a) (i)
		4	Thermal power plants	A	1 (d)
		6	Coal Washeries	B	2 (a)
		8	Metallurgical industries (ferrous & non-ferrous)	A	3 (a)
		11	Coke Oven Plants	A	4 (b)
		33	Ports, harbours, break waters and	A	7 (e)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Tel. : 033 – 22250500, 09433341156 *Conditions apply*		dredging		
100	**Mahabal Enviro Engineers Pvt. Ltd.** **Address:** Plot No. F-7, Road No. 21, Wagle Estate Thane-400604, Maharashtra **E-mail:** mahabal_thane@yahoo.in, thane@mahabal.com **Tel.:** 022- 25823154/ 0658/ 1663 09323058368 *Conditions apply*	1	Mining of minerals including opencast/underground mining	A	1(a) (i)
		2	Offshore and onshore oil and gas exploration, development & production	A	1 (b)
		4	Thermal power plants	A	1 (d)
		8	Metallurgical industries (ferrous & non-ferrous)	B	3(a)
		9	Cement plants	B	3(b)
		22	Distilleries	A	5(g)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		31	Industrial estates/ parks/ complexes/areas, export processing Zones(EPZs), Special Economic	A	7 (c)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			Zones(SEZs), Biotech Parks, Leather Complexes		
		32	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	A	7 (d)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		38	Building and construction projects	B	8 (a)
		39	Townships and area development projects	B	8(b)
101	**Mantras Green Resources Ltd.(**formerly known as Mantras Resources) **Address:** Hall No. 1, 1st Floor, NICE Sankul, Plot No. A -9, Opp. Nashik Merchant Co- op Bank Ltd., ITI Signal, MIDC Satpur, Nasik-422007 **E-mail:** info@mantrasresources.com, uksharma@mantrasresources.com **Tel.:** 0253 2355665 / 2355086 *Conditions apply*	1	Mining of minerals including opencast/underground mining	A	1(a) (i)
		3	Irrigation projects only	A	1 (c)
		4	Thermal power plants	B	1 (d)
		6	Coal washeries	A	2(a)
		7	Mineral beneficiation including pelletisation	A	2 (b)
		8	Metallurgical industries(non ferrous only) - both primary & secondary	A	3 (a)
		9	Cement plants	A	3 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers;	B	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			basic organic chemicals, other synthetic organic chemicals and chemical intermediates)		
		22	Distilleries	A	5 (g)
		25	Sugar Industry	B	5 (j)
		37	Common Municipal Solid Waste Management Facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
102	**Mantec Consultants Pvt. Ltd.** **Address:** D- 36, Sector – 6, Noida – 201301 **E-mail:** envmantec@yahoo.co.in, mantec@vsnl.com; **Tel.:** 0120- 4215000, 4215804 09312284682; 07409574441 *Conditions apply*	1	Mining of minerals (Open cast only)	A	1 (a) (i)
		2	Offshore and onshore oil and gas exploration, development & production	A	1 (b)
		3	River valley projects	A	1 (c)
		4	Thermal power plants	A	1 (d)
		13	Chlor-alkali industry	A	4 (d)
		16	Chemical Fertilizers	A	5 (a)
		20	Petrochemical based processing (processes other than cracking & reformation and not covered under the complexes)	A	5 (e)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk	A	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)		
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		34	Highways	B	7 (f)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
103	**Mecon Limited**	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Address: Vivekanand Path, P.O. Ranchi – 834002 **E. mail:** envenggranchi@meconlimited.co.in **Tel.:** 0651- 2481314, 2483382 09470193680 *Conditions apply*	2	Offshore and onshore oil and gas exploration, development & production	A	1 (b)
		3	River valley, hydel, Drainage and Irrigation projects	A	1 (c)
		4	Thermal power plants	A	1 (d)
		5	Nuclear power projects and processing of nuclear fuel	A	1(e)
		6	Coal washeries	A	2 (a)
		7	Mineral beneficiation including pelletisation	A	2 (b)
		8	Metallurgical industries(ferrous and non-ferrous)	A	3 (a)
		11	Coke oven plants	A	4 (b)
		8[#]	Induction/ arc furnaces/ cupola furnaces/ submerged arc furnace/ crucible furnace/ re-heating furnace of capacity more than 5Tonne per heat *[#]Sector 26 has been merged with sector 8 (for projects of induction furnace etc. > 30,000 t/y) vide AC MoM dated December 07, 2011*	B	5 (k)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical	A	6 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal		
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		30	All ship breaking yards including ship breaking units	A	7 (b)
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes	A	7 (c)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		34	Highways	A	7 (f)
		39	Township and Area development projects	B	8 (b)
104	**Metamorphosis[SM] Project Consultants Pvt. Ltd.** (formerly known as Metamorphosis) **Address:** Prakruti Bhavan, # 200, 1st & 2nd Floor, 1st Cross, 40th Main, Behind	1	Mining of minerals (open cast only)	A	1 (a) (i)
		3	River Valley, Hydel, Drainage and Irrigation projects	A	1 (c)
		7	Mineral beneficiation including pelletisation	A	2 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Silk Board, BTM, Layout II Stage, Bengaluru- 560068 **E.mail:** mail@metamorphosis-india.com Dr.shanth@metamorphosis-india.com **Tel.:** 080-26783006 09845027475 *Conditions apply*	8	Metallurgical industries (ferrous only)- both primary and secondary	A	3 (a)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
105	**Mineral Engineering Services** **Address:** 25/ XXV, Club Road, Bellary – 583103 **E-mail:** sachinraju2000@yahoo.com **Tel.:** 080 – 25432968, 25432969 09448024304 *Conditions apply*	1	Mining of minerals including Opencast / Underground mining	A	1 (a) (i)
106	**MITCON Consultancy Services Ltd.** **Address:** Agriculture College Campus, Next to DIC Office, Shivajinagar, Pune – 411005 **E-mail:** eme@mitconindia.com mitconenviro@gmail.com **Tel.:** 020-66289400/ 66289406 09822451150, 09850724177 *Conditions apply*	1	Mining of Minerals including Open cast/ Underground mining	B	1 (a) (i)
		3	River linking & Irrigation projects only	A	1 (c)
		4	Thermal power plants	A	1 (d)
		7	Mineral beneficiation including pelletisation	B	2 (b)
		8	Metallurgical industries (ferrous only)	B	3 (a)
		9	Cement plants	B	3 (b)
		21	Synthetic organic chemicals industry	A	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			(dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)		
		22	Distilleries	A	5 (g)
		24	Pulp & paper industry excluding manufacturing of paper from wastepaper and manufacture of paper from ready pulp without bleaching	A	5 (i)
		25	Sugar Industry	B	5 (j)
		31	Industrial estates/ parks/ complexes/areas, export processing Zones(EPZs), Special Economic Zones(SEZs), Biotech Parks, Leather Complexes	B	7 (c)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		34	Highways	A	7 (f)
		36	Common Effluent Treatment Plants (CETPs)	B	7 (h)
		37	Common Municipal Solid Waste Management Facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		39	Townships and Area development projects	B	8 (b)
107	**National Environmental Engineering Research Institute** **Address:** Nehru Marg, Nagpur – 440020 **E-mail:** director@neeri.res.in; rj_krupadam@neeri.res.in **Tel.:** 0712-2249885, 07758079540 *Conditions apply*	1	Mining of minerals (Open cast only)	A	1 (a) (i)
		2	Offshore & Onshore Oil and gas exploration, development & production	A	1 (b)
		3	River valley, hydel, Drainage and Irrigation projects	A	1 (c)
		4	Thermal power plants	A	1 (d)
		10	Petroleum refining industry	A	4 (a)
		13	Chlor-alkali industry	B	4 (d)
		16	Chemical fertilizers	B	5 (a)
		18	Petro-chemical complexes (industries based on processing of petroleum fractions & natural gas and/or reforming to aromatics)	A	5 (c)
		19	Textile – cotton and manmade fibers	B	5 (d)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		31	Industrial estates/ parks/	A	7 (c)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			complexes/areas, export processing Zones (EPZs), Special Economic Zones(SEZs), Biotech Parks, Leather Complexes.		
		32	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	A	7 (d)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		36	Common Effluent Treatment Plants (CETPs)	B	7(h)
		37	Common Municipal Solid Waste Management Facility (CMSWMF)	B	7 (i)
108	**National Institute for Interdisciplinary Science and Technology** **Address:** Council of Scientific & Industrial Research, Industrial Estate (PO), Pappanamcode, Thiruvanthapuram- 695019 **E-mail:** director@niist.res.in **Tel.:** 0471-2515226, 0471-2490324, 09447706202	1	Mining of minerals (Open cast only)	A	1 (a) (i)
		33	Ports, harbours, break waters and dredging	B	7 (e)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Conditions apply				
109	**N.S. envirotech Laboratories & Consultants** **Address:** A-8, Neha Medical Building, Opp. ESI Hospital, Hasanpura Road, Sodala, Jaipur – 302006, Rajasthan **E-mail:** nsenvirotech@gmail.com **Tel.:** 0141-2451959 *** The organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment.* *Conditions apply*	1	Mining of minerals including Open cast/ Underground mining	B	1 (a) (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
110	**Oasis Environmental Foundation** **Address:**6, Kartik Apartments, Plot no. 75 + 76B, Shanti Sheela Society, Off Law College Road, Erandwane, Pune- 411004	8	Metallurgical industries (ferrous & nonferrous) - both primary & secondary	A	3 (a)
		21	Synthetic organic chemicals industry (dyes and dye intermediates; bulk drugs and intermediates excluding	A	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	E-mail: oasisenv@vsnl.com **Tel.:** 020-25435691, 9822009923 *Conditions apply*		drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)		
		37	Common Municipal Solid Waste Management Facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
111	**Oil and Natural Gas Corporation** **Address:**8th Floor, Core- 4, Scope minar, laxmi Nagar, Delhi -92 **E-mail:** sharmajswarup@hotmail.com **Tel.:** 011-22406031, 9868282044, 9868282230 *Conditions apply*	2	Offshore and onshore oil and gas exploration, development & production	A	1 (b)
112	**Overseas Min-Tech Consultants Pvt. Ltd.**	1	Mining of minerals - Open cast only	A	1 (a) (i)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Address: 5th Floor, Apex Tower, Tonk Road, P.O. Jaipur, Rajasthan – 302015 **E-mail**:arun.omtc@gmail.com **Tel.:** 09460221084 Conditions apply	3	Irrigation projects only	B	1 (c)
		4	Thermal power plants	B	1 (d)
		7	Mineral beneficiation	A	2 (b)
		34	Highways	A	7 (f)
		38	Building and construction projects	B	8 (a)
113	**Paramarsh (Servicing Environment and Development** **Address:** 4/97, Viram Khand, Gomti Nagar, Lucknow – 226010, Uttar Pradesh **Email:** paramarsh.env@hotmail.com **Tel. No.** (0522) 4114250 Mobile: 09336348520 *** Though the EIA Coordinator for these sectors*	9	Cement plants (grinding units only)	B	3 (b)
		22**	Distilleries	B	5 (g)
		24**	Pulp & paper industry excluding manufacturing of paper from wastepaper and manufacture of paper from ready pulp without bleaching	B	5 (i)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	was found suitable for Cat. A, the organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment. They can take up projects in these sectors only for Cat. B as an organization. *Conditions apply*	38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
114	**Perfact Enviro Solutions Pvt. Ltd.** **Address:** 5th Floor, NN Mall, Sector – 3, Rohini, New Delhi - 110085 **E-mail:** info@perfactgroup.in; **Tel.:** 011 – 49281360 09871591330 *Conditions apply*	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		7	Mineral beneficiation including pelletisation	A	2 (b)
		15	Leather/skin/hide processing industry	A	4 (f)
		21	Synthetic organic chemicals industry (dyes and dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		22	Distilleries	A	5 (g)
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather	A	7 (c)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			complexes		
		32 A	Bio-Medical waste treatment Facilities	B	7(da)
		35	Aerial ropeways	A	7 (g)
		37	Common Municipal Solid Waste Management Facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
115	**Pioneer Enviro Laboratories & Consultants Pvt. Ltd.** **Address:** 6-3-652, Flat # 7-3, Dhruvatara Apartments, Amrutha Estates, Erramanjil, Somajiguda, Hyderabad- 500082 **E-mail:**pelcpl@yahoo.co.in, pelcpl@gmail.com **Tel.:**040-23314270, 9440677333	1	Mining of minerals- Open Cast only	A	1 (a) (i)
		3	River Valley projects	A	1 (c)
		4	Thermal power plants	A	1 (d)
		6	Coal Washeries	A	2 (a)
		7	Mineral beneficiation including pelletisation	B	2 (b)
		8	Metallurgical industries (ferrous & non-ferrous)	A	3 (b)
		9	Cements plants	A	3 (b)
		12	Asbestos milling and asbestos based products	A	4 (c)
		13	Chlor-alkali industry	A	4 (d)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Conditions apply	16	Chemical Fertilizers- SSP only	B	5 (a)
		21	Synthetic organic chemicals industry (dyes and dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		22	Distilleries	A	5 (g)
		25	Sugar Industry	B	5 (j)
		31	Industrial estates/ parks/ complexes/areas, export processing Zones(EPZs), Special Economic Zones(SEZs), Biotech Parks, Leather Complexes	A	7 (c)
		37	Common Municipal Solid Waste Management Facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
116	**Pollution Control Research Institute** **Address:** Bharat Heavy Electricals Limited (BHEL)Ranipur, Haridwar – 249403, Uttarakhand	4	Thermal power plants	A	1 (d)
		16	Chemical Fertilizers	A	5 (a)
		24	Pulp & paper industry excluding manufacturing of paper from waste paper and manufacture of paper	A	5 (i)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	E-mail: ambrish@bhelhwr.co.in **Tel.:** 01334- 281872 09410395764 *Conditions apply*		from ready pulp without bleaching		
		40 (v)	Food processing	-	-
117	**Pollution and Ecology Control Services** **Address:** Near Dhantoli Police Station, Dhantoli, Nagpur – 440012 **E-mail:** pecs_nagpur@rediffmail.com **Tel.:** 0712-6504146, 09423683728, 09373128182 *Conditions apply*	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		3	River Valley projects	A	1 (c)
		4	Thermal power plants	A	1 (d)
		6	Coal Washeries	A	2 (a)
		7	Mineral beneficiation	A	2 (b)
		8	Metallurgical industries (Ferrous & nonferrous)- both primary and secondary (including Induction &other furnaces > 30000 TPA)	A	3 (a)
		9	Cement plants	B	3 (b)
		11	Coke oven plants	A	4 (b)
		36	Common effluent treatment plants (CETPs)	B	7 (h)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
118	**Pragathi Labs & Consultants Pvt. Ltd.** **Address:** Plot No. 8, Temple Rock Enclave, Lane Opp. Linkwell Building, Tarbund 'X' roads, Secunderabad – 500009 **E-mail:**madala_r@yahoo.com **Tel.:** 040- 27897213; 09515121956 09849872272 *Conditions apply*	1	Mining of minerals including opencast/underground mining	A	1(a) (i)
		3	River Valley projects(Irrigation only)	A	1 (c)
		4	Thermal power plants	A	1 (d)
		8	Metallurgical industries(Ferrous only)	A	3 (a)
		21	Synthetic organic chemicals industry	A	5 (f)
		27	Oil & Gas transportation pipeline	A	6 (a)
		32	Common hazardous waste treatment, storage and disposal facilities(TSDFs)	B	7 (d)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		34	Highways	A	7 (f)
		37	Common Municipal Solid Waste Management Facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
		40(v)	Food Processing	A	-
119	**Precitech Laboratories Private Limited** (formerly known as Precitech Laboratories)	4	Thermal power plants	B	1 (d)
		9	Cement plants	B	3 (b)
		17	Pesticides industry and pesticide specific intermediates (excluding	A	5 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			formulations)		
	Address: 1st Floor Bhanujyot Complex, Plot No. C5/27, Opp Oriental Ins. Co. Ltd., Nr. GIDC Char Rasta Vapi - 396195 **E-mail:**vapi@precitechlab.com, dr.hmbhatt@precitechlab.com, rujul.h.bhatt@gmail.com **Tel.:** 0260-2425542, 2420995, 2424901, 3298985 09825121185, 9925008673 *Conditions apply*	19	Manmade fibers manufacturing	A	5 (d)
		20	Petrochemical based processing (processes other than cracking & reformation and not covered under the complexes)	A	5 (e)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		33	Ports, harbours, break waters and dredging	B	7 (e)
		38	Building and construction projects	B	8 (a)
120	**Pridhvi Envirotech (P) Ltd.** **Address:** 184/c,Lawn House, 4th floor, Vengalraonagar, Hyderabad - 500 038 **E-mail:** pvr@pridhvienviro.com **Tel.:** 040-40179770, 9849023662	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		4	Thermal power plants	B	1 (d)
		8	Metallurgical industries (ferrous & non-ferrous)	B	3 (a)
		9	Cement plants	B	3 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding	A	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Conditions apply		drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)		
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes	A	7 (c)
		37	Common Municipal Solid Waste Management Facility (CMSWMF)	B	7(i)
		38	Building and construction projects	B	8(a)
		39	Townships and Area development projects	B	8(b)
121	**Project & Development India Limited** **Address:** CIFT Building, PDIL, Sindri, Dhanbad, Jharkhand-828122 **E-mail:** Dhn_envpdil@bsnl.in , ajay15b@gmail.com **Tel.:** 03262350801, 09431777483 *Conditions apply*	10	Petroleum refining industry	A	4 (a)
		16	Chemical Fertilizers	A	5 (a)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quality indicated	B	6 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			in column 3 of schedule 2 & 3 of MSIHC Rules 1989 amended 2000)		
		29	Air ports	A	7 (a)
122	**R. K. Consultants** **Address:**17-E/ 403, C. H.B, Jodhpur- 342008 **E.mail:**rpurohit2226@gmail.com, rkconsultants@sify.com **Tel.:**0291- 2706098, 09829021098 *Conditions apply*	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		38	Building and construction projects	B	8 (a)
123	**R. S. Envirolinks Technologies Pvt. Ltd.** **Address:** 402, Radisson Suites Commercial Plaza, B Block, Sushant Lok 1, Gurgaon – 122009 **e. mail:** ravi@rstechnologies.co.in **Tel.:** 0124 – 4295383 09810136853	27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		33	Jetties only	B	7 (e)
		34	Highways	A	7 (f)
		40 (i)	Automobile and Auto Components	-	-

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Conditions apply				
124	**Ramans Enviro Services Pvt. Ltd.** **Address:** SF 23 & 24, Camps Corner, Nr. AUDA Garden, Prahladnagar, Ahmedabad – 380015 **e. mail:** ramans_consultancy@rediffmail.com samirchoksi88@yahoo.com **Tel.:** 079 – 26937472, 26937411 09824034495 *Conditions apply*	4	Thermal power plants	B	1 (d)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quality indicated in column 3 of schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		32	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	B	7 (d)
		36	Common effluent treatment plants (CETPs)	B	7 (h)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area Development projects	B	8 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
125	**Ramky Enviro Services Private Limited** **Address:** 2nd Floor, Ramky Grandiose, Ramky Towers Complex, Gachibowli, Hyderabd- 500032, Telangana **e. mail:** drchakradhar@ramky.com consultancy@ramky.com vvijaykumar@ramky.com **Tel.:** 0*40 2331 0091,* 09849597458 *Conditions apply*	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		2	Offshore and onshore oil and gas exploration, development & productions	A	1 (b)
		3	River Valley projects	A	1 (c)
		4	Thermal power plants	A	1 (d)
		20	Petrochemical based processing (processes other than cracking & reformation and not covered under the complexes)	A	5 (e)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes	A	7 (c)
		32	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	A	7 (d)
		33	Ports, harbours, break waters and	B	7 (e)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			dredging		
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area Development projects	B	8 (b)
126	**Ramji Mine Envirotech** **Address:** Plot No.-21,I Floor, Aarna 2 Tower, Kartarpura, Industrial Area, 22 Godam Jaipur-302006 **E-mail:** rme.envirotech@gmail.com, mkguptarqp@gmail.com, **Tel.:** 0140-4036199, 9799744347 *Conditions apply* *** Though the EIA Coordinator for this sector was found suitable for Cat. A, the organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment. They can take up projects in these sectors only for Cat. B as an organization.*	1**	Mining of minerals including Open cast	A	1 (a) (i)
			Mining of minerals - Underground mining	B	
		6	Coal washeries	B	2 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
127	**Right Source Industrial Solutions Pvt. Ltd.** **Address:** Plot No.203, H.No.5-36/203, Prashanthi Nagar, Kukatpally, Hyderabad- 500072 **E.mail:** prasad@rightsource.co.in info@rightsource.co.in **Tel.:**04023070602/23075699/40126589/65873137, 09885560011 *Conditions apply*	1	Mining of minerals including opencast/underground mining	B	1(a) (i)
		17	Pesticides industry and pesticide specific intermediates(excluding formulation)	A	5 (b)
		21	Synthetic organic chemicals industry(dyes & dye intermediates bulk drug, and intermediates excluding drug formulation, synthetic rubbers, basic organic chemicals, other synthetic organic chemicals and chemical intermediates.	A	5 (f)
		38	Building and construction project	B	8 (a)
128	**Rites Limited** **Address:** RITES Bhawan, Plot no. 1, Sector 29,Gurgaon- 122001	3	River Valley projects	B	1 (c)
		29	Air ports	A	7 (a)
		34	Highways	A	7 (f)
		35	Aerial ropeways	A	7 (g)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	E-mail: ue.rites@gmail.com, **Tel.:** 9810404276 *Conditions apply*	37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
129	**SBA Enviro Systems Pvt Ltd.** **Address**: 201, DDA Local Shopping Centre, E Block, Vikaspuri, New Delhi 110018 **E.mail:** sbaenvirosystems@ymail.com **Tel.:** 91 11 45118929 *** Though the EIA Coordinators for these sectors were found suitable for Cat. A, the organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment. They can take up projects in these sectors only for Cat. B as an organization.* *Conditions apply*	8	Metallurgical industries - (ferrous & nonferrous)	B	3 (a)
		15	Leather/ skin/ hide processing industry	A**	4 (f)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	B	5 (f)
		34	Highways	A**	7 (f)
		38	Building and Construction projects	B	8(a)
		39	Townships and Area development projects	B	8(b)
130	**SD Engineering Services Pvt. Ltd.**	3	River Valley, Hydel, Drainage and	A	1 (c)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Address: 14, Age Arcade, New Osmanpura, Near Sant Eknath Rang Mandir, Aurangabad - 431 005 **E-mail:**sdesplinida@gmail.com, deepak.sanghai@gmail.com **Tel.:** 0240-2333622, 2333064 *Conditions apply*		Irrigation projects		
		4	Thermal power plants	A	1 (d)
		8	Metallurgical industries - (ferrous & nonferrous)	A	3 (a)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		22	Distilleries	A	5 (g)
		25	Sugar Industry	B	5 (j)
		36	Common effluent treatment plants (CETPs)	B	7 (h)
		38	Building and Construction projects	B	8(a)
		39	Townships and Area development projects	B	8(b)
131	**Sadekar Enviro Engineers Pvt. Ltd.** **Address:** 310, Dempo Towers, EDC Patto, Panaji-403001	1	Mining of minerals (Open cast only)	A	1 (a) (i)
		2	Offshore and onshore oil and gas exploration, development & production	A	1 (b)
		17	Pesticide industry and pesticide	A	5(b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	E.mail: sadekarenviro@rediffmail.com psadekar@yahoo.com prs@sadekarenviro.com **Tel.:** 02437048, 09423055718, 09423318140 09820144125/09423055718 *Conditions apply*		specific intermediates (excluding formulations)		
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates	A	5 (f)
		25	Sugar industry	B	5(j)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/ coral reefs/ ecologically sensitive Areas including LNG terminal	A	6 (a)
		3	Industrial estates/ parks/ complexes/Areas, export processing Zones(EPZs), Special economic zones(SEZs), Biotech Parks, Leather Complexes	A	7 (c)
		33	Ports, Harbours, break waters and dredging	A	7 (e)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		39	Township and area development projects	B	8 (b)
132	**San Envirotech Pvt. Ltd.** **Address:**401/402/423/424/324, Medicine Market, Opposite Shefali Centre, Paldi, Cross road, Ahmedabad, Gujarat- 380007 **Email:**Mahendra.sepl@gmail.com **Tel.:** 07926583077, 09825007201, 09327637201 *Conditions apply*	1	Mining of minerals (Open cast only)	B	1 (a) (i)
		4	Thermal power plants	A	1 (d)
		8	Metallurgical industries (ferrous only) -both primary & secondary	B	3 (a)
		9	Cement plants	B	3 (b)
		13	Chlor-alkali industry	B	4 (d)
		16	Chemical Fertilizers	A	5 (a)
		17	Pesticides industry and pesticide specific intermediates (excluding formulations)	A	5 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates	A	5 (f)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quality indicated in column 3 of schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		38	Building and construction projects	B	8 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
133	**SGM Corporate Consultants Pvt. Ltd.** **Address**: Sahil Apartment, 1102/A/4B, Lakaki Road,Opp. Kirloskar Banglow, Model Colony, Shivaji Nagar , Pune -411016 **E-mail:** sgm_pune@yahoo.com, sgmcorporate@gmail.com **Tel.:** 020- 25822900 09822180803 *Conditions apply*	1	Mining of minerals - Open cast only	B	1 (a) (i)
		4	Thermal Power Plants	B	1 (d)
		9	Cement plants	A	3 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	B	5 (f)
		22	Distilleries	A	5 (g)
		25	Sugar Industry	B	5 (j)
		38	Building and construction projects	B	8 (a)
134	**SAWEN Consultancy Services Pvt. Ltd.** **Address:** 409-A, 426-B, 417-A & B, Sahara Shopping Centre, Faizabad Road, Lucknow – 226016	7	Mineral Beneficiation	B	2(b)
		25	Sugar Industry	B	5 (j)
		38	Building and construction projects	B	8 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	E-mail: consultancy_sawens@yahoo.co.in, **Tel.:** 0522- 7379444471-74 09450738044 *Conditions apply*	39	Townships and Area development projects	B	8 (b)
135	**SGS India Pvt. Ltd.** **Address:** 250, Udyog Vihar, Phase IV, Gurgaon - 122015 **E-mail:** sanjeev.kumar@sgs.com **Tel.:** 0124 – 2399990, 2399998 09871794706 *Conditions apply*	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		2	Offshore and onshore oil and gas exploration, development & production	A	1 (b)
		3	River Valley	B	1 (c)
		4	Thermal power plants	A	1 (d)
		9	Cement plants	A	3 (b)
		10	Petroleum refining industry	A	4 (a)
		12	Asbestos milling and asbestos based products	A	4 (c)
		18	Petro-chemical complexes (industries based on processing of petroleum fractions & natural gas and/or reforming to aromatics)	A	5 (c)
		20	Petrochemical based processing (processes other than cracking & reformation and not covered under the complexes)	A	5 (e)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		22	Distilleries	A	5 (g)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quality indicated in column 3 of schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		29	Air ports	A	7 (a)
		33	Ports, Harbours, Jetties, marine terminals, break waters and dredging	A	7 (e)
		34	Highways	A	7 (f)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development	B	8 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			projects		
136	**Shivalik Solid Waste Management Limited** **Address:** (UPL Enviro Infrastructure Group Co.), 2nd Floor, SCO 20-21, near Hotel Dolphin,Zirakpur,Punjab-140604 **E-mail:** s.brahma@tatvaglobal.com **Tel.:** 08872028131, 08288079363, 09316028131 *Conditions apply*	1	Mining of minerals- Open cast only	A	1 (a) (i)
		3	River Valley projects	A	1 (c)
		4	Thermal power plants	B	1 (d)
		8	Metallurgical industries(ferrous & nonferrous) - both primary & secondary	A	3 (a)
		17	Pesticides industry and pesticide specific intermediates (excluding formulations)	A	5 (b)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	B	6 (a)
		32	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	A	7 (d)
		32 A	Bio-medical waste treatment facilities	B	7 (da)
		36	Common effluent treatment plants (CETPs)	B	7 (h)
		38	Building and construction projects	B	8 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
137	**Shriram Institute for Industrial Research** **Address:** 19, University Road Delhi- 110007 **E-mail:** sridlhi@shriraminstitute.org **Tel.:** 011- 27667267 *Conditions apply*	27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quality indicated in column 3 of schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		31	Industrial estates/ parks/ complexes/Areas, export processing Zones(EPZs), Special economic zones(SEZs), Biotech Parks, Leather Complexes	A	7 (c)
138	**Siddhi Green Excellence Private Limited** **(Earlier known as Siddhi Consultants)** **Address:** "Kamal Arcade", Shop No. 3, Comm. Plot No. C-3/3, Near State Bank of India, G.I.D.C, Ankleshwar – 393002	17	Pesticides industry and pesticide specific intermediates (excluding formulations)	A	5 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other	A	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	E-mail: siddhi_ank@rediffmail.com **Tel.:** 02646- 224805 09824345895 *Conditions apply*		synthetic organic chemicals and chemical intermediates)		
139	**Singareni Collieries Company Limited** **Address:** Kothagudem Collieries Bhadrachalam Road Rly. Station, Khammam District – 507101 **E-mail:**dpp@scclmines.com **Tel.:** 08744242328 09491144455 *Conditions apply*	1	Mining of minerals including Open cast and Underground mining	A	1 (a) (i)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
140	**S.M. Consultants** **Address:** S.M.Tower, Plot No.- 130,Mancheswar Industrial Estate, Rasulgarh, Bhubaneswar-751010, Odisha **E-mail:** qualitycontrol@smcindia.com Tel.: 08908215859 *** Though the EIA Coordinator for this sector was found suitable for Cat. A, the organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment. They can take up projects in these sectors only for Cat. B as an organization.* *Conditions apply*	34**	Highways	B	7 (f)
		38	Building and construction projects	B	8 (a)
141	**SMS Envocare Ltd.** **Address:** 301, Pentagaon, P3, Magarpatta City, Hadapsar, Pune - 411028	3	River Valley projects	B	1 (c)
		4	Thermal power plant	B	1(d)
		19	Man made fibre manufacturing	A	5(d)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk	A	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	E-mail: nilesh.deshmukh@smsl.co.in **Tel.:** 020- 66801111 09922901511 *Conditions apply*		drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)		
		22	Distilleries	A	5 (g)
		25	Sugar Industry	B	5 (j)
		32	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	A	7 (d)
		36	Common Effluent Treatment Plants (CETPs)	B	7 (h)
		37	Common Municipal Solid Waste Management Facility (CMSWMF)	A	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
142	**Sneha Hi-Tech Products** **Address:** No.8 & 28, 4 th Cross, Maruthinagar	1	Mining of minerals - Open cast only	A	1 (a) (i)
		36	Common Effluent Treatment Plants (CETPs)	B	7 (h)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Chandra Layout, 80 feet road, Nagarabhavi, Bangalore-560072 **E-mail:** snehahitechproducts@gmail.com **Tel.:** 080-23180113/23390341 **The organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment.* *Conditions apply*	38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
143	**Srujan Research and Planning foundation** **Address:** Sharada Center, 11/1 Erandawane, Off Karve Road, Pune - 411004 **E-mail:** rahul.nawle@srujanfoundation.com, planning@srujanfoundation.com **Tel.:** 020-65333394/ 09970181813 *Conditions apply*	38	Building and construction projects	B	8 (a)
		39	Townships and Area Development projects	B	8 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
144	**State Forest Research Institute** **Address:** State Forest Research Institute, Polipathar, Narmada Road, Jabalpur - 482008 (M.P) **E-mail:** pandeyrk1@yahoo.com **Tel.:** ***The organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment. They can take up projects in these sectors only for Cat. B as an organization.* *Conditions apply*	1	Mining of minerals including Open cast and Underground mining	B	1 (a) (i)
		3	River valley projects	B	1 (c)
145	**Sri Sai Manasa Nature Tech Pvt. Ltd.** **Address**: Plot No. 74/A, Flat No. 102, Central Bank Building, Kalyan Nagar, Hyderabad – 500038 **E-mail:**ssmntpl@gmail.com	1	Mining of minerals – Open cast only	A	1 (a) (i)
		4	Thermal power plants	A	1 (d)
		6	Coal washeries	A	2 (a)
		8	Metallurgical industries (ferrous & non ferrous)	B	3 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Tel.: 040- 23816333 09010548548 *Conditions apply*	9	Cement plants	A	3 (b)
		22	Distilleries	B	5 (g)
		31	Industrial estates/ parks/ complexes/Areas, export processing Zones(EPZs), Special economic zones(SEZs), Biotech Parks, Leather Complexes	B	7 (c)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
146	**Srushti Sewa** **Address:** Harihar Niwas, Agrasen Marg, Near Adivasi Bhavan, Giri Peth, Nagpur – 440010 (M.S.) **E-mail:** srushtisewa@sancharnet.in srushtisewa@yahoo.com **Tel.:** 0712- 6888545 09422108095, 08237002633 *** Though the EIA Coordinators for these sectors were found suitable for Cat. A, the organization as a*	1	Mining of minerals including underground mining	A**	1 (a) (i)
		3	River Valley Projects	A**	1 (c)
		4	Thermal power plants	A**	1 (d)
		6	Coal washeries	A**	2 (a)
		8	Metallurgical industries (ferrous & non-ferrous)	B	3 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment. They can take up projects in these sectors only for Cat. B as an organization. *Conditions apply*				
147	**SV Enviro Labs & Consultants** **Address:** B1-Block –B, IDA Auto Nagar, Visakhapatnam- 530012 **E-mail:** svenviro_labs@yahoo.co.in **Tel.:** 0891- 2797377 09440338628 *Conditions apply*	1	Mining of minerals (Open cast only)	A	1 (a) (i)
		3	River Valley Projects	A	1 (c)
		16	Chemical Fertilizers (SSP & DAP plants only)	A	5 (a)
		22	Distilleries	A	5 (g)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		33	Ports, Harbours, break waters and dredging	A	7 (e)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		39	Townships and Area development projects	B	8 (b)
148	**TATA Consulting Engineers Limited** **Address:** Matulya Center, A-249, Senapati Bapat Marg, Lower Parel (west), Mumbai – 400013 **E-mail:** vsbapat@tce.co.in; alokk@tce.co.in **Tel.:** 022- 66624743, 66624724 *Conditions apply*	1	Mining of minerals (Open cast only)	B	1 (a) (i)
		4	Thermal power plants	A	1 (d)
		8	Metallurgical industries (ferrous only) – both primary and secondary	A	3 (a)
		11	Coke oven plants	A	4 (b)
		16	Chemical Fertilizers	A	5 (a)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
149	**TEAM Institute of Science & Technology Pvt Ltd.** **Address:** E-65, Chittaranjan Marg, C-Scheme, Jaipur,Rajasthan-3020022 **e. mail:** eia@teamtesthouse.com	1**	Mining of minerals - Open cast only	A	1 (a) (i)
		36	Common effluent treatment plants (CETPs)	B	7(h)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Tel.: 0141-2369980 ***Though the EIA Coordinator for this sector was found suitable for Cat. A, the organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment. They can take up projects in this sector only for Cat. B as an organization.* *Conditions apply*	38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
150	**TEAM Labs and Consultants** **Address:** B- 115 & 509, Annapurna Block, Aditya Enclave, Ameerpet, Hyderabad – 500038 **e. mail:**teamlabs@gmail.com **Tel.:** 040 – 23748666/ 23748616 09866415966 *Conditions apply*	1	Mining of minerals including Open cast / Underground mining	A	1 (a) (i)
		4	Thermal power plants	A	1 (d)
		8	Metallurgical industries (ferrous only) – both primary and secondary	A	3 (a)
		9	Cement plants	A	3 (b)
		13	Chlor-alkali industry	A	4 (d)
		17	Pesticides industry and pesticide specific intermediates (excluding formulations)	A	5 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding	A	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)		
		31	Industrial estates/ parks/ complexes/Areas, export processing Zones(EPZs), Special economic zones(SEZs), Biotech Parks, Leather Complexes	A	7 (c)
		34	Highways	A	7 (f)
		38	Building and construction projects	B	8(a)
		39	Townships and Area development projects	B	8 (b)
151	**Terracon Ecotech Pvt. Ltd.** **Address:** 202, Kingston, Tejpal Road, Vile Parle (E), Mumbai 400057, India **e. mail:** info@terraconindia.com **Tel.:**022-2613939/40/41, 9820828087 *Conditions apply*	1	Mining of minerals- Open cast only	B	1 (a) (i)
		2	Off shore and on shore oil and gas exploration, development and production	A	1(b)
		3	River valley, hydel, drainage and irrigation projects	B	1 (c)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		33	Ports, harbours, break waters and dredging	A	7 (e)
		34	Highways	A	7 (f)
		37	Common municipal solid waste management facility (CMSWMF)	B	7(i)
		38	Building and Construction projects	B	8(a)
152	**T. R. Associates** Address: Ganesh Meridian, Block No - C, Office No - 605a, Opp. Kargil Petrol Pump,Nr. Sola Over Bridge, B/S. Shapath Hexa, S.G. Highway, Ahmedabad 380060 **E-mail:** trassociates@hotmail.com **Tel.:** 98253 71099	4	Thermal power plants	B	1 (d)
		9	Cement plants	B	3 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		38	Building and construction projects	B	8 (a)
153	**Udaipur Min-Tech Pvt. Ltd.** **Address:** 206, "Apeksha Complex", Sector 11, Hiran Magri, Udaipur- 313002 **E-mail:** ssbist@udrmintech.com	1	Mining of minerals - Open cast mining only	A	1 (a) (i)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Tel.: 0294- 2489672 09414167672, 09950998672 *Conditions apply*				
154	**ULTRA-TECH** **Address:** 206, 224-225, Jai Commercial Complex, Eastern Express Highway, Opp. Cadbury, Khopat, Thane West - 400 601 **E-mail:** sawantkishor@ultratech.in **Tel.:** 020-25281338 09322917772 *Conditions apply*	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		2	Offshore & Onshore Oil and gas exploration, development & production	A	1 (b)
		3	River Valley projects	A	1 (c)
		4	Thermal Power Plants	A	1 (d)
		7	Mineral beneficiation	A	2 (b)
		8	Metallurgical industries- (ferrous & nonferrous) - both primary and secondary	A	3 (a)
		9	Cement Plants	A	3 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		22	Distilleries	A	5 (g)
		25	Sugar Industry	B	5 (j)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		34	Highways	A	7 (f)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
155	**Unistar Environment & Research Labs Pvt. Ltd.** **Address:** 215, Royal Arcade, Near GIDC Office, Vapi – 396195 **E-mail:** unistar@uerl.in	8	Metallurgical industries (ferrous only)	B	3 (a)
		19	Manmade fibers manufacturing	A	5 (d)
		20	Petrochemical based processing (processes other than cracking & reformation and not covered under the complexes)	B	5 (e)
		21	Synthetic organic chemicals industry	A	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Tel.: 0260 – 2435610, 2433966 09909946373 *Conditions apply*		(dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)		
		23	Integrated paint industry	B	5 (h)
		38	Building and construction projects	B	8 (a)
156	**Vardan Environet** **Address:** D-142, Sushant-Lok III, Golf Course Extension Road, Sector- 57, Gurgaon, Haryana **E-mail:** vardanenviro165@gmail.com **Tel.:**09953147268, 09971684812 *Conditions apply*	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		7	Mineral beneficiation	A	2 (b)
		8	Metallurgical industries (ferrous & nonferrous)- both primary & secondary	A	3 (a)
		9	Cement Plants	B	3 (b)
		11	Coke oven plants	B	4 (b)
		20	Petrochemical based processing (processes other than cracking & reformation and not covered under the complexes)	B	5 (e)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other	A	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			synthetic organic chemicals and chemical intermediates)		
		22	Distilleries	A	5 (g)
		25	Sugar Industry	B	5 (j)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		34	Highways	A	7 (f)
		36	Common effluent treatment plants (CETPs)	B	7(h)
		37	Common municipal solid waste management facility (CMSWMF)	B	7(i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
157	**Vasantdada Sugar Institute** **Address:** Manjari (BK), Taluka, Haveli, Pune-412307 **E-mail:** ds.nimbalkar@vsisugar.org.in **Tel.:** 020- 26902343 *Conditions apply*	4	Thermal Power Plants – Biomass based projects only	A	1 (d)
		22	Distilleries	A	5 (g)
		25	Sugar Industry	B	5 (j)
		39	Townships and Area development projects	B	8 (b)
158	**Vimta Labs Limited** **Address:** 142, IDA, Phase – II, Cherlapally, Hyderabad – 500051 **E-mail:** janardhan@vimta.com **Tel.:** 040- 27264141 09000711309, *Conditions apply*	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		2	Offshore & Onshore Oil and gas exploration, development & production	A	1 (b)
		4	Thermal power plants	A	1 (d)
		6	Coal Washeries	A	2 (a)
		8	Metallurgical industries- (ferrous & nonferrous) - both primary and secondary	A	3 (a)
		9	Cement plants	A	3 (b)
		12	Asbestos milling and asbestos based products	A	4 (c)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	B	5 (f)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		29	Air ports	A	7 (a)
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes	A	7 (c)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
159	**Vison Labs** **Address:** H.No. 16-11-23/37/A, Plot No. 205, Opp. RTA Office, Sagar Hotel Building, Malakpet, Hyderabad – 500036 **E-mail:** vison_labs@yahoo.co.in vison.labs@gmail.com **Tel.:** 040- 24544320 09849110019 *Conditions apply*	1	Mining of minerals - Opencast mining only	B	1 (a) (i)
		4	Thermal power plants	B	1 (d)
		8	Metallurgical Industries	B	3 (a)
		9	Cement plants	B	3 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		38	Building and construction projects	B	8 (a)
160	**Visiontek Consultancy Services Pvt. Ltd.** **Address:** Plot No.-108, District Center, Chandrasekharpur, Bhubaneswar, Khurda -751016 **e-mail:** p_kumar_ranjan@vcspl.org **Tel.:** 0674-2744594	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		3	River valley projects	A	1 (c)
		4	Thermal power plants	A	1 (d)
		6	Coal washeries	A	2 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	09437179882, 9338770319 *Conditions apply*	7	Mineral beneficiation	A	2 (b)
		8	Metallurgical industries- (ferrous & nonferrous) - both primary and secondary	A	3 (a)
		9	Cement plants	A	3 (b)
		11	Coke oven plants	A	4 (b)
		15	Leather/ skin/ hide processing industry	A	4 (f)
		32	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	A	7 (d)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		34	Highways	B	7(f)
		37	Common Municipal Solid Waste Management Facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
161	**VITYA Consultants Pvt. Ltd.**	31	Industrial estates/ parks/ complexes/ Areas, export processing	A	7 (c)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Address: 4th Floor, Laxmi Plaza, Adj. Shenoy Nursing Home, East Marredpally , Secunderabad - 500 026 (India) **E-mail:**kk@vitya.in ed.vitya@gmail.com **Tel.:** 040 – 66233979 09989211387, 09000611387 *Conditions apply*		zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes		
		34	Highways	A	7 (f)
		36	Common effluent treatment plants (CETPs)	B	7 (h)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
162	**VK:e Environmental** **Address:** 73/2, Bhakti Marg, Off Law college Road, Erand wane Pune-411004 **E-mail:**aparanjape@vke-environmental.com, anaghap@gmail.com **Tel.:** 0120-66268888 Mob. No.9822013405 *Conditions apply*	38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
163	**Voyants Solutions Private Limited** **Address:** 403, 4th Floor, Park Centra Sector -30, NH-8 Gurgoan-122001 **E-mail:** info@voyants.in **Tel.:** 0124-4598200 /9599757300 *Conditions apply*	1	Mining of minerals (Open cast only)	A	1 (a) (i)
		3	River valley projects	A	1 (c)
		4	Thermal power plants	B	1 (d)
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes	B	7 (c)
		33	Ports, harbours break waters and dredging	A	7 (e)
		34	Highways	A	7 (f)
		37	Common Municipal Solid Waste Management Facility (CMSWMF)	B	7(h)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
164	**Wapcos Limited** **Address:** 76 – C, Institutional Area, Sector – 18, Gurgaon - 122015 **E-mail:**wapcos.cfe@gmail.com **Tel.:** 0124 – 2397396, 09811487830 *Conditions apply*	1	Mining of minerals (Open cast only)	A	1 (a) (i)
		3	River valley projects	A	1 (c)
		4	Thermal power plants	A	1 (d)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		38	Building and construction projects	B	8 (a)
165	**Wolkem India Limited** **Address:** Consultancy Division, Post Box No. 21 E – 102 Mewar Industrial Area (Madri), Udaipur – 313003 Email: mahip@wolkem.com **Tel.:** 0294- 6452067 08890836012 *Conditions apply*	1	Mining of minerals including Opencast / Underground mining	A	1 (a) (i)
		7	Mineral beneficiation	A	2 (b)
		8	Metallurgical Industries (Secondary Ferrous)	B	3 (a)
		9	Cement plants	A	3 (b)
		16	Chemical Fertilizers	A	5 (a)
		17	Pesticides industry and pesticide specific intermediates (excluding formulations)	A	5 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk	A	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)		
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
166	**Yes Enviro Solutions** **Address:** G-256, Second Floor, Sec-63, Noida, 201301 **Email:** info@yesenviro.co.in **Tel:** 07838007393 ***Though the EIA Coordinator for this sector was found suitable for Cat. A, the organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment. They can take up projects in this sector only for Cat. B as an organization.* *Condition Apply*	1	Mining of Minerals	B	1 (a) (i)
		3	River valley projects	B	1 (c)
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes	B	7 (c)
		34**	Highways	A	7 (f)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)

Note*:* Revision 56 (August 08, 2017): List of EIA Consultant Organizations

1. ***(#) includes Accredited EIA Consultant Organizations who have submitted requisite details which are under process***
2. **New Accredited EIA Consultant Organizations:** None
3. **Deletion from the list:** Envirochem Laboratories (P) Ltd. and Naik Environment Research Institute Limited
4. **The ACOs who have not taken requisite actions to comply with the requirements of Version 3 are mentioned in List 'B'**
5. **ACOs shifted to List 'B':** None
6. **While preparing this list, due care has been taken. However, any inadvertent error cannot be ruled out. In case any error is noticed, kindly intimate the same to QCI-NABET.**

Annexure-8

GHCL Limited

Ref: GHCL/New Proj/03

Date: 5th June, 2018

National Environmental Engineering Research Institute.
Nehru Marg,
NAGPUR- 440 020

Kind Attn: Dr. M Sureshkumar/Dr.R J Krupadam

Sub: Letter of Intent to carry out Environment Impact Assessment for Greenfield Soda Ash project at Taluka Mandavi of district Kutch, Gujarat.

Ref: Mail offer Dated 3rd April, 2018 & telecon had with you today.

Dear Sir,

With reference to your above mentioned offer & our subsequent discussions, we are pleased to release letter of intent for subject requirement on study as per terms and conditions mentioned below. Our formal Purchase order / Work order will be issued in due course.

Scope of Supply / work:

a) Initial Environmental Examination (IEE)

- Selection of site: Based on visit to the 4 sites considered by the GHCL; and Appropriate site will be selected for the Chemical Complex.
- The environmental and economic merits and demerits of the different Sodaash manufacturing technologies and selection of suitable process technology.
- Reconnaissance survey in the study/impact area.

b) Environmental Impact Assessment (EIA)

Study area

- Geographical location of the proposed project site with coordinates of all corners & related to toposheet(s) to be provided by the GHCL Limited's Project near Taluka- Mandavi of District Kutch, Gujarat for delineation of the study area for collection of primary baseline data and secondary data in the area falling 10 km radius from the proposed project site. Environmental samples will be collected from sampling location in the study area as a part of environmental monitoring with proper reasoning.

c) Environmental Quality

- **AIR QUALITY :**
  Baseline data of ambient air parameters namely RSPM, nitrogen dioxide, sulphur dioxide, carbon monoxide, heavy metals and other air pollutants will be collected in an area extending 10 km from the project boundary by observation at a number of locations for one season other than monsoon as per CPCB

norms-specific importance to areas in close proximity of project i.e.,1 km. One station should be in the up-wind/non-impact/non-polluting area as a control station.

- Meteorological data covering the following will be incorporated in the EIA report.
  - i. Wind speed and direction
  - ii. Rainfall
  - iii. Relative humidity
  - iv. Temperature
  - v. Barometric pressures
  - vi. History of cyclones

- The data for at least a 10-year period will be presented from the nearest meteorological station, except for the history of cyclones and tidal surges for which 100-year data.
- Impact of project construction/operation on the ambient air quality on account of emissions of dust during construction as well as emission of gases from equipment deployed for construction and vessels handling will be assessed.
- Prediction due to emissions from the project activity and increased traffic; emission inventory for critical pollutants with and without mitigation measures, and prediction of the impact due to the existing activity on the proposed project on the ambient environment will be reported.
- Mitigation measures proposed during the construction stage will include dust Suppression measures by suitable techniques. Mitigation measures to prevent impact and manage the impact of the project will be delineated. Water Harvesting and greenbelt development in the project site will be planned.

(d) Noise

- Baseline data on noise pollution at the project area and the neighbourhood up to 1 km or nearest residential areas will be monitored as per the CPCB norms.
- Impact of project construction/operation on the noise on account of construction equipment, project plant and utilities equipment and road traffic.
- Mitigation measures to reduce adverse effects will be provided.

(e) Water environment

- Groundwater- Baseline data of groundwater including data of pH, dissolved solids, suspended solids, BOD, DO, coli-form bacteria, oil, heavy metals for one-season.
- Surface water- Baseline data on location of surface water like lagoons, lakes, tidal inlets, streams, rivers, their details, present quality for one season – Details of water bodies in the project area and the utility.
- Identification of anticipated impacts due to discharge of effluent and sewage - Impact of project construction/operation on the groundwater and surface water bodies.
- Propose appropriate mitigation measures to reduce adverse effects such as routing surface drainage to settlement tanks/pits - Treatment of effluent to meet the discharge standards of CPCB for marine disposal.
- Mitigation measures for protection of surface water resources in terms of quality and quantity will be proposed for both construction and operational stages of the project activity. Water requirement for project and the source of water for processing, Water harvesting and conservation plans will be prepared. Proposals to treat effluents confirming to standards notified under EP Act1996 will be submitted.

(f) Land environment

- Land availability - Justification for the proposed quantum of the area.
- Anticipated Impacts during project construction/operation on the land requirement/land use pattern will be assessed - Effect of future growth of the project and/or of the ancillaries will be assessed - Impact on the public utilities and natural drainage system arising out of proposed project activities.

- Mitigation measures will be proposed to reduce adverse effects like adopting soil improvement techniques and adopting suitable design methods to reduce land requirement.
- Baseline data describing of existing situation of the land at the proposed project area including description of terrain hill slopes coastal and inland topography, coastal features (low-land, beaches, littoral areas, shoal areas), terrain features, Slope and elevation.
- LU/LC: Study of land use pattern, habitation, cropping pattern, forest cover, environmentally sensitive places using remote sensing and GIS.
- Geology- Baseline data on rock types, regional tectonic setting (reported fractures/faulting, folding, warping), and history of any volcanic activity, seismic it and associated hazards, mainly in the coastal area.
- Soil data including type, classification, characteristics, and soil properties which is useful in engineering considerations for design of structures, and greenbelt development. Changes in parameters of soil also may affect plantation and vegetative growth, which in turn may endanger the health of local habitat. Baseline data of the soil quality as per CPCB guidelines in the study area.
- Anticipated impacts of proposed project on the topography due to activities like depletion of hills due to large scale quarrying, filling of low-lying area with dredged spoil and borrowed material, damage to existing vegetation/ greenbelt and plantation, changes in land use patterns, disturbance to existing protected areas like mangroves, forests and environmentally sensitive areas/zones will be assessed.
- Mitigation measures will be suggested to reduce adverse effects include improving greenbelt, usage of alternative construction materials like fly-ash, where possible; and storm water management.

(g) Solid and Hazardous wastes

- Details of authorized municipal solid waste facilities and hazardous waste disposal facilities in the study area will be inventoried in case if these facilities proposed to utilize the proposed project.
- Impacts due to non-hazardous and hazardous solid waste generated during the construction and operational stages will be assessed.
- Mitigation measures to comply the norms will be proposed for solid and hazardous wastes management. Options for minimization of solid waste and environmentally compatible disposal/recycling of waste to conserve natural resources will be planned.

(h) Ecology and Biodiversity

- Terrestrial Ecology – Baseline data of terrestrial flora and fauna at the project area by proper surveys - History of any endangered species – Flora and fauna in the neighborhood – Details on secondary data on the existing flora and fauna in the study area as well as 10 km from its boundary, carried-out by an university/institution under the relevant discipline (such as BSI, ZSI, and WII) in the list of flora and fauna along with classification as per Schedule given in the Wild Life Protection Act,1972 (for fauna) and in the Red Book Data (flora)- statement clearly specifying whether the study area forms a part of an ecologically sensitive area or migratory corridor of any endangered fauna.
- Impacts of the project construction/operation on terrestrial ecology on account of project construction will be assessed by suitable empirical/model studies.
- Fisheries resources - Impacts on the fishing activity due to the project – Specific study on effects of construction activity and pile driving on marine life.
- Mitigation measures to reduce adverse effects on ecology and biodiversity will be provided.

(I) Socio-economic and Occupational Health

- Baseline data at the project area will include the demography, particularly on human settlements, health status of the communities, existing infrastructure facilities in the proposed area and area of impact due to the proposed activity - Present employment and livelihood of these populations, awareness of the population about the proposed activity shall be included.

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- Baseline data of existing public utility infrastructure shall be ascertained and reported to assess the impacts of the project on these public utilities in order to incorporate desired methods in the EMP and monitor the same during the construction as well as operational phases of the port.
- Details of public and private land in the proposed and immediate surroundings socio-economic status of the affected owners of the private land will be reported. Present status of health, housing, public utilities, commercial structures and transportation should be collected. Impact of the project on socio cultural aspects will be assessed.

(j) Environmental Monitoring Program

- The technical aspects of the monitoring of environmental parameters as per the requirements of SPCB/CPCB for the effectiveness of mitigation measures (including measurement methodologies, data analysis, reporting schedules, emergency procedures,detailed budget & procurement schedules) will be included in the EIA report.
- Some important considerations for formulation of the environmental monitoring program are:
    1. Requirement of monitoring facilities
    2. Frequency, location, parameters of monitoring
    3. Compilation and analysis of data, comparison with base line data and compliance to accepted norms and reporting system
    4. Plantation monitoring program

(k) Environmental Management Plan (EMP)

Summary of potential impacts & recommended mitigation measures.

- Allocation of resources and responsibilities for plan implementation
- Administrative and technical setup for management of environment
- Institutional arrangements proposed with other organizations/Govt. Authorities for effective implementation o environmental measures proposed in the EIA
- Safeguards/mechanism to continue the assumptions/ field conditions made in the EIA
- Environmental specifications for contractors will be prescribed and ensured required safeguards during the design and construction stage

<u>Deliverables:</u>

- Assist in preparing application for obtaining ToR from MoEF & CC
- Assist to make necessary presentation to MoEF and obtain ToR
- Carryout Environment Impact Assessment Study and coordinate with other studies related to EIA
- Submission of draft EIA Report (2 copies + soft-copy) for review by the proponent
- Submission of Final EIA Report along with executive summary after incorporation of suggestions from GHCL Limited (25 copies along with 2 CDs) for Environmental Appraisal at MoEF & CC
- Make presentation to MoEF for Environmental clearance(EC)

Note: Any change in the above proposal as per TOR conditions/clauses spelled out in MoEF letter of TOR to be Incorporated in the study & reported.

PROJECT COST:

GHCL Limited

PROJECT DURATION: 8-15 months

Payment terms: 40% of order value as advance against submission of Proforma Invoice before start of work.
50% payment against submission of draft report & balance 10% against submission of final report.

Kindly acknowledge this LOI and send copy duly signed as a token of acceptance. **Kindly coordinate your work/Emails/correspondence with our Shri V N Desai (E-mail: vndesai@ghcl.co.in)**

Thanking you,

Truly yours,

For, GHCL Limited.

Authorized Signatory

Regd. Office : "GHCL House", Opp. Punjabi Hall, Nr. Navrangpura Bus-Stand, Navrangpura, Ahmedabad-380 009. India
Phone : +91-79-39324100, 26427818, Fax : +91-79-26423623, Website : www.ghclindia.com

Head Office : "GHCL House", B-38, Institutional Area, Sector - 1, Noida - 201 301 (U.P.) India Phone : +91 120 2535335, Fax : +91 120 2535209
CIN: L24100GJ1983PLC006513

A Dalmia Brothers Enterprise

Annexure-9

GHCL Limited

GHCL/AHD/ENV/MOEF/VND/17-18/07 23rd November 2017

Member Secretary Industries 2
Ministry of Environment, Forest and Climate Change.
Indira Paryavaran Bhavan. Jorbagh Road
Aliganj, Lodhi Colony
New Delhi - 110 003
Ph: 011 24365199
E-mail: aksmree@yahoo.com/ sk.smree66@nic.in

Kind Attn: **Mr S K Srivastava.**

Sub: **Approved consultant for EIA/EMP Studies for Green Field Soda Ash Project.**

Dear Sir,

M/s GHCL Ltd is a reputed Soda Ash Manufacturing Heavy Chemical Unit incorporated in 1983 is located at Sutrapada, Gujarat. This is India's first integrated soda Ash Plant based on Akzo's Dry Liming Technology. Plant was commissioned in the year 1988 with 4,20,000 TPA capacity. Over the time capacity expanded to 11,00,000 TPA. This plant is the most energy efficient soda ash plant of the country.

GHCL is now planning for setting up a Green Field Chemical Complex in the Taluka of Mandvi, District of Kutch, State of Gujarat. For this project, M.O.U with Govt. Of Gujarat was signed during Vibrant Gujarat 2017 event. We have ambitious plans for Soda Ash Plant, Caustic Soda Plant, and Edible Salt etc. However to start with planning to set up a Green Field 5.00 Lac TPA Soda Ash Plant along with 60 MW C.P.P i.e solid fuel based Captive Power Plant. In future capacity expansion to take pace. The Captive Power Plant is a necessary as uninterrupted power and process steam at various operating pressures is the requirement. The Plant process being exothermic large quantity of sea water needs to be drawn from the sea. The entire plant treated effluent confirming to the laid down standards will be discharged in the sea at a recommended point. Further to meet process water requirement R.O./D.M will be installed. To draw water sea water, intake facilities will be set up.

Soda Ash integrated project being a mega project classified as category 4 (E) and 1 (D) by Project sector NABET/CIA, environment clearance for such project from M.O.E.F is mandatory .As per our understanding there is not a single environmental consultant of India registered/approved by quality council of India for soda Ash sector. For undertaking terrestrial / on shore environmental studies i.e EIA/EMP studies, we propose to engage the India's most reputed non controversial organizations like M/s NEERI/ M/s NIO / M/S I.R.S (if they agree to undertake the studies). We hope this will have your approval. In case if you have on approved list any other reputed consultant kindly share with us.

Thanking you,

Yours faithfully
For GHCL Ltd

V N Desai
Authorized Signatory

CC : Mr K C Mistry, Principal Secretary
G.P.C.B, Gandhinagar, Gujarat

GHCL Limited

Ref: GHCL/AHD/ENVMOEF&CC/VND/21-22/01 **28th July 2021**

Director and Member Secretary,
(IA Division- Industry Committee-3)
Ministry of Environment, Forest & Climate Change,
3rd Floor, Vayu Wing, Indira Paryavaran Bhavan,
Jor Bagh Road, Ali Ganj,
New Delhi – 110 003

SUBJECT: **Submission of Application for Terms of Reference (TOR) for proposed Green field Chemical complex – Soda Ash Manufacturing and associated utilities.**

REF: **Our letter No. GHCL/AHD/ENV/MOEF/VND/17-18/07 dtd. 23.11.2017**

Dear Sir,

M/s GHCL is a leading company in the manufacturing of chemicals, textiles, edible salt and other consumer products. In chemical sector, the company manufactures Soda Ash (Anhydrous Sodium Carbonate), a major raw material for detergents, glass & ceramics industries and the other product Sodium Bicarbonate (baking soda). The company caters to about 25% of domestic Soda Ash demand in the country.

GHCL has signed an MoU during Vibrant Gujarat, 2017 to set up a Greenfield Chemical Complex in district Kutch, Gujarat. GHCL proposes to set up 11,00,000 TPA Light Soda Ash, 5,00,000 TPA Dense Soda Ash, 2,00,000 TPA Sodium Bicarbonate manufacturing plants, solid fuel based 120 MW Captive Co-generation Power plant, RO-DM plant, other utilities, Seawater intake and effluent disposal facilities near village Bada, Taluka Mandvi, District Kutch, State Gujarat.

The proposed project falls under project activity item no 4 (e) Category 'A' as stated in EIA notification, 2006 and hence the project needs to obtain Environment Clearance from MOEFCC, New Delhi. Keeping this in consideration we had informed MOEFCC regarding appointment of EIA consultants vide letter NO. GHCL/AHD/ENV/MOEF/VND/17-18/07 dtd. 23.11.2017 as at that time no consultant specifically accredited for Soda Ash sector.

We have appointed M/s CSIR- NEERI, Nagpur and M/s CSIR-NIO, Mumbai for carrying out terrestrial and marine environment impact assessment studies. The terrestrial EIA and marine EIA studies have been almost completed and data collected is valid till 2022-2023. We have kept in mind the provisions of Standard TOR prescribed for Soda Ash Industry by MOEFCC. We will also conduct any additional study if suggested by MOEFCC for inclusion in EIA. We had aimed to start site activities by 2020 however due to COVID19 business activities and acquisition process got impacted.

GHCL Limited AHMEDABAD

GHCL Limited

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CSIR-NIO, Goa has carried out sand dunes mapping and morphological changes, Zoological Survey of India (ZSI) had conducted Status survey and Conservation plan for Sea turtle, M/s STUP consultants had carried out Pre-feasibility study for seawater intake and effluent disposal, Ecological and wild life Assessment study was conducted by NABET accredited Functional Area Expert.

The area identified for setting up the proposed project is about 1481.48 acres (599.54 Ha.). The proposed site was selected after examining 5 alternative sites along Gujarat coast. We have already applied to District Collector for allotment of Govt. Land and Industries Commissioner for allotment of Private and Govt. Land.

Industries Commissioner, Govt. of Gujarat has grant the approval for Bonafied Industrial Purpose to GHCL Ltd. vide letter UF/Infra/Land/Tr-131/IC Office dtd. 27.07.2021.
We are enclosing herewith Form-I along with Pre-feasibility Report for the proposed project, seeking grant of ToR under EIA Notification, 2006.

We request you to kindly process the application for grant of TOR at the earliest.

Thanking You,

Yours faithfully,
FOR GHCL Ltd.

NISHIT NARBHERAM RADIA
Digitally signed by NISHIT NARBHERAM RADIA
Date: 2021.07.28 12:14:19 +05'30'

N N Radia
Chief Operating Officer

Encl: Form – I, Pre-feasibility Report

GHCL Limited AHMEDABAD

GHCL House, Swastik Society, Opp. Punjabi Hall, Navrangpura, Ahmedabad, Gujarat-380009, India Ph. : +91-079-26434100
CIN : L24100GJ1983PLC006513, E-mail : ghclinfo@ghcl.co.in, Website : www.ghcl.co.in

Head Office : GHCL House, B - 38, Institutional Area, Sector - 1, Noida, Uttar Pradesh - 201301, India. Ph. : +91-120-2535335, 3358000, Fax : +91-120-2535209

Annexure-11

National Accreditation Board for Testing and Calibration Laboratories

CERTIFICATE OF ACCREDITATION

CSIR-NATIONAL ENVIRONMENTAL ENGINEERING RESEARCH INSTITUTE

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2005

"General Requirements for the Competence of Testing & Calibration Laboratories"

for its facilities at

NEHRU MARG, NAGPUR, MAHARASHTRA, INDIA

in the field of

TESTING

Certificate Number: TC-7452

Issue Date: 22/06/2018 **Valid Until:** 21/06/2020

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the relevant requirements of NABL.
(To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Name of Legal Identity : CSIR-National Environmental Engineering Research Institute

Signed for and on behalf of NABL

N. Venkateswaran
Chief Executive Officer

GHCL Limited

Date: 31-12-2022

TO WHOMSOEVER IT MAY CONCERN

I, **Shri N N Radia** Chief Operation Officer (COO) of **M/s. GHCL Limited**, located at **Village: Bada, Taluka: Mandvi, District: Kutch, Gujarat**. We have applied for Environmental Clearance for Manufacturing of Soda Ash and captive Co-generation power plant etc.

I, **Shri N N Radia** hereby gives undertaking that all the information and documents in the CAF & Proposal are filled/uploaded and are factually correct.

N N Radia

COO

Works : Sutrapada, Dist. Gir-Somnath, Gujarat - 362275, India. Tel. +91-02876-263401-03, 263551-56 Fax : +91-02876-263480-83
CIN : L24100GJ1983PLC006513, E-mail : ghclinfo@ghcl.co.in , Website : www.ghcl.co.in

Regd. Office : GHCL House, Swastik Society, Opp. Punjabi Hall, Navrangpura, Ahmedabad, Gujarat-380009, India Tel. +91-079-26427519-818 Fax : +91-079-26423623
Head Office : GHCL House, B- 38, Institutional Area, Sector - 1, Noida, Uttar Pradesh - 201301, India. Ph. : +91-120-2535335, 3358000, Fax : +91-120-2535209

Quality Council of India

National Accreditation Board for Education & Training

Certificate of Accreditation

CSIR- National Environmental Engineering Research Institute

Nehru Marg, Wardha Road, Nagpur- 440020, Maharashtra

*The organization is accredited as **Category-A** under the QCI-NABET Scheme for Accreditation of EIA Consultant Organization, Version 3 : for preparing EIA-EMP reports in the following Sectors –*

Sl.No	Sector Description	Sector (as per)		Cat.
		NABET	MoEFCC	
1	Thermal power plants	4	1 (d)	A
2	Petroleum refining industry	10	4 (a)	A
3	Chlor-alkali industry	13	4 (d)	B
4	Petro-chemical complexes (industries based on processing of petroleum fractions & natural gas and/or reforming to aromatics)	18	5 (c)	A
5	Manmade fibers manufacturing	19	5 (d)	A
6	Petrochemical based processing (processes other than cracking & reformation and not covered under the complexes)	20	5 (e)	A
7	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs / ecologically sensitive areas including LNG terminal	27	6 (a)	A
8	Industrial estates/ parks/ complexes/areas, export processing Zones(EPZs), Special Economic Zones(SEZs), Biotech Parks, Leather Complexes	31	7 (c)	A
9	Common Effluent Treatment Plants (CETPs)	36	7 (h)	B
10	Common Municipal Solid Waste Management Facility (CMSWMF)	37	7 (i)	B

Note: Names of approved EIA Coordinators and Functional Area Experts are mentioned in SA AC minutes dated Sep. 04, 2020 posted on QCI-NABET website.

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Sr. Director, NABET
Dated: Oct. 10, 2020

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4	Thermal power plants	4	1 (d)	A
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6	Petroleum refining industry	10	4 (a)	A
7	Chlor-alkali industry	13	4 (d)	A
8	Chemical fertilizers	16	5 (a)	A
9	Pesticides industry and pesticide specific intermediates	17	5 (b)	A
10	Petro-chemical complexes	18	5 (c)	A
11	Manmade fibers manufacturing	19	5 (d)	A
12	Petrochemical based processing	20	5 (e)	A
13	Synthetic organic chemicals industry	21	5(f)	A
14	Oil & gas transportation, passing through national parks/ sanctuaries/coral reefs / ecologically sensitive areas including LNG terminal	27	6 (a)	A
15	Industrial estates/ parks/ complexes/areas, export processing Zones (EPZs), Special Economic Zones (SEZs), Biotech Parks, Leather Complexes	31	7 (c)	A
16	Ports, harbours, break waters and dredging	33	7 (e)	A
17	Common Effluent Treatment Plants (CETPs)	36	7 (h)	B
18	Common Municipal Solid Waste Management Facility (CMSWMF)	37	7 (i)	B

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May 21, 2012

The Scientist – Ocean Engineering
National Institute of Oceanography
Dona Paula, Goa-403004
(Kind Attention: **Dr. V. Sanil Kumar**)

Dear Sir,

QCI-NABET Scheme for Accreditation of EIA Consultant Organizations

This is with reference to your application for QCI-NABET Accreditation as EIA Consultant Organizations.

Kindly refer to the minutes of Accreditation Committee meeting dated March 20, 2012 posted on QCI website. Your application for accreditation under the Scheme could not be accepted as **National Institute of Oceanography (NiO)** could not fulfil the Scheme's requirements in respect of availability of eligible experts for core functional areas.

However, as mentioned in the AC MoM dated March 20, 2012, NABET will identify specialised functional areas (such as marine ecology) which are relevant for specific EIAs and would notify on QCI website.

In the interim, NIO being involved in providing marine ecology related inputs to EIAs may allow its scientists/ professionals/EIA units to take up marine component of EIAs in association with any accredited EIA consultant organization.

Thanks and best regards,

Yours sincerely,

(Vipin Sahni)
Director

Director : For information.

25/5/12

SRShetye 30/5

DIRECTOR'S SECRETARIAT
N.I.O., GOA
28 MAY 2012
Time 9.10am

Institution of Engineers Building, 2nd Floor, Bahadur Shah Zafar Marg, New Delhi – 110 002, India
Tel : +91-11-2337 9321, 2337 8057 Fax : +91-11-2337 9621 email: nabet@qcin.org Website: www.qcin.org

1221 TC4
29/8/2019

3741

F.No. J-17011/8/92- IA-III
Government of India
Ministry of Environment, Forest and Climate Change
(IA. III Division)

Indira Paryavaran Bhawan,
Jorbagh Road, New Delhi - 3

Dated: 8th August, 2019

OFFICE MEMORANDAM

Sub: Institutes/Agencies for preparation/updation of Coastal Zone Management Plans (CZMPs)/ Island Coastal Regulation Zone (ICRZ) plans/ Integrated Island Management Plans (IIMPs) in line with CRZ/ICRZ Notifications, 2019 - reg.

In supersession of this Ministry's OM of even number., dated 14th March, 2014, the institutes/agencies given here under are hereby authorized for preparation/updation of Coastal Zone Management Plan (CZMPs)/ Island Coastal Regulation Zone (ICRZ) plans/ Integrated Island Management Plans (IIMPs) in consonance with the provisions of the CRZ Notification, 2019 issued vide G.S.R. 37(E), dated 18.01.2019 and Island Protection Zone Notification issued vide S.O. 1242(E) dated 08.03.2019.

S.No.	Name of the Institutes/ Agency
1	Space Application Centre, Ahmedabad
2	Centre for Earth Sciences Studies, Thiruvananthapuram
3	Institute for Remote Sensing, Anna University, Chennai
4	National Centre for Sustainable Coastal Management (NCSCM), Chennai
5	Institute of Environmental Studies And Wetland Management, Kolkata
6	National Institute of Oceanography (NIO), Panjim, Goa
7	National Institute of Ocean Technology (NIOT), Chennai

2. The preparation/updation of the aforesaid plans mentioned above, shall be carried out as per the general guidelines issued by this Ministry vide OM No. 12-1/2019-IA.III dated 26.06.2019.

This issues with approval of the Secretary (EF&CC).

(W. Bharat Singh)
Director (CRZ)

To

1. The Secretary (Environment & Forests) of Coastal States (Gujarat, Maharashtra, Goa, Karnataka, Kerala, Tamil Nadu, Andhra Pradesh, West Bengal, Odisha) & Administrators of Andaman and Nicobar Islands, Puducherry, Lakshadweep, Daman & Diu.

2. The Member Secretaries, Coastal Zone Management Authorities of Gujarat, Maharashtra, Goa, Karnataka, Kerala, Tamil Nadu, Andhra Pradesh, West Bengal, Odisha and UT of Andaman and Nicobar Islands, Puducherry, Lakshadweep and Daman & Diu.
3. All the above authorized agencies

Copy for information to:

1. PS to Minister for Environment, Forest and Climate Change
2. PS to MoS (EF&CC)
3. PPS to Secretary (EF&CC)
4. PPS to AS(RSP)/AS(AKJ)
5. PPS to JS(RKS)/JS(AKN)/JS(GM)/JS(RS)
6. Website of MoEF&CC
7. Guard File

-TRUE COPY-

ANNEXURE R/26

CONSERVATION AND MANAGEMENT PLAN FOR CONSERVATION SIGNIFICANT SPECIES

PROPOSED GREENFIELD CHEMICAL COMPLEX

VILLAGE BADA,TALUKA - MANDVI,
DISTRICT - KACHCHH, GUJARAT

Final Report

Submitted to

GHCL Limited
GHCL House, Opp. Punjabi Hall,
Navrangpura, Ahmedabad-380009(Gujarat)

Submitted by

Gujarat Institute of Desert Ecology
Opp. Changleshwer Temple, Mundra Road
Bhuj-370 001, Kachchh, Gujarat
www.gujaratdesertecology.com

February 2023

Foreword

GHCL Ltd. is a leading Soda Ash manufacturing chemical unit, established in 1983 located at Sutrapada of Gir Somnath district in the State of Gujarat. This was India's first integrated Soda Ash plant based on Akzo's Dry Liming Technology. It caters to about 25% of domestic soda ash demand in the country. GHCL, is now proposing to set-up a Greenfield Chemical Complex to produce \ Light Soda Ash Plant having capacity of 11,00,000 TPA, dense soda ash plant with the capacity of 5,00,000 TPA and sodium bicarbonate plant with the capacity of 2,00,000 TPA near the village Bada, Taluka – Mandvi, District Kachchh in Gujarat state. Along with above production capacities necessary utilities like Captive Power plant of 120 MW capacity, seawater intake and effluent disposal system were also planned to support manufacturing infrastructure.

Industrial developments are essential for the economic growth and creating employment opportunity in the state. Needless to mention that the development projects should respect the ecological integrity, biodiversity values and social feasibility of the region as these are going to be the determinants of the quality of environment as well as the sustainability of the development interventions.

Keeping these in view and considering the statuary requirement of environmental clearance and conservation of wildlife, the GHCL planned to take up a rapid study to assess the status of biodiversity and wildlife, and its conservation and management measures for the existing biodiversity in core and buffer areas around the proposed projects. In this connection, the GHCL have given the study to Gujarat Institute of Desert Ecology (GUIDE), Bhuj.

The details of the status of biodiversity in core zones and buffer zones of the project area were presented in the report. The possible impacts on biodiversity due to proposed project and its associated developments in the core and buffer zones were assessed and Conservation and Management Plan (CMP) is framed to mitigate the possible impacts on conservation significant wildlife in study area due to project development and its associated activities. The Conservation and Management Plan also addressed the suggestions given by the concerned officials.

Dr. V. Vijay Kumar
Director
Gujarat Institute of Desert Ecology
Bhuj-Kachchh, Gujarat

Conservation and Management plan for Conservation Significant Species

Proposed Greenfield Chemical complex

Village Bada,Taluka - Mandvi, District - Kachchh, Gujarat

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1. INTRODUCTION

Biodiversity refers to the variety of species and ecosystems thriving on Earth (Gaston, 2000). Biodiversity supports human societies on ecological, economical, cultural and spiritual levels (MEA 2005). Its benefits are, however, compromised by anthropogenic activity which, in conjunction with population growth, results in the rapid deterioration of earth ecosystems and a decline in the number of species and their genetic heterogeneity (Prescott *et al*., 2000).

The biodiversity and wildlife conservation is referred as the development of habitats in a rational and scientific manner to sustain and flourish the entire biodiversity and genetic resources for the welfare of human society and maintenance of inherent ecological balance in a long-term manner in a geographical region. The natural ecosystems of the planet support human life by providing energy, food, water, and other resources.

During the last few decades, there is a massive decline as well as alteration of wildlife habitats and wild population, attributed by the tremendous increase in human and livestock population, destruction of habitats for the development of agriculture, increased dependency on natural resources from forests, development of infrastructure, mining, industrialization and urbanization, etc. Anthropogenic activities like agricultural expansion, road construction, urbanization, and other developmental activities are envisaged as major threats to biodiversity that have resulted in the extinction of species at a rate of 1000 to 10,000 times faster than the ancient times (Wilson, 1988). Thus, the conservation of wildlife becomes a global responsibility.

Development projects in any given region should respect the ecological integrity and biodiversity values of the region as these are going to make an impact on environmental quality as well as the sustainability of the developmental interventions. With determination and effort, these unwanted consequences that emerge from a development initiative can be reduced or prevented or mitigated substantially through technological innovations and managerial skills. Due to the manifold pressure from natural as well as anthropogenic causes, many of the species which are familiar to us are now disappearing on daily basis. Some of the species are facing threats of extinction locally, nationally and globally. Therefore, conservation of biodiversity is our prime duty for our

very survival and sustainable utilization of biological resources (MEA 2005). At this juncture, it is crucial to develop appropriate policy and plan for the sustainable utilization of resources along with conservation and management of biodiversity.

Gujarat state is bestowed with rich mineral resources which accounts for 18 major minerals and the state is placed at 3rd position in production of major mineral within India. Soda Ash the common name given for the technical grade anhydrous sodium carbonate (Na_2CO_3) forms an important part of Indian inorganic chemical industry. It is a high volume, low-value product and finds application mainly in the production of detergents (42% light soda ash), glass (23% dense soda ash), chemicals (17% mainly light soda ash), sodium silicate, pulp & paper industries, and water treatment. India has the advantage of the abundance of raw materials viz. limestone and salt and growing domestic demand that favours the establishment of soda ash plants in the state of Gujarat. GHCL Ltd. is one of the largest Soda Ash manufacturing companies in India and caters to around 25% of country domestic demand. The proposed soda ash plant at Kachchh will meet the increased domestic and industrial demand.

1.1 ABOUT GHCL LIMITED

Gujarat Heavy Chemicals Limited (hereafter GHCL) is a reputed Soda Ash manufacturing chemical unit, established in 1983 located at Sutrapada of Gir Somnath district in the State of Gujarat. This was India's first integrated Soda Ash plant based on Akzo's Dry Liming Technology. The Sutrapada plant was commissioned in the year 1988 with the production capacity of 4,20,000 tons per annum (TPA) capacity. Over the time capacity has been expanded up to 11,00,000 TPA.

GHCL, is now proposing to set-up a Greenfield Chemical Complex to produce the Light Soda Ash Plant having the capacity of 11,00,000 TPA, dense soda ash plant with the capacity of 5,00,000 TPA and sodium bicarbonate plant with the capacity of 2,00,000 TPA near the village Bada, Taluka – Mandvi, District Kutch in Gujarat state. Along with above products, salt based derivative plants will also be planned in the future. The Soda Ash process requires uninterrupted and stable power supply, which will be met from the proposed 120 MW solid fuel based captive cogeneration power plant. The entire envisaged capacity will be achieved in two phases. The major raw materials are solar salt, chemical grade limestone, fossil fuel and other chemicals. The process is being

exothermic and requires a large quantity of seawater for cooling purpose, RO-DM and diluting process effluent to meet statutory norms. Seawater will be withdrawn from nearby Arabian Sea. The other associated utilities will be part of the project. The diluted/treated effluent generated from various process units and utility rejects will be dispersed through the marine outfall system in the Arabian Sea.

1.2 RATIONALE

M/s GHCL Limited was incorporated in 1983. The company is mainly in business of Soda Ash and Sodium Bi-carbonate manufacturing. The manufacturing plants are located at Sutrapada, of Gir-Somanth District, in the State of Gujarat, India. It contributes to almost 25% to 29% of the annual domestic demand. Soda Ash product is significant because of its use in major consumption related sectors like chemicals, detergents, water treatment, glass manufacturing, pulp and paper, textile and mining industry etc. Sodium Bicarbonate is widely used in Food industry.

GHCL Ltd. has signed an M.O.U with Govt. of Gujarat during the Vibrant Gujarat Summit in 2017 for the establishment of Greenfield Chemical Complex in Kachchh District. Thus, in order to create new Greenfield capacity for Soda ash and Sodium bicarbonate to meet the growing demand from user industry and to honor the commitment made during Vibrant Gujarat Summit (VGS), it has proposed to set up Greenfield Chemical Complex in KachchhDistrict. The Greenfield Chemical Complex comprise of manufacturing units for Soda Ash (Light and dense), Sodium Bicarbonate, Captive Power plant and Seawater Intake and Effluent Disposal System.

The MoEF&CC had granted TOR for the project in August 2021. GHCL had engaged CSIR-NEERI and CSIR-NIO for the preparation of EIA reports with respect toTerrestrial and Marine environment. Company has also engaged CSIR-NIO Goa unit for carrying out Sand Dune morphology study and Wildlife and ecology related studies had been carried out by a NABET accredited Functional Area Expert. There are some literatures available on the nesting of Sea Turtles along the sandy coast of Mandvi. The study related to Sea Turtles Status Survey and Conservation had been carried out by Zoological Survey of India (ZSI). Therefore, GHCL has consulted Gujarat Institute of Desert Ecology (GUIDE), Bhuj for preparation of Conservation plan for Schedule-I species including Sea Turtles as part of TOR compliance and GCZMA meeting minutes.

1.3 OBJECTIVES AND SCOPE OF THE STUDY

The following scope of work had been formulated under the study on the proposed Greenfield Chemical complex project.

1. ***Identify and assess the status of floral components of different habitats within core and buffer zones of the proposed project site***
2. ***Identify and assess the status of major faunal components of different habitats within core and buffer zones of the proposed project site.***
3. ***Identify and evaluate species and habitat of conservation significance (Threatened species and crucial habitats) within the project area.***
4. ***Suggest mitigation measures to minimize the identified impacts on the project components***
5. ***Prepare the Species Conservation Management Plan for the proposed project.***

2. STUDY AREA

Project Location

The proposed Project site and the study area are located on the coast of Bada village, in Mandvi Taluka of Kachchh district in the state of Gujarat (Map-1).

For the convenience of the study and the user agencies, the study area was divided into two major parts i.e. 1) Core area/project area and 2) Buffer area i.e. 10.0 km, in the periphery of the project boundary (Map-2).

1. Core Area

The core area is the proposed land area for the establishment of the project plant (Map 2), that covers about 1350 Acres of private, unirrigated agricultural land and Sarkar-shree land/Government land, near the Bada village of Mandvi Taluka in Kachchh district. The proposed project area is composed of sparsely distributed thorny scrub species, dominated by invasive species *Prosopis juliflora.* There are no rivulets or drainage traversing through the project area.

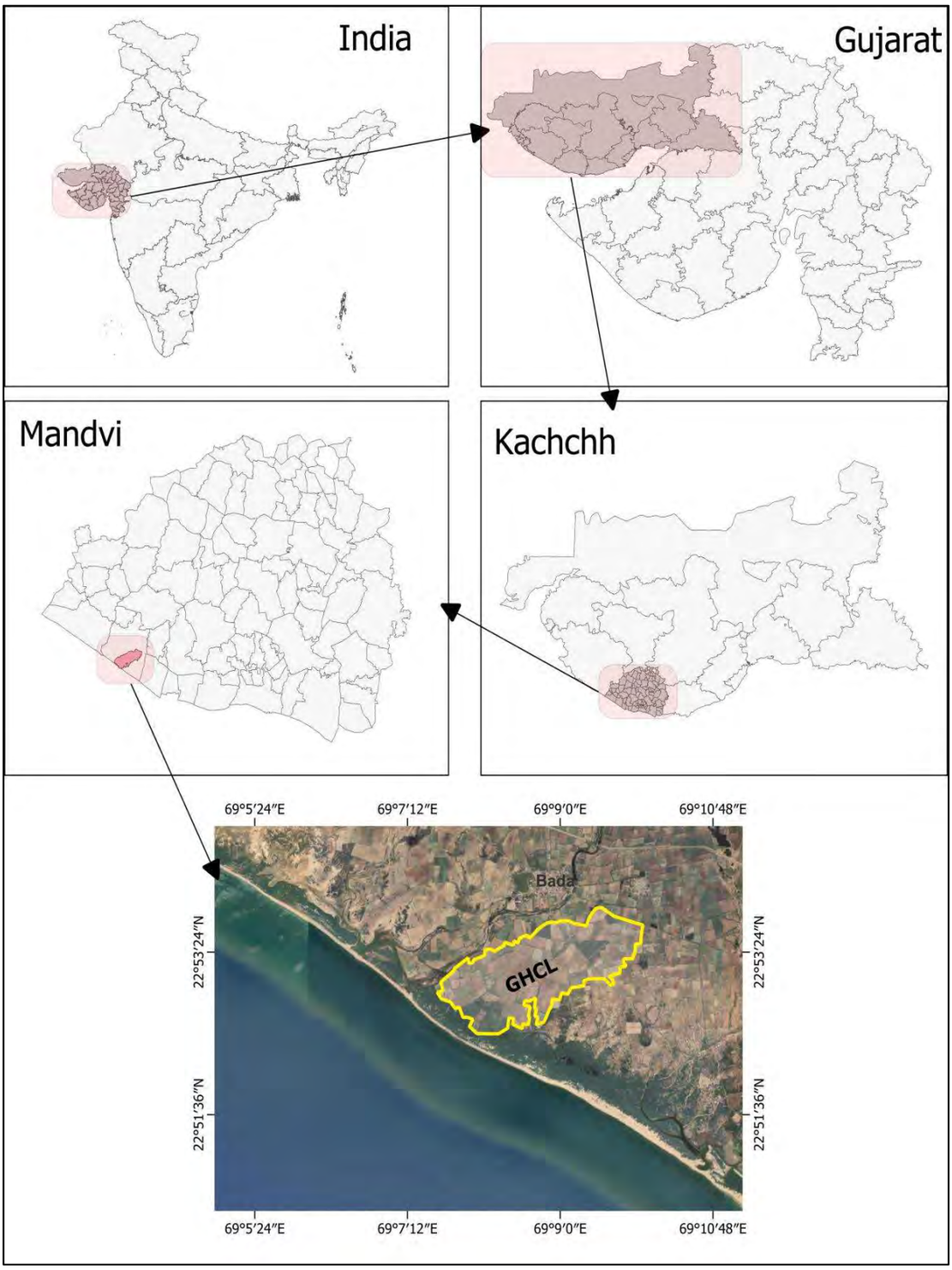
The Arabian Sea coast is located south of the proposed boundary of the project. The area is located at 6.0 km distance from the National Highway NH-41. As there is no major natural vegetation and human settlements present within the proposed land, therefore there is no requirement for relocation of any human settlements from the project site. The project site does not fall in 10.0 km periphery of any protected areas such as National Park or Sanctuary or eco-sensitive zones.

2. Buffer Area

The representative sampling locations within the villages within the 10 km buffer area are as below:

Table-1: Sampling locations in villages within 10 km buffer area

Sr. No.	Village Name	Sr No.	Village Name
1	Bada	7	Bhisara
2	Bhamdai	8	Panchatiya
3	Padampur	9	Bhada
4	Janakpur	10	Layija Nana
5	Chagdai	11	Laiyja Mota
6	Mapar	12	Bayath



Map- 1: Proposed project location near Bada village of Mandvi Taluka of Kachchh district in Gujarat

3. APPROACH AND METHODOLOGY

1. Reconnaissance Survey

A reconnaissance survey was conducted during March and April 2022 in core and buffer areas of the proposed Greenfield Chemical complex project site to take a note of existing flora, fauna and eco-sensitivity zone status.

The survey was conducted to identify various habitats within the study area and fix the sampling locations for the intensive survey and data collection on various aspects of the present study.

2. Land use and Land Cover Classification

The reconnaissance field survey was undertaken to get acquainted with the general land cover pattern of the area. Field observations were carried out along the core and buffer area for ground truthing to understand the patterns and characters using satellite imageries. Various features identified during the ground truthing were correlated with the information collated from the satellite imageries.

Major land use land cover in the study area observed to be waste land, rain fed agriculture land, water bodies, Arabian Sea and sand dunes and transport network. Due to sandy nature of shoreline the mangrove system is found to be absent in site.

3. Intensive Survey

Intensive field surveys were carried out from March to April 2022 for the data collection on the existing flora and fauna within the core and buffer zone of the study area.

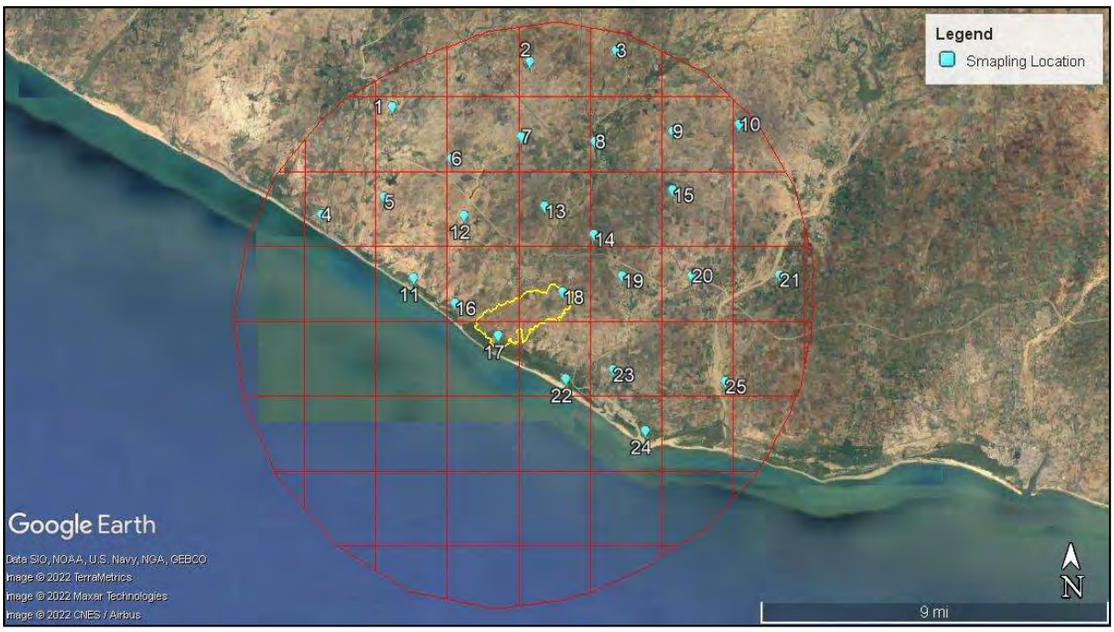
Sampling Locations

In order to assess the biodiversity status of the project study area, 25 locations (Transects) (Map 2) were sampled covering different habitats. These locations were randomly selected based on the availability of extent of area falling under different habitat types.

Distribution of sampling locations

Among the 25 sampling transects, 04 were selected within the Project Area (Core area) and the rest are in Buffer Area. Since the site is predominated by single crop

Agricultural habitat, wasteland with *Prosopis* thickets and Scrub land, maximum of 25 locations were sampled in this area.



Map-2: Core and Buffer area with sampling location of proposed plant in Kachchh, Gujarat.

The approach and methodology applied for assessing terrestrial biodiversity of the study area is described in respective sections below.

3.1. Terrestrial Biodiversity

Micro level approach mainly involving field based primary data collection on faunal diversity in the core and buffer zones within study area was undertaken. The various groups of faunal species including mammal, bird, reptile and amphibian were surveyed using standard methods in habitats such as forest, wetland, scrubland, grassland, human habitation, fallow land, mudflats, creeks, and agriculture, etc.

3.1.1. Floral status

Floral species existing was surveyed in all the representative habitats covering wetland, forest, grassland, scrubland and wastelands in core and buffer area of the proposed project site. Quantitative data on floristic diversity were collected using Standard Quadrate Sampling Methods followed by Mueller-Dombois and Ellenberg (1967), Kershaw and Wright (1980). Random vegetation surveys were also made at some locations to assess the plant diversity.

4.2 Status of Species Diversity

During the study period different plant and animal species belonging to both terrestrial and marine environments were recorded. An account of the floral and faunal diversity recorded during the study is given in the following sections.

4.2.1 Floral Diversity

Based on the preliminary survey on flora of the study area, a total of 110 species (Annexure I) of plants belong to 96 genera and 39 families were recorded (Figure 4.1). Among the recorded plants, 13 species were trees, 11 species of shrub, 47 species of herbs, 24 species of Grass and 15 species of climbers (Figure 4.2).

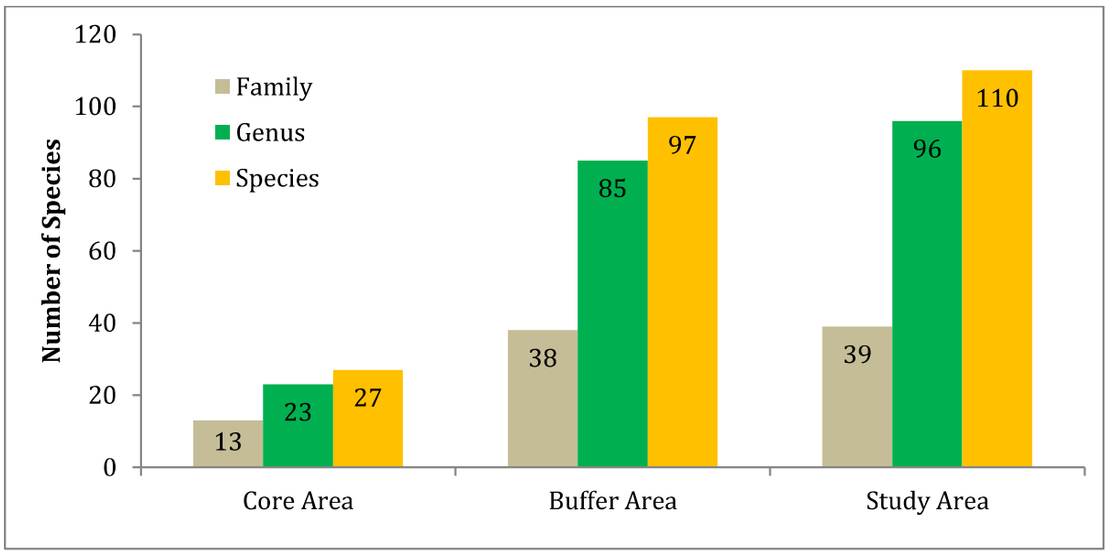


Figure 4.1: Floral Species diversity of the study area of GHCL, Kachchh

The buffer area of 447.24 km^2 was surveyed for biodiversity assessment and21 transects (for faunal survey) and 105 quadrates (for vegetation assessment) were laid. Nested quadrate sampling for trees (10 x10 m), shrubs and climbers (5 x5 m) and herbs (1 x1 m) were carried out. A total of 97 plant species were recorded belonging to 38 families and 85 genera. The species diversity of the recorded plants in the buffer area highlights that the highest number of plants were Herbs and Grasses (59) followed by Climber (15), Tree (13) and Shrub (10). The value of Shannon-wiener diversity index H' was 2.34 which depicted medium species diversity in the buffer area.

5. Threatened Biodiversity/Wildlife

5.1 Threatened Plant: There were no rare, endangered or conservation concern species present in the core area of the project site, however the sporadic occurrence of *Commiphora wightii*(Critically Endangered)with low abundance and frequency of occurrences in buffer zone was observed. The important and noteworthy plant species observed in the study area are, *Commiphora wightii, Hallopyrum mucronatu, Citrulus colosysnthis, Prosopis cenaraia, Tribulus terrestris* etc.

5.2 Threatened herpetofauna: In the present study we identified a total of 8 species of reptiles within the core area and 15 species in the buffer area (Table 4.1). The Mugger reported from the buffer area is listed as Schedule-I in the Wildlife (protection) Act, 1972 and vulnerable by the IUCN. The Indian Flap-shell turtle and Indian monitor lizard were also reported from the buffer area. These two species are common throughout the country and listed as Schedule-I in the Wildlife (Protection) Act, 1972 and least concerned by the IUCN. Among the other species Spiny-tailed Lizard belongs to Schedule-II whereas, rest of the species belongs to Schedule-IV. Majority of the reptiles (except Green and Olive Ridley Sea turtles which were added in the list from literature review of previous published reports) reported from the buffer area falls under 'Least Concern' category of IUCNRed list of threatened species. No endangered, rare, threatened or endemic species of reptiles was reported from the project core area.

The sandy stretches of Kachchh district are known for sporadic nesting of two species of sea turtles *i.e.*, Olive ridley (*Lepidochelys olivacea*) and Green Sea turtle (*Chelonia mydas*). Gujarat Ecology Commission a Government of Gujarat Organization has carried out a study as part of World Bank aided Integrated Coastal Zone Management (ICZM) Project titled "*Evaluation of Sea Turtle Nesting Population and Threats to Nesting Beaches: Suggest Conservation and Management Strategies" (*also referred as Sunderraj *et. al.,* 2013*).* The study based on secondary data (from Gujarat Forest Department and Sunderraj *et. al.,* 2002) identified total 10 stretches of Sea turtle nesting beaches on Kachchh coast.

The survey of 2000-2001 (Sunderraj *et. al.* 2002) is mentioned and considered by ZSI experts also while making site specific observation and report writing for the GHCL. The report mentions about sea turtle nesting information available for Kachchh coast is based on the data collected from Forest department, except for one-time survey by

Sunderraj *et. al.* (2002). However, ZSI has carried out site specific survey in 2019 for the proposed project and they did not sight or recorded any sea turtle in the study area. Further, there were no direct or indirect evidences on the nesting of Sea turtle on the Bada coast near to the project site was recorded during the rapid field visits carried out in the month of March and April 2022. Also, during the field visits the presence of rock was recorded in all over the beach during the low tide, with abrupt slope and dense vegetation in the supra tidal region on the beach near proposed project site. Presence of vegetation such as *Prosopis juliflora* is seen to hold sand and stabilized sand dunes. We also observed higher presence of predators such as jackals and dogs along the beach.

Based on the above primary observations it can be depicted that due to the presence of rocky patches, tidal inundation due to narrow strip, abrupt slope, dense thorny vegetation and presence of predators such as dogs and jackals, sea turtle nesting might have been hindered near the proposed study area. However, it is envisaged that sandy beach along the coast of Bambhdai, Pachotiya, Bhada and Nana Layja appear to be an ideal and viable habitat for sea turtle nesting based on the suitable habitat in terms of morphology and past records. Therefore, a detailed study is required to understand the exact status and nesting of Sea turtles.

Threatened birds: During the study a total of 91 bird species was observed in the study area. Majority of the species (67) are resident species whereas only 17 species were found to be migratory and seven species are resident migratory (Annexure II). Of these 91 bird species recorded, 84 belong to 'Least Concern' category rated by IUCN, whereas total 4 species *i.e*. Painted Stork (*Mycteria leucocephala*), Oriental White Ibis (*Threskiornisme lanocephalus*), Eurasian Curlew (*Numenius arquata*), and Pallied harrier (*Circus macrourus*) belong to Near Threatened category (Annexure II) and one species i.e. River Tern (*Sterna aurantia*) falls under Vulnerable category. Of the recorded species, five species belong to Schedule-I, 85 species belong to Schedule-IV and one species belong to Schedule-V.

Threatened Mammals: Total 16 mammal species was recorded from buffer area and seven from core area of the project site (Table-4.7). The common mammalian species that were directly observed in the core area include Wild boar (*Sus scrofa*), Grey Mongoose (*Herpestes edwardsii*), Indian Hare (*Lepus nigricollis*), Nilgai (*Boselaphustra*

gocamelus), Pale Hedgehog (*Ghemiechinus collaris*) and Five Striped Squirrel (*Funambulus pennantii*), etc. There were no Threatened or Schedule-I species reported from the core area of the project site (Table-4.7). Chinkara (*Gazella gazelle bennettii*) is the only Schedule-I species reported from the buffer area. Jackal (*Canis aureus*), Jungle cat (*Felis chaus*), Indian Fox (*Vulpus bengalensis*), Common Mongoose (*Herpestes javanicus*) belongs to Schedule-II of Indian Wildlife (Protection) Act, 1972. Whereas, Nilgai (*Boselaphustrago camelus*), Wild boar (*Sus Scrofa*) belong to Schedule-III. Rest of the species belong to Schedule-IV of IWPA, 1972. Majority of the common mammalian species recorded during the survey in the core and buffer area are present throughout semi-arid, non-forested and non-protected landscapes especially in Kachchh region.

Table-5.1: Species of high conservation significance (Threatened/Sch.-I) present in the study area.

No.	Taxa	Name of Species		IWPA Status	IUCN Status
		Common Name	**Scientific Name**		
1	Reptile	Flap shell Turtle	*Lissemus punctatea*	Sch.-I	LC
2	**Reptile**	***Green Sea turtle**	***Chelonia mydas***	**Sch.-I**	**EN**
3	Reptile	Indian monitor lizard	*Varanus bengalensis*	Sch.-I	LC
4	**Reptile**	***Olive Ridley Sea turtle**	***Leoidochelys olivacea***	**Sch.-I**	**VU**
5	**Reptile**	**Mugger/Crocodile**	***Crocodylus palustris***	**Sch.-I**	**VU**
6	Bird	Black shoulder kite	*Elanus caeruleus*	Sch.-I	LC
7	Bird	River Tern	*Sterna aurantia*	Sch.-IV	VU
8	Bird	Indian Peafowl	*Pavo cristatus*	Sch.-I	LC
9	Bird	Marsh Harrier	*Circus aeruginosus*	Sch.-I	LC
10	Bird	Pallid Harrier	*Circus macrourus*	Sch.-I	NT
11	Bird	Shikra	*Accipiter badius*	Sch.-I	LC
12	Bird	Short-toed Snake Eagle	*Circaetus gallicus*	Sch.-I	LC
13	Mammal	Chinkara	*Gazalla bennettii*	Sch.-I	LC
14	Plant	Gugal	*Commiphora wightii*	-	CR
	*Green Sea turtle and Olive Ridley Sea turtle were reported through secondary data. Sea Turtle visit only during the breeding season. However, no study has established exact breeding season and timing for the regions in study area. Mugger also reported from the study area.				

7. Conservation and Management Plan for Biodiversity and Wildlife

Wildlife conservation and management include "the management of wildlife populations in the context of the ecosystem, providing them suitable habitat and resources for feeding, breeding, roosting, nesting, and movement".

Most critical aspect of wildlife conservation is habitat management. Habitat loss presents the greatest threat to wildlife. Habitats management is the foremost need in order to support wildlife. Majority of the developmental activities now-a-days, reducing the natural habitat of wildlife and as a result certain population of wildlife is getting locally extinct day by day. Therefore, balance is needed to maintain between management of wildlife habitat and developmental activities.

Every habitat has a carrying capacity to support vital resources viz. food, water, cover to certain quantity of wildlife for a period of time. Maintaining carrying capacity of a habitat is a challenging task for the wildlife managers.

The formulation of a biodiversity and wildlife conservation and management plan for developmental project is one of the steps towards the environmental conservation. There are some basic principles that should always be considered when creating a long-term vision for successful species conservation and its management. These include:

- Conservation of populations within the major ecological settings across the species' natural range; and conservation of the species' genetic diversity across that range;
- Ecological functionality for Conservation of large populations requires enough habitat to support self-sustaining populations interacting with the full range of the species' natural predators, parasites, competitors, and prey and/or food plants;
- Human socio-economic and cultural needs and desires for conservation and management of the species across the geographic range, mainly to ensure the basic socio-economic and cultural needs of the human beings in a manner consistent with the above principles

This Conservation and Management Plan (CMP) is for Schedule-I faunal species as per the Indian Wildlife (Protection) Act, 1972 recorded in the study area (core and buffer) of proposed Greenfield Chemical Complex located in Mandvi taluka, Kachchh district of Gujarat. A total of Twelve species under Schedule-I fauna were recorded from the study area. The wildlife conservation plan for each of the conservation significant species is given in Table 7.1 to Table 7.6. It is also recommended that GHCL Ltd. shall follow Conservation measures mentioned in Status Survey Report for Sea Turtles prepared by ZSI, Kolkata for Greenfield Project. Conservation and management plan for rest of Schedule-I faunal species is given in table 7.6.

Mugger Crocodile (*Crocodylus palustris*)

Habit and Habitat: The mugger is a medium-sized crocodile (maximum length ca. 4-5m), and has the broadest snout of any living member of the genus *Crocodylus.* This species is found in freshwater habitats including, rivers, lakes, reservoirs, hill streams, village ponds and manmade tanks. It may also be found in coastal saltwater lagoons. Mugger is a hole-nesting species, with egg-laying taking place during the annual dry season. Females become sexually mature at approximately 1.8-2 m, and lay 25-30 eggs (Whitaker and Whitaker 1989). Nests are located in a wide variety of habitats, and females have even been known to nest at the opening of, or inside, their burrow. Like a number of other crocodilians, *C. palustris* is known to dig burrows. These burrows play a critical role in the survival of crocodiles living in harsh environments (Whitaker *et al*. 2007), allowing them to avoid exposure to excessively low and high temperatures.

Distribution: Muggers are principally restricted to the Indian subcontinent (India, Sri Lanka, Pakistan, Nepal and possibly from Bangladesh) where they may be found in a number of freshwater habitat types including rivers, lakes and marshes. In India and Sri Lanka, mugger crocodiles have adapted well to reservoirs, irrigation canals and manmade ponds, and in some areas may even be found in coastal saltwater lagoons (Whitaker and Whitaker 1989). The species has become locally extinct over large parts of its range, and viable populations only occur in protected areas (Santiapillai and Silva 2001). In Gujarat a sizable number of mugger crocodiles are found in many water bodies located in various parts of the state.

Population Trend: Stable

Muggers are reported from 15 States of India and the wild population is tentatively estimated as 3,021 to 4,287 non-hatchlings (Whitaker and Andrews 2003).

Threats: The current threats to the mugger crocodile are principally habitat destruction due to agricultural and industrial expansion, entanglement and drowning in fish nets, egg predation by people, and the use of crocodile parts for medicinal purposes (Groombridge 1982). Adequate survey data exist only for India and Sri Lanka, and indicate that populations while generally small and isolated, are widespread. There are increasing incidents of human conflict with this species and this is due to encroachment by humans into the species' natural habitats.

Conservation Status: IUCN: Vulnerable; **CITES**: Appendix-I; **IWPA, 1972**: Schedule-I

Conservation Measure Undertaken: Management of the species is largely based on the legal protection of wild populations and captive breeding for restocking natural populations. In India, a large-scale captive rearing program was initiated in 1975. The project has collected eggs from the wild, as well as produced young from captive adult breeding stock. The resulting juveniles have been used to restock natural populations in 28 national parks, wildlife reserves and crocodile sanctuaries throughout the country.

Olive Ridley, *Lepido chelysolivacea*

Distribution: The Olive Ridley sea turtle has a circumtropical distribution, with nesting occurring throughout tropical waters and migratory circuits in tropical and some subtropical areas (eg. Indian Ocean). Nesting occurs in nearly 60 countries worldwide. The coastal stretch between Mandvi to Pingleshwar is important nesting site of this species.

Population trend: Decreasing

Habit and Habitat: Olive Ridleys display a complex life cycle, which requires a range of geographically separated localities and multiple habitats (Márquez *et al.*, 1998). Females lay their nests on coastal sandy beaches from which neonates emerge and enter the marine environment to continue their development. They remain in a pelagic phase, drifting passively with major currents that disperse far from their natal sites, with juveniles sharing some of the adults' habitats (Kopitsky *et al.* 2000) until sexual

Conservation Plan: The conservation plan for the species in buffer areas of GHCL is given in table 7.5.

Conservation and Management plan of other Schedule I species is given in Table 7.6.

7.1. Marine Environment Management Plan (Suggested by CSIR-NIO)

The Marine Environment Impact assessment carried out for Seawater Intake and and Effluent Disposal for Greenfield Chemical Complex off Bada Coast, Arabian Sea has been carried out by Council of Scientific & Industrial Research (CSIR) – National Institute of Oceanography (NIO), Mumbai. The Executive Summary of the report is annexed along with this report. However, the findings of effluent release are mentioned as below:

The proponent proposed to release the effluent into the sea at two sites (CSIR-NIO EIA report 2021). Both the effluent release site would attain the ambient levels within 300m (max) distance. Since the area is devoid of mangroves and corals their destruction due to the development is unlikely. Well established sand dunes of sea shore would not be disturbed as the land base pipe line will be through tunnelling.

Based on the results of the Buoyant / Forced-Jet Model, it is suggested that the effluent should be released with a minimum initial jet velocity of 3.01 m/s through a 20 port diffuser at 9.47 m and 10.71 m below CD depth above 0.5 m from the bottom. As the effluent plume descends through the water column, it would attain initial dilution by 30-40 times.

Operation phase Impacts:

Effect on Water quality: The predicted maximum water temperature in a small area around the diffuser would be 33°C which is lower than the threshold of 35°C considered for tropical marine areas. Hence the release of the effluent is unlikely to cause thermal shock to the flora and fauna even in the vicinity of the diffuser. An incremental increase of Suspended Solids (SS hereafter) in a small area is unlikely to negatively influence the biota even in the vicinity of the diffuser. The ambient conditions would be attained within 300 m distance from the outfall location. A major fraction of the SS would settle but fine particles would remain in suspension for a longer duration. This would impart a milky hue to the water around the diffuser under continuous release of effluent. This however would not affect the flora and fauna since the SS in the effluent in non-toxic.

Effect on Sediment quality: The SS in the effluent is inorganic in nature and largely composed of constituents commonly occurring in the marine environment. Considering the sediment type off Bada, the settlement of the effluent associated SS is unlikely to grossly modify sediment character of the region.

Effect on Flora and fauna: The general water quality of the coastal area would not be affected negatively. Hence, by and large, the biological characteristics of the region would not be affected adversely except for some negative impact on macro-benthos in the vicinity of the diffuser, due to the settlement of SS. The SS though not harmful, it may change the sediment character locally and the macro-benthos community would have to adjust to this modified habitat.

Hence, as per the Marine EIA report submitted by CSIR-NIO, it is recommended that M/s GHCL can withdraw 16,00,000 M^3/day of water from two intake locations (IT1: 22o 52' 1.07''N; 69o 07' 28.96''E and IT2: 22°51'57.44" N; 69°07'32.44" E).

The disposal of 15,80,000 M^3/day at two out fall locations OF2_1: 22°52'15.79"N; 69°06'14.35"E (depth 9.47 m below CD), OF2_2: 22°52'6.65" N; 69°05' 59.08"E (depth 10.71 m below CD) will not impact the marine environment. The GHCL has to take approval from concerned authorities before commencement of the work.

Table 7.1

Conservation and Management Plan of Mugger Crocodile in Buffer areas of GHCL, Mandvi Taluka, Kachchh District

Sl. No.	Specific Conservation and Management Objective	Conservation and Management Action	Role/Responsibilities								Timeline		
			GHCL	Forest Dept.	GBB	GPCB	CRZ	Fisheries Dept	Agri. Dept	NGOs	Short term	Medium term	Long term
1	Habitat Conservation and Protection	Conservation and Protection of freshwater bodies like pond, lake, river, etc.	√	√	√	-	-	√	-	-	-	√	-
		Protection of hedge of river and nala which are important site for making borrow by the crocodile.	-	√	-	-	-	-	-	-	-	√	√
2	Habitat Improvement	Development of new water bodies in the area for the animal.	√	√	√	-	-	-	-	-	-	√	-
3	Minimise road killing	Crocodiles are migrating from one water body to another water body during breeding season through movement in land. Therefore, appropriate measure should be taken to avoid road killing of this animal by vehicular traffic.	√	√	√	√	-	-	-	√	√	-	-
4	Research and Monitoring	Regular Monitoring the crocodile in nearby water bodies to understand their local population.	-	√	√	-	-	-	-	-	√	√	√
		Research should be conducted on its population, dispersal patterns, breeding, etc.	-	√	√	-	-	-	-	-	√	√	√

Sl. No.	Specific Conservation and Management Objective	Conservation and Management Action	Role/Responsibilities								Timeline		
			GHCL	Forest Dept.	GBB	GPCB	CRZ	Fisheries Dept	Agri. Dept	NGOs	Short term	Medium term	Long term
5	Conservation education	Organization of Nature Education Program included creating awareness in the local community, college students, school children, etc. in regular basis.	√	√	√	-	-	-	-	√	√	√	√
6	Awareness generation	Creating awareness about Mugger Crocodile conservation can be done with active participation from the community, NGOs, school students, forest staffs for achieving educational goals.	√	√	√	-	-	-	-	√	√	√	√
7	Enhancing cooperation	Putting of boards with animal photographs/slogan along road sides, public places, schools, etc. to increase awareness about wildlife conservation.	-	√	√	-	-	-	-	-	√	-	-
		Interdepartmental cooperation, public private partnership, NGOs, Institutions and local community relationship need to be enhance conservation of Mugger crocodile	√	√	√	-	-	-	-	-	-	√	√
8	Pollution Control	Appropriate measure should be taken to minimize water pollution in all water bodies in the area.	√	√	√	√	√	-	-	-	√	√	√
9	Capacity building	Training is needed for forest staffs, community members, and local NGOs for rescue, captive breeding and conservation of Mugger crocodile.	-	√	√	-	-	-	-	√	-	√	√

Table 7.2

Conservation and Management Plan of Olive Ridley in Buffer areas of GHCL, Mandvi Taluka, Kachchh District

Sl. No.	Specific Conservation and Management Objective	Conservation and Management Action	Role/Responsibilities								Timeline		
			GHCL	Forest Dept.	GBB	GPCB	CRZ	Fisheries Dept	Agri. Dept	NGOs	Short term	Medium term	Long term
1	Habitat Conservation and Protection	Conservation and Protection of Sandy beaches which are natural sites for its nesting and egg lying.	√	√	√	-	-	-	-	-	-	√	-
		Protection of coastal sites from all kinds of pollution to manage its natural egg lying habitat	-	√	-	-	-	-	-	-	-	-	√
2	Habitat Improvement	Development of sandy beaches for nesting and egg laying and free from all kinds of disturbance	√	√	√	-	-	-	-	-	-	√	-
3	Reduce mortality due to accidental catch by marine fishing	Awareness generation among local fishermen about the accidental catch of this species.	√	√	√	√	-	-	-	√	√	-	-
		Rescue of the accidental individuals and release in sea or in rescue centre of forest department	√	√	√	√	-	-	-	√	√	-	-
4	Research and Monitoring	Regular Monitoring the sandy beaches located along the coastal stretch between Mandvi to Pingleshvar to understand their nesting ecology.	√	√	√	-	-	-	-	-	√	√	√

Sl. No.	Specific Conservation and Management Objective	Conservation and Management Action	Role/Responsibilities								Timeline		
			GHCL	Forest Dept.	GBB	GPCB	CRZ	Fisheries Dept	Agri. Dept	NGOs	Short term	Medium term	Long term
		Research should consist of its population dynamics, dispersal patterns, movement, nesting and breeding ecology, etc.	√	√	√	-	-	-	-	-	√	√	√
5	Conservation education	Organization of Nature Education Program included creating awareness in the local community, college students, school children, etc. in regular basis.	√	√	√	-	-	-	-	√	√	√	√
6	Awareness generation	Putting of boards with animal photographs/slogan along coastal areas, fish landing centres, fish market, etc. to aware fisherman and local community about the importance of marine turtle.	√	√	√	-	-	-	-	√	√	√	√
		Preparation of leaflets in local language highlighting the importance of this species and its conservation. The leaflets should be distributed among the fisherman communities.	√	√	√	-	√	√	-	√	√	√	√
		Creating awareness about sea turtle conservation through active participation from the community, NGOs, school students, forest staffs for achieving educational goals.	√	√	√	-	√	√	-	√	√	√	√

Sl. No.	Specific Conservation and Management Objective	Conservation and Management Action	Role/Responsibilities								Timeline		
			GHCL	Forest Dept.	GBB	GPCB	CRZ	Fisheries Dept	Agri. Dept	NGOs	Short term	Medium term	Long term
7	Enhancing cooperation	Interdepartmental cooperation, public private partnership, NGOs, Institutions and local community relationship need to be enhance to share the information about the wildlife, its rescue and its conservation	√	√	√	-	√	√	-	√	√	√	√
8	Pollution Control	Control of all source of pollution in coastal areas which are directly or indirectly impact on the marine turtle population.	√	√	√	√	√	-	-	-	√	√	√

(GHCL: Gujarat Heavy Chemical Ltd., FD: Forest Dept., GBB: Gujarat Biodiversity Board, GPCB: Gujarat Pollution Control Board, Short Term: 2 years, Medium term: 5 Years, Long Term: 10 years)

Table 7.3

Conservation and Management Plan of Green Sea Turtle in Buffer areas of GHCL, Mandvi Taluka, Kachchh District

Sl. No.	Specific Conservation and Management Objective	Conservation and Management Action	Role/Responsibilities								Timeline		
			GHCL	Forest Dept.	GBB	GPCB	CRZ	Fisheries Dept	Agri. Dept	NGOs	Short term	Medium term	Long term
1	Habitat Conservation and Protection	Conservation and Protection of Sandy beaches which are natural sites for its nesting and egg lying.	√	√	√	-	-	-	-	-	-	√	-
		Protection of coastal sites from all kinds of pollution to manage its natural egg lying habitat	-	√	-	-	-	-	-	-	-	-	√
2	Habitat Improvement	Development of sandy beaches for nesting and egg laying and free from all kinds of disturbance	√	√	√	-	-	-	-	-	-	√	-
3	Reduce mortality due to accidental catch by marine fishing	Awareness generation among local fishermen about the accidental catch of this species.	√	√	√	√	-	-	-	√	√	-	-
		Rescue of the accidental individuals and release in sea or in rescue centre of forest department	√	√	√	√	-	-	-	√	√	-	-
4	Research and Monitoring	Regular Monitoring the sandy beaches located along the coastal stretch between Mandvi to Pingleshvar to understand their nesting ecology.	√	√	√	-	-	-	-	-	√	√	√

Sl. No.	Specific Conservation and Management Objective	Conservation and Management Action	Role/Responsibilities								Timeline		
			GHCL	Forest Dept.	GBB	GPCB	CRZ	Fisheries Dept	Agri. Dept	NGOs	Short term	Medium term	Long term
		Research should consist of its population dynamics, dispersal patterns, movement, nesting and breeding ecology, etc.	√	√	√	-	-	-	-	-	√	√	√
5	Conservation education	Organization of Nature Education Program included creating awareness in the local community, college students, school children, etc. in regular basis.	√	√	√	-	-	-	-	√	√	√	√
6	Awareness generation	Putting of boards with animal photographs/slogan along coastal areas, fish landing centres, fish market, etc. to aware fisherman and local community about the importance of marine turtle.	√	√	√	-	-	-	-	√	√	√	√
		Preparation of leaflets in local language highlighting the importance of this species and its conservation. The leaflets should be distributed among the fisherman communities.	√	√	√	-	√	√	-	√	√	√	√
		Creating awareness about sea turtle conservation through active participation from the community, NGOs, school students, forest staffs for achieving educational goals.	√	√	√	-	√	√	-	√	√	√	√

Sl. No.	Specific Conservation and Management Objective	Conservation and Management Action	Role/Responsibilities								Timeline		
			GHCL	Forest Dept.	GBB	GPCB	CRZ	Fisheries Dept	Agri. Dept	NGOs	Short term	Medium term	Long term
7	Enhancing cooperation	Interdepartmental cooperation, public private partnership, NGOs, Institutions and local community relationship need to be enhance to share the information about the wildlife, its rescue and its conservation	√	√	√	-	√	√	-	√	√	√	√
8	Pollution Control	Control of all source of pollution in coastal areas which are directly or indirectly impact on the marine turtle population.	√	√	√	√	√	-	-	-	√	√	√

(GHCL: Gujarat Heavy Chemical Ltd., FD: Forest Dept., GBB: Gujarat Biodiversity Board, GPCB: Gujarat Pollution Control Board, Short Term: 2 years, Medium term: 5 Years, Long Term: 10 years)

Table 7.4

Conservation and Management Plan of Peafowl in Buffer areas of GHCL, Mandvi Taluka, KachchhDistr

Sl. No.	Specific Conservation and Management Objective	Conservation and Management Action	Role/Responsibilities								Timeline		
			GHCL	Forest Dept.	GBB	GPCB	CRZ	Fisheries Dept	Agri. Dept	NGOs	Short term	Medium term	Long term
1	Habitat Conservation and Protection	Conservation and Protection of Scrubland, River bed, Agriculture, wasteland, etc.	√	√	√	-	-	-	-	-	-	√	-
		Conservation of Mandvi taluka Reserve Forest is very much essential to conserve this species in the areas	-	√	-	-	-	-	-	-	-	-	√
2	Habitat Improvement	Development of scrubland and grassland patches which are site for nesting and egg laying	√	√	√	-	-	-	-	-	-	√	-
3	Reduce mortality due to vehicular traffic	Vehicular traffic and its speed limit should be minimised to check the chance of accident of animal along the coastal highway between Mandvi and Suthri.	√	√	√	√	-	-	-	√	√	-	-
4	Research and Monitoring	Regular Monitoring the Peafowl population is essential to understand their population dynamics.	√	√	√	-	-	-	-	-	√	√	√
		Research should consist of its population dynamics, social organization and dispersal patterns, movement, breeding, etc.	√	√	√	-	-	-	-	-	√	√	√

Sl. No.	Specific Conservation and Management Objective	Conservation and Management Action	Role/Responsibilities								Timeline		
			GHCL	Forest Dept.	GBB	GPCB	CRZ	Fisheries Dept	Agri. Dept	NGOs	Short term	Medium term	Long term
5	Conservation education	Organization of Nature Education Program included creating awareness in the local community, college students, school children, etc. in regular basis.	√	√	√	-	-	-	-	√	√	√	√
6	Awareness generation	Creating awareness about peacock conservation can be done with active participation from the community, NGOs, school students, forest staffs for achieving educational goals.	√	√	√	-	-	-	-	√	√	√	√
7	Enhancing cooperation	Putting of boards with animal photographs/slogan along road sides, public places, schools, etc. to increase awareness about wildlife conservation.	-	√	√	-	-	-	-	-	√	-	-
		Interdepartmental cooperation, public private partnership, NGOs, Institutions and local community relationship need to be enhance its conservation	√	√	√	-	-	-	-	-	-	√	√
8	Pollution Control	Control of water, soil and sound pollution created by various sources which are directly or indirectly impact on the Peafowl population.	√	√	√	√	√	-	-	-	√	√	√

Sl. No.	Specific Conservation and Management Objective	Conservation and Management Action	Role/Responsibilities								Timeline		
			GHCL	Forest Dept.	GBB	GPCB	CRZ	Fisheries Dept	Agri. Dept	NGOs	Short term	Medium term	Long term
9	Organic cultivation and cultivation of folk varieties	Emphasis should be given for organic cultivation and cultivation of folk/traditional varieties of crop to increase prey base of this animal in agricultural habitat	-	-	√	-	-	-	√	-	-	√	√

(GHCL: Gujarat Heavy Chemical Ltd., FD: Forest Dept., GBB: Gujarat Biodiversity Board, GPCB: Gujarat Pollution Control Board, Short Term: 2 years, Medium term: 5 Years, Long Term: 10 years)



Table 7.5

Conservation Plan for Chinkara in Buffer areas of GHCL, Mandvi taluka, Kachchh District

Sl. No.	Specific Conservation and Management Objective	Conservation and Management Action	Role/Responsibilities								Timeline		
			GHCL	Forest Dept.	GBB	GPCB	CRZ	Fisheries Dept	Agri. Dept	NGOs	Short term	Medium term	Long term
1	Habitat Conservation and Protection	Conservation and Protection of *Prosopis* Scrubland, patches of grassland and coastal sand dune which are the probable habitat of Chinkara.	-	√	√	-	-	-	-	-	-	√	√
		Conservation of Mandvi taluka Reserve Forest is very much essential to conserve this species in the areas	-	√	-	-	-	-	-	-	-	√	√
2	Habitat Improvement	Water hole exclusively fresh water and salt licking sites should be developed along the costal belt.	√	√	√	-	-	-	-	-	√	√	-
		Development of grassland patches and scrubland in the areas for fodder security of this species.	-	√	√	-	-	-	-	-	√	√	-
3	Protection of home range	Protection of the home range of this animal along coastal belt is required to manage the population	-	√	√	-	-	-	-	-	-	√	√
4	Reduce mortality due to vehicular traffic	Vehicular traffic should be minimised to check the chance of accident along the coastal highway between Mandvi and Suthari	-	√	√	-	-	-	-	-	-	√	√

Sl. No.	Specific Conservation and Management Objective	Conservation and Management Action	Role/Responsibilities								Timeline		
			GHCL	Forest Dept.	GBB	GPCB	CRZ	Fisheries Dept	Agri. Dept	NGOs	Short term	Medium term	Long term
5	Research and Monitoring	Regular Monitoring the Chinkara population is essential to understand their population dynamics.	-	√	√	-	-	-	-	-	√	√	√
		Research should consist of basic demographics parameters, Social organization and dispersal patterns, Home range, breeding, etc.	-	√	√	-	√	-	-	-	-	√	√
6	Conservation education	Organization of Nature Education Program included creating awareness in the local community, college students, school children, etc. in regular basis.	√	√	√	-	-	-	-	-	√	√	-
7	Awareness generation	Creating awareness about Chinkara conservation can be done with active participation from the community, NGOs, school students, forest staffs for achieving educational goals.	√	√	√	-	-	-	-	-	√	√	-
		Putting of boards with animal photographs/slogan along road sides, public places, schools, etc. to increase awareness about wildlife conservation.	√	√	√	-	-	-	-	-	√	√	-

Sl. No.	Specific Conservation and Management Objective	Conservation and Management Action	Role/Responsibilities								Timeline		
			GHCL	Forest Dept.	GBB	GPCB	CRZ	Fisheries Dept	Agri. Dept	NGOs	Short term	Medium term	Long term
8	Enhancing cooperation	Interdepartmental cooperation, public private partnership, NGOs, Institutions and local community relationship need to be enhance to share the information about the wildlife, its rescue and its conservation	√	√	√	√	√	√	√	√	-	√	√
9	Pollution Control	Control of sound pollution due to vehicular traffic along state highways during night hours.	√	√	√	-	-	-	-	-	√	√	-

(GHCL: Gujarat Heavy Chemical Ltd., FD: Forest Dept., GBB: Gujarat Biodiversity Board, GPCB: Gujarat Pollution Control Board, Short Term: 2 years, Medium term: 5 Years, Long Term: 10 years)

Table 7.6

Conservation Plan for other Schedule-1 Wildlife (Hyena, Raptors, Lizards) fauna existing in Buffer areas of GHCL, Mandvi taluka, Kachchh district

Sl. No.	Specific Conservation and Management Objective	Conservation and Management Action	Role/ Responsibilities			Implementation area	Implementing agency	Funding agency	Time-line	
			GHCL	FD	GBB				Short term	Long term
1	Habitat conservation and protection	Protection measures need to be undertaken for conservation of natural/suitable habitats of species *viz*. tropical thorn forests, scrub forests, grassland, wetlands, etc. of the area. Along with protection, it is also crucial to develop these habitats by planning suitable site-specific plant species.	-	√	√	NSS & OSA	FD & GHCL	GHCL	-	√
		Species like; *Acacia leucopholea, Prosopis cineraria, Acacia auriculiformis* and *Salvadora persica* could be planted near water bodies. These species could also be planted in village gaucher and Common Property Land Resources (CPLRs) at the density of 30 trees per hectare. These species provide nesting, roosting site for birds, and shades for animal and also some extend of fodder to herbivores.	√	√	√	Bada, Bambhadai, Pachotiya	FD & GHCL	GHCL	-	√
		Development of scrubland and grassland patches which are site for nesting and egg laying of many species of birds, reptile and small mammals should be carried out.	-	√	√	RFs	FD & GHCL	GHCL	-	√

Sl. No.	Specific Conservation and Management Objective	Conservation and Management Action	Role/ Responsibilities			Implementation area	Implementing agency	Funding agency	Time-line	
			GHCL	FD	GBB				Short term	Long term
		Large trees are normally used for nesting and roosting purposes by many of wildlife species. Therefore, large trees need to be conserved and plantation of suitable trees in the buffer areas needs to be undertaken.	√	√	√	RFs	FD & GHCL	GHCL	-	√
		Yearly monitoring of habitats of threatened species which are frequently utilized for feeding, nesting and breeding purpose should be done.	-	√	-	NSS & OSA	GUIDE	GHCL	√	-
2	Habitat improvement / management	Management and protection of natural water bodies with minimum human interventions. If possible, new water bodies should be constructed in forest and its adjoining areas or areas having dense population of wildlife. Also, cemented water holes need to be developed and frequent wildlife movement areas and is to be regularly filled through tankers for constant supply of water for wildlife and free grazing livestock.	-	√	-	Buffer area villages	FD & GHCL	GHCL	-	√
		Prosopis juliflora invasion in natural areas should be controlled. Pruning is also essential for maintaining this species. During fruiting season, the pods falling on the ground needs to be removed manually for preventing its spread through livestock.	-	√	√	Bada, Bambhadai,	FD & GHCL	GHCL	-	√

Sl. No.	Specific Conservation and Management Objective	Conservation and Management Action	Role/ Responsibilities			Implementation area	Implementing agency	Funding agency	Time-line	
			GHCL	FD	GBB				Short term	Long term
		Plantation in community places like road sides, school campus, gardens, and wasteland for improving general environment. *Ficusbenghalensis, Ficusracemosa, Salvadora persica* and some of other suitable species (given in Annexure V) for planting along the road sides, school campuses and gardens.	√	√	-	Within buffer area villages	FD & GHCL	GHCL	√	-
		Preference to be given for plantation of natural species of plants in greenbelt or suitable areas to provide habitat for feeding, resting and nesting of species.	√	-	-	Bada, Bambhdai,	GHCL	GHCL	-	√
		Grassland development should be done in suitable areas for fodder security of livestock and ecological securities of dependent biodiversity. *Chloris, Dactyloctenium, Cenchrus, Sporobolus,* etc. are some of the productive and nutritive grasses suitable for grassland development in the area.	-	√	√	Bada Bambhadai.	GHCL	GHCL	-	√
		Plantation of large tree species in some areas which are used for nesting by some bird species like raptors should be done.	√	√	-	Buffer villages	GHCL	GHCL	√	-

Sl. No.	Specific Conservation and Management Objective	Conservation and Management Action	Role/ Responsibilities			Implementation area	Implementing agency	Funding agency	Time-line	
			GHCL	FD	GBB				Short term	Long term
3	Protection and management of wildlife Population	The movement corridor used by various wildlife animal viz. carnivore, herbivore, reptile, birds need to be protected.	√	√	√	NSS & OSA	FD	FD	-	√
		The river bed, its tributaries, natural nala, wasteland which is used as a corridor by the wild animal should be protected.	-	√	√	NSS & OSA	FD	FD	-	√
		Yearly monitoring and population census of Schedule-1 species (WPA, 1972) / Threatened species should be recorded in the buffer zone of the study area.	√	√	-	NSS & OSA	GUIDE	GHCL	√	-
		Food and water availability for wildlife especially in drought period/summer season should be ensured.	-	√	-	NSS & OSA	FD	FD	-	√
		Speed and vehicular traffic should be minimised to check the chance of accident along the road used for project related activities, especially during evening and early morning hours.	√	-	-	Along roads in buffer area	Transport Dept.	GHCL	√	-

Sl. No.	Specific Conservation and Management Objective	Conservation and Management Action	Role/ Responsibilities			Implementation area	Implementing agency	Funding agency	Time-line	
			GHCL	FD	GBB				Short term	Long term
		Measures should be taken for controlling spreads of wildlife diseases like infectious and epidemic diseases by way of vaccination to livestock. Maintaining precautionary measures where wildlife and domestic animal share common feeding grounds.	-	√	-	NSS & OSA	FD	GHCL	-	√
4	Conservation education/ Awareness and Outreach activities	Conservation education/awareness programme like nature education camp involving local forest departments/NGOs to create awareness among various stakeholders with active participation from the community, school students, and local industrial houses for achieving conservation goals should be conducted.	√	-	-	Buffer area of GHCL	GHCL& GUIDE	GHCL	√	-
		Preparation of booklets, leaflets, pamphlets, calendars, and other printing material on biodiversity and its conservation importance to distribute among various stakeholders like local communities, schools, other departments, NGOs, etc.	√	√	√	NA	GHCL	GHCL	-	√
		Fixing of boards with animal photographs/slogan along road sides, public places, schools, etc. to increase awareness about biodiversity/wildlife conservation.	√	-	-	NA	GHCL& GUIDE	GHCL	√	-

Sl. No.	Specific Conservation and Management Objective	Conservation and Management Action	Role/ Responsibilities			Implementation area	Implementing agency	Funding agency	Time-line	
			GHCL	FD	GBB				Short term	Long term
		Supports Local NGOs/Vanya Prani Mitra/Eco-clubs of schools and colleges for wildlife conservation activities	√	-	-	NA	GHCL	GHCL	√	√
5	Pollution Control	Avoid water, soil and air pollution in project areas and roads uses for transportation	√	-	-	Buffer area of GHCL	GHCL& GUIDE	GHCL	√	-
		Plantation of dust capturing trees species (Annexure VI)	√	-	-				√	√
		Control of sound pollution created by project related activities/ transportation along the roads passing through wildlife habitat especially during night hours.	√	-	-				√	-

(GHCL: Gujarat Heavy Chemical Ltd., GBB: Gujarat Biodiversity Board, FD: Forest Dept., NSS: Narayan Sarovar Sanctuary, RFs: Reserve Forests, OSA: Outside Sanctuary Area, RFs: Reserve Forests, Short Term: 2 years, Long term: 5 Years)

8. Fund Allocation for Implementation of Conservation Plan

The successful conservation and protection of wildlife in natural habitat is prime duty of all stakeholders using the natural resources of such area for their livelihood. The detailed plan for the conservation and management of wildlife in the buffer areas of proposed Greenfield Chemical Complex of GHCL is given in table 7.1 to table 7.6. Since there is a good population of Chinkara and Peafowl present outside sanctuary areas, special focus is required to ensure effective conservation measures of Schedule-I faunal species through habitat improvement programmes.

To implement the above-mentioned Wildlife Conservation and Management Plan in the buffer areas of proposed Greenfield Chemical Complex of GHCL the budget is proposed (breakup given in table 8.1) for each activity to meet the goal of successful conservation of Schedule-I wildlife species. The proposed estimated budget of Rs. 1,26,00,000/- (One crore twenty-six lakhs only) has been allocated for upcoming 10 years from the date of inception of the project to implement various conservation actions as suggested in table 7.1 to table 7.6. The budget has been estimated as per the present market price/ Schedule of Rate (SoR) of activities. The estimated budget for some activities under wildlife conservation plan as mentioned in table 8.1 will be revised on yearly basis as per the current market rate/Schedule of Rate (SoR) of the Government of Gujarat to the implementation of such activities.

In addition to the fund allocation made for conservation and management activities of Schedule-I faunal species located in buffer areas of the GHCL, environmental/ habitat improvement programmes could be undertaken as part of CSR activities focussing on the conservation of Schedule-I faunal species. Along with that the budget is already allocated for the conservation of marine environment given in Marine EIA report prepared by the CSIR-NIO.

Table 8.1: Budget estimate (10 year plan) for Implementation of the Wildlife Conservation Plan for Bada Soda Ash Plant of GHCL

Sl. No.	Conservation Objective	Activities	Location of activities	Implementing Agency	Year of Implementation & Targets										Rate/Cost (In Rupees)	Rs in Lakhs
					1	2	3	4	5	6	7	8	9	10		
1	Habitat Conservation, Protection and Improvement	Plantation & Greenbelt development	Soda Ash Plant area and Periphery of plant (30 ha)	GHCL	LP	10 ha	10 ha	10 ha	GF	GF	GF	GF	GF	GF	Rs. 52000/ha	15.60
			Roadside plantation to minimise pollution& attract birds (20 ha)	GHCL	LP	5 ha	5 ha	10 ha	GF	GF	GF	GF	GF	GF	Rs. 52000/ha	10.40
			Bada, Bambhadai and other RF. (50 ha) (Location will be decided by FD)	FD	LP	20 ha	20 ha	10 ha	GF	GF	GF	GF	GF	GF	Rs. 52000/ha	26.00
		SMC Work	Reserve forest area (creation of water hole structures)	FD	-	10 St	20 St	20 St	-	-	-	-	-	-	Rs. 10000/ structure	5.00
		Plantation management	Water tanker* (1) and Tractor* (1)	FD	-	√	-	-	-	-	-	-	-	-	Rs. 2000000	20.00
			Utility vehicle* (1)	FD	-	√	-	-	-	-	-	-	-	-	Rs. 1200000	12.00
2	Research and Monitoring	Plantation Monitoring	Plantation Area	3rd Party Monitoring	-	-	√	-	√	-	-	√	-	-	Rs. 600000	6.00
		Wildlife Monitoring	Narayan Sarovar Sanctuary & Reserve Forests area	FD and GUIDE	-	-	√	-	√	-	-	√	-	-	Rs. 1000000	10.00
3	Education & Awareness	Workshop, NEC, Sign board, etc.	GHCL& Nearby Schools & Colleges	FD and GUIDE	-	√	-	√	-	√	-	√	-	√	Rs. 1000000	10.00
4	Miscellaneous	Contingency	-	GHCL & FD	√	√	√	√	√	√	√	√	√	√	Lump sum	5.00
															Sub-total	**120.00**
	Monitoring of works		Implementation Areas of WCP	FD	-	√	-	√	-	√	-	√	-	√	@5% of total	6.00
															Grand Total	**126.00**

GHCL: Gujarat Heavy Chemical Ltd.; FD: Forest Dept; GUIDE: Gujarat Institute of Desert Ecology; LP: Land preparation; GF: Gap filling; NEC: Nature Education Camp

*Note: Vehicles are required for the efficient management of plantation activities and it will be the asset for the forest department in future.

8.1 Review and Monitoring of Wildlife Conservation Plan

The conservation plan proposed for the Schedule-I fauna existing in buffer area of GHCL should be monitored continuously to assess any short comings and to remediate further and implement the plan to achieve the goal for conservation and improvement of the wildlife population and its habitat. In order to do this a team comprising experts from the field of ecology, environment and wildlife from a reputed organization will monitor the works implemented for conservation of threatened and Schedule-I fauna by the GHCL Ltd. The team will review the progress and evaluate the works and submit reports periodically. The report should also suggest remedial measures for effective conservation and management of the threatened and Schedule-I faunal species.

8.2 Field Monitoring

It will be difficult to assess the results and success of this proposed conservation plan unless the status of threatened I fauna, associated wild animals and its habitat are monitored on a regular or timeline basis. This monitoring can be done scientifically through experienced wildlife experts/Institute/Organization with the support of local Forest Department and result needs to be submitted to the monitoring committee for further discussion and future policy implementation with necessary changes. The field monitoring can preferably do at the post-monsoon period or winter season of every 3 year. The above activities will be monitored by MoEF& CC and respective agencies.

8.3 Success Indicators

Following factors will be undertaken as measurable indicators of success of the plan:

1. Increase in vegetation density and ground cover in buffer area.
2. Increase in population and abundance of rare, threatened and Schedule-I faunal species as mentioned in the plan.
3. Increase in population and abundance of biodiversity and other wildlife in the area.
4. Overall health of the habitat and ecosystem in buffer areas

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ANNEXURE R/27

GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE
(IA DIVISION-INDUSTRY-3 SECTOR)
*****

Dated:8.1.2024

MINUTES OF THE 72nd EXPERT APPRAISAL COMMITTEE (INDUSTRY-3 SECTOR) MEETING HELD ON 2nd JANUARY, 2024

Venue: Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi-110003 through Video Conferencing (VC)

Time: 10:30 AM onwards

(i) Opening Remarks by the Chairman

Prof. (Dr.) A.B. Pandit, Chairman welcomed the Committee members and opened the EAC meeting for further deliberations.

(ii) Details of Agenda items by the Member Secretary

The Member Secretary then apprised the Committee about the details of Agenda items to be discussed during this Expert Appraisal Committee (EAC) meeting.

Agenda Items as per Parivesh 2.0 Portal

Agenda No. 72.1

Proposed expansion for manufacturing of Synthetic Organic Chemicals and Resins and Formaldehyde with production capacity from 833.33 MTPM to 16000 MTPM located at block no. 634/7/1 & 637, Lamdapura Road, Manjusar, Taluka: Savli, District: Vadodara, Gujarat by M/s. Rajsha Chemicals Pvt. Ltd. Consideration of Environmental Clearance

[Proposal No. IA/GJ/IND3/447188/2023, File No. J-11011/607/2009-IA-II(I)]

1. The proposal is for Environmental Clearance to the Proposed expansion for manufacturing of Synthetic Organic Chemicals and Resins and Formaldehyde with production capacity from 833.33 MTPM to 16000 MTPM located at block no. 634/7/1 & 637, Lamdapura Road, Manjusar, Taluka: Savli, Dist.: Vadodara, Gujarat by M/s. Rajsha Chemicals Pvt. Ltd.

Paithan, District Aurangabad, Maharashtra by M/s Satellite Pharmaceuticals Pvt. Ltd. - Consideration of Environmental Clearance

[Proposal No. IA/MH/IND3/419096/2023; File No. IA-J-11011/505/2021-IA-II(I)]

PP did not attend the meeting. Accordingly, the proposal was **deferred.**

Agenda No.72. 9

Proposed project to produce Light Soda Ash (LSA) of 11,00,000 TPA capacity, 5,00,000 TPA of Dense Soda Ash (DSA) and 2,00,000 TPA Sodium Bicarbonate (SBC) located at near village Bada, Taluka - Mandvi, District - Kutch in the Gujarat state by "Greenfield Chemical Complex" of GHCL Ltd- Consideration of Environmental Clearance

[Proposal no: IA/GJ/IND3/408164/2022, File No. IA-J-11011/293/2021-IA-II(I)]

1. The proposal is for Environmental Clearance to the Proposed project to produce Light Soda Ash (LSA) of 11,00,000 TPA capacity, 5,00,000 TPA of Dense Soda Ash (DSA) and 2,00,000 TPA Sodium Bicarbonate (SBC) located at near village Bada, Taluka - Mandvi, District - Kutch in the Gujarat state by "Greenfield Chemical Complex" of GHCL Ltd

2. The project/activity is covered under Category 'A' of Item 4 (e) soda ash industry of Schedule of Environment Impact Assessment (EIA) Notification, 2006 (as amended) and requires appraisal at Central Level by the Expert Appraisal Committee (EAC) as the project is located outside the notified industrial area.

3. The ToR was issued by the Ministry, vide letter no. IA-J-11011/293/2021-IA-II(I) dated 10th August, 2021. The PP applied for the Environment Clearance in the Common Application Form and submitted the EIA/EMP Report and other documents. The PP in the CAF reported that it is a **Fresh EC case.** The proposal is placed in 72nd EAC Meeting held on 2nd January, 2024 where project was wherein the PP and an accredited Consultant, CSIR NEERI [NABET accreditation till **NABET Accreditation Number: NABET/EIA/2124/RA 0227, Valid till July 01, 2024**], made a detailed presentation on the salient features of the project and informed the following:

4. The PP reported that the Total land area is **5463200 m^2; no** additional land will be used for **proposed project** and no R& R is involved in the Project. The details of various products are as follows:

Sr. No.	Name of the Product	Production Capacity (MT/Month)	CAS Number	End use
1	Light Soda Ash	11,00,000 TPA	497-19-8	Manufacturing of glass, usage in chemical industry, paper and detergent manufacturing, and food industry
2	Dense Soda Ash	5,00,000 TPA	497-19-8	
3	Sodium bicarbonate	2,00,000 TPA	144-55-8	
Captive Co-generation Power plant Steam (CFBC boilers)			120 MW	
Emergency DG Set			5 MVA	
Note- The production capacities are planned in phased manner and for Phase 1 production capacity for LSA: 5,50,000 TPA, Dense Soda Ash: 2,50,000 TPA, SBC: 1,00,000 TPA and 60 MW for Captive Co-generation Power plant.				

5. The PP reported that there is no violation case as per the Notification No. S.O.804(E) dated 14.03.2017 and no direction is issued under E(P) Act/Air Act/Water Act.

6. The PP reported that There is no National Parks, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site. **Marine National Park and Sanctuary, Jamnagar are located at 75 km aerial distance in South direction and Narayan Sarovar Sanctuary is located at more than 100 km aerial distance in North-West directions**. Flap shell turtle, Green Sea turtle, Indian monitor lizard, Olive Ridley Sea turtle, Black shoulder kite, Eurasian Spoonbill, Indian Peafowl, Marsh Harrier, Oriental Honey Buzzard, Gugal Schedule-I species were found in the study area for which conservation plan has been preapred and submitted to PCCF and Chief wildlife warden dated 9.11.2023.

7. The PP reported that the diversion of 0.9689 ha unclass forest for laying part of sea water intake and effluent disposal pipeline and passage for related construction equipment movement in Kachchh has been obtained vide ketter dated 18. 7.2023.

8. The PP reported the Unit has received the Final recommendation letter from GZMA vide file no ENV/ 10/ 2021/184/ T- cell dated 26.12.2023. CRZ details are as:

Activities	Zone
Construction of process plant and utilities etc.	Outside CRZ area
Effluent collection	Outside CRZ area
Seawater Intake system i.e. sump and pump house	CRZ III
Intake Pipeline	CRZ IA, CRZ IB and CRZ IV
Outfall Pipeline	CRZ IA, CRZ IB and CRZ IV

Laying of Seawater Intake and effluent disposal underground pipeline through tunnel from unclassified Forest area, Sand dune area, intertidal area outside project boundary.

9. The PP reported that **Ambient air** quality monitoring was carried out at **10 locations** during **December 2019 – February 2020**. The baseline data indicates the ranges of concentrations as: PM_{10} (**19 µg/m^3 to 53 µg/m^3**), $PM_{2.5}$ (**8 µg/ m3 to 17 µg/ m3**), SO_2 (**1 µg/m^3 to 14 µg/m^3**), NOx (**5 µg/m^3 to 16 µg/m^3**), Ammonia (**6 µg/m^3 to 19 µg/m^3**), Ozone (**2 µg/m^3 to 8 µg/m^3**), Carbon Monoxide (**0.09 mg/m^3 to 0.21 mg/m^3**), Hydrocarbons [Methane hydrocarbons (**0.23 µg/m^3 to 1.27 µg/m^3**) and Non-Methane hydrocarbons (**0.11 µg/m^3 to 0.19 µg/m^3**)], Lead (Pb) (**0.05 µg/m^3 to 0.27 µg/m^3**), Arsenic (As) (**0.02 ng/m^3 to 0.11 ng/m^3**), Nickel (Ni) (**0.11 ng/m^3 to 0.18 ng/m^3**), Benzo(α)pyrene(B[a]P) (**ND to 0.03 ng/m^3**) and Benzene (**ND to 0.16 µg/m^3**). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be **3.05** µg/m^3 in case of Lignite, Coal and Petcoke with respect to PM_{10}, **10.98** µg/m^3 in case of Lignite, **2.55** µg/m^3 in case of Coal and **13.26** µg/m^3 in case of Petcoke with respect to SO_2 and **11.37** µg/m^3 in case of lignite, **7.3** µg/m^3 in case of coal and **5.62** µg/m^3 in case of Petcoke with respect to NO_x. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

10. The PP reported that the Total water requirement for project will be 15,20,060 m^3/day in case of Dry Lime process or 13,63,878 m^3/day in case of Wet Lime process which will be met from Sea water. Total Effluent of 15,88,570 m^3/day (Domestic - 160 m^3/day + Industrial – 15,88,410 m^3/day) in case of Dry Lime process or 14,48,818 m^3/day (Domestic - 160 m^3/day + Industrial – 14,48,658 m^3/day) in case of Wet Lime process. The Process effluent generated i.e. from distiller waste, brine purification reject, RO/DM rejects will be disposed off along with once through return cooling water/fresh seawater into Arabian Sea as per recommendation of NIO. The characteristics of the discharge water are within the norms prescribed by CPCB.

11. The PP reported that the Power requirement for proposed project will be 120 MW and will be met from Captive Co-generation Power plant. D. G. Set (5 MVA X 1) [Fuel: HSD (60 KL)] shall be provided and used only in case of power failure. Stack (30 meter) and Retrofit shall provide as per CPCB norms to the DG sets. Industry will provide six Steam Boiler (150 TPH) for captive power plant, six lime kilns and D G sets

12. Details of process emissions generation and its management:

SR.NO.	Stack attached to	Capacity	Height of the stack (m)	Fuel & its Consumption	Expected Pollutant	APC System	GPCB Limit
1	CPP with flue gas desulphurization CFBC Boiler (6 Nos.)	150 TPH	130 m	Imported Coal/Lignite/ Pet coke (Imported Coal: 13,14,000 TPA, Lignite :19,71,000 TPA, Pet coke: 9,12,500 TPA)	SPM SO_2 NO_2 Hg	Individual ESP with each Boiler	PM ≤ 30 mg/Nm^3 SO_2 ≤ 100 mg/Nm^3 NO_2 ≤ 100 mg/Nm^3 Hg ≤ 0.03 mg/Nm^3
2	D G Set (2/3 Nos.)	5 MVA	30 m	HSD (60 KL)	HC CO PM NO_x	Retrofitting	NOx 710 ppmv NMHC 100 mg/Nm3 PM 75 mg/Nm3 CO 150 mg/Nm3

3	Lime Kiln 1		68 m	Coke or Briquette or Anthracite (Coke - 1,30,000 TPA, Briquette- 1,55,000 TPA, Anthracite - 1,10,000 TPA)	SPM SO_2 NO_2	Scrubber and Dust Collector system	SPM ≤ 150 mg/Nm^3 SO_2 ≤ 100 ppm NO_2 ≤ 50 ppm
4	Lime Kiln 2		68 m			Scrubber and Dust Collector system	
5	Lime Kiln 3		68 m			Scrubber and Dust Collector system	
6	Lime Kiln 4		68 m			Scrubber and Dust Collector system	
7	Lime Kiln 5		68 m			Scrubber and Dust Collector system	
8	Lime Kiln 6		68 m			Scrubber and Dust Collector system	

SR.NO.	**Stack attached to**	**Height of the stack (m)**	**Expected Pollutant**	**APC System**
1	Ammonia Recovery system	42 m	Ammonia	Water scrubber
2	Lime grinding system / Slaker	65 / 20 m	PM / Water vapor	Bag filter / Adequate stack height
3	Calciner unit	37 m	PM	Scrubber, Bag filter
4	Densification	43 m	PM	Scrubber

5	Sodium Bi-Carbonate Unit	30 m	PM	Bag filter
6	Lime Kiln	Closed system	PM	Scrubber and Wet ESP

13. **Details of Solid Waste/ Hazardous Waste Generation and Its Management**:

Sr. No.	Type of Waste	Mode of Disposal
1	ETP Sludge from treatment of effluent generated from captive power plant & RO/DM Plant	The effluent from power plant, RO/DM plant will require only neutralization & it will have negligible BOD/COD. Sludge will be disposed off in nearby landfill site.
2	Used Oil / Used Cotton	It will be sold to MoEF&CC/CPCB registered recyclers only. Approx. 12 KL
3	Discarded Drums	It will be sold to approve traders. Approx. 5 MT/yr
	Discarded Bags	It will be sent back to supplier for reuse.
4	Spent Ion exchange resin	To be sold to authorized recyclers or will be incinerated at MoEF&CC/CPCB approved TSDF for which plant will obtain membership. Approx. 3000 l/yr
5	Lead acid Batteries	It will be sold to authorized agency through auction.
6	Ash (Fly ash & Bottom Ash) from Boiler	The Boiler ash will be used for cement Manufacturing/ Brick Manufacturing. Approx. 750 TPD
7	Limestone rejects	It can be used in Boiler for desulphurization and as a sweetener in cement industry, road making, pavement etc. 5% of lime stone consumption.
8	Settled sludge	Since settled sludge, non-hazardous in nature, it is proposed to be disposed off in Nearby landfill site.

14. The Budget earmarked towards the Environmental Management Plan (EMP) is ₹ **205.07 crore** (capital) and the Recurring Cost (operation and maintenance) will be about ₹ **6.98 Crore** per Annum. Industry proposes to allocate ₹ **18.04 Crore** towards CER.

15. The PP reported that Public Hearing for the Proposed project has been conducted by the State Pollution Control Board at the project site on **17.10.2022**. The main issues raised during the public hearing are related to the air pollutants, water pollutants, schedule 1 conservation plan, fishing, traffic etc.

16. The PP proposed to set up an Environment Management Cell (EMC) by engaging Environment officals for the functioning of EMC.

17. The PP submitted the Disaster and Onsite and Offsite Emergency Plans in the EIA report.

18. The estimated total project cost is **Rs 3550 Crores**. Total Employment will be **1200** persons as direct.

19. Intake pipeline and outfall pipeline fall in CRZ 1A, 1B and IV area as per demarcation. It was reported that construction of process plant and utilities fall outside the CRZ area. SCZMA recommendation has been obtained for Laying of Seawater Intake and effluent disposal underground pipeline through tunnel from unclassified Forest area, Sand dune area, intertidal area outside project boundary.

20.

21. The Public Hearing earlier was scheduled to be held on 16-04-2022 at 11:00 Hrs, Venue: Project Site, Survey no. 432, Village: Bada, Taluka: Mandvi, District: Kutch, Public hearing was then time being postponed due to unavoidable circumstances. After that public hearing was completed on **17-10-2022 at 11.00 Hrs.** Venue: Project Site, Survey no . 432, Village: Bada, Taluka: Mandvi, District: Kutch, Gujarat. Which was presided over by Shri Chetan Mishan(GAS), Sub Divisonal Magistrate & Deputy Collector, Mundra- Kutch. Public hearing Details as given below:

S.No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
1	CSR–Fodder	4	Steps to be taken for cattle Care about Maldhari community Security regarding fodder supply for livestock.	Fodder will be provided as well as provision for veterinary doctor will be carried out by GHCL foundation under CSR activity.	• Activities for fodder supply will be carried out under CSR and CER activities for strengthening the bond between the project authorities and the local population. (refer Ch-8 and Table 10.4 in Ch-10). Fodder field will be developed on the Government/allocate land to nearby villages. • Unit will do promotion through providing support for breed improvement, animal health care, fodder improvement and providing veterinary doctor in nearby villages under CER and CSR activities for communities. • During year 2020-2021, GHCL foundation has spent INR 9.03 Crores towards CSR activities. CSR projects/activities worth INR 19.09 Cr. were implemented. GHCL wide range of CSR projects have touched and benefitted more than 90,200 lives over the years. Promoting such activities like water conservation, Animal husbandry, health care, SHG,	• As per MoEF&CC Office Memorandum F.NO. 22-67/2017-IA III, MoEF&CC, New Delhi, dated on 1st May 2018 GHCL Ltd has earmarked 0.5 % of capital investment (appro. Rs. 18.04 crore), towards the Corporate Environment Responsibility in 5 years • GHCL Ltd will spend approx. **4.35 crore*** towards Animal husbandry promotion through providing support for breed improvement, animal health care, Veterinary doctor and others as well as provides Fodder for cattle feeding nearby villages as per requirement under CER activities (* value may defer as per actual requirement)	5 years	GHCL Limited
2	Employment	5	For employment of local villagers Number of employment opportunities to be Priority must be given to nearby 10 villages Regarding priority to nearby villages	Information on employment opportunities has given by Project Proponent that there are different types of employment opportunities in the two phase of the projects i.e. construction	• The proposed project has a potential for employment of skilled, semi skilled and unskilled employees during construction phase as well as	• GHCL Ltd will spend approx. 2.25 crore towards Promoting activities for skill building to improve	During construction and Operation phase	GHCL Limited

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
			for labor work Regarding employment for local communities.	phase and operational phase of the project. GHCL will strive to provide these employment opportunities to the local people, for which work will be done for their skill development and employment opportunities will be provided to the local people. As per requirement, training will be given to local people in coordination with HR department. Priority will be given for employment of local people. In nearby villages a group of women can be formed so that they can work in Gruhudhyogs (Home-based business) M/s	operational phase. The plant will create direct employment in phased manner for about 1200 (operational phase) skilled as well as semi-skilled staff and indirectly large number of unskilled manpower will be engaged for the project. For Employment, local people will get first priority as per suitability and requirement. People will also get employed by the contractors for various project related activities.(Refer Ch-8	employment opportunities and women empowerment in nearby villages under CER activities.		
3	CSR - Health	1	Regarding health facilities under CSR activities	Will provide mobile health van facility and upgradation of existing healthcare infrastructure	• Industry will provide Mobile Health Care, Health Camps, and Specialized Check Up Camps in nearby villages. Necessary support and help will be extended for advanced diagnosis and treatment wherever identified, Free medical health checkup under CSR and CER	• GHCL Ltd will spend approx.. 1.12 crore towards Infrastructure development Such as primary healthcare units and the fulfilment of the basic amenities in PHCs including mobile	5 years	GHCL Limited
4	CSR - Education	3	Regarding scholarship Regarding skill development of	Will build school in future as per requirement and will also upgrade the existing school	• Unit will be directed at two levels viz. school and skill building to		5 years	GHCL Limited

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
			conditions To provide educational facilities	skill development activities	school level we intend to promote quality of education and learnability, develop infrastructure of Government schools, provide vocational training as per the requirement under CSR and CER activities. • GHCL foundation will support local government and NGO to make that program more effective. • GHCL foundation will carry out skill development Programme for local youth to improve their employment opportunities, women empowerment under CSR and CER activities. • During year 2020-2021, GHCL Foundation has spent INR 9.03 Crores towards CSR activities. CSR projects/activities worth INR 19.09 Cr. were implemented. GHCL wide range of CSR projects have touched and benefitted more than 90,200 lives over the years. Promoting such activities like water conservation, Animal husbandry, health care, SHG, Infrastructure development etc.	towards Infrastructure development for quality of education, which will ultimately upgrade schools in nearby villages under CER activities.		
5	Air Pollutants (SOx, NOx, Dust)	6	Height of chimney to be installed Levels of Sox and NOx Regarding acid rain cause by Sox Emission of PM during transportation and	For minimizing Air Pollution, requisite height of the stacks will be provided as per the NAAQS norms. Besides this, Modern technology	• The best available technology-based pollution prevention and control shall used to meet the regulatory standards and these pollution control systems will be commissioned before	• Air pollution • Capital cost would include air pollution	During operation phase	GHCL Limited

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
			mercury. Regarding once through cooling for 120 MW. Regarding linkage of fuel and how they are going to use it	installed. As a result, the pollution level will be within standard limits. GHCL will continue to support development of green belt in the surrounding villages through various agencies including GHCL Foundation (AF). GHCL shall endorses AF tree plantation movement of planting trees in entire Mandvi Taluka and 50,000 trees that mentioned, GHCL shall surely nurture those plants for five years.	commencement of operation of the project. Wherever possible, the control systems shall be interlinked wit h the operational units, so that failure of the control system shall shut down the respective operational unit. • High efficiency ESPs shall be provided in the flue gas path of the CFBC boilers for control of particulate matter. • Finely ground limestone will be added to the boiler combustion zone • together with coal/lignite to arrest the SO2 formed during combustion. • Lime stone dozing system to the furnace to be designed to achieve higher than 90% capture of SO2. Monitoring system(CEMS) of air pollutants SO2, NOx, NH3, PM10 and PM2.5 will be implemented. • So, the expected pollutants will be well within standard norms. • The air quality	Stacks, Dry Fog system, Wind screen etc- 89.28 crore • recurring cost would include operation and maintenance of pollution control devices- 1.50 crore • **Environmental monitoring Programme** capital cost include OCEMS, online weather station etc- 3.4 crore • Recurring cost – 0.95 crore • Greenbelt • Capital Cost- 20 Crore • Recurring Cost- 0.5 crore		

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
					• There is no readily available infrastructure for transportation of fuel i.e. rail or water way. So, we have to transport through road. Traffic study are shown in section 3.2.3 of chapter-3 and impact due to transportation is show in 4.1.4.3 and 4.2.3 of Chapter-4 in EIA report. In future, any alternative option available will explore.			
6	Water pollutants (BOD,COD,Ammonia, Mercury, Sea Weed, Mangroves)	7	Regarding water related question by Koli society Regarding decrease in number of phytoplanktons and disruption of food Regarding temperature and presence of ammonia Regarding presence of mangroves Regarding setup of tunnel for intake of sea water, seismic zone in which company falls, liquification of land Regarding discharge of effluents into sea containing ammonia and high temperature and Regarding quality of effluent in terms of BOD and COD	Effluent will be highly alkaline so it will be mixed with HCL and then it will be disposed off in sea. Design of structure will done according to seismic zone V. In soda ash industry impact of ammonia is very low.	• Industry will provide adequate effluent management and monitoring system for disposal of treated water • Proper seawater intake and treated effluent disposal (ensure maximum dilution) shall be done as per recommendation Marine EIA report. • The water monitoring results of (surface and groundwater and marine) should be carefully evaluated to identify significant changes, if any, adverse change from the baseline accordingly, corrective measures will be taken to ensure the sustenance of water quality. However, there	• Capital cost would	During operation phase	GHCL Limited

S. No.	Issue related to	Nos. Issues	Concern in RH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
					within the limit specified by CPCB for soda ash industry. ● There is no such fish kill cases due to treated effluent in existing plant. There are independent studies available which indicates there is no significant adverse impact on marine environment but there will be positive impact on environment. ● During studies, there is no such mangroves identified in sea			
7	Marine Life	1	Effect on marine life due to proposed project	No adverse impact on fish or marine animals and sea weed observed.	● Industry should be ensured that the effluent released to the sea meets the prescribed GPCB/ CPCB norms at all times. This should be verified through tracer studies after the outfall becomes operational. The effluent release scheme can then be adequately modified to ascertain necessary dilution, if required. The efficiency of the diffuser must be checked periodically and if necessary, it	● A provision of Rs. 1 crore to be earmarked for the biodiversity management plan to be implemented in the project area during construction phase and operation phase. ● For periodic monitoring of the marine area environment during project ● construction phase, a	During construction and Operation phase	GHCL Limited

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
					impact on environment but there will be positive impact on environment. • Design of pipeline/tunnel will be done according to seismic zone V. In case of catastrophic failure/ liquification on land, there are no chances of flooding as water transport through gravity.			
8	Health & Hygiene(Ammonia Leakge)	2	Skin diseases due to Soda Ash Regarding the leakage of ammonia.	GHCL will take care of any such issues related to Health of local peoples and workers. All the necessary measures for handling of chemicals will be implemented to reduce its impact on health of peoples. This information is also provided in the EIA report. All the pockets will have leak detection and repair system technology. Moreover, periodical maintenance will also be carried out. GHCL will ensure that there will be no leakage and therefore, there will not be occupational health issues for workers or villagers working in the plant. Moreover, GHCL	• Ammonia tanks should have latest instrumentation provision for pressure indication, temperature indication and level indication. The provision of instrumentation should be within 100 percent redundancy. Continues recording of major parameters pertaining to the storages shall be maintained in the control room. • Unit will provide all the safety measure for ammonia storage	• Capital cost would include cost of OHS center, PPEs, fire & safety instruments, automation system for ammonia storage – 3.4 crore • Recurring cost would include maintenance charges and training, audit & health check-up etc.- 0.35	During operation phase	GHCL Limited

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
					commissioned before commencement of operation of the project. Wherever possible, the control systems shall be interlinked with the operational units, so that failure of the control system shall shut down the respective operational unit. ● There is no significant impact observed in the			
9	CSR - Farmers	3	Facilities to be provided How hygenic the plant will How hygenic will be bada plant and what facility will be provided to the farmer.	GHCL Foundation is already providing subsidy for drip irrigation and GHCL will also consider to support this scheme further out of the CSR funds proposed for this project. To help agriculture, GHCL will help farmers as part of our CSR activity in consultation with villagers. The details and type of developmental work will be decided in consultation with villagers. GHCL foundation has been working for farmers through its different schemes like ground water recharge, water harvesting	● Industry will Promote environment friendly and nature-based solutions to enhance productivity of farming (Organic Farming) activities. It covers capacity building on farming techniques, provision of high-quality seeds/manure, efficient irrigation solutions, etc. under CSR and CER activities	● GHCL Ltd will spend approx.. 3.00 crore towards Promoting environment friendly and nature-based solutions to enhance productivity of farming (Organic Farming) activities. It covers capacity	5 years	GHCL Limited
10	EIA Report & PH	14	EIA report is not correct	The terrestrial EIA report	● It is requested to note that as			GHCL Limited

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
	advertisement		Regarding the alternative of site modhwa village. Regarding the NIO accreditation to prepare marine EIA report Regarding ToR granted and Study carried out prior of ToR granted. Regarding the advertisement of the PH Regarding NABET accreditation of consultant organization Regarding Marine EIA Regarding NEERI who has prepared EIA report Regarding the correction in EIA report Regarding the monitoring data collection Regarding accreditation certificate of additional studies for ecology.	prepared by CSIR NEERI and Marine EIA report is prepared by NIO, Mumbai	per OM number J-17011/8/92-IA-III dated 8th August, 2019, there are 7 institutes/agencies authorized for preparation of CZMPS in consonance with the provision of CRZ notification, 2019 vide GSR 37(e) dated 18/01/2019. IRS anna university Chennai has prepared the CRZ map for GHCL LTD. CSIR - NIO is Expert hired to carryout the Marine EIA study. ● EIA report has been prepared by CSIR-NEERI, which is reputed governmental body and QCI NABET accredited consultant.			
11	Vipassana	3	Project site is near Vipassana meditation center The meditation center will be disturbed due to industry. Ammonia used in the industry. Related to presence of Vipassana center and other religious places in 15km radius of project site	--	● Environmental Management Plan envisages the plans for the proper implementation of mitigation measures to reduce the adverse impacts. ● The EMP implementation will minimize the impact of atmospheric emissions, liquid effluents, solid wastes and noise generation on the surrounding environment.	● Cost of Environment management plant including various installations for Air	--	GHCL Limited

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
					ash manufacturing industry. • It is reported in CSIR NEERI report that there are no significant impact expected on man-made sensitive installations and habitations. On basis of study of present environment condition near project area and impact prediction and control measures proposed by GHCL Ltd. The proposed project will not have any significant negative impact on environment. Company operations are limited to the plant boundary and no negative impacts on	• Recurring Cost- 0.5 crore		
12	CSR - Animal Husbandry	3	Regarding arrangements for Animal Regarding distribut Regarding number of cattle present in the area	GHCL Foundation will support nearby community by providing education and livelihood support to make them self – reliant.	• Unit will do promotion through providing support for breed improvement, animal health care, fodder improvement and providing veterinary doctor in nearby villages under CER and CSR activities. • Unit will also promote development Initiatives for Fishing Communities such as Creation of infrastructure like ice plants, cold storages as well as provide operational inputs such as fishing boats, nets and engines	• GHCL Ltd will spend approx.. 4.35 crore towards Animal husbandry promotion through providing support for breed improvement, animal health care, Veterinary doctor and others as well as provides	5 years	GHCL Limited

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
13	Site Selection	2	Regarding the alternative of site modhwa village. Regarding showing presence of marshy land near coastline	--	During the site selection, the alternative sites considered for setting-up of the proposed chemical complex project are given below: : Site 1 – Village Pingleswar, Taluka – Abdasa, Dist. Kutch Site 2 – Village Suthri, Taluka – Abdasa, Dist. Kutch Site 3 – Village Bambhdai, Taluka – Mandvi, Dist. Kutch Site 4 – Village Bada, Taluka – Mandvi, Dist. Kutch Site 5 – Village Modhva, Taluka Mandvi, Dist. Kutch The site at village bada is considered favorable based on the environmental and logistic advantages over other four sites. Justification	--	--	GHCL Limited
14	Sand Dunes	2	Concern of presence of sand dunes at bada coast Regarding digging of sand dunes for preparation of tunnels for water intake	--	• There is no disturbance to existing sand dunes. • Tunnelling work (much below ground level) for laying pipeline through sand dunes will be done by adopting proven construction methodology like micro tunnelling. The detailed Studies on sand dune mapping and morphological changes near the project site was carried by National Institute of	--	--	GHCL Limited

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
15	Turtle	3	Regarding presence of turtles on the coastline of bada Regarding information on endangered species not mentioned in EIA report Regarding hatching and presence of sea turtles	--	• Study on Status Survey and Conservation Plan for Sea Turtles along Mandvi Taluka, Bhuj, Gujarat by **Zoological Survey of India, Kolkata (April,2019)** is attached with EIA report. • ZSI study report mention that they did not any encounter any sea turtle and fresh/old nests or crawl marks of turtles on the beach. Since many of the factor for selection of a suitable nesting site are not conducive. • As per additional Ecological and Biodiversity study, suggests that the coast near the proposed project site may not be	• Contribution to Forest department for Sea Turtle Conservation Activities- 0.20 crore	10 years	GHCL Ltd
16	Schedule 1 species	4	Regarding presence of greater numbers of	--	• Details of schedule -1	• the proposed	10 years	GHCL Ltd

S. No.	Issue related to	Nos. Issues	Concern in PH	G HCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
	Sandha and indian Monitor Lizard)		stated in report Presence of reptiles and amphibians not reported Related to study of presence of Indian Monitor Lizard in study area Regarding presence of gugal trees,		already incorporated in EIA report. • GHCL shall make financial allocations for taking up wildlife mitigation measures and for contribution to forest department for carrying out activities towards propagation, protection and conservation of wildlife. • GHCL Ltd have submitted Conservation Plan (Flap shell turtle, Green Sea turtle, Indian monitor lizard, Olive Ridley Sea turtle, Black shoulder kite, Eurasian Spoonbill, Indian Peafowl, Marsh Harrier, Oriental Honey Buzzard, Shikra, Short-toed Snake	allocation for conservation of Schedule 1 species for 10 years is 1.25 crore		
17	Conservation Plan	2	Regarding conservation plan for Schedule 1 species Concern regarding green sea turtles and conservation plan for them	--	• GHCL shall make financial allocations for taking up wildlife • mitigation measures and for contribution to forest department for carrying out activities towards propagation, protection and conservation of wildlife. • The unit have submitted Conservation Plan (Flap shell turtle, Green Sea turtle, Indian monitor lizard, Olive Ridley Sea turtle, Black shoulder kite, Eurasian Spoonbill, Indian Peafowl, Marsh Harrier, Oriental Honey Buzzard, Shikra, Short-toed Snake Eagle,	• the proposed budget allocation for conservation of Schedule 1 species for 10 years is 1.25 crore	10 Years	GHCL Limited

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
					department of			
18	Form 1(Water Bodies, Temples, Schedule 1 Species)	5	Regarding presence of waterbody not shown in form-1 Regarding religious places and lakes not mentioned in PFR Waterbody not mentioned in form-1 Data given in form-1 and EIA are different Waterbody not mentioned in form-1	--	• Environmental settings are given in Chapter-1 and Chapter-5 of EIA report. Approximate distance of water bodies, temples etc are given in EIA report. • Through drainage studies of the area, it was observed that there is one stream of 1st order entering the plant area from north. Although, it has small catchment area, it is proposed that this stream, will be diverted to nearby passing Vengadi River in the	• -Cost of drainage network of surface runoff, rainwater collection pond and rain water harvesting system – 53 crores (included in EMP)	--	GHCL LTD
19	Govt. Land	3	Regarding type of land to be procured by the industry Regarding status of government land to be procured Providing data for proving gauchar land	--	• There is no gauchar land within proposed project site. M/s GHCL has applied to Industries Commissioner and District Collector for allotment of aforesaid land. Industries Commissioner has granted In Principle approval for Bonafied Industrial Purpose District	--	--	GHCL LTD
20	Fishing	8	Regarding details of Pagadia fisherman not mentioned and Marine EIA is misinterpreted	--	• Proper seawater intake and treated effluent disposal (ensure maximum	• A provision of Rs. 1 crore to be earmarked for the	During construction and	GHCL LTD

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
			Regarding disturbance to fishes due to presence of pipeline Regarding status of fishing near bada and Mandvi Related to number of fisherman not incorporated in study -- Related to presence of dead fishes not reported in study, fishing carried out for commercial purpose Regarding presence of fisherman in study area		Marine EIA report prepared by NIO • Industry should be ensured that the effluent released to the sea meets the prescribed GPCB/ CPCB norms at all times. This should be verified through tracer studies after the outfall becomes operational. • Details of Fishery and fishermen including their family and population are given in Chapter-3 of marine EIA report. • Other than construction phase, there will be no any impact on pagadiya fisher men. As shore line will remain undisturbed. • It is mentioned in marine EIA report that no large-scale commercial fishing operation prevail in the study area except for minor shore based and Gill net operations. • There are independent studies available which indicates there is no significant adverse impact on environment but there will be positive impact on environment.	implemented in the project area during construction phase and operation phase. • For periodic monitoring of the marine area environment during project • construction phase, a provision of Rs. 0.5 crore to earmarked. • For operation phase, Rs. 0.3 crore per year to be kept provision for • the monitoring. • GHCL Ltd will spend approx.. 0.75 crore towards Development Initiatives for Fishing Communities	Operation phase	
21	Water Body (check dams)	2	Related to presence of seasonal river which passes near bada village and presence of dam over it	--	• Through drainage studies of the area, it was observed that there is one stream of 1st order	• Cost of drainage network of surface	During construction and	GHCL LTD

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
			Related to distance of river from project site		entering the plant area from north. Although, it has small catchment area, it is proposed that this stream, may be diverted to nearby passing Vengadi River in the west, which has two check dams, one for salinity ingress check and on upstream side for storing fresh water. This will not cause any adverse impact on the downstream. For channelizing the monsoon run off from the area adjacent to plant it is required to construct peripheral drain along plant boundary so that flooding is avoided and run off find its way to the natural slope towards Arabian Sea. So, the present hydrological setting of the area will remain unaffected. So, the present hydrological setting of the area will remain unaffected. • The additional water enter into the vengadi river through drainage will not impact on check dam. As	pond and rain water harvesting system – 53 crores (included in EMP)	Operation phase	
22	Traffic (RMH, Heavy Trucks, Road Usage)	4	Regarding number of trucks passing due to project for raw Related to traffic study not mentioned in ToR, impact not carried out Concern regarding public roads Regarding number of trucks passing	--	• Traffic study are shown in section 3.2.3 of chapter-3 and impact due to transportation is show in 4.1.4.3 and 4.2.3 of Chapter-4 in EIA report. • We will use existing road network as no other transportation i.e. rail/water ways are	--		GHCL Limited

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
					Traffic study (Level of Service) and added on Form Part-C.			
23	CSR General	1	Regarding past data of CSR	GHCL has proposed CSR budget in the EIA report which will be utilized based on need identification and village development meetings. CSR will be implemented with CSR implementing agencies including GHCL Foundation is working in following area. 1. Agro-livelihood and animal husbandry, 2. Education and skill development, 3. Health, water, and sanitation.	• GHCL's commitment towards the development of weaker sections of society has been a continuous initiative for more than two decades. Through its "GHCL Foundation Trust", GHCL has upgraded its CSR activities to cover a larger section of the society to provide support to the downtrodden, needy and marginalized citizens and also to create a social infrastructure for their sustenance. GHCL Foundation serves as the Corporate Social Responsibility arm of GHCL Limited and represents our commitment to the holistic development of our surrounding c ommunity. During year 2020-2021	--	--	GHCL LTD

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
					Infrastructure d evelopment etc.			
			Regarding pollution to be caused by industry -- Regarding to dusting due to kiln and power plant,		• Environmental Management Plan envisages the plans for the proper implementation of mitigation measures to reduce the adverse	• Cost of Environment management plant including various installations for		GHCL Limited

24	Pollution and Environment General	4	Related to disposal of effluent water	Unit will follow all the rules and regulation with their subsequent amendments as directed by concerned authorities	impacts. • The EMP implementation will minimize the impact of atmospheric emissions, liquid effluents, solid wastes and noise generation on the surrounding environment	Air Pollution, Water Pollution, Noise Control, Greenbelt Development, Occupational Health and Safety and other related activities.- 205.07 crore	--	
25	Forest area	2	Related to distance of project site from forest area Details regarding families dependent on forest	There is no classified forest area.	• There is no forest land within the boundary of proposed project site. However, some part of the unclassed forest area located south of the project site outside boundary. Sea water intake and outfall pipeline will pass through underground micro tunnel in specific corridor to cross forest area. The permission from the Forest Department is	--	--	GHCL LTD

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
					of 0.9689 Ha. of un-class forest			
26	Supporting for Industrial Development to GHCL LTD	--	For Employment For Infrastructure development in nearby village Social upliftment towards nearby villages Health facilities Women empower ment Skill	GHCL LTD team thanked for welcoming the industries	--	--	--	--
	Total	94						

22. **Deliberations by the EAC:**

After detailed deliberations, EAC desired the following additional information:

1) **Action plan for disposal of gypsum and fly ash generated from desulphursation plant.**
2) Action plan for management and disposal of $CaCl_2$ and $CaSO_4$.
3) Details of existing natural drains within the proposed project site as well as proposal for diversion if any. Details of measures to be taken to maintain the flow.
4) Status of land acquisition including government and pvt. land as well as permission for landuse change for industrial purpose.
5) It was observed that baseline study was conducted during December 2019 – February 2020, which is more than 3 years old. As per OM, PP shall conduct fresh 3 months study.
6) It was noted that EIA -EMP report is prepared by NEERI, which is not QCI /NABET accredited consultant for soda ash. PP informed that now T R Associate has been hired for the proposed project who is a QCI /NABET accredited consultant for soda ash. The Committee suggested that new consultant shall undertake site visit and verify/check the entire data as well as EIA -EMP report. They should give undertaking that they are satisfied with data and own the data provided in the EIA-EMP report. PP shall also submit authorization letter for new Consultant.
7) Revised water balance to be submitted. STP's treatment process shall include secondary treatment.
8) PP informed that widening of approach road to project site is being carried out. PP shall submit road wideining action plan. Traffic study to be conducted.
9) Air quality modeling for line source shall also be incorporate and cumulative impact of line and point source shall provided.
10) As per point source air quality modeling, incremental levels of SO2 and NOx have been estimated to be 10.98 $\mu g/m^3$ and 11.37 $\mu g/m^3$, which are in higher side. PP shall reduce the incremental values after taking suitable pollution control measures.
11) Villages are located 500-600 m away from the project site. PP shall elaborate various measures to be taken for the surrounding villages.
12) Details representations received by SPCB/MoEF&CC agains the project, if any. Action plan to address the issues raised in writted/represntations received by SPCB /MoEF&CC.
13) Details of issues raised by local fishermen if any. Action plan to address the said issues.
14) Copy of stage I forest Clearance and SCZMA recommendations.
15) Commitment for Disaster Management Plan in case of Tsunami, earthquake and cyclone to be prepared and submitted to the respective authority.

Accordingly, proposal was deferred for want of above additional information. Above all additional information shall be submitted online to the PARIVESH portal for further consideration by EAC.

Annexure-III

List of the Expert Appraisal Committee (Industry-3) members participated during Video Conferencing (VC) meeting

S. No.	Name of Member	Designation
1.	**Prof. (Dr.) A.B. Pandit**	Chairman
2.	**Dr. Suresh Panwar**	Member
3.	**Prof. (Dr.) Vijayanand S. Moholkar**	Member
4.	**Dr. (ER.) Dibakar Swain**	Member
5.	**Shri Dinabandhu Gouda**	Member
6.	**Dr. Kishore Malviya**	Member
7.	**Dr. P. Jagannadha Rao**	Member
8.	**Prof. (Dr.) Suneet Dwivedi**	Member
9.	**Dr. D. S. Pai**	Member
10.	**Shri Dinesh Runiwal,**	Member
11.	**A N Singh**	Member Secretary
MOEFCC		
1.	**Dr. Kanchan Puri**	Scientist-B
2.	**Dr. S. Pradeepkumar**	Scientist-B

***

MOM approved by



(Prof. Aniruddha B. Pandit)
Chairman

***

-TRUE COPY-

ANNEXURE R/28

GHCL Limited

To,
M/s. T. R. Associates,
A-401, S G Business Hub,
Near Gota Overbridge,
Sarkhej - Gandhinagar Highway,
Gota, Ahmedabad, Gujarat 380060

Date: 10.01.2024

Subject: Authorization for checking and validating EIA/EMP Report as instructed in the ADS by honourable EAC committee of MoEF&CC during appraisal for further Environmental Clearance

I, **N N Radia – Chief Operating Officer (COO) of** "Greenfield Chemical Complex" of GHCL Ltd., to be located at Village: Bada, Taluka: Mandvi, District: Kutch, Gujarat do hereby **authorize M/s. T. R. Associates**, NABET Accredited consultant for Soda Ash Industry, to undertake the checking and verification of the Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP) reports for our proposed Soda Ash plant.

They are also authorized to make the necessary application on behalf of us for obtaining Environmental Clearance.

It is important to note that we had previously authorized NEERI to prepare the EIA/EMP report for our proposed project. However, considering the specific accreditation requirements for soda ash projects and as advised by EAC committee of MoEF&CC, we have chosen to engage M/s. T. R. Associates, who are QCI/NABET accredited consultants for Soda Ash to conduct the necessary checks and verifications.

EIA - EMP report is prepared by NEERI, which is not QCI /NABET accredited consultant for Soda Ash. M/s. GHCL Limited is authorizing T. R. Associates for the proposed project who is a QCI /NABET accredited consultant for Soda Ash and Thermal Power Plant. As per the Committee's suggestion, T. R. Associates shall undertake site visit and verify/check the entire data as well as EIA - EMP report prepared by NEERI. T. R. Associates should give undertaking that they are satisfied with data and own the data provided in the EIA-EMP report.

We trust that M/s. T. R. Associates will undertake these responsibilities diligently and in accordance with the relevant guidelines and standards. They are also authorized to correspond with the concerned authorities on behalf of us regarding the environmental clearance process.

We appreciate your cooperation and look forward to a successful and environmentally compliant execution of our proposed Soda Ash plant.
Thank you for your attention to this matter.

N N Radia
Chief Operating Officer (COO),
GHCL Ltd.

GHCL LIMITED

GHCL House, Swastik Society, Opp. Punjabi Hall, Navrangpura, Ahmedabad, Gujarat-380009, India Ph. : +91-079-26434100
CIN : L24100GJ1983PLC006513, E-mail : ghclinfo@ghcl.co.in, Website : www.ghcl.co.in

Head Office : GHCL House, B - 38, Institutional Area, Sector - 1, Noida, Uttar Pradesh - 201301, India. Ph. : +91-120-2535335, 3358000, Fax : +91-120-2535209

ADDENDANUM of EIA REPORT

FOR

"Greenfield Chemical Complex" of GHCL Ltd. (Light Soda Ash Plant of Capacity 3000 TPD, Dense Soda Ash 1500 TPD, Sodium Bicarbonate 600 TPD with Solid Fuel based Captive Co-generation Power Plant (120 MW capacity), Seawater Intake and Effluent Disposal System) Village Bada, Taluka Mandvi, District Kutch, Gujarat"

GHCL Limited,
GHCL House, Opp. Punjabi Samaj Seva Hall,
Navrangpura, Ahmedabad.

CATEGORY: 4 (e) and 1(d), 'A'

Baseline Monitoring Period [December 2022 to February 2023]
Baseline Study Carried By: T. R. Associates Laboratory
(NABL Certificate Number: TC-7896)

PREPARED BY:

T. R. ASSOCIATES
[NABET ACCREDITED EIA CONSULTANT]
A-401, S. G. Business Hub,
B/w sola Bhagwat & Gota Over Bridge,
Near Umiya Campus, S. G. Highway, Ahmedabad – 380060
E-MAIL: adm.trassociates@gmail.com
CONTACT NO.: 09825371099

NABET Accreditation No.: NABET/EIA/2326/RA 0293 valid up to April 8, 2026.

JANUARY, 2024

trassociates.in
A-401, S.G.Business Hub, Between Sola Bhagwat & Gota Over Bridge, Near Umiya Campus, S.G. Highway, Ahmedabad - 380060. Gujarat. | P : +91 98253 71099, +91 97241 49800 | E : adm.trassociates@gmail.com
OUR SERVICES : ENVIRONMENTAL CONSULTANT | ENVIRONMENTAL LABORATORY
EXPLOSIVE CONSULTANT | PROJECT CONSULTANT | CHARTERED ENGINEER
T. R. ASSOCIATES

UNDERTAKING

I, Mr. T. R. Patel, Proprietor of T. R. Associates, a QCI/NABET accredited consultant for Soda Ash Industry and Thermal Power Plant, here confirm that we have checked/verified the Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP) report for the "Greenfield Chemical Complex" of GHCL Ltd., at Bada, Kutch.

We have verified the EIA/EMP report, and prepared an addendum report describing our findings and observations. This report conveys our satisfaction with the data presented in the EIA/EMP report.

Furthermore, it is important to note that a fresh baseline study has been conducted by T. R. Associates Laboratory, a NABL accredited laboratory. This study was conducted during the winter season from December 2022 to February 2023. The results of this baseline study have been incorporated into the EIA Addendum report.

Date: 30.01.2024

Place: Ahmedabad

T. R. ASSOCIATES AHMEDABAD

Mr. T. R. Patel,

Proprietor,

T. R. Associates

PART A: DECLARATION BY ACO AND EXPERTS CONTRIBUTING TO THE ADDENDUM OF EIA REPORT

Declaration by experts contributing to the EIA study for proposed soda ash manufacturing plant at Village Bada, Taluka – Mandvi, District Kutch, Gujarat by **M/s. GHCL Limited.**

I, hereby certify that I was a part of the EIA team in the following capacity that developed the EIA report.

EIA sector number as per NABET	14 & 4	**Name of the sector**	Soda Ash Industry & Thermal power plants

EIA CO-ORDINATOR

Name:	**Mr. T. R. Patel**
Signature:	
Date:	30th January, 2024.
Period of Involvement:	**November, 2022 – January, 2024**
Contact information:	**M/s. T. R. Associates** A-401, S. G. Business Hub, B/w. Sola Bhagwat & Gota Over Bridge, Near Umiya Campus, S. G. Highway, Ahmedabad – 380060. Contact No.: 98253 71099 adm.trassociates@gmail.com

FUNCTIONAL AREA EXPERTS

Sr. No.	Function Area	Name of the FAEs	Involvement & Task	Signature
1	AP Air Pollution Monitoring, Prevention & Control	Mr. T. R. Patel	**Period of Involvement:** November, 2022 – January, 2024 **Tasks:** • Baseline monitoring visit; • Identification of impacts of the proposed project based on industrial activities and proposing mitigation measures; • Finalisation of EIA Addendum report.	30/1/24.
		Mrs. Hiral Shah	**Period of Involvement:** November, 2022 – January, 2024 **Tasks:** • Data Collection and identification of pollutants; • Baseline monitoring visit and noted filed observation; • Verification of ambient air quality results. • Preparation of EIA Addendum report.	Hiral Shah 30/1/24
2	AQ Meteorology, Air Quality Modeling & Prediction	Mr. T. R. Patel	**Period of Involvement:** November, 2022 – January, 2024 **Tasks:** • Verification of primary data received, for air quality modelling; • Finalization of EIA Addendum report; • Identification of impacts of the proposed project and suggesting mitigation measures.	30/1/24.
		Mrs. Hiral Shah	**Period of Involvement:** November, 2022 – January, 2024 **Tasks:** • Identify fuel characteristics, calculate proposed pollution load generation due to combustion of fuel; • Collection of primary and secondary meteorological data; • Air Quality Modeling for Point source and Line source; • Preparation of EIA Addendum report.	Hiral Shah 30/1/24

Sr. No.	Function Area	Name of the FAEs	Involvement & Task	Signature
			Period of Involvement:	
3	**WP** Water Pollution Monitoring, Prevention & Control	Mr. Malav Dalwadi	November, 2022 – January, 2024 **Tasks:** • Site visit; • Verification of analysis results; • Contributiuon in preparation of EIA Addendum; • Identification of impacts of the proposed project and suggestion for its mitigation measures.	30/1/24
		Mr. Darshit Dave	**Period of Involvement:** November, 2022 – January, 2024 **Tasks:** • Baseline monitoring visit and collected water samples & noted field observation and co-relate with baseline monitoriong results; • Perform ground truth verification of relevant ground water & surface water. • Onsite preservation of samples; • Onsite parameter measurement.	30/1/24
4	**SHW** Solid & Hazardous Waste Management	Mr. T. R. Patel	**Period of Involvement:** November, 2022 – January, 2024 **Tasks:** • Finalization of categorization of sources of non-hazardous & hazardous/solid waste from proposed project; • Finalization of quantification of hazardous waste generated from industrial activities; • Identification of impacts of the proposed project & suggestions for mitigation measures related to solid & hazardous waste management. • Finalization of action plan for fly ash & gypsum generation from desulphurisation plant.	30/1/24.

T. R. ASSOCIATES

Sr. No.	Function Area	Name of the FAEs	Involvement & Task	Signature
			Period of Involvement:	
	SHW (SW & HW)	Mrs. Hiral Shah	November, 2022 – January, 2024 **Tasks:** • Review of categorization of sources of non-hazardous & hazardous/solid waste from proposed project; • Verification of quantification of hazardous waste generated from industrial activities; • Preparetion of action plan for fly ash & gypsum generation from desulphurisation plant.	Hiral Shah 30-1-24.
5	**RH** Risk Assessment & Hazards Management	Mr. T. R. Patel	**Period of Involvement:** November, 2022 – January, 2024 **Tasks:** • Site visit; • Finalization of disaster management plan; • Verification of impacts of the proposed project and suggesting mtitgation measures; • Finalisation of RH report.	30/1/24.
		Mr. Darshit Dave	**Period of Involvement:** November, 2022 – January, 2024 **Tasks:** • Site visit with EIA coordinator, FAEs and relevant team members; • Analysis and Identification of impact of the proposed project from the manufacturing process and storage hazards. • Verification & review of RH report.	30/1/24
6	**SE** Socio-Economics	Mrs. Snehaben Patel	**Period of Involvement:** November, 2022 – January, 2024 **Tasks:** • Collection of secondary data; • Evaluation of socio economic status from primary data; • Assessment of the possible changes to socio-economic issues arising out of the project; • Identification of impacts of the proposed project on surrounding environment and suggesting mitigating measures; • Preparation of SE report.	Patel 30/1/24

T. R. ASSOCIATES

Sr. No.	Function Area	Name of the FAEs	Involvement & Task	Signature
7	**SC** Soil Conservation	Dr. B. T. Patel	**Period of Involvement:** November, 2022 – January, 2024 **Tasks:** • Site and field visit for baseline monitoring; • Collection of soil samples; • Compilation of data; • Review & finalization of results for soil analysis; • Interpretation of results of soil analysis; • Identification of impacts of the proposed project on soil environment and suggestion of its mitigation measures.	30-01-2024
8	**N** Noise	Mr. Rajendra Gohil*	**Period of Involvement:** November, 2022 – January, 2024 **Tasks:** • Site and field visit for baseline monitoring; • Review & finalization of noise monitoring results; • Identification of impacts of the proposed project on surrounfing environment & suggestions for mitigation measures.	Rajendra Gohil 30/1/24
9	**HG** (Hydrology, Ground Water & Water Conservation) **&** **GEO** (Geology)	Mr. I. M. Patel	**Period of Involvement:** November, 2022 – January, 2024 **Tasks:** • Collection of secondary data; • Site visit; • Primary data collection; • Verification of secondary data during site visit; • ground water quality results; • Identification of impacts & mitigation measures; • Preparation of FAE report.	30/1/24.

Sr. No.	Function Area	Name of the FAEs	Involvement & Task	Signature
10	LU Land Use	Mr. Vishwas Patel	**Period of Involvement:** November, 2022 – January, 2024 **Tasks:** • Site visit; • Preparation and Finalization of landuse map of study area; • Preparation & finalization of landuse report.	30/1/24
11	EB Ecology and Biodiversity	Dr. Pankaj Joshi*	**Period of Involvement:** November, 2022 – January, 2024 **Tasks:** • Site visit; • Varification of primary data; • Identification and assessment of impacts of proposed activities of project on biological environment; • Preparation and finalization of EB report.	30/1/24

Note: * Empaneled Expert

Name of the EIA consultant organization: T. R. ASSOCIATES

NABET Certificate No.: NABET/EIA/2326/RA 0293 valid up to April 8, 2026.

CHAPTER - 1
INTRODUCTION

PURPOSE OF EIA ADDENDUM

The proposed project "Greenfield Chemical Complex" was envisaged and conceptualized during Vibrant Gujarat Summit 2017, Government of Gujarat. During MOU M/s. GHCL Ltd. has committed to set up Greenfield Soda Ash facility in District Kutch, Gujarat. At the time of planning of execution of project, there was no NABET accredited Consultant for soda ash sector available. M/s. GHCL limited had appointed institutes of National repute like CSIR NEERI Nagpur based on their past experience of EIA for similar nature of Greenfield Soda Ash project at Gujarat coast. M/s. GHCL Limited had informed to MoEF&CC regarding the appointment of EIA consultants (CSIR NEERI) Vide Letter no. GHCL/AHD/ENV/MOEF/VND/17-18/07 dated 23-11-2017. Earlier all the EIA study of Soda ash industry was carried out by only Chlor Alkali Approved consultant and Environmental Clearance was granted by MoEF&CC. After that CSIR-NEERI and M/s. GHCL Limited had started site alternatives for the proposed Greenfield chemical complex, they had examined 5 site alternatives for the proposed Greenfield chemical complex and this activity had taken significant time to finalize the proposed site and after that we had started collection of Baseline monitoring data. M/s. GHCL Limited intended to commission plant activities at earliest but due to COVID 19 the project activities got seriously impacted and delay had been affected. M/s. GHCL Limited had made an online proposal during July 2021 to MOEFCC for obtaining TOR proposal for the aforesaid project, in Covering letter of the proposal mentioned status about appointment of CSIR NEERI. At the time of submission of TOR proposal, the baseline data was near completion. Hon'ble MOEFCC had raised EDS for TOR proposal. During reply of EDS we had again indicated the name of hired EIA consultant (CSIR NEERI). After that TOR was granted for the project on 10-08- 2021 after reply of EDS vide letter No. IA-J-11011/293/2021-IA-II(I).

During the 72nd EAC meeting held on 02nd January, 2024 EAC committee considering the specific accreditation requirements for soda ash projects directed to engage the QCI/NABET accredited consultant for Soda Ash Industry that shall undertake site visit, conduct fresh 3-month Baseline Monitoring and verify/check the entire data as well as EIA - EMP report prepared by NEERI.

Therefore, M/s. GHCL Limited have chosen to engage T. R. Associates, who are QCI/NABET accredited consultants for Soda Ash Industry, to conduct the necessary checks and verifications.

SECTION 1.2: IDENTIFICATIOBN OF PROJECT AND PROJECT PROPONENETS

Details of Directors and their background

Sr. No.	Name of The Directors	Address	Designation
1	Shri Anurag Dalmia	9, Tees January Marg, New Delhi Pin -110011	Non- executive Chairman
2	Dr. Manoj Vaish	B-305, Paradise, Raheja Vihar, Powai, Mumbai – 400072	Independent Director

3	Smt. Vijaylaxmi Joshi	564, Shriniketan CGHS Plot No. 1, Sector-7, Dwarka, New Delhi – 110075	Independent Director
4	Justice (Retd.) Ravindra Singh	A – 216, Sector – 31, Noida – 201301 (U.P.)	Independent Director
5.	Shri Arun Kumar Jain	House No. B – 802, Prateek Stylhome, Sector-45, Noida – 201303 (U.P.)	Independent Director
6.	Dr. Lavanya Rastogi	74 Elandor Blossom, DR Tomball TX 77375, US	Independent Director
7.	Shri R. S. Jalan	330, Mandakani Enclave, Alakhnanda New Delhi 110019	Managing Director
8.	Shri Raman Chopra	C - 143, Sector – 44, Noida – 201301, U.P.	CFO & Executive Director (Finance)
9.	Shri Neelabh Dalmia	9, Tees January Marg, New Delhi Pin -110011	Executive Director (Growth & Diversification Projects)

Details of EIA Consultant including NABET accreditation:

The EIA consultant for the proposed project is T.R. Associates, which is approved NABET accredited consultant in Soda ash Industry, Category 4(e) with NABET Accreditation No NABET/EIA/2326/RA 0293 valid up to April 8, 2026. There are a group of experts from different organizations including CSIR-NIO involved in this project. The demarcation of coastal zone related to CRZ study was carried out by the Institute of Remote Sensing (IRS), Anna University, Chennai. The details about the T.R. Associates and NABET Accreditation are given in Chapter 12.

SECTION 1.4: SCOPE OF THE STUDY- DETAILS OF REGULATORY SCOPING CARRIED OUT (TERMS OF REFERNCE)

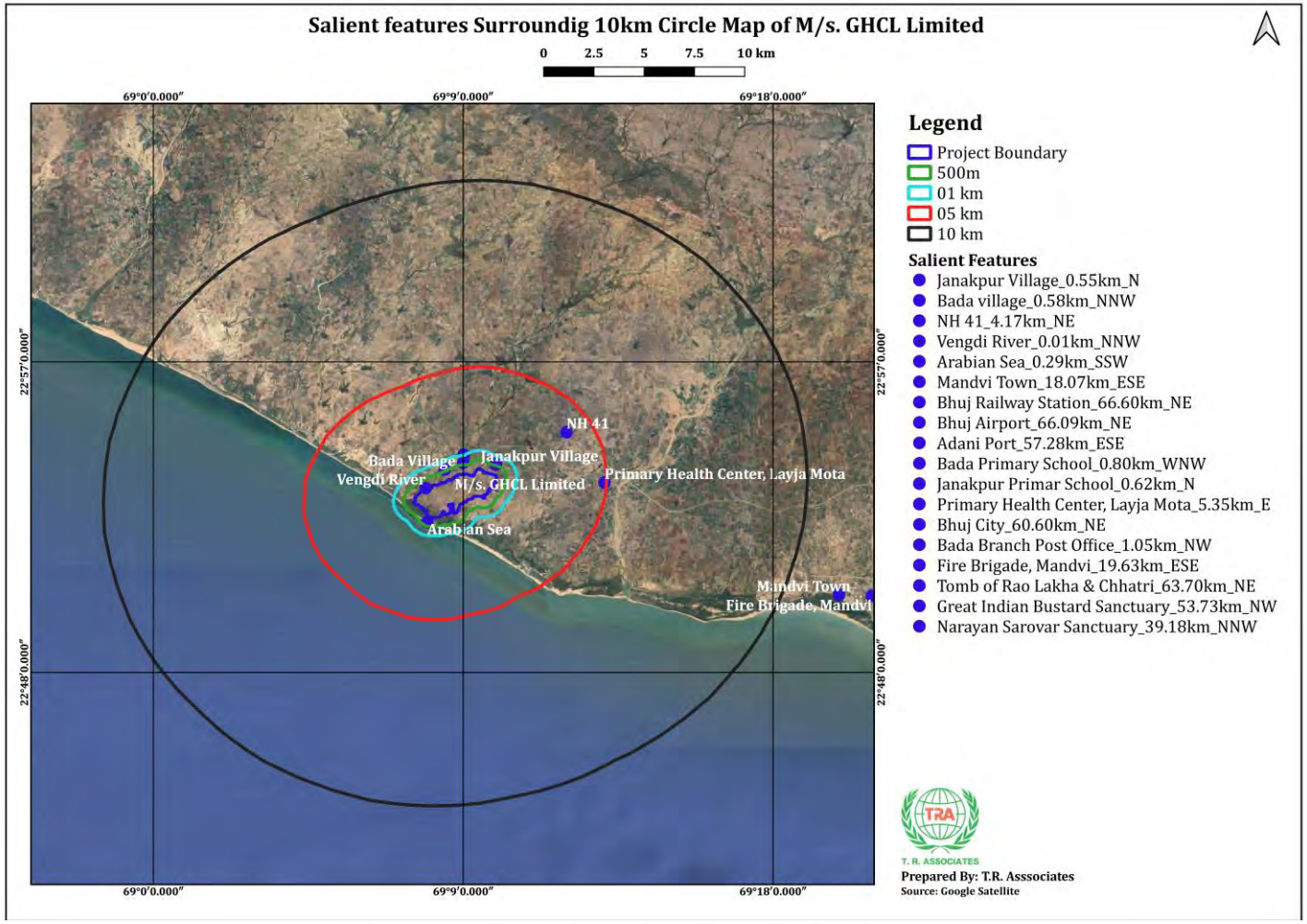


Table 1.1 Environmental Settings in the 10 km Study Area of the Proposed Project

Sr. No.	Important Features	Description
1.	Location	Village: Bada, Taluka: Mandvi, District: Kutch, Gujarat
2.	GPS Co-ordinates	22°53'12.29"N, 69° 8'47.63"E
3.	Temperature Range	19.6 - 33.6
4.	Mean Sea Level	34
5.	Annual Rain Fall	378.2
6.	Nearest Village	Janakpur Village at 0.55 km in North direction Bada village at 0.58 km in NNW direction
7.	Nearest Highway	NH 41 at 4.17 km in NE direction
8.	Nearest River/Water body	Vengdi River at 0.01 km in NNW direction Arabian Sea at 0.29 km in SSW direction
9.	Nearest Town	Mandvi at 18.07 km in ESE direction
10.	Nearest Railway Station	Bhuj Railway Station at 66.60km in NE direction
11.	Nearest Airport	Bhuj Airport at 66.09 km in NE direction
12.	Nearest Port	Adani Port at 57.28km in ESE direction
13.	Areas occupied by sensitive man-made land uses (hospitals, schools etc.)	Bada Primary School at 0.80 km in WNW direction Janakpur Primar School at 0.62 km in North direction
		Primary Health Center, Layja Mota at 5.35 km in East direction
14.	Nearest city	Bhuj city at 60.60 km in NE direction
15.	Nearest Post office	Bada Branch Post Office at 1.05 km in NW direction
16.	Nearest Fire station	Fire Brigade, Mandvi at 19.63 km in ESE direction
17.	Seismic Zone	V
Details of Environmental Sensitivity within 10 km study area		
18.	Nearest heritage place	Tomb of Rao Lakha & Chhatri at 63.70 km in NE direction
19.	Nearest Reserved Forest	Not within 10 km of Project Site
Details of Ecological Sensitive area within 10 km study area		
20.	National Parks / Sanctuary	Great Indian Bustard Sanctuary at 53.73 km in NW direction Narayan Sarovar Sanctuary at 39.18 km in NNW direction
21.	Eco-sensitive Area (ESAs)	Not within 10 km of Project Site
22.	Eco-sensitive Zone (ESZs)	Not within 10 km of Project Site

Regulatory Frame Work

The proposed project is of Soda Ash manufacturing unit; so, the regulatory framework related with the hazardous or toxic chemicals as well as regulatory provision of risk, emergency & safety management are applicable to the proposed project. The regulatory provision related to the hazardous chemical handling, manufacturing, storage & transportation are also applicable to the project. The project will have potential of pollution and also attracts the provisions of EIA notifications 2006 - SO 1533 (as amended). So, the proposed Greenfield Chemical Complex of M/s. GHCL Limited may be required to comply with many regulatory provisions.

The project proponent shall follow the regulatory frame work as listed below and additional applicable provision shall also be referred timely as cited as mandatory provision for proposed unit. In any case, proponent shall comply with the regulatory provision as directed through particular regulatory provision. The major regulatory provisions applicable to the proposed project are shown here:

Table: Regulatory Frame Work

SR. NO.	LEGAL INSTRUMENT (TYPE, REF., YEAR)	CONCERN AUTHORITY OR BODIES	APPLICABILITY
1	Air (Prevention and Control of Pollution) Act, 1981 and its subsequent amendments	CPCB and SPCB	Air emissions from the stacks attached to the Boiler, DG set, Lime Kiln, Ammonia Recovery system, Lime Grinding system/Slaker, Calciner Unit, Densification unit, Sodium Bi-Carbonate Unit of the Soda Ash Plant and Captive Power Plant. The project proponent will obtain CC& A after obtaining EC from concern authority.
2	Water (Prevention and Control of Pollution) Act, 1974 and its subsequent amendments	CPCB and SPCB	Wastewater generation from industrial activities and from domestic activities. The project proponent will obtain CC& A after obtaining EC from concern authority.
3	The Environment (Protection) Act, 1986 & Environmental (Protection) Rules, 1986 and their subsequent amendments	Ministry of Environment and Forests, & Climate Change (MoEF&CC), CPCB and SPCB.	Production of Soda Ash. The project proponent will obtain CC& A after obtaining EC from concern authority.
4	Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016	MoEF&CC, CPCB, SPCB, DGFT, Port Authority and Customs Authority	Generation of Solid & Hazardous Wastes from industrial activities. The industry will obtain membership for disposal or incineration of wastes.
5	Manufacture Storage and Import of Hazardous Chemicals Rules, 1989 amended 2000	MoEF&CC, Chief Controller of Imports and Exports, CPCB, SPCB, Chief Inspector of Factories, Chief Inspector of Dock Safety, Chief Inspector of Mines, AERB, Chief Controller of Explosives, District	Unit will take safety precautions for storage of hazardous chemicals identified under MSIHC Rules 1989. And the safety aspects are considered during Plant layout. It can be seen in Plant layout provided in Chapter 2.

SR. NO.	LEGAL INSTRUMENT (TYPE, REF., YEAR)	CONCERN AUTHORITY OR BODIES	APPLICABILITY
		Collector or District Emergency Authority, CEES under DRDO	
6	Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996	Ministry of Environment & Forests & Climate Change, Chief Controller of Imports and Exports, CPCB, SPCB/UTPCC, Chief Inspector of Factories, Chief Inspector of Dock Safety, Chief Inspector of Mines, AERB, Chief Controller of Explosives, District Collector or District Emergency Authority, CEES under DRDO.	Storage of hazardous chemicals within the project premises. Onsite-offsite emergency plan will be prepared.
7	EIA Notification, 2006 and its subsequent amendments	MoEF&CC, SPCB	Production of Soda Ash.
8	Public Liability Insurance Act, 1991 amended 1992 & Public Liability Insurance Rules, 1991 and its subsequent amendments	MoEF&CC, District Collector	The Manufacturing of Soda Ash will require approx. 1200 no. of employees.
9	The Factories Act, 1948	Ministry of Labor, DGFASLI and Directorate of Industrial Safety and Health/Factories Inspectorate	Industrial unit will apply to DISH (Director industrial Safety and Health), Gujarat after getting Environmental Clearance.
10	The Explosive Act ,1884	Ministry of Commerce and Industry (Department of Explosives)	Industrial unit will obtain the required licenses after getting Environmental Clearance for PESO department.
11	Noise Pollution (Regulation and Control) Rules, 2000 and its amendments	CPCB and SPCB	Noise may be generated due to industrial activities.
12	Fly Ash Notification, 1999 and its subsequent amendments	CPCB and SPCB	The Fly ash generated from the manufacturing of Soda Ash will be collected, storage, transported and sold to the nearby Cement/Brick Manufacturing Industry.
13	Bio-medical Waste Management Rules, 2016	CPCB and SPCB	The biomedical waste generated in the premises will be managed and disposed of as per Biomedical waste management rules and its subsequent amendments.
14	Battery Waste Management Rule, 2022	CPCB and SPCB	The Lead acid Batteries generated due to industrial activities will be Collected, stored and sold to authorized agency through auction.
16	E-Waste (Management) Rules, 2022	CPCB and SPCB	The E-waste generated due to industrial activities will be Collected, stored and

SR. NO.	LEGAL INSTRUMENT (TYPE, REF., YEAR)	CONCERN AUTHORITY OR BODIES	APPLICABILITY
			sold to authorized agency through auction.
17	Plastics Waste Management Rules, 2016 and their subsequent amendments	CPCB and SPCB	Collection, Storage and Disposal to CPCB/SPCB authorized recyclers under EPR of Plastic Waste Management
18	Construction and Demolition Waste Management Rules 2016	CPCB and SPCB	Collection, storage and utilize internally for area filling, road making etc.

T. R. Associates – NABET Accredited Consultant was appointed by Greenfield Chemical Complex of M/s. GHCL Limited to prepare the Addendum of Environmental Impact Assessment report for their proposed project.

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CHAPTER – 2
PROJECT DESCRIPTION

SECTION 2.3: PROJECT LOCATION

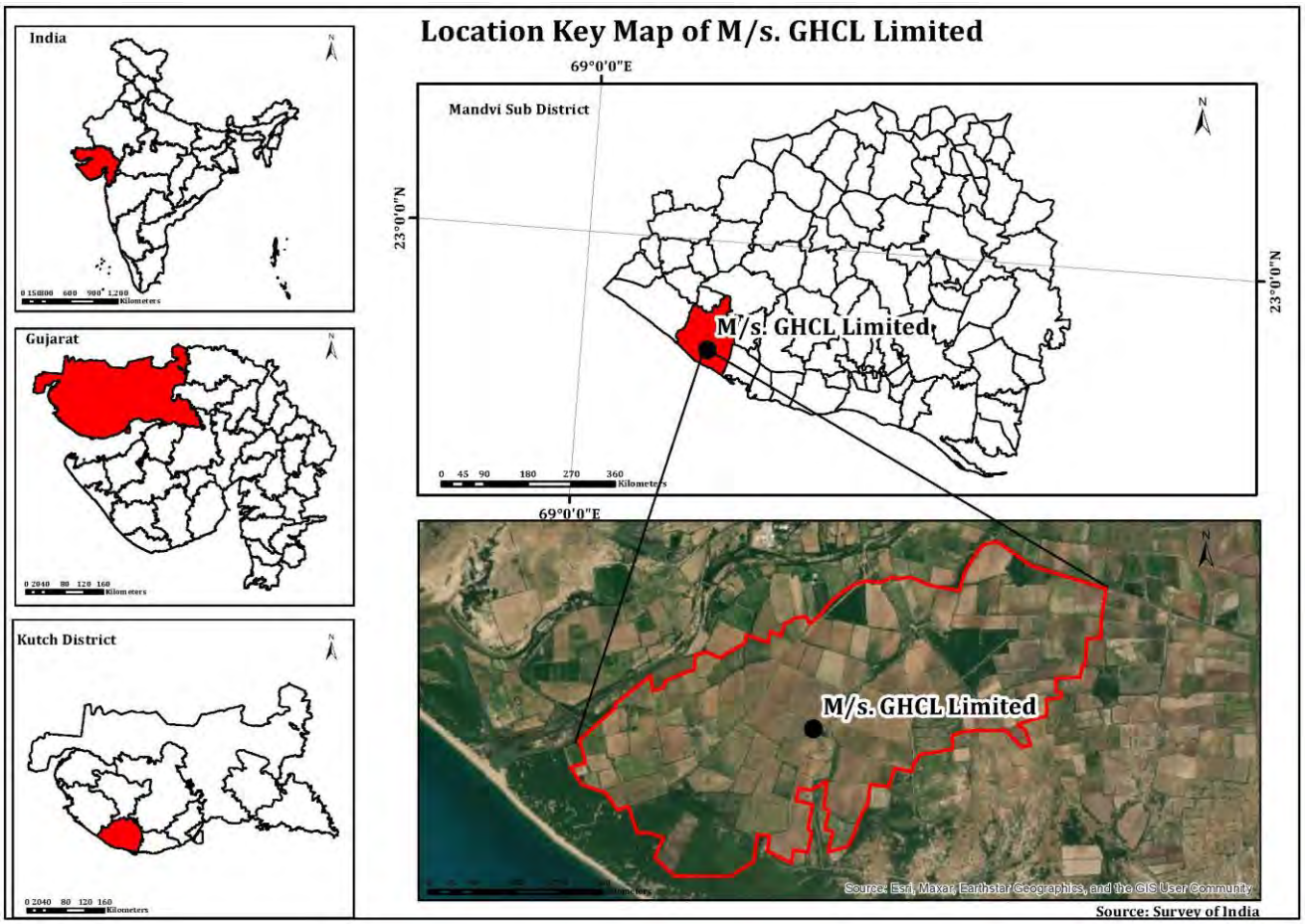


Figure 2.1 Project Location

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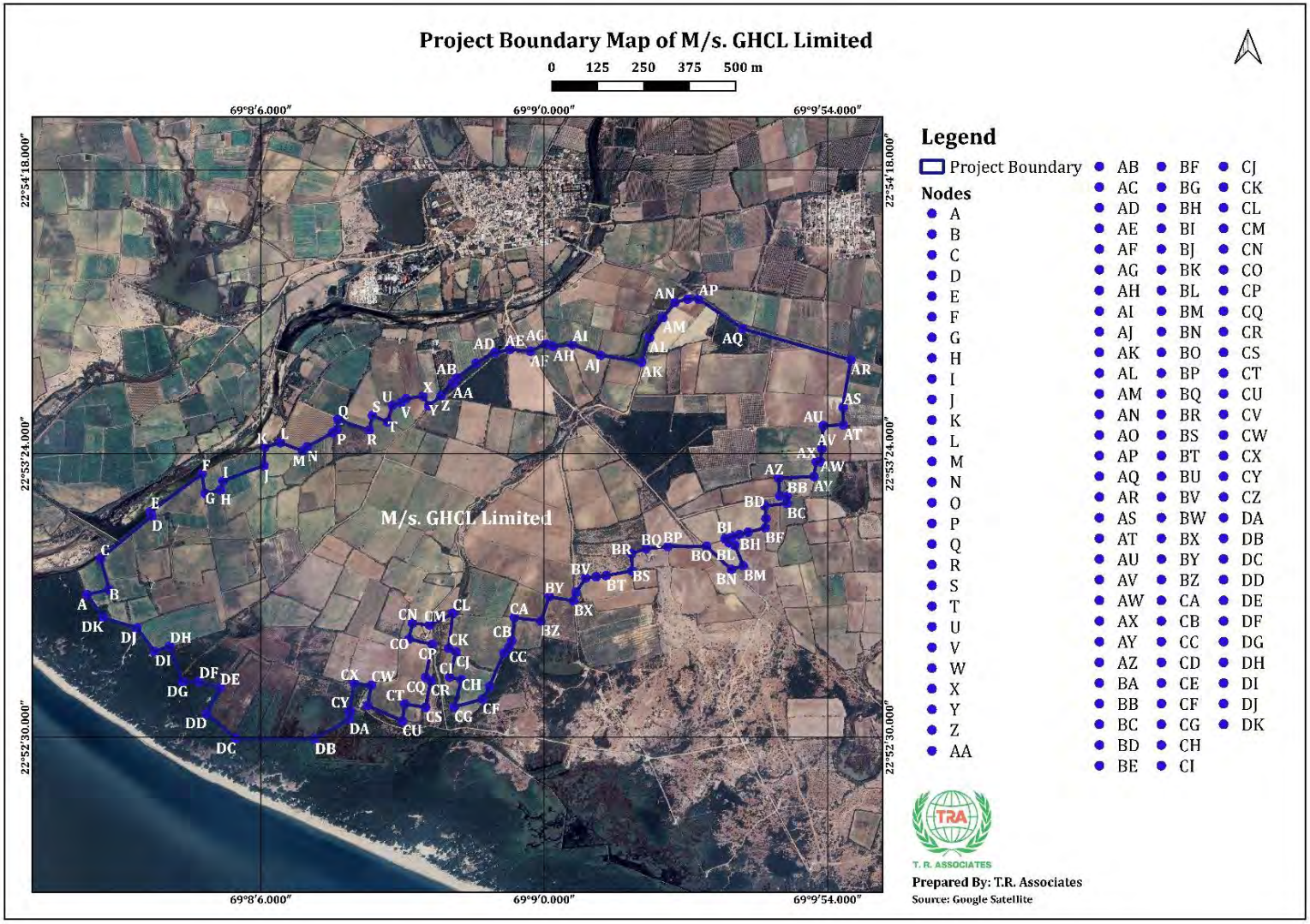
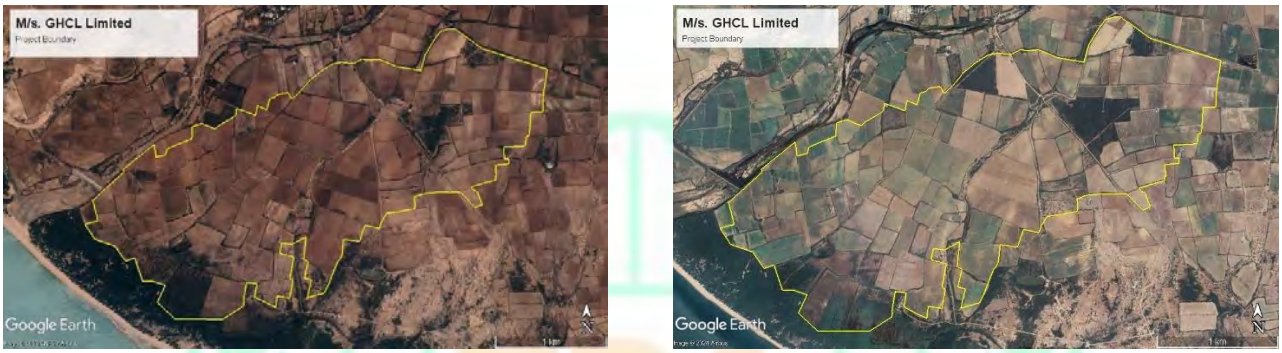


Figure 2.2 Google Image showing Project Location

SITE HISTORY

This project site is located at Village Bada, Taluka – Mandvi, District Kutch, Gujarat which proposes to set-up a Greenfield Chemical Complex to produce Light Soda Ash Plant of 11,00,000 TPA, Dense Soda Ash of 5,00,000 TPA and 2,00,000 TPA of Sodium Bicarbonate, 120 MW captive power plant, RO DM plant and seawater intake and effluent disposal system.

The below figure shows the site history of the project site.



Imagery Date: 08/11/2015 Imagery Date: 11/04/2023

Image source: Google Earth

Figure: Site History of Project Site

PROJECT COST

The estimated capital cost, including foreign exchange component, for the proposed Soda Ash Plant Phase 1: Capacity 5,50,000 TPA Light Soda Ash, and 2,50,000 TPA Dense Soda Ash, 1,00,000 TPA Sodium Bi-carbonate and CPP 60 MW is Rs **3563.08 crores.** The bifurcation of the project cost is given in below table:

Table: Project Cost of the Proposed Project

Sr. No.	Details	Total Cost in Crore
1	Land	130
2	Building	400
3	Plant & Machineries	2715
4	EMP	318.08
TOTAL		**3563.08**

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CHAPTER – 3
DESCRIPTION OF ENVIRONMENT

3.1 INTRODUCTION

Baseline monitoring is required to evaluate prevailing environment to workout direct and indirect impacts on various components of environment (viz. water, air, noise, soil, socio) due to upcoming project and their interrelationships as per EIA Notification 2006. Based on the identified impacts required and adequate mitigation measures will be proposed in the project.

The objective of establishing baseline conditions is "To compile authentic and relevant information on the environmental components in the study area, which are likely to undergo change due to the proposed project-related activities in both short as well as long term and have potential of causing environmental impacts." This necessitates ensuring focus on capturing the information which is relevant, appropriate, authentic and credible.

Baseline data requirement is also necessary to identify environmentally significant issues as well as to enumerate the critical environmental change that is likely to occur due to the project activity. Here an attempt has been made to collect the information about an existing environment on the below mentioned six major environmental attributes:

1. Air Environment
2. Water Environment
3. Noise Environment
4. Land & Soil Environment
5. Biological Environment
6. Socio – Economic Environment

For baseline data collection, an effective methodology is important and impact prediction is important to develop an efficient environment management plan. For this aspect, it is very important to understand the ground realities of the site and surrounding by the Functional Area Experts.

Accordingly, a team of Functional Area Experts had visited the project site to understand the surrounding environment and possible impacts from the activities of the proposed plant. The EIA coordinators in consultation with the respective Functional Area Experts had selected the sampling locations as per the TORs prescribed by the EAC, New Delhi.

3.1.1 BASELINE STUDY PERIOD

The baseline monitoring was undertaken during **December 2022 to February 2023 (01-12-2022 to 22-02-2023)** by the members of T. R. Associates along with in-house NABL accredited laboratory and external NABL accredited laboratory. The collected data were analyzed and interpreted. The same is represented below under various sections. The photo of visit of all Functional area Expert, Team Member & Functional Area Associates as well as EIA Co-Ordinator at project site is shown under various sections of this chapter:

3.1.2 BASELINE STUDY AREA

To carry out Environment Baseline Monitoring and to generate baseline environmental data, study area of 10 km radial distance from project site has been selected. Base line data of ambient air quality, water quality, soil quality, noise, ecology as well as socio economic status were collected for study area of 10 km.

3.1.3 BASELINE STUDY METHODOLOGY

For the generation of baseline data, guidelines proposed by MoEF&CC as well as generic TORs issued by Expert Appraisal Committee (EAC) of MoEF&CC has been taken into consideration. Relevant secondary data available for different environmental components were collected and analyzed. Baseline planning has been described in **Table 3.1** in brief. Pre-Baseline Network design of 10 km study area is briefly described in **Annexure-1**.

Table 3.1 Brief Baseline Monitoring Planning

Sr. No.	Environmental Attribute	Description of Baseline Monitoring Planning
1	Air	**Monitoring Frequency**: 24 hourly twice a week throughout the study period for some parameters and once a month throughout the study period for others **No. of Locations:** 10 locations in core and buffer zone of the project site **Parameters:** PM_{10}, $PM_{2.5}$, SO_2, NO_x (24 hourly, twice a week) VOC (hourly & Once during Monitoring Period) NH_3 (24 hourly, twice a week & Once during Monitoring Period) O_3 (hourly, twice a week & as per NAAQS) CO, As, Ni, Pb, Benzo alpha Pyrene, Benzene (once a month)
	Meteorology	**Monitoring Frequency**: On hourly basis for entire study period **Parameters:** Temperature, Relative humidity, Wind direction, Wind speed, Precipitation
2	Water	**Surface Water Monitoring** **Monitoring Frequency**: Once during Monitoring Period **Type of sampling**: Grab sampling **No. of Locations**: 8 locations in core and buffer zone of the project site **Parameters**: As per CPCB guidelines
		Ground Water Monitoring **Monitoring Frequency**: Once during Monitoring Period **Type of sampling**: Grab sampling **No. of Locations**: 11 locations in core and buffer zone of the project site **Parameters**: As per CPCB guidelines
3	Noise	**Noise Monitoring Frequency**: Day & Night Time monitoring; **No. of Locations**: 10 locations within core zone of study area **Traffic Monitoring Frequency:** **Monitoring Frequency:** Once in a season Morning (10 AM to 14 PM),

		Evening (16 PM to 20 PM) **No. of Locations:** 1 location
4	Ecology & Biodiversity Study	**Monitoring Frequency**: Once in a study period **Locations**: 10 km aerial distance from the project site **Methodology**: Visual encounters (Detail methodology is described into the ecology and biodiversity section)
5	Soil	**Monitoring Frequency**: Once in a season **No. of Locations**: 10 locations within core & buffer zone of study area **Methodology**: As per CPCB guidelines
6	Socio – Economic	**Monitoring Frequency**: Once in a season **No. of Locations**: 10 locations within core & buffer zone of study area **Methodology**: household survey, group discussion & individual discussion via questionaries
7	Land use Pattern	**Monitoring Frequency**: Once in a season **Location**: 10 km radius (Aerial distance) from the project site **Methodology**: Sentinel satellite image procured from NRSC, Hyderabad
8	Hydrology	**Monitoring Frequency**: Once in a season **Locations**: 10 km radius (Aerial distance) from the project site **Methodology**: Site survey through field visit

3.2 AIR ENVIRONMENT

Dispersion of different air pollutants released into the atmosphere have significant impacts on the surrounding air environment of an industrial project and forms an important role in impact assessment studies. The ambient air quality status with respect to the study area of 10 km radius from the plant site will form the base line information over which the predicted impacts due to the proposed plant can be super imposed to find out the impacts on air environment. The baseline status of the ambient air quality can be assessed thorough scientifically designed ambient air quality monitoring network. Baseline Network design of 10 km study area is briefly described in **Annexure – 1.** The design of monitoring network in the air quality surveillance program is to be based on the following considerations.

- Meteorological data with respect to wind speed, wind direction, relative humidity & temperature in general observation.
- Topography of the study area.
- Representation of regional background levels.
- Representation of plant site.
- Representation of cross-sectional distribution in the downward direction.
- Influence of the existing sources if any, are to be kept at minimum.
- Inclusion of major distinct villages to collect the baseline status.
- Villages having large population and near to the plant site.

Note: We have considered the locations that were previously monitored for data validation of the previously collected baseline data. The baseline environmental quality has been determined previously for winter season (December 2019 – February 2020) by following guidelines

prescribed in MoEF&CC, EIA notification 2006, standard ToR, TGM (Soda Ash Sector) and subsequent amendments

3.2.1 MICROMETEOROLOGICAL DATA

Micro-meteorological data within the project area during the survey period is an indispensable part of air pollution study. The meteorological data recorded during survey period is very useful for proper interpretation of the baseline information as well as serves as an input, to predictive models for air quality impacts.

To understand meteorological scenario primary and secondary data are collected. Primary data was collected for the proposed project site during the study period (**December 2022 to February 2023)**, while secondary data were collected from Indian Meteorological Department (IMD), Bhuj. This data is used in the interpretation of wind scenario. The data collected from both the sources are summarized as follows:

Table 3.2 Meteorological Data Collection Period

Meteorological data	**Primary data (December 2022 to February 2023) (01-12-2022 to 22-02-2023):** Parameters like Wind speed and its direction, Temperature, Humidity and Precipitation collected. **Secondary data (Last 30 Years):** Secondary data has been collected from the nearest IMD source (Bhuj) for Temperature, Humidity, Rainfall and Wind Speed.

3.2.1.1 METEOROLOGICAL DATA FROM SECONDARY SOURCES

Temperatures vary considerably from season to season. The summers are generally hot and winters are cool. The year can be divided into four seasons. The period from March to May is the hot season (summer) followed by southwest monsoon from June to September, October and November constitute the post-monsoon or retreating monsoon season. The cold season (winter) starts from December and ends in February.
The mean maximum temperature ranges between 32°C during January to 43.7°C during May and the mean minimum temperatures vary between 5.3°C during January and 24.6°C during June. The relative humidity varies between 29 % (February/March/April) and 84 % (August). The mean wind speed varies from 4.9 kmph (November) to 15.2 kmph (June). Long-term average annual rainfall recorded by IMD station at Bhuj is 323.3 mm. Climatological data of nearest IMD station which is Bhuj is given in the **Table 3.3.**

Table 3.3 Monthly Mean values of Meteorological Data (Secondary Data)

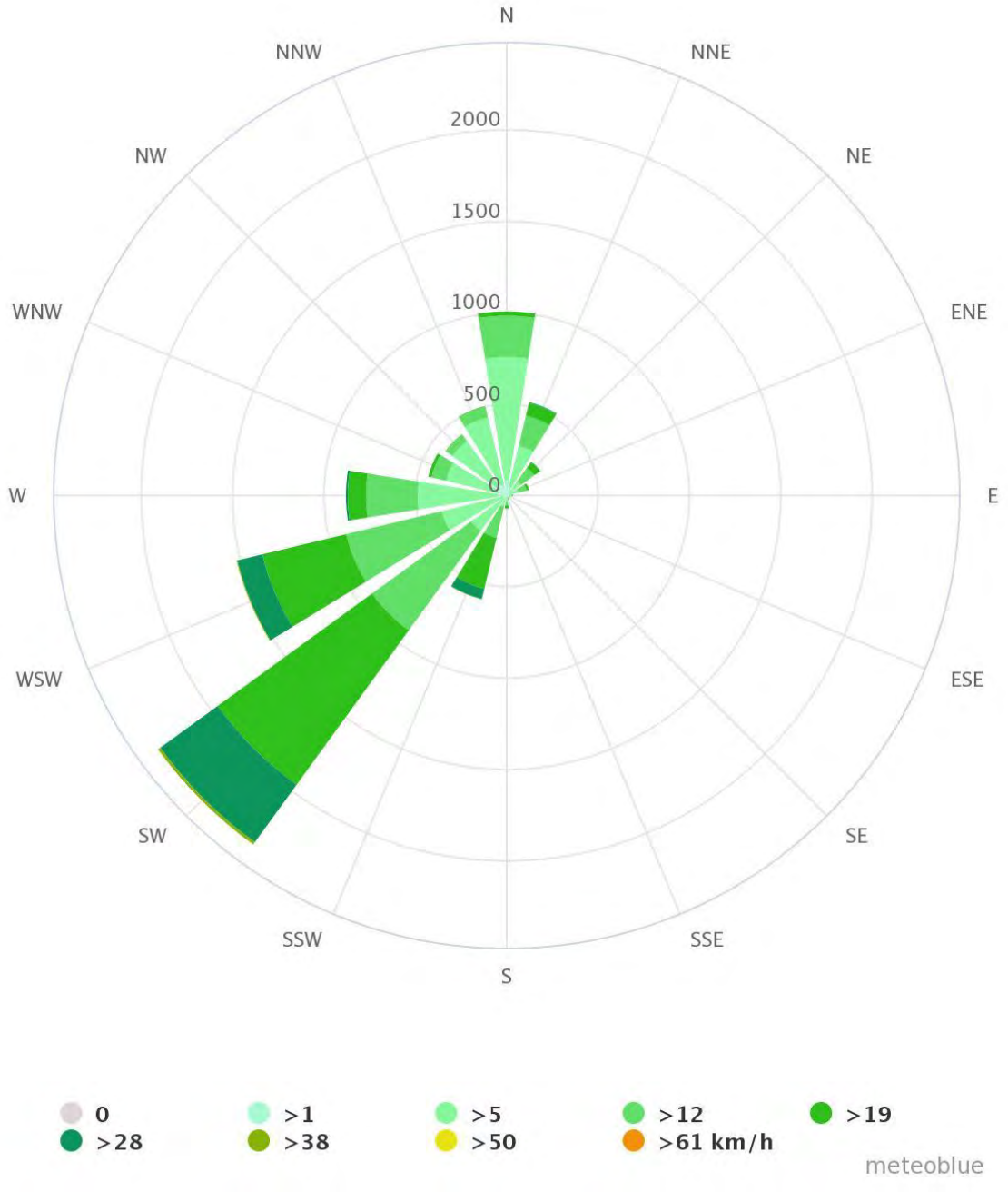
Month	Air Temperature(°C)		Humidity (%)		Mean Wind Speed (Kmph)	Rainfall (mm)
	Max.	Min.	Max.	Min.		
January	32	5.3	71	32	5.4	1.3
February	35.5	7.2	71	29	6.2	0.3
March	40	12.4	70	29	7.2	1.1
April	43	17.9	68	29	9.9	0.2

Month	Air Temperature(°C)		Humidity (%)		Mean Wind Speed (Kmph)	Rainfall (mm)
	Max.	Min.	Max.	Min.		
May	43.7	22.3	73	39	14	1.5
June	42	24.6	75	51	15.2	35.6
July	38.3	24	81	64	14.6	130.9
August	36.2	23.6	84	66	12.9	99.7
September	38.8	22	81	54	9.6	48.6
October	40	17.5	71	33	5.9	2.3
November	36.6	11.1	67	31	4.9	1.8
December	32.6	6.7	69	33	5.1	0.2
Annual Mean	**44.3**	**4.7**	**73**	**41**	**9.2**	**323.3**

Source: As per Climatological Table – IMD, Bhuj Station (1981-2010)

The wind rose diagram obtained from meteoblue organization for the entire year based on 30 years of hourly historical weather data for Mandvi location is presented in **Figure 3.1.**

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Source:https://www.meteoblue.com/en/weather/historyclimate/climatemodelled/m%c4%81ndvi_india_1263824

Figure 3.1 Wind Rose Diagram of Entire Year (Secondary Source)

Interpretation: Spoke of pre-dominant wind indicates that wind blows from SW to NE direction

- 0.84 % of the time winds blow from SW to NE at >1-5 Km/hr
- 8.76 % of the time winds blow from SW to NE at >5-12 Km/hr
- 26.84 % of the time winds blow from SW to NE at >12-19 Km/hr
- 41.8 % of the time winds blow from SW to NE at >19-28 Km/hr
- 15.56 % of the time winds blow from SW to NE at >28-38 Km/hr

- 0.6 % of the time winds blow from SW to NE at >38-50 Km/hr

3.2.1.2 PRIMARY METEOROLOGICAL DATA (December 2022 TO February 2023)

Meteorology of the study zones plays an important role in the study of air pollution. Micrometeorological conditions regulate the dispersion and dilution of air pollutants in the atmosphere. The weather data has been collected for the period of December 2022 to February 2023 (01-12-2022 to 22-02-2023) and recorded hourly observations for the parameters like Maximum and minimum Temperatures (°C), Relative Humidity (%), Wind Speed (m/sec), Wind direction and Rainfall (mm).

Meteorological conditions of the site regulate the transport and diffusion of air-pollutants released into the atmosphere. Ambient temperature, wind speed, wind direction and atmospheric stability are called primary or basic meteorological parameters because the dispersion and diffusion of pollutants depend mainly on these parameters. Humidity, precipitation, pressure and visibility are secondary meteorological parameters as this control the dispersion of the pollutants indirectly by affecting primary parameters. The weather data are depicted in the form of wind roses. Primary meteorological data are shown below:

Table 3.3(A): Primary Meteorological Parameters

Sr. No.	Parameters	Minimum value	Maximum value	Mean Value
1.	Temperature (°C)	9	31	19.78
2.	Wind Speed (m/s)	0	3153	130.996
3.	Relative Humidity (%)	12	100	40.29
		Total rainfall (mm)	**No. of rainy days**	**Average annual rainfall (mm)**
4.	Rainfall	0	0	378.2
5.	Predominant Wind direction	NNE		

Source: NABL Accredited laboratory of M/s. T. R. Associates

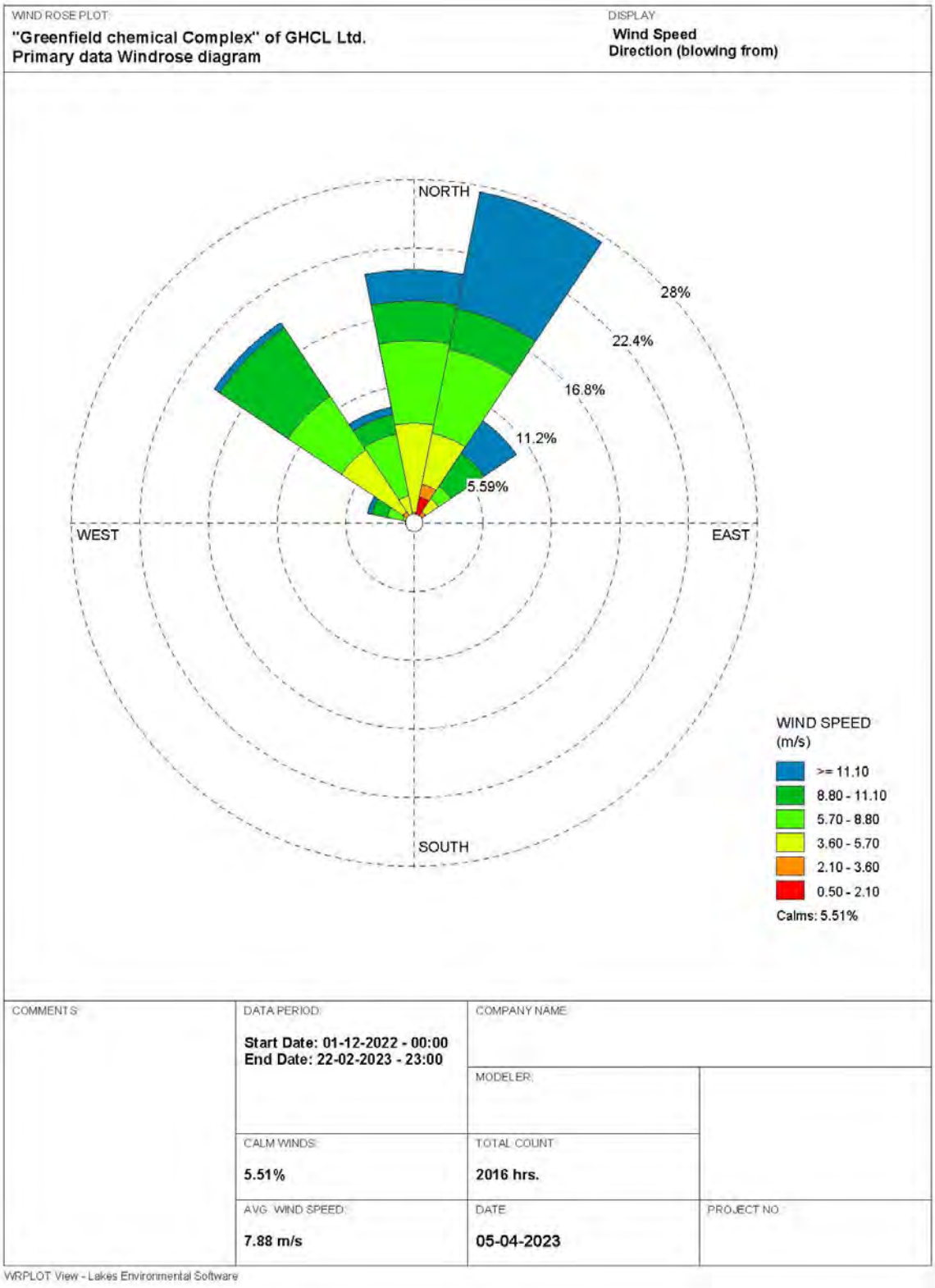


Figure 3.2 Primary wind rose diagram

Interpretation: Spoke of wind indicates that winds blow from NNE direction to SSW direction. From the primary meteorology data, it can be interpreted that average speed of the wind was 7.88 m/sec during the monitoring period and 5.51 % was observed to be in calm condition.

3.2.2 SELECTION OF AAQ STATIONS

As per the guidelines of CPCB, a network of ten ambient air-sampling locations have been selected for assessment of the existing status of air environment within the study zone of 10 km. The sampling locations were selected according to CPCB guidelines. The heights of the sampling locations were kept between 3 to 6 m in all the locations. After inspection of the area and observing the topographical features and review of the available meteorological data and local conditions the sampling sites were chosen which will be the representative of the local areas under study.

Note: We have considered the locations that were previously monitored for data validation of the previously collected baseline data.

3.2.2.1 EXISTING AAQ (PRE-PROJECT) STATUS

Ambient levels of pollutants such as PM_{10}, $PM_{2.5}$, SO_2, NO_x, NH_3, O_3, CO, VOC, and Heavy Metals (Pb, Ni, As) Benzo alpha Pyrene and Benzene are selected for the sampling. Ambient air monitoring locations is given in **Table 3.4**. The frequency of monitoring is given in **Table 3.5** and methodology of analysis in detail is given in **Table 3.6**. Photograph showing ambient air monitoring is shown in **Figure 3.4**. ambient air quality monitoring results are shown in **Table 3.7.**

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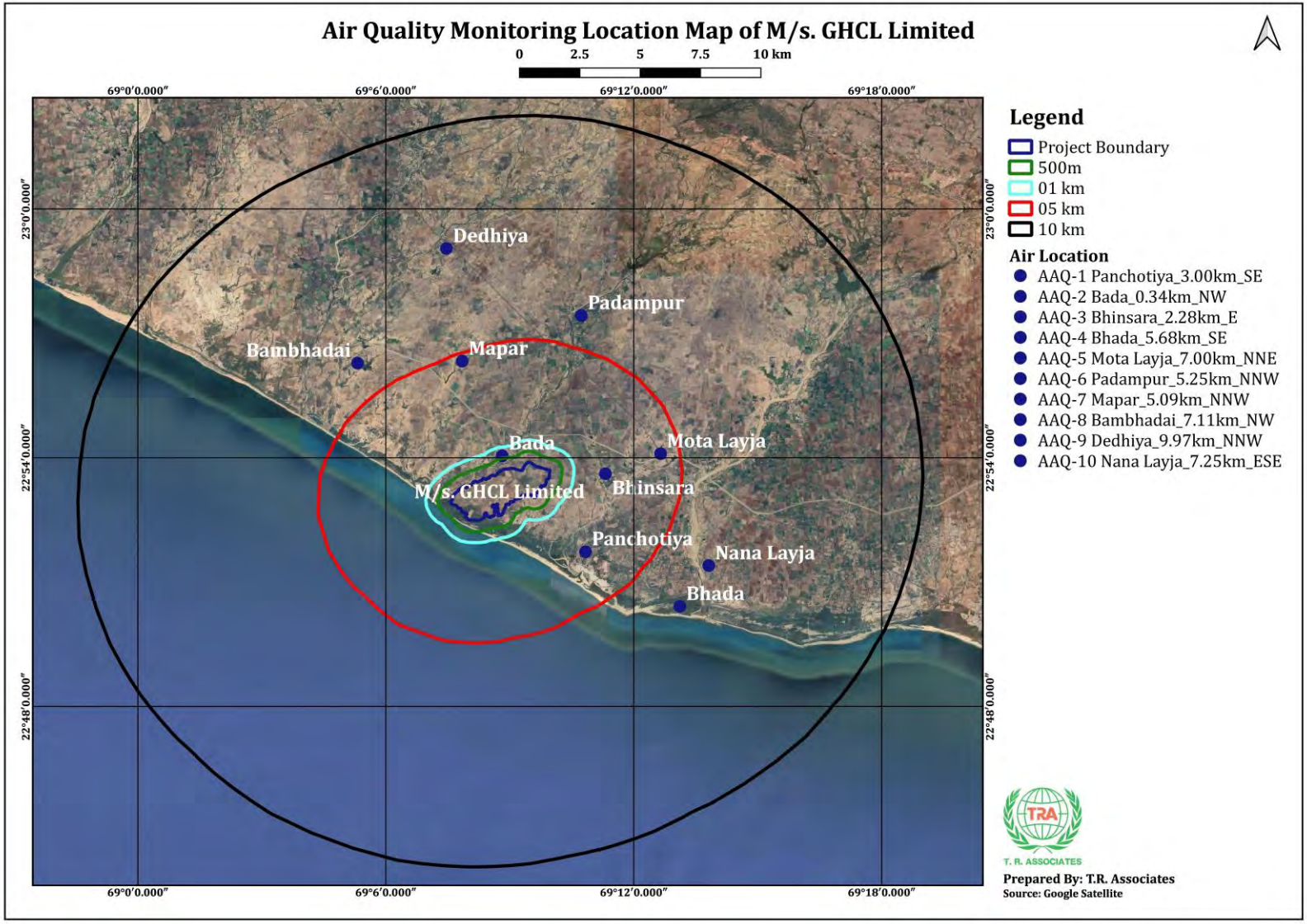


Figure 3.3 Map showing Ambient Air Quality locations

Table 3.4 Ambient Air Monitoring locations

Sr. No.	Village	Distance (km)	Direction	Located in	Latitude & Longitude	Taluka	District	Observation
1.	Panchotiya	3.00 km	SE	Downwind	22°51'49.9"N 69°10'46.9"E	Mandvi	Kutch	Temples and small houses were observed surrounding the location. No industries were found.
2.	Bada	0.34 km	NW	Upwind	22°53'38.7"N 69°08'12.8"E	Mandvi	Kutch	Residential area was found surrounding the monitoring location. No industries were found nearby.
3.	Bhinsara	2.28 km	E	Crosswind	22°53'41.8"N 69°11'18.5"E	Mandvi	Kutch	Temples and residencies were found near the location. Surrounding land was barren and no industries were observed.
4.	Bhada	5.68 km	SE	Downwind	22°51'09"N 69°12'14.4"E	Mandvi	Kutch	Dry agro waste was found near the monitoring location. Temples and wind wheels were observed nearby. Arabian Sea is close to the monitoring location. Gando Baval was observed near Arabian Sea.
5.	Mota Layja	7.00 km	NNE	Crosswind	22°53'23.04"N 69°13'14.50"E	Mandvi	Kutch	Main highway (NH41) was passing nearby the location, farm and barren land was observed.
6.	Padampur	5.25 km	NNW	Crosswind	22°57'28.7"N 69°10'47.3"E	Mandvi	Kutch	Surrounding area is residential and no industries were found nearby.
7.	Mapar	5.09 km	NNW	Crosswind	22°56'23.2"N 69°07'47"E	Mandvi	Kutch	Residential and agricultural areas were observed near the location. No industries were found.
8.	Bambhadai	7.11 km	NW	Upwind	22°56'23.5"N 69°05'23.7"E	Mandvi	Kutch	Wind wheels were found near the monitoring location. Surrounding land is agricultural land.
9.	Dedhiya	9.97 km	NNW	Crosswind	22°58'58.6"N 69°07'26.4"E	Mandvi	Kutch	No industries were observed near the monitoring location. Residential areas were found nearby.
10.	Nana layja	7.25 km	ESE	Crosswind	22°51'24.5"N 69°13'28.4"E	Mandvi	Kutch	Surrounding land was covered by baval. No industries were found nearby the location.



Location: Nana Layja
Latitude: 22°51'23"N, Longitude: 69°13'50"E



Location: Panchotiya
Latitude: 22°51'44"N, Longitude: 69°10'49"E



Location: Mapar
Latitude: 22°56'20"N, Longitude: 69°7'51"E



Location: Bada
Latitude: 22°54'3"N, Longitude: 69°8'49"E



Location: Bambhadai
Latitude: 22°56'17"N, Longitude: 69°5'19"E



Location: Mota Layja
Latitude: 22°54'6"N Longitude: 69°12'39"E



Location: Bhinsara
Latitude: 22°53'37"N Longitude: 69°11'19"E



Location: Padampur
Latitude: 22°57'26"N Longitude: 69°10'44"E



Location: Bhada
Latitude: 22°50'25"N, Longitude: 69°13'7"E



Location: Dedhiya
Latitude: 22°59'3"N, Longitude: 69°7'28"E



AWS Location: Bhinsara
Latitude: 22°53'37"N, Longitude: 69°11'19"E

Figure 3.4 Photograph showing Ambient Air Monitoring and AWS location

Table 3.5 Air - Parameters Analyzed and Sampling Duration

Attribute	Parameter	Frequency of Monitoring
AAQ	PM_{10}, $PM_{2.5}$, SO_2, NO_x, NH_3, O_3, VOC, CO, Benzene, Benzo alpha Pyrene and heavy metals (Pb, As, Ni, &) at 10 locations	24 hrs. Sampling for PM_{10}, $PM_{2.5}$, SO_2, NO_x, -24 hourly, Two days per week during the study period December 2022 to February 2023 **(01-12-2022 to 22-02-2023)** 24 hrs. Sampling for NH_3, Monitored for twice a week & once during the study period. Hourly sampling for O_3, Monitored for twice a week as per NAAQS during the study period
		VOC – hourly & Once in the study period December 2022 to February 2023 **(01-12-2022 to 22-02-2023)**
		CO, As, Ni, Pb, Benzo alpha Pyrene, Benzene (once a month)

Attribute	Parameter	Frequency of Monitoring
		The stated monitoring was carried out in accordance with the guidelines of Central Pollution Control Board (CPCB), Scientific Manual of GPCB and National Ambient Air Quality Standard (NAAQS) of CPCB.

Table 3.6 Ambient Air Quality - Methodology

	Pollutant			Method of analysis
Variables	Dust	PM_{10}	Particulate Matter 10	IS 5182 (Part 23)
		$PM_{2.5}$	Particulate Matter 2.5	IS 5182 (Part 24)
	Gases	SO_2	Sulfur dioxide	IS 5182 (Part 2)
		NO_2	Nitrous Oxides	IS 5182 (Part 6)
		O_3	Ozone	IS 5182 (Part 9)
		NH_3	Ammonia	IS 5182 (Part 25)
		VOC	Volatile Organic Carbon	TRA/STP/AA/07 (Based on manual instrument manufactures)
		CO	Carbon Monoxide	IRDH/SOP/AAQM/08:2015
	Heavy metal	Pb	Lead	IS:5182(Pan-22):2014
		As	Arsenic	IRDH/SOP/AAQM/06: 2013
		Ni	Nickel	IRDH/SOP/AAQM/07:2014
	other	C_6H_6	Benzene	IRDH/SOP/AAQW/11:2015
		BAP	Benzo alpha Pyrene	IRDH/SOP/AAQM/12:2015

Various statistical methods like standard deviation, geometric mean, minimum; maximum concentrations have been used and different percentiles have been computed from the data examined during sampling in all sampling stations.

Table 3.7 Ambient Air Monitoring Results (Baseline Period: (01-12-2022 to 22-02-2023))

Ambient Air Quality Locations												
Parameter	**Particular**	**Panchotiya**	**Bada**	**Bhinsara**	**Bhada**	**Mota Layja**	**Padampur**	**Mapar**	**Bambhadai**	**Dedhiya**	**Nana Layja**	**NAAQ Standard (24 hours)**
$PM_{2.5}$ ($\mu g/m^3$)	Min	44.77	35.34	36.60	46.08	21.65	31.24	30.38	43.27	26.22	39.12	60 $\mu g/m^3$
	Max.	50.64	42.50	43.37	51.31	27.82	38.55	36.84	47.92	32.55	47.62	
	Mean	47.45	39.06	39.90	49.00	24.63	34.52	33.66	45.33	29.46	42.67	
	98th Percentile	50.53	42.35	43.31	51.29	27.60	38.50	36.76	47.52	32.53	47.28	
PM_{10} ($\mu g/m^3$)	Min	75.54	69.44	62.78	78.40	53.64	58.72	60.11	65.16	50.31	71.28	100 $\mu g/m^3$
	Max.	81.53	76.56	68.99	83.48	59.73	68.74	65.94	72.99	58.68	81.98	
	Mean	78.83	72.80	65.82	80.68	56.12	63.45	63.25	69.15	54.73	75.48	
	98th Percentile	81.50	75.94	68.69	83.33	59.70	68.40	65.94	72.88	58.41	80.66	
SO_2 ($\mu g/m^3$)	Min	11.08	9.12	8.03	11.32	B.D.L(DL=5)	7.27	6.03	5.44	B.D.L(DL=5)	10.10	80 $\mu g/m^3$
	Max.	15.60	14.82	13.68	16.92	8.25	12.92	11.78	10.94	9.85	17.38	
	Mean	13.26	11.52	10.94	14.10	6.25	9.85	9.03	8.57	7.48	13.86	
	98th Percentile	15.48	14.21	13.62	16.78	8.19	12.84	11.70	10.84	9.77	17.26	
NO_x ($\mu g/m^3$)	Min	33.58	28.30	27.03	36.49	16.38	25.14	23.28	21.11	18.24	28.72	80 $\mu g/m^3$
	Max.	38.88	33.67	31.81	41.49	22.71	30.38	33.62	28.45	25.65	36.43	
	Mean	35.56	30.66	29.26	39.03	19.17	28.12	28.47	25.27	22.20	33.08	
	98th Percentile	38.81	33.63	31.77	41.46	22.38	30.37	33.13	28.40	25.61	36.37	
NH_3 ($\mu g/m^3$)	--	B.D.L (D.L-21)	B.D.L (D.L-21)	B.D.L (D.L-21)	B.D.L (D.L-21)	B.D.L (D.L-21)	B.D.L (D.L-21)	B.D.L (D.L-21)	B.D.L (D.L-21)	B.D.L (D.L-21)	B.D.L (D.L-21)	400 $\mu g/m^3$
O_3 ($\mu g/m^3$)	Min	B.D.L(DL=10)	B.D.L (DL=10)	B.D.L (DL=10)	11.19	10.59	B.D.L(DL=10)	B.D.L(DL=10)	B.D.L(DL=10)	B.D.L(DL=10)	B.D.L(DL=10)	180 $\mu g/m^3$
	Max.	14.09	B.D.L (DL=10)	12.47	17.67	19.62	13.14	12.83	11.89	12.08	11.08	
	Mean	11.87	B.D.L (DL=10)	10.22	14.34	13.18	B.D.L(DL=10)	B.D.L(DL=10)	B.D.L(DL=10)	B.D.L(DL=10)	B.D.L(DL=10)	
	98th Percentile	14.03	B.D.L (DL=10)	12.39	17.50	19.45	11.63	12.50	10.36	11.81	10.93	
Note :	CO : BDL, VOC : BDL, Lead : BDL, Arsenic : BDL, Nickel : BDL, Benzene : BDL & Benzo alpha Pyrene : BDL											

3.2.2.2 Baseline Data Interpretation of AAQ of Study Area

- PM_{10} concentration is observed within the study area in the range of 50.31 µg/m³ to 83.48 µg/m³. The maximum concentration is observed at Bhada with the result of 83.48 µg/m³. The maximum concentration 98th percentile is recorded at Bhada with the result of 83.33 µg/m³. It may be due to the fugitive emission from unpaved internal roads.
- $PM_{2.5}$ concentration is observed within the study area in the range of 21.65 µg/m³ to 51.31 µg/m³. The maximum concentration is observed at Bhada with the result 51.31 µg/m³. The maximum 98th percentile concentration is also recorded at Bhada with the result of 51.29 µg/m³. It may be due to the fugitive emission from unpaved internal roads.
- SO_2 concentration is observed within the study area from B.D.L(DL=5) to 17.38 µg/m³. The maximum concentration is observed at Nana Layja with the result 17.38 µg/m³. The maximum concentration 98th percentile is recorded at Nana Layja with the result of 17.26 µg/m³. Higher concentration can be due to the vehicular emission from nearby village road.
- NO_x concentration is observed within the study area in the range of 16.38 µg/m³ to 41.49 µg/m³. The maximum concentration is observed at Bhada with the result 41.49 µg/m³. The maximum concentration 98th percentile is recorded at Bhada with the result of 41.46 µg/m³. Higher concentration can be due to the transportation activities on village road.
- Ozone concentration is observed within the study area from B.D.L(DL=10) to 19.62 µg/m³. The maximum concentration is observed at Mota Layja with the result 19.62 µg/m³. The maximum concentration 98th percentile is recorded at Mota Layja with the result of 19.45 µg/m³. The possible reason for higher concentration can be vehicular movements on the NH-41, which is passing nearby the village.
- Ammonia, CO, VOC, Lead, Arsenic, Nickel, Benzene & Benzo Alpha Pyrene were observed B.D.L.
- All the above results are found well within the prescribed limits of National Ambient Air Quality standards for 24 hrs.

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3.2.3 AIR QUALITY INDEX

3.2.3.1 OBJECTIVE OF AIR QUALITY INDEX:

Air Quality index is an effective tool to know overall status of ambient air quality in baseline monitoring area and its impact on health of public. Air Quality Index (AQI) is one such tool for effective dissemination of air quality information to people. As per CPCB guideline, there are six AQI categories, namely Good, Satisfactory, Moderately polluted, Poor, Very Poor, and Severe. The overall objective of the project can be stated as under:

"To adopt/develop an Air Quality Index (AQI) based on national air quality standards, health impacts and monitoring programme which represent perceivable air quality for general public in easy to understand terms and assist in data interpretation and decision-making processes related to pollution mitigation measures."

The AQI values and corresponding ambient concentrations (health breakpoints) as well as associated likely health impacts for the identified eight pollutants are as follows:

AQI Category, Pollutants and Health Breakpoints								
AQI Category (Range)	PM_{10} 24-hr	$PM_{2.5}$ 24-hr	NO_2 24-hr	O_3 8-hr	CO 8-hr (mg/m^3)	SO_2 24-hr	NH_3 24-hr	Pb 24-hr
Good (0-50)	0-50	0-30	0-40	0-50	0-1.0	0-40	0-200	0-0.5
Satisfactory (51-100)	51-100	31-60	41-80	51-100	1.1-2.0	41-80	201-400	0.5 –1.0
Moderately polluted (101-200)	101-250	61-90	81-180	101-168	2.1- 10	81-380	401-800	1.1-2.0
Poor (201-300)	251-350	91-120	181-280	169-208	10-17	381-800	801-1200	2.1-3.0
Very poor (301-400)	351-430	121-250	281-400	209-748*	17-34	801-1600	1200-1800	3.1-3.5
Severe (401-500)	430 +	250+	400+	748+*	34+	1600+	1800+	3.5+

Source: Report on National Air Quality Index published by CPCB, New Delhi (2014-2015)

Table 3.8 Rating of Ambient Air Quality

AQI	Rating	Associated Health Impacts
0-50	Good	Minimal Impact
51-100	Satisfactory	May cause minor breathing discomfort to sensitive people.
101-200	Moderately polluted	May cause breathing discomfort to people with lung disease such as asthma, and discomfort to people with heart disease, children and older adults.
201-300	Poor	May cause breathing discomfort to people on prolonged exposure, and discomfort to people with heart disease
301-400	Very Poor	May cause respiratory illness to the people on prolonged exposure. Effect may be more pronounced in people with lung and heart diseases.
401-500	Severe	May cause respiratory impact even on healthy people, and serious health impacts on people with lung/heart disease. The health impacts may be experienced even during light physical activity.

Source: Report on National Air Quality Index published by CPCB, New Delhi

Based on the measured ambient concentrations, corresponding standards and likely health impact, a sub-index is calculated for each of these pollutants. The worst sub-index reflects overall AQI. Associated likely health impacts for different AQI categories and pollutants have also been suggested, with primary inputs from the medical expert members of the group.

Based on analysis results of AAQ monitoring (Table 3.7) in baseline monitoring area, AQI calculated as under:

Calculation of AQI

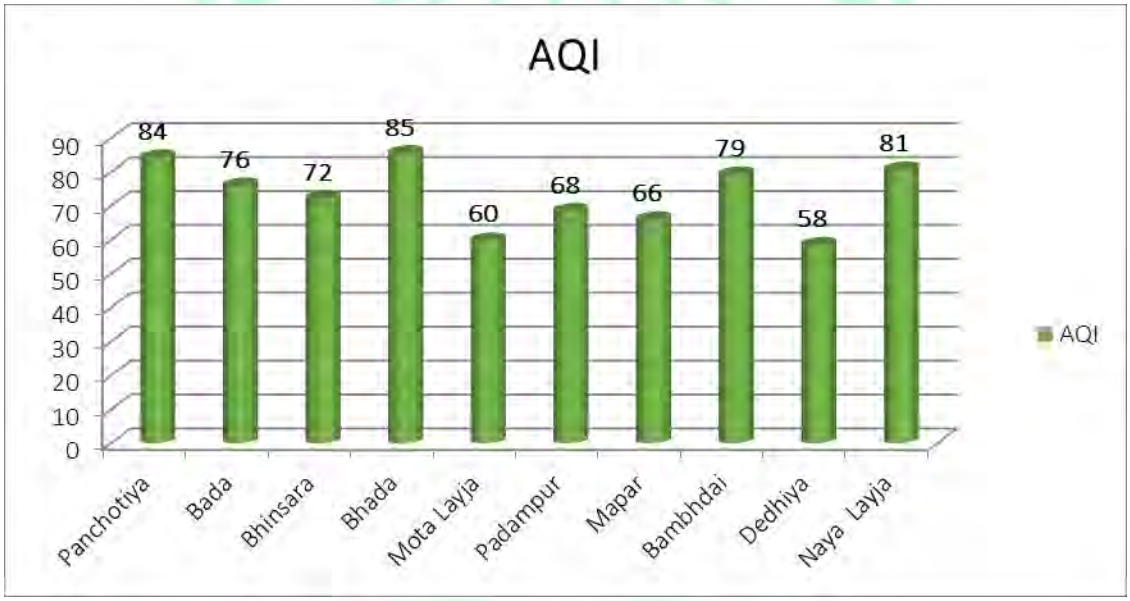
Date		Address	Panchotiya GHCL, Kutch		
Dec 2022 -Feb 2023					
Pollutants		**concentration in µg/m3 (except for CO)**	**Sub-Index**		**Air Quality Index**
				check	
PM10	24-hr avg	81.50	82	1	
PM2.5	24-hr avg	50.53	84	1	
SO2	24-hr avg	15.48	19	1	
NOx	24-hr avg	38.81	49	1	AQI = 84
*CO (mg/m3)	max 8-hr	0.00	0	0	
O3	max 8-hr	14.03	14	1	
NH3	24-hr avg	0.00	0	0	

* Concentrations of minimum three pollutants are required; one of them should be PM10 or PM2.5
* The check displays "1" when a non-zero value is entered

Good (0-50)	Minimal Impact	**Poor (201-300)**	Breathing discomfort to people on prolonged exposure
Satisfactory (51-100)	Minor breathing discomfort to sensitive pe	**Very Poor (301-400)**	Respiratory illness to the people on prolonged exposure
Moderate (101-200)	Breathing discomfort to the people with lu heart disease, children and older adults	**Severe (>401)**	Respiratory effects even on healthy people

Table 3.9 Baseline Status of Ambient Air Quality

Sr. No.	Location	AQI
1.	Panchotiya	84
2.	Bada	76
3.	Bhinsara	72
4.	Bhada	85
5.	Mota Layja	60
6.	Padampur	68
7.	Mapar	66
8.	Bambhadai	79
9.	Dedhiya	58
10.	Naya Layja	81



3.2.3.2 Interpretation of Air Quality Index

According to National Air Quality Index prescribed by CPCB, the result obtained is shown in table given above. AQI of baseline monitoring locations are ranges from 58 (Dedhiya) to 85 (Bhada). It seems that quality of ambient air is satisfactory. It may cause minor discomfort to sensitive people. So, it is advised to sensitive people to take necessary precautions.

3.3 NOISE ENVIRONMENT

Noise word come from the Latin word 'nauseas', is a loud outcry or commotion that is unpleasant, unexpected, or undesired with various frequencies over the audible range due to the regular activities of the mankind primarily noise pollution (or environmental noise) is displeasing human, animal or machine-created sound that disrupts the activity or balance of humans or animal life. The source of most outdoor noise worldwide is mainly evolved from industries, constructions and transportation systems, including motor vehicle noise, aircraft noise and rail noise, poor urban planning may give rise to noise pollution.

Industrial noise resulting to noise pollution has many reasons such as industries being close to human habitats which prevent the noise from decaying before it reaches human ear.

A determination is made of the micro scale impact by predicting anticipated noise levels for each alternative during both construction and operational phases. Predicted noise levels are compared with applicable standards or criteria in order to assess the impact.

The physical description of sound concerns its loudness as a function of frequency. Noise in general sound which comprises of many frequency components with different variations in loudness over the audible frequency range.

Various noise scales have been introduced to describe, a single number, the response of an average human to a complex sound made up of various frequencies at different loud levels, the response of the human ear to sound is dependent on the frequency of the sound and this has led to the concept of weighting scales. In the "A-weighting" scale, the sound pressure levels for the lower frequencies and higher frequencies are reduced by certain amounts before they are being combined together to give one single sound pressure level value. This value is designated as dB (A). The dB (A) is often used as it reflects more accurately the frequency response of the human ear. A perceived loud noise has a high dB or dB (A) value and a soft noise has a low one. The human ear has peak response around 2,500 to 3,000 Hz and has a relatively low response at low frequencies.

3.3.1 EXISTING NOISE LEVELS

Noise levels have been monitored at different points within the study zone and device manufactured by LUTRON SL 4033-SD was used for this purpose. Keeping in view of various local activities such as residential, commercial, silence and Industrial activities 10 noise level measurement locations were identified previously and the same sites were monitored again for baseline data validation, sites are depicted in the **Figure 3.5** & **Table 3.10**.

Table 3.10 Noise Monitoring Locations

Sr. No.	Village	Distance (km)	Direction	Latitude & Longitude	Taluka	District	Zone
1	Panchotiya	3.00 km	SE	22°51'49.04"N 69°10'45.96"E	Mandvi	Kutch	Residential
2	Bada	0.76 km	North	22°54'8.17"N 69° 8'51.85"E	Mandvi	Kutch	Residential
3	Bhinsara	2.19 km	East	22°53'42.94"N 69°11'15.47"E	Mandvi	Kutch	Residential
4	Bhada	5.70 km	SE	22°51'10.12"N 69°12'15.83"E	Mandvi	Kutch	Commercial
5	Mota Layja	5.60 km	ESE	22°53'29.19"N 69°13'14.47"E	Mandvi	Kutch	Commercial
6	Padampur	6.94 km	NNE	22°57'26.95"N 69°10'48.46"E	Mandvi	Kutch	Commercial
7	Mapar	5.05 km	NNW	22°56'18.08"N 69° 7'52.39"E	Mandvi	Kutch	Commercial
8	Bambhadai	7.24 km	NW	22°56'22.58"N 69° 5'27.55"E	Mandvi	Kutch	Silence
9	Dedhiya	9.97 km	NNW	22°59'0.37"N 69° 7'23.64"E	Mandvi	Kutch	Silence
10	Nana Layja	7.63 km	ESE	22°51'22.68"N 69°13'41.76"E	Mandvi	Kutch	Silence
Traffic Study							
Bada-Bhishra-Mota layja road		0.62 km	North	22°54'4.56"N, 69° 9'3.20"E	Mandvi	Kutch	
NH-41		5.27	East	22°53'32.88"N, 69°13'3.29"E	Mandvi	Kutch	



Location: Dedhiya
Latitude: 22°59'3"N, Longitude: 69°7'20"E



Location: Padampur
Latitude: 22°57'26"N Longitude: 69°10'45"E



Location: Mota Layja
Latitude: 22°53'32"N, Longitude: 69°13'4"E



Location: Bhambhadai
Latitude: 22°56'28"N, Longitude: 69°5'21"E



Location: Bhinshra
Latitude: 22°53'42"N Longitude: 69°11'15"E



Location: Bhada
Latitude: 22°51'9"N, Longitude: 69°12'15"E



Location: Mapar
Latitude: 22°56'15"N, Longitude: 69°7'54"E



Location: Bada
Latitude: 22°54'10"N, Longitude: 69°8'47"E



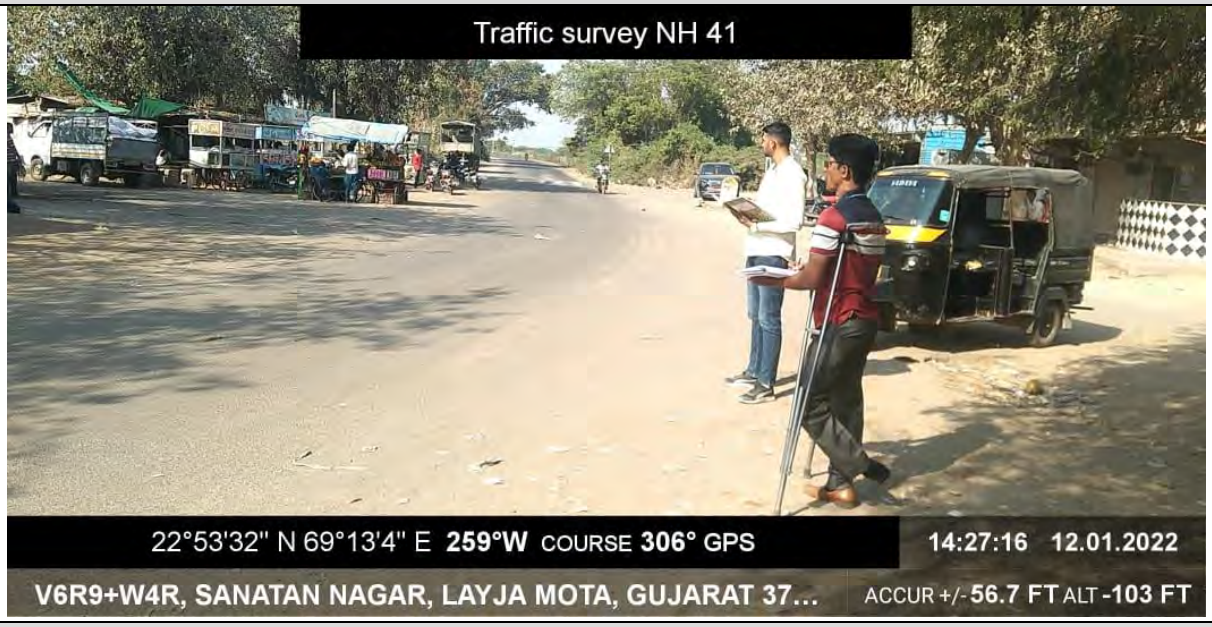
Location: Panchotiya
Latitude: 22°51'42"N, Longitude: 69°10'47"E



Location: Nana Layja
Latitude: 22°51'25"N, Longitude: 69°13'43"E



Traffic Survey Location: Bada-Bhishra-Mota layja road
Latitude: 22°54'1"N, Longitude: 69°9'10"E



Traffic Survey Location: NH 41
Latitude: 22°53'32"N, Longitude: 69°13'4"E

Figure: 3.5 Photograph showing Noise monitoring sample collection

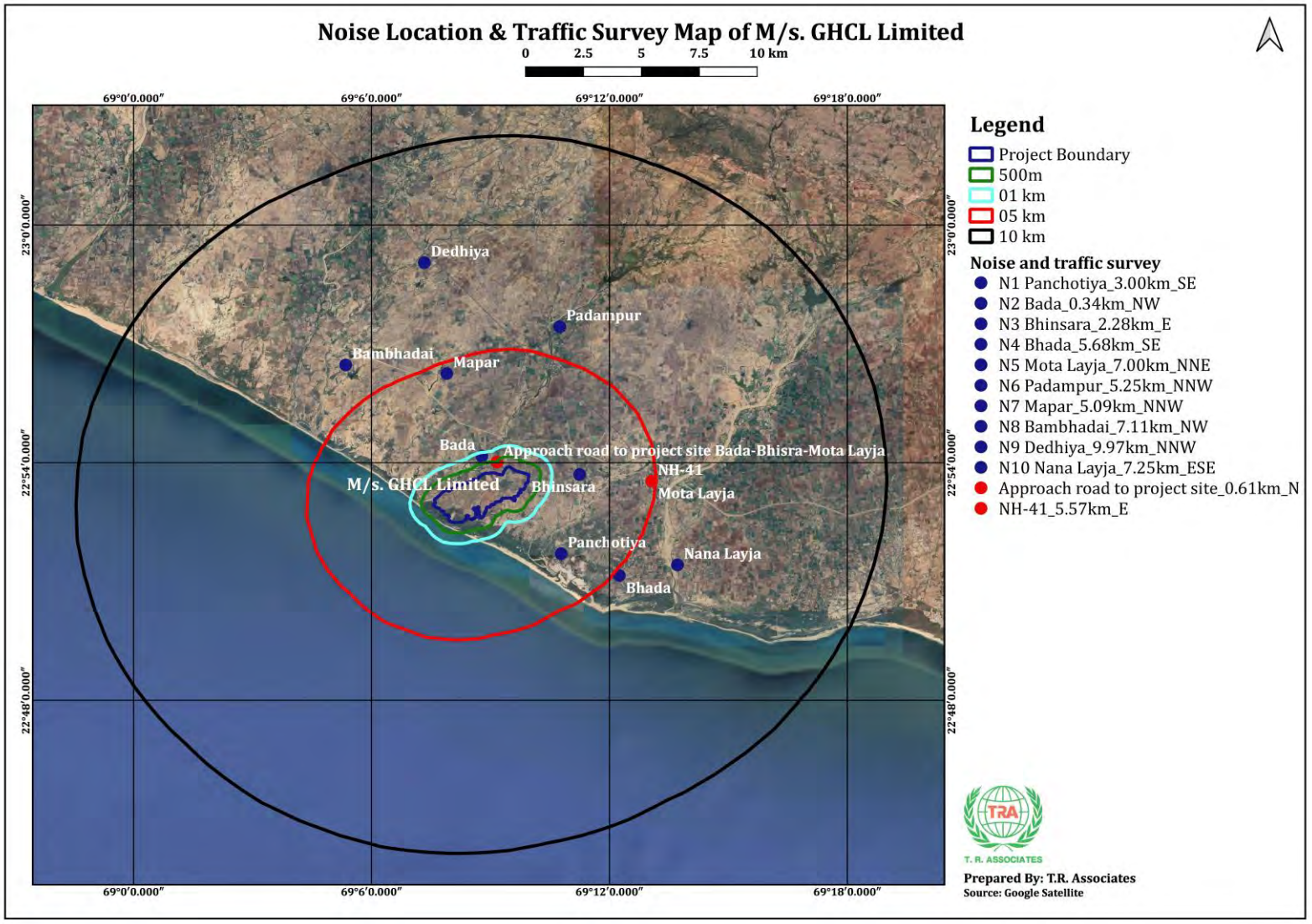


Figure 3.6 Map Showing Noise Sampling Locations

Source: Satellite image (Google Earth)

3.3.2 DATA ANALYSIS

The recorded sound levels are given in Table 3.11 and 3.12**.**

Table 3.11 Noise Level Monitoring Data (Day timings in Leq dB (A))

Day time Monitoring						
Location	**Sampling Date**	**Category**	**Recorded level in dB(A)**			**Limits Leq (dB(A))**
			Minimum	**Maximum**	**Leq**	
Panchotiya	01.12.22 to 02.12.22	Residential	44.9	53.5	50.3	55
Bada	02.1.22 to 03.12.22	Residential	40.7	47.6	44.9	55
Bhinshra	03.12.22 to 04.12.22	Residential	39.6	43.8	42.1	55
Bhada	04.12.22 to 05.12.22	Commercial	52.4	65.8	62.0	65
Mota Layja	05.12.22 to 06.12.22	Commercial	56.1	63.8	60.8	65
Padampur	06.12.22 to 07.12.22	Commercial	47.5	63.7	60.7	65
Mapar	07.12.22 to 08.12.22	Commercial	49.4	60.7	57.5	65
Bambhadai	08.12.22 to 09.12.22	Silence	35.8	47.7	44.0	50
Dedhiya	09.12.22 to 10.12.22	Silence	41.4	47.8	45.4	50
Nana Layja	10.12.22 to 11.12.22	Silence	33.4	46.6	42.7	50

Table 3.12 Hourly Noise data (Night timings in Leq dB (A))

Night time Monitoring						
Sampling Location	**Sampling Date**	**Category**	**Recorded level in dB(A)**			**Limits Leq (dB(A))**
			Minimum	**Maximum**	**Leq**	
Panchotiya	01.12.22 to 02.12.22	Residential	39.5	44.1	41.9	45
Bada	02.1.22 to 03.12.22	Residential	31.5	42.6	38.4	45
Bhinshra	03.12.22 to 04.12.22	Residential	33.3	41.1	37.4	45
Bhada	04.12.22 to 05.12.22	Commercial	49.2	57.4	52.9	55
Mota Layja	05.12.22 to 06.12.22	Commercial	39.8	46.8	44.4	55
Padampur	06.12.22 to 07.12.22	Commercial	46.2	52.3	48.2	55
Mapar	07.12.22 to 08.12.22	Commercial	45.2	52.6	50.2	55
Bambhadai	08.12.22 to 09.12.22	Silence	30.5	39.2	35.7	40
Dedhiya	09.12.22 to 10.12.22	Silence	32.9	37.2	35.0	40
Nana Layja	10.12.22 to 11.12.22	Silence	32.5	39.4	35.8	40

3.3.3 BASELINE DATA INTERPRETATION OF AMBIENT NOISE QUALITY (DAY AND NIGHT TIME)

Sound levels had been recorded according to IS: 9989:1991 (Reaffirmed 2001). The maximum noise level (Leq.) measured in the study area was 62.0 dB (A) in day time and 52.9 dB (A) in night time at Bhada, which is below the stipulated standards in day time as well as in night time.

Residential Zone: The noise levels (Leq) of the residential area within the impact zone varied from 42.1 – 50.3 dB (A) in the day time and 37.4 – 41.9 dB (A) in the night time.

Commercial Zone: The noise levels (Leq) of the commercial area within the impact zone varied from 57.5 – 62.0 dB (A) in the day time and 44.4 – 52.9 dB (A) in the night time.

Silence Zone: The noise levels (Leq) of the Silence area within the impact zone varied from 42.7 – 45.4 dB (A) in the day time and 35.0 – 35.8 dB (A) in the night time.

Out of all the 10 locations measured for noise levels, recorded noise levels are found to be within the standard limits.

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3.4 WATER ENVIRONMENT

Studies on Water Environment aspects of ecosystem is integral for Environmental Impact Assessment to identify sensitive issues and take appropriate action by maintaining balance of the organisms in an ecosystem in the early stages of development of the project. The objective of this report is to define the present environment in which the proposed plant will operate, to evaluate all possible events, to ensure that all negative impacts are minimized, and to demonstrate that proposed project has been appropriately announced to all interested parties so that their concerns can be considered.

Water quality studies have been carried out in the study area to understand the availability of water resources, possibility of water contamination and existing water quality.

3.4.1 WATER QUALITY

Water of high quality is essential to human life as well as for flora & fauna and water of acceptable quality is essential for drinking, agricultural, industrial, domestic and commercial uses; in addition, most recreation is water based; therefore, major activities having potential effects on surface water are certain to be of appreciable concern to the consumers.

3.4.1.1 SAMPLE COLLECTION AND ANALYSIS

The water resources in the study area may be classified into two major categories like Surface water and Ground water.

Water samples were collected at 19 different locations, out of which 8 samples were selected from surface water sources and 11 samples selected from ground water sources for physico-chemical and biological parameters. Parameters like pH, Odour, Temperature, TDS and DO were analyzed at the time of sampling. TDS & DO were also analyzed in laboratory. For other Parameter analysis the samples were preserved as per the recommended techniques for various Elemental determinations as per `IS: 3025 (part I) 1987'. Preservation chart for the different parameters is given in **Table 3.13**. These parameters were analyzed as per the procedures specified in 'Standard Methods for Examination of Water and Wastewater' Published by American Public Health Association (APHA) / IS 3025. Ground water & Surface water samples results were compared with IS: 10500 specifications.

Method of Water Sampling, Collection, Preservation

The following procedures were followed while sampling:

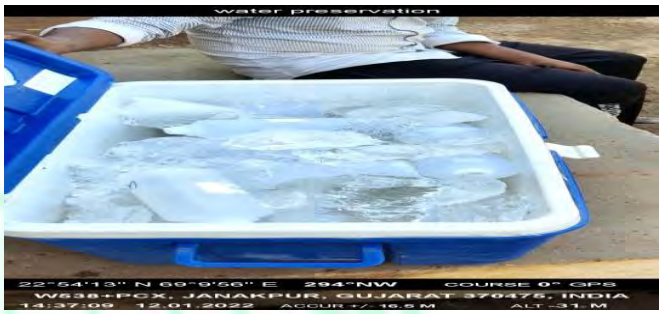
- Washing the bottles/cans with distilled water prior to the sampling.
- Before collection of water the bottles/cans are again washed 2-3 times with the same water.
- For surface water, bottles were lowered to a minimum depth of 30 cm below water surface.
- At each point different sets of water samples were collected so as cover all the parameters.
- Proper attention is taken in proper numbering at the site.
- Sterilized bottles were used for the samples that are to be analysed for bacteria.
- Civil supply water pipeline taps are sterilized before collection for bacteriological analysis
- Parameters like pH, Odour, Temperature and TDS were analysed in the field conditions and the results were reconfirmed after getting to the laboratory. DO is fixed in the field itself. Appropriate

preservatives are added, depending upon the elements to be analysed and marked accordingly (IS: 3025 (part I) 1987). Preservation chart for the different parameters is given in **Table 3.13.**

- All the water samples collected in the ice box, were immediately transported to the laboratory and freeze at < 4°C for analysis
- Field observations were noted in the field notebook
- As far as possible photographs were taken in almost all sampling points. Sampling & analysis of all the parameters are as per APHA, 22nd Edition & IS: 3025.



Sample preservation



Sample preservation

Figure 3.8 Photographic proof of sample preservation

Table 3.13 Preservation chart for different parameters

Sr. No.	Parameters
A. SAMPLE PRESERVATION: **ONSITE ANALYSIS**	
1.	Odor
2.	Temperature
3.	pH
B. SAMPLE PRESERVATION: **COOL, 4°C**	
1.	Acidity
2.	Alkalinity
3.	Bicarbonate
4.	Carbonate
5.	Chloride
6.	Chlorine Demand
7.	Chlorine Residual
8.	Chromium Hexavalent
9.	Chromium Total
10.	Color
11.	Conductivity
12.	Dissolved Oxygen
13.	Fluoride
14.	Nitrate-Nitrogen
15.	Nitrite-Nitrogen
16.	Phosphate (ortho)
17.	Settleable Solids
18.	Silica

19.	Solids (dissolved)
20.	Solids (fixed) each
21.	Solids (volatile) each
22.	Sulfate
23.	Sulfites
24.	Suspended Solids
25.	Total Solids
26.	Turbidity
C. SAMPLE PRESERVATION: **HNO_3, pH <2**	
1.	Aluminum
2.	Boron
3.	Calcium (Titrimetric)
4.	Copper
5.	Hardness (calcium)
6.	Hardness (total)
7.	Iron
8.	Magnesium
9.	Manganese
10.	Nickel
11.	Sodium
12.	Potassium
13.	Sodium Absorption Ratio (SAR)
D. SAMPLE PRESERVATION: **H_2SO_4 PH<2, COOL 4°C**	
1.	Ammonical Nitrogen
2.	Chemical Oxygen Demand (COD)
3.	Oil & Grease
4.	Phosphate (total)
E. SAMPLE PRESERVATION: **FIX ON SITE AND STORE IN DARK (2 ml $MnSO_4$ + 2 ml ALKALI AZIDE + 2 ml H_2SO_4)**	
1.	Dissolved Oxygen (Winkler)
2.	Biochemical Oxygen Demand (BOD)
F. SAMPLE PRESERVATION: **NaOH pH > 11**	
1.	Phenol
G. SAMPLE PRESERVATION: **ZINK ACETATE + NaOH pH > 9, COOL 4°C**	
1.	Sulfide

Table 3.14 Ground Water Monitoring Locations

Sr. No.	Location	Distance from project site (km)	Direction	Latitude & Longitude	Taluka	District	Site Observation
1.	Bhada	5.51	SE	22°51'14.6"N 69°12'8.7"E	Mandvi	Kutch	Water used for domestic purpose.
2.	Panchotiya	3.06	SE	22°51'50.4"N s69°10'49.9"E	Mandvi	Kutch	Open well was at the bank of pond. Water used for domestic purpose.
3.	Bada	0.78	NNW	22°54'2.8"N 69°08'33.5"E	Mandvi	Kutch	Water used for domestic purpose. Depth – 100 ft. Dia- 5 mts. Single phase motor.
4.	Bhinsara	2.45	East	22°53'22.1"N 69°11'22.5"E	Mandvi	Kutch	Waste debris, frogs observed in the well. Water level was at 20 ft. In the open well, water mixed with pond water due to monsoon activity.
5.	Mota Layja -1	5.59	East	22°53'39.6"N 69°13'14.2"E	Mandvi	Kutch	Pond water is directly penetrating into the open well. Well is surrounded by the pond.
6.	Mota Layja -2	4.16	NE	22°55'34"N 69°11'19.5"E	Mandvi	Kutch	Some debris along with frog, fishes and small insects observed in the well. Borewell constructed in open well.
7.	Bayath	5.31	NNE	22°56'28.2"N 69°10'47.4"E	Mandvi	Kutch	Water is used for the domestic purpose.
8.	Bambhadai	6.86	NW	22°56'11.2"N 69°05'27.6"E	Mandvi	Kutch	Water used for domestic purpose. Dug well near pond. Depth – 40 ft.
9.	Nana Layja	6.62	ESE	22°52'9.6"N 69°13'22.8"E	Mandvi	Kutch	Water used for domestic and agriculture purpose.
10.	Padampur	6.61	NNE	22°57'16.1"N 69°10'43.9"E	Mandvi	Kutch	Sample taken from open well. Water used for domestic and agriculture purpose.
11.	Dedhiya	8.12	NNW	22°58'11.1"N 69°08'25"E	Mandvi	Kutch	Water used for drinking and domestic purpose after treatment. Depth – 100 ft. Dia - 200 mm. Single phase motor. Phreatic water level – 70 ft.



Location: Nana Layja
Latitude: 22°52'4"N, Longitude: 69°13'24"E



Location: Bhada
Latitude: 22°51'14"N, Longitude: 69°12'8"E



Location: Panchotiya
Latitude: 22°51'49"N, Longitude: 69°10'49"E



Location: Bhinsara
Latitude: 22°53'46"N, Longitude: 69°11'22"E



Location: Bayath
Latitude: 22°56'25"N Longitude: 69°10'46"E



Location: Padampur
Latitude: 22°57'26"N, Longitude: 69°10'39"E



Location: Mota Layja-1
Latitude: 22°53'39"N, Longitude: 69°13'13"E



Location: Mota Layja-2
Latitude: 22°55'34"N, Longitude: 69°11'19"E



Location: Dedhiya
Latitude: 22°58'58"N, Longitude: 69°7'40"E

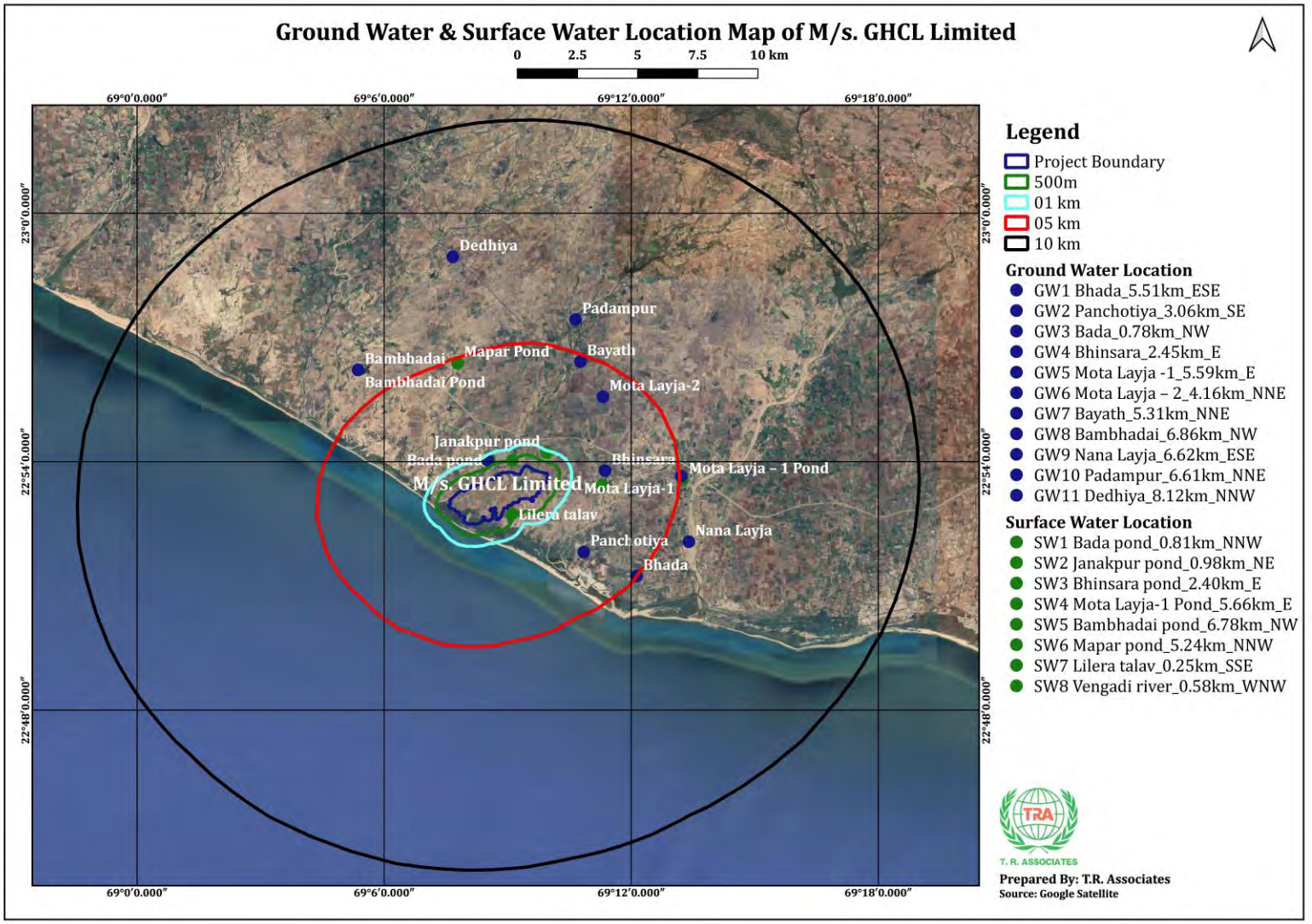


Location: Bada
Latitude: 22°54'3"N, Longitude: 69°8'33"E



Location: Bambhadai
Latitude: 22°56'13"N, Longitude: 69°5'22"E

Figure 3.7 Photograph showing Ground Water Sample Collection



Source: Satellite Image (Google Earth)

Figure 3.8 Map showing Ground Water and surface water Monitoring Locations

Table 3.15 Surface Water Monitoring Locations

Sr. No.	Location	Distance from project site (km)	Direction	Latitude & Longitude	Taluka	District	Observation
1.	Bada Pond	0.81	NNW	22°54'4"N 69°8'33.3"E	Mandvi	Kutch	Animal bathing observed. Washing activity also observed & water used for domestic purpose.
2.	Janakpur Pond	0.98	NE	22°54'13.8"N 69°09'57.3"E	Mandvi	Kutch	Religious debris observed. Water is used for Domestic purpose.
3.	Bhinsara Pond	2.40	E	22°53'24.6"N 69°11'20.9"E	Mandvi	Kutch	Slide turbidity observed in water due to suspended particles of soil. Biota and green vegetation observed.
4.	Mota Layja – 1 pond	5.66	E	22°53'34.8"N 69°13'15.4"E	Mandvi	Kutch	Waterbody was full of water. Biota observed around the pond. Religious waste observed.
5.	Bambhadai Pond	6.78	NW	22°56'12"N 70°28'28.42"E	Mandvi	Kutch	Use for domestic activity. Animal bathing and biota observed.
6.	Mapar Pond	5.24	NNW	22°56'23.2"N 69°07'47"E	Mandvi	Kutch	Biota observed. Animal bathing observed.
7.	Lilera Talav	0.25 km	SSE	22°52'44.00"N 69° 9'6.00"E	Mandvi	Kutch	Biota observed. Animal drinking and bathing observed.
8.	Vengadi River	0.58 km	WNW	22°54'2.00"N 69° 9'7.00"E	Mandvi	Kutch	Vengadi river is seasonal river and stagnant water observed. Biota observed all over area. Also, small fish observed.

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<table>
<tr><td> 
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<tr><td>Location: Bhinsara Pond
Latitude: 22°53'26"N, Longitude: 69°11'18"E</td><td>Location: Mota Layja Pond
Latitude: 22°53'34"N, Longitude: 69°13'15"E</td></tr>
<tr><td> 
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</td></tr>
<tr><td>Location: Bhambhdai Pond
Latitude: 22°56'13"N, Longitude: 69°5'22"E</td><td>Location: Lilera Talav
Latitude: 22°52'44"N, Longitude: 69°9'6"E</td></tr>
<tr><td> 
</td><td> 
</td></tr>
<tr><td>Location: Janakpur pond
Latitude: 22°54'13"N, Longitude: 69°9'57"E</td><td>Location: Bada Pond
Latitude: 22°54'4"N, Longitude: 69°8'33"E</td></tr>
<tr><td> 
</td><td> 
</td></tr>
<tr><td>Location: Mapar Pond
Latitude: 22°56'23"N, Longitude: 69°7'47"E</td><td>Location: Vengadi River
Latitude: 22°54'2"N, Longitude: 69°9'7"E</td></tr>
</table>

Figure 3.9 Photograph showing Surface Water Sample Collection

Sr No	Parameters	Bhinsara Pond	Mota Layja-1 Pond	Bada Pond	Bambhadai Pond	Mapar Pond	Janakpur Pond	Vengadi river	Lilera Talav	Acceptable Limit	Permissible Limit
	m as Mo (mg/L)	0.01)	0.01)	0.01)	1)	.01)	.01)	0.01)	.01)		
46	**Selenium as Se (mg/L)**	BDL(DL= 0.005)	BDL(DL= 0.005)	BDL(DL= 0.005)	BDL(DL=0.0 05)	BDL(DL=0 .005)	BDL(DL=0 .005)	BDL(DL= 0.005)	BDL(DL=0 .005)	0.01	No relaxation
47	**Zinc as Zn (mg/L)**	BDL(DL= 0.02)	BDL(DL= 0.02)	BDL(DL= 0.02)	BDL(DL=0.0 2)	BDL(DL=0 .02)	BDL(DL=0 .02)	BDL(DL= 0.02)	BDL(DL=0 .02)	5	15

Note: BDL = Below Detection Limit, NS = Not Specifies, D.L. = Detection Limit, ND = Not Detected
Permissible Limit is applicable in the absence of Alternate source

3.4.1.4 BASELINE DATA INTERPRETATION OF SURFACE WATER ANALYSIS

- pH is found between 7.37 to 8.38 which is well within the acceptable limits.
- Chloride is found within the range of 41.5 mg/L to 589 mg/L. The concentration is found higher than the acceptable limit at Janakpur pond and Vengadi river, but found well within the permissible limit. The higher concentration is may be due to the use of surfactants for domestic washing activities such as cloth and utensil washing. Also, the higher concentration can be due to the saline soil of study area.
- Total Hardness is found within the range of 70 mg/L to 890 mg/L. The concentration is found higher than the acceptable limit at all locations except Bambhadai pond, Mapar pond and Lilera talav. Total hardness was found higher than the permissible limit at only Vengadi river. It may be due to the saline soil due to nearby coastal area.
- Magnesium is found within the range of 8.1 mg/L to 126.4 mg/L. The value found higher than the acceptable limit at Bada pond and Vengadi river and found higher than the permissible limit at only Vengadi river.
- Calcium is found within the range of 12 mg/L to 148.3 mg/L. The value found higher than the acceptable limit at Bhinsara Pond, Janakpur pond and Vengadi river, but found well within the permissible limit.
- TDS is found within the range of 176 mg/L to 2472 mg/L. TDS found higher than the acceptable limit at all locations except Bambhadai pond, Mapar pond and Lilera talav. The TDS is found higher than the permissible limit at Vengadi river. It may be due to the salty soil of the study area. The sampling location is nearby the coastal area. Also, domestic washing activities may contribute to the higher results of TDS.
- DO is found within the range of 4.9 mg/L to 5.6 mg/L, which is quite good for aquatic life.
- COD is found within the range of 8.1 mg/L to 44.4 mg/L, which may be due to the agriculture run off and storm water runoff.

- The concentration of iron found higher than the acceptable limit at Bhinsara pond and Bambhadai pond. It may be due to the iron content in the soils of the area.
- Other parameters like Arsenic as As, Zinc as Zn, Selenium as Se, Molybdenum as Mo, Mercury as Hg, Lead as Pb, Cobalt as Co and Cadmium as Cd at all the locations are found BQL.
- Total coliform was found at all locations. And it may be due to the cattle washing, presence of algae, and use of water for domestic activities, which may impact on health of persons who will use this water.
- Thus, surface water can be used for domestic and agricultural purpose after primary treatment as well as after disinfection.
- Water quality of all 8 locations is found below E as per CPCB guidelines

3.4.1.5 WATER QUALITY INDEX

Table 3.18 water quality classification based on WQI value

WQI Value	Water Quality
<50	Excellent
50-100	Good water
100-200	Poor water
200-300	Very poor water
>300	Water unsuitable for drinking

(Ramakrishnaiah *et al.*2009)

Table 3.19 Water Quality Index for Surface Water

Parameter	Standard	Bada Pond	Janakpur Pond	Bhinsara Pond	Mota Layja-1 Pond	Mapar Pond	Bambhadai Pond	Lilera Talav	Vengadi River
	S1	C1	C2	C3	C4	C5	C6	C7	C8
pH	7	7.73	8.38	7.37	7.86	8.23	8.06	8.22	7.78
Chloride as Cl^-	250	191.3	281.9	166.1	167.8	41.5	50.3	55.9	589
Total Hardness as $CaCO_3$	200	290	366.7	300	263.6	70.0	100	88.9	890
Calcium as Ca^{++}	75	64.1	75.7	76.2	61.9	12	20	22.3	148.3
Magnesium as Mg^{++}	30	31.6	43.2	26.7	26.5	9.7	12.2	8.1	126.4
Nitrate as NO_3^-	45	1.98	2.79	3.31	3.90	1.72	2.18	3.51	1.44
Fluoride as F	1	0	0	0	0	0	0	0	0
Sulphate as SO_4^{-2}	200	64	125	66	49	10	48	52	166
TDS	500	860	1300	784	524	176	212	300	2472
Bicarbonate*	600	48	88	160	130	38	12	18	116

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Bada Pond	Janakpur Pond	Bhinsara Pond	Mota Layja-1 Pond	Mapar Pond	Bambhadai Pond	Lilera Talav	Vengadi River	Weight (wi)	Relative Weight (Wi)
q1	q2	q3	q4	q5	q6	q7	q8		
110.43	119.71	105.29	112.29	117.57	115.14	117.43	111.14	4	0.1
76.52	112.76	66.44	67.12	16.58	20.12	22.36	235.60	3	0.1
145.00	183.33	150.00	131.82	35.00	10.00	44.45	445.00	2	0.1
85.47	100.93	101.60	82.53	16.00	16.27	29.73	197.73	2	0.1
105.33	144.00	89.00	88.33	32.33	40.67	27.00	421.33	2	0.1
4.40	6.20	7.36	8.67	3.82	4.84	7.80	3.20	5	0.2
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4	0.1
32.00	62.50	33.00	24.50	5.00	24.00	26.00	83.00	4	0.1
172.00	260.00	156.80	104.80	35.20	42.40	60.00	494.40	4	0.1
8.00	14.67	26.67	21.67	6.33	2.00	3.00	19.33	3	0.1
								33	1.0

Bada Pond	Janakpur Pond	Bhinsara Pond	Mota Layja-1 Pond	Mapar Pond	Bambhadai Pond	Lilera Talav	Vengadi River
SI1	**SI2**	**SI3**	**SI4**	**SI5**	**SI6**	**SI7**	**SI8**
13.39	14.51	12.76	13.61	14.25	13.96	14.23	13.47
6.96	10.25	6.04	6.10	1.51	1.83	2.03	21.42
8.79	11.11	9.09	7.99	2.12	0.61	2.69	26.97
5.18	6.12	6.16	5.00	0.97	0.99	1.80	11.98
6.38	8.73	5.39	5.35	1.96	2.46	1.64	25.54
0.67	0.94	1.11	1.31	0.58	0.73	1.18	0.48
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3.88	7.58	4.00	2.97	0.61	2.91	3.15	10.06
20.85	31.52	19.01	12.70	4.27	5.14	7.27	59.93
0.73	1.33	2.42	1.97	0.58	0.18	0.27	1.76
66.81	**92.08**	**65.99**	**57.01**	**26.84**	**28.81**	**34.28**	**171.61**
Good	**Good**	**Good**	**Good**	**Excellent**	**Excellent**	**Excellent**	**poor**

Interpretation for Surface water: Water quality index is found to be Excellent at Mapar Pond, Lilera pond and Bambhadai Pond, good at Bada Pond, Janakpur pond, Bhinsara pond, and Mota Layja-1 pond and observed poor at vengadi river. Poor quality water can be used after appropriate treatment.

3.5 SOIL ENVIRONMENT

Land study is important for Environmental Impact Assessment to identify sensitive issues and take appropriate action by maintaining 'ecological homeostasis' in the early stages of development of the project. The objective of this report is to define the present environment in which the proposed action is to occur, to evaluate all the possible eventualities, to ensure that all negative impacts are minimized and to demonstrate that the proposed project has been appropriately announce to all the interested parties so that their concerns can be considered.

For this purpose, baseline data (biotic and abiotic factors) have been studied around 10 km radius of the project. This data has been generated during **December 2022- February 2023.**

3.5.1 METHODOLOGY OF SOIL SAMPLING AND ANALYSIS

Soil

For soil quality analysis, 10 sampling sites were chosen to understand physio-chemical status of the soil. Photograph of soil sampling is shown in **Fig. 3.10** and the sampling sites are marked in **Fig. 3.11**. This will establish the baseline characteristics and will facilitate identifying the contamination if any due to the proposed project.

Collection of soil samples and analysis

The soil samples were collected with tube auger the rotary cuttings and bailers and also from split spoon samplers. Un-disturbed tube samples were collected using thin walled tubes. Soil samples were collected such that structure and moisture content of the soil do not get altered. In accordance with IS: 2720, split samples were carefully extracted from the samplers.

Adequate amount of composite soil samples was collected very precisely for analysis. The samples were packed in dependable, waterproof containers and marking specified accurately and distinctly. All the soil samples and core boxes were carefully transported to the testing laboratory. Soil sampling and analysis has been done as per the Indian Standard IS – 2720.

	
Location: Bhinsara Latitude: 22°53'36"N, Longitude: 69°12'26"E	**Location: Bayath** Latitude: 22°55'39"N, Longitude: 69°11'17"E

	
Location: Padampur Latitude: 22°57'51"N, Longitude: 69°10'17"E	**Location: Bambhadai** Latitude: 22°57'4"N, Longitude: 69°4'51"E
	
Location: Mapar Latitude: 22°55’40"N, Longitude: 69°8'4"E	**Location: Bada** Latitude: 22°53'35"N, Longitude: 69°7'52"E
	
Location: Mota Layja Latitude: 22°52’44"N, Longitude: 69°13'42"E	**Location: Bhada** Latitude: 22°51’17"N, Longitude: 69°11'54"E
	
Location: Panchotiya Latitude: 22°51’33"N, Longitude: 69°10'35"E	**Location: Janakpur** Latitude: 22°53’16"N, Longitude: 69°10'36"E

Figure 3.10 Photograph showing soil sample collection

Parameters analyzed for soil samples were pH, Electrical Conductivity, Moisture, Organic Matter, Organic Carbon, available Phosphorus, Sodium, Potassium, Cation Exchange Capacity, Water Holding Capacity and SAR, Total Nitrogen, Calcium, Magnesium, Nitrate, Bulk density & texture.

CHAPTER – 5
ANALYSIS OF ALTERNATIVES

SECTION 5.3: TECHNOLOGIES FOR ENVIRONMENT MANAGEMENT

SR. NO.	PARTICULAR	CONVENTIONAL TECHNOLOGIES	PROPOSED TECHNOLOGY ALTERNATIVES	JUSTIFICATION FOR SELECTION OF TECHNOLOGY
1.	Wastewater Management	Domestic wastewater: • **Option: 1** Domestic wastewater can be disposed to soak pit via septic tank or treated I STP with primary treatment • **Option: 2** Domestic wastewater can be treated in STP with Primary treatment followed by Secondary and Tertiary treatment.	**Domestic wastewater:** • Total domestic wastewater (160 m^3/day) will be generated which will treated in STP and reuse in gardening (150 m^3/day).	• The domestic wastewater treated with Primary treatment followed by Secondary and Tertiary treatment in STP effectively reduce the concentrations of pollutants, suspended solids, organic matter, and nutrients in the wastewater, meeting regulatory standards and environmental discharge requirements. • The sludge generated from STP will be reused as manure in gardening as organic fertilizer promoting sustainability and resource efficiency. • Additionally, treated wastewater will be reused in greenbelt development, thereby reducing the demand for fresh water resources. • So, **Option 2** is adequate and efficient for the unit for domestic effluent treatment.

SR. NO.	PARTICULAR	CONVENTIONAL TECHNOLOGIES	PROPOSED TECHNOLOGY ALTERNATIVES	JUSTIFICATION FOR SELECTION OF TECHNOLOGY
2.	Air Pollution Control	• **Option: 1** Multi cyclone Separator followed by ESP followed by Alkali scrubber can be provided as APCM for stack attached to Boiler of Captive Power Plant. • **Option: 2** Flue Gas Desulphurization System along with individual ESP with all 6 nos. of CFBC boiler as APCM for stack attached to CFBC boiler of Captive Power Plant.	• Unit will have Flue Gas Desulphurization System along with individual ESP with all 6 nos. of CFBC boiler as APCM with adequate stack height of 130 m. • The unit will Inject Sodium Bicarbonate for the control of SO_2 emission.	• The unit will install CPP with flue gas desulphurization CFBC Boiler along with 6 individual ESP with each Boiler. The unit will provide adequate stack height of 130 m. • The desulphurization system will have 97% efficiency and further the Injection of Sodium Bicarbonate will increase the efficiency to 99.70% controlling the SO_2 emission up to larger extent meeting the emission standards and will not pose any impact on the environment as well as nearby habitat and vegetation. • For the control of process gas emissions from Lime Kiln, Ammonia Recovery system, Lime grinding system / Slaker, Calciner unit, Densification and Sodium Bi-Carbonate Unit, the unit will provide efficient APCM such as Scrubber, Bag filter, Wet ESP, Dust collection system. • Proposed APCM are efficient to remove the Pollutants and required need meets the pollutants criteria given by authority. • So, **Option 2** is adequate and efficient for the unit for the control of air pollution.
3.	Solid/ Hazardous Waste Management	Solid & Hazardous Waste can be stored in separate storage area with pucca	Details of Hazardous Waste Management: ➢ **Settled Sludge from treatment of effluent**	• The proposed disposal management of the Solid/Hazardous waste generated from the Soda Ash and Captive power plant is

SR. NO.	PARTICULAR	CONVENTIONAL TECHNOLOGIES	PROPOSED TECHNOLOGY ALTERNATIVES	JUSTIFICATION FOR SELECTION OF TECHNOLOGY
		flooring, shed & leachate collection system The Solid & Hazardous wastes can be finally disposed of by following ways: 1) To TSDF site 2) To CHWIF site 3) Recover/Reuse of wastes within premises. 4) Treated in ETP. 5) Sold to registered recyclers	**generated from captive power plant & RO/DM Plant** Collection, storage and disposal at approved TSDF site ➢ **Used Oil** Collection, storage and used within premises as a lubricant / sold to registered recycler ➢ **Discarded Drums and Bags** Collection, storage & sold to authorized vendor ➢ **Spent Ion exchange resin** Collection, storage and disposal at approved TSDF site ➢ **Used Cotton** Collection, storage and disposal at approved CHWIF site ➢ **Lead acid Batteries** Collection, storage & sold to authorized agency through auction.	adequate for the unit to ensure that it will not have any adverse impact on the land/soil, marine life and nearby terrestrial habitat.

SR. NO.	PARTICULAR	CONVENTIONAL TECHNOLOGIES	PROPOSED TECHNOLOGY ALTERNATIVES	JUSTIFICATION FOR SELECTION OF TECHNOLOGY
			➢ **Ash (Fly ash & Bottom Ash) from Boiler** Collection, storage & sold to cement Manufacturing/ Brick Manufacturing ➢ **E-Waste** Collection, storage & sold to authorized agency through auction ➢ **Plastic Waste** Collection, Storage and Disposal to CPCB/SPCB authorized recyclers under EPR of Plastic Waste Management ➢ **Bio-medical Waste** Collection, storage and disposal at as per Bio-medical Waste Management Rules, 2016 ➢ **Construction and Demolition Waste** Collection, storage and utilize internally for area filling, road making etc. ➢ **STP sludge** Reused as Manure in Greenbelt Development ➢ **Kitchen Waste** Collected and composted in Composter and further used as manure for gardening in the	

SR. NO.	PARTICULAR	CONVENTIONAL TECHNOLOGIES	PROPOSED TECHNOLOGY ALTERNATIVES	JUSTIFICATION FOR SELECTION OF TECHNOLOGY
			premises ➢ **Limestone rejects** Collection and reused in Boiler for desulphurization and as a sweetener in cement industry, road making, pavement etc.	

CHAPTER – 6
ENVIRONMENTAL MONITORING PROGRAM

6.1 PREAMBLE

Environmental monitoring can be defined as the sampling and analysis of different aspects of environment like air, water, soil, noise and biodiversity to analyse at regular intervals. Environmental monitoring is used in the preparation of environmental impact assessments, as well as in many circumstances in which human activities carry a risk of harmful effects on the natural environment. All monitoring strategies and programs have reasons and justifications which are often designed to establish the current status of an environment or to establish trends in environmental parameters. In all cases the results of monitoring will be reviewed and analysed statistically.

Environmental monitoring program is designed to understand how the environment changes over time. Therefore, regular monitoring program of the environmental parameters is essential to consider the changes in the environment. The objectives of environmental monitoring program are;

1. To verify the results of the impact assessment study in particular with regard to new development.
2. To follow the trend of parameters which have been identified as critical;
3. To check or assess the efficiency of the pollution control measures;
4. To ensure that new parameters, other than those identified in the impact assessment study, do not become critical through the commissioning of new installations;
5. To check assumption made with regards to the development and to detect deviations in order to initiate necessary measures; and
6. To establish a database for future Impact Assessment Studies for new projects.

6.2 ENVIRONMENTAL MONITORING PROGRAM & BUDGET FOR IMPLEMENTATION OF ENVIRONMENTAL MONITORING PLAN

The attributes, which merit regular monitoring, are air quality both at source and ambient atmosphere, water and wastewater quality, noise levels, ecological conservation, greenbelt development, socio-economic aspects, etc. The Post Project Monitoring program is given below in Table 6.1. NABL accredited /GPCB approved agency will carry out monitoring/sampling, analysis and charge/cost will be as specified by the GPCB. Annual budget allocated towards environmental monitoring with respect to the proposed project is approx. **Rs. 50,30,870 per Annum** as described in **Table - 6.1.**

Table 6.1 Environmental Monitoring Program & Budget Allocation

Sr. No.	Particulars	Monitoring Frequency	Parameters	Analysis & sampling Rate in Rs. per parameters	Methodologies	Total Budget in Rs. per year
Air Pollution Monitoring						
1.	Stack Monitoring of flue gas stack (8 Nos) and process gas stack (9 Nos)	Monthly	SPM, SO_2, NO_2, CO, HC or specified by GPCB in their consent	SPM – 1050 SO_2 – 1050 NO_2 – 1050 HC – 5300 NO_x – 1050 PM – 1050 CO – 1050 Sampling Charge: Stack Monitoring Flue Gas - 13100 Stack Monitoring Process Gas - 18400	PM: IS 11255(Part-1):1985 (RA 2014) SO_2: IS 11255(Part-2):1985 (RA 2014) NO_x: IS 11255(Part-7):2012 (RA 2017)	44,59,800/-
2.	**Ambient Air Quality Monitoring** • Near Coal Storage • Near Parking • Near Process Area • Upwind of CPP stack • Downwind of CPP stack-1 • Downwind of CPP stack-2	Every 3 Month or as per EC & CCA	SPM, SO_2, NO_2 specified by GPCB in their consent	SPM- 1050 SO_2 – 1050 NO_2 – 1050 & sampling charge = 10500	PM: IS 11255(Part-1):1985 (RA 2014) SO_2: IS 5182(Part-2):2001 (RA 2017) NO_x: IS 5182(Part-6):2006 (RA 2017)	3,70,800/-
3.	Work zone fugitive monitoring for VOC (2 locations)	Twice in a year	SPM	SPM-1050 & sampling charge = 10500	PM: IS 11255(Part-1):1985 (RA 2014)	46,200/-
Water Pollution Monitoring						

Sr. No.	Particulars	Monitoring Frequency	Parameters	Analysis & sampling Rate in Rs. per parameters	Methodologies	Total Budget in Rs. per year
4.	Monitoring of wastewater (ETP inlet and outlet)	Monthly	pH, Temperature, TSS, Ammonical Nitrogen, Oil & Grease	pH – 110 Temperature – 120 TSS – 180 Ammonical nitrogen - 350 Oil & Grease – 350 & sampling charge = 960	APHA-AWWA 22nd edition	49,440/-
5.	Monitoring of wastewater (STP inlet and outlet)	Monthly	pH, BOD, TSS	pH-110 BOD-1050 TSS-180 & sampling charge = 960		55,200/-
Noise Quality Monitoring						
6.	**Ambient noise monitoring** • Near DG set • Near Turbine in CPP • Near Boiler & ESP area • Near Limstone Grinding Section	Twice in a year	Noise level by Sound Level Meter	Sampling charge: First Monitoring - 7000 Each Subsequent Monitoring Within same premises - 10500	IS: 9989	35,000/-
Soil Quality Monitoring						
7.	Monitoring of soil (1 within the premises and 1 from vicinity)	Once in a year	EC, Nitrate, CEC, Phosphate, SAR, Organic Carbon	EC – 175 Nitrate-530 CEC-700 Phosphate-700 SAR-1140 Organic carbon-620	IS 2720 various parts and book by Department of Agriculture and Cooperation, Ministry of Agriculture	9830/-

Sr. No.	Particulars	Monitoring Frequency	Parameters	Analysis & sampling Rate in Rs. per parameters	Methodologies	Total Budget in Rs. per year
				& sampling charge = 1050		
8.	Monitoring of solid / hazardous waste generated (ETP waste)	Once in a year	Reactivity Corrosivity Total Organic Carbon	Reactivity – 960 Corrosivity – 960 Total Organic Carbon – 880 & sampling charge = 1800	--	4600/-
9.	Records of generation of Solid / Hazardous Wastes	Daily				
10	Record of storage, treatment, transportation and disposal of solid / hazardous wastes to recyclers/Re processors and TSDF	Daily				
	Total					**50,30,870/-**

Source: The Gujarat Government Gazette "Egazzete analysis charge 13/05/2022" by Gujarat Pollution Control Board

6.3 Infrastructural Requirements

The unit will provide effluent treatment plant for treatment of industrial effluent. The unit will install small laboratory for analysis of effluent for basic parameters like pH, COD, TDS regularly. In order to observe the efficacy of treatment system. In addition to this, regular monitoring will be carried out through NABL approved laboratory.

For the medical facilities, first aid boxes/kits, with basic medicines and requirements, will be provided at prominent places in the premises and also one MBBS doctor will be appointed for weekly visit in the plant. Moreover, unit will tie-up with nearby hospital for medical assistance in case of any emergency. Unit will maintain the medical records of all workers.

6.4 Documentation and Reporting

All the data and reports of monitoring of all parameters as stated in monitoring program will be properly maintained and timely reviewed by management for taking corrective or preventive actions. Monitoring reports will be regularly submitted to the concerned authorities as per their requirements.

6.5 Corporate Environment Policy

Project proponent is going to propose manufacturing plant of different types of resins and understand their responsibilities towards community as well environment alongwith doing business. They believe in sustainable development and therefore will provide adequate environmental control and management system in unit and will regularly and efficiently operate the same.

Unit will prepare environment policy duly approved by all partners prescribing standard operating procedures to bring into focus any deviation/violation of environmental or forest norms/conditions. The policy will be displayed at various prominent places in the premises and all the employees will be educated about the same.

For performing all the environmental management activities and operating environmental management systems efficiently, unit will establish Environmental Management Cell governed by partner as mentioned below.

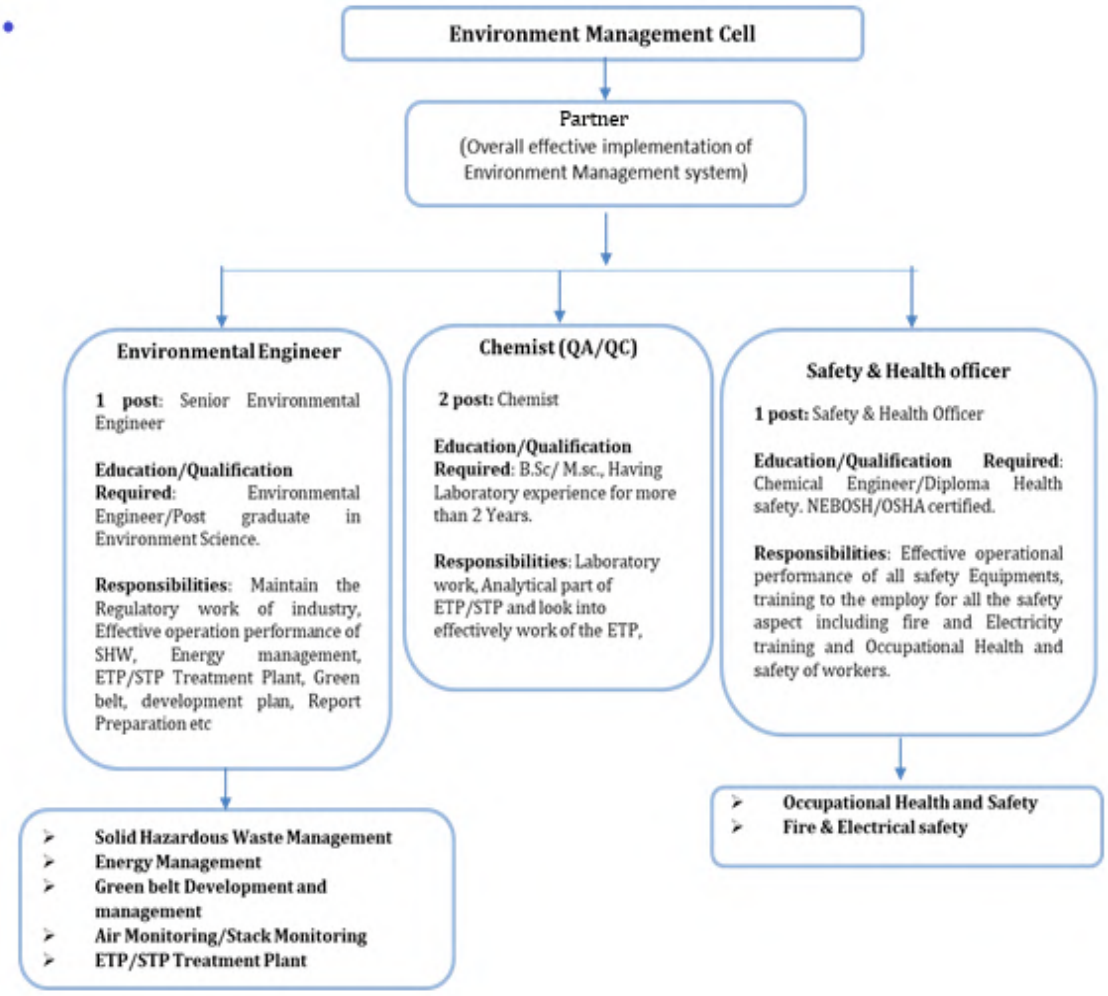


Figure 6.1: Environmental Management Cell

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CHAPTER - 7
ADDITIONAL STUDIES

A. Public Consultation

The proposed project **Greenfield Chemical Complex of M/s. GHCL Limited** is located at Village Bada, Taluka – Mandvi, District Kutch, Gujarat for manufacturing of Soda Ash. The proposed product fall under Category 4(e) as stated in Environment Impact Assessment Notification Published on 14th September, 2006.

Public Consultation refers to the process by which the concerns of locals likely to be affected or all the stakeholders who have tenable stake in the environmental impacts due to the project are established with a view to considering all the material concerns in the project design as appropriate.

Public Consultation:

1. Submission of Draft EIA report to the Concern authorities
2. Notice of Public hearing
3. Panel supervising the public hearing process
4. Videography
5. Proceedings
6. Process of public hearing should be complete in 45 days date of receipt of the request letter from the Applicant.

- The Public Hearing earlier was scheduled to be held on 16-04-2022 at 11:00 Hrs., Venue: Project Site, Survey no. 432, Village: Bada, Taluka: Mandvi, District: Kutch. Public hearing was then time being postponed due to unavoidable circumstances. After that public hearing was completed on **17-10-2022 at 11.00 Hrs.** Venue: Project Site, Survey no. 432, Village: Bada, Taluka: Mandvi, District: Kutch, Gujarat. Which was presided over by Shri Chetan Mishan (GAS), Sub Divisonal Magistrate & Deputy Collector, Mundra- Kutch.
- The public hearing was attended by 106 people. Requisite publicity through local newspapers/ media i.e. earlier an advertisement in English was published in **"The Times of India" Dated 04.03.2022** and in Gujarati in **"Divya Bhaskar" Dated 03.03.2022** and re advertisement in English was published in **"The Times of India" Dated 01.10.2022** and in Gujarati in **"Divya Bhaskar" Dated 30.09.2022.**
- Total 1154 written questions and 1066 verbal questions were asked by people in Public Hearing.
- The project proponent has given commitment to fulfil the environmental and social responsibility for development of community of nearby villages.
- The Public hearing Action Plan for written as well as verbal issues is attached below:

S. No.	Issue related to	Verbal/ written nos. of issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
1	CER – Fodder	4	Steps to be taken for cattle Care about Maldhari community Security regarding fodder supply for livestock. Provision for taking care of the health cattle.	Fodder will be provided as well as provision for veterinary doctor will be carried out by GHCL foundation under CSR activity.	• Activities for fodder supply will be carried out under CSR and CER activities for strengthening the bond between the project authorities and the local population. (refer Ch-8 and Table 10.4 in Ch-10). Fodder field will be developed on the Government/allocate land to nearby villages. • Unit will do promotion through providing support for breed improvement, animal health care, fodder improvement and providing veterinary doctor in nearby villages under CER and CSR activities for communities. • During year 2020-2021, GHCL foundation has spent INR 9.03 Crores towards CSR activities. CSR projects/activities worth INR 19.09 Cr. were implemented. GHCL wide range of CSR projects have touched and benefitted more than 90,200 lives over the years. Promoting such activities like water conservation, Animal husbandry, health care, SHG, Infrastructure development etc. • We have already provided veterinary doctor for nearby affected villages.	• As per MoEF&CC Office Memorandum F.NO. 22-67/2017-IA III, MoEF&CC, New Delhi, dated on 1st May 2018 GHCL Ltd has earmarked 0.5 % of capital investment (approx. Rs. 18.04 crore), towards the Corporate Environment Responsibility in 5 years • GHCL Ltd will spend approx. **4.35 crore*** towards Animal husbandry promotion through providing support for breed improvement, animal health care, Veterinary doctor and others as well as provides Fodder for cattle feeding nearby villages as per requirement under **CER activities** (* value may defer as per actual requirement)	5 years	GHCL Limited
2	CER - Employment	5	For employment of local villagers Number of employment opportunities to be generated	Information on employment opportunities has given by Project Proponent that there are	• The proposed project has a potential for employment of skilled, semiskilled and	• GHCL Ltd will spend approx. **2.25 crore** towards Promoting	During construction and	GHCL Limited

			Priority must be given to nearby 10 villages Regarding priority to nearby villages	different types of employment opportunities in the two phase of the projects i.e. construction	unskilled employees during construction phase as well as	activities for skill building to improve	Operation phase	

S. No.	Issue related to	Verbal/ written nos. of issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
			for labor work Regarding employment for local communities.	phase and operational phase of the project. GHCL will strive to provide these employment opportunities to the local people, for which work will be done for their skill development and employment opportunities will be provided to the local people. As per requirement, training will be given to local people in coordination with HR department. Priority will be given for employment of local people. In nearby villages a group of women can be formed so that they can work in Gruhudhyogs (Home- based business). M/s. GHCL shall provide employment to women as per their skills and qualification.	operational phase. The plant will create direct employment in phased manner for about 1200 (operational phase) skilled as well as semi-skilled staff and indirectly large number of unskilled manpower will be engaged for the project. For Employment, local people will get first priority as per suitability and requirement. People will also get employed by the contractors for various project related activities. (Refer Ch-8 of EIA report) • GHCL foundation will carry out skill development Programme for local youth to improve their employment	employment opportunities and women empowerment in nearby villages under **CER activities.**		

3	CER - Health	1	Regarding health facilities under CSR activities	Will provide mobile health van facility and upgradation of existing healthcare infrastructure	opportunities, women empowerment under CSR and CER activities. • Industry will provide Mobile Health Care, Health Camps, and Specialized Check Up Camps in nearby villages. Necessary support and help will be extended for advanced diagnosis and treatment wherever identified, Free medical health checkup under CSR and CER activities.(Refer Ch-8 of EIA report). We have already initiated mobile health van facility for nearby affected villages of project site.	• GHCL Ltd will spend approx. **2.12 crore** towards Infrastructure development Such as primary healthcare units and the fulfilment of the basic amenities in PHCs including mobile medical van and Provide Bala-Rasayana to Malnutrition Children in Aanganwadi and PHC of nearby Villages under **CER activities.** • GHCL Foundation will spend approx. **2.47 crore**	5 years	GHCL Limited
4	CER - Education	3	Regarding scholarship under CSR activity Regarding skill development	Will build school in future as per requirement and will also upgrade the existing school infrastructure and will carry out	• Unit will be directed at two levels viz. school and skill building to improve employment opportunities. At		5 years	GHCL Limited

S. No.	Issue related to	Verbal/ written nos. of issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
			conditions To provide educational facilities	skill development activities	school level we intend to promote quality of education and learnability, develop infrastructure of Government schools, provide vocational training as per the requirement under CSR and CER activities. • GHCL foundation will support local government and NGO to make that program more effective. • GHCL foundation will carry out skill development Programme for local youth to improve their employment opportunities, women empowerment under CSR and CER activities. • During year 2020-2021, GHCL Foundation has spent INR 9.03 Crores towards CSR activities. CSR projects/activities worth INR 19.09 Cr. were implemented. GHCL wide range of CSR projects have touched and benefitted more than 90,200 lives over the years. Promoting such activities like water conservation, Animal husbandry, health care, SHG, Infrastructure development etc.	towards Infrastructure development for quality of education, which will ultimately upgrade schools in nearby villages under **CER activities.**		
5	Air Pollutants (SOx, NOx, Dust)	6	Height of chimney to be installed Levels of SOx and NOx	For minimizing Air Pollution, requisite height of the stacks will be provided as per the NAAQS	• The best available technology-based pollution prevention and control shall	• **Air pollution** • Capital cost would	During operation phase	GHCL Limited

			Regarding acid rain cause by SOx Emission of PM during transportation and Emission	norms. Besides this, Modern technology equipment's like Dust collector, Electrostatic Precipitator, Scrubber will be	used to meet the regulatory standards and these pollution control systems will be commissioned before	include air pollution control devices like ESPs, Scrubbers, Dust extraction and		

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S. No.	Issue related to	Verbal/ written nos. of issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
			mercury. Regarding once through cooling for 120 MW.	installed. As a result, the pollution level will be within standard limits.	commencement of operation of the project. Wherever possible, the control systems shall be interlinked with the	Stacks, Dry Fog system, Wind screen etc- 89.28 crore which is included in		

			Regarding linkage of fuel and how they are going to use it	GHCL will continue to support development of green belt in the surrounding villages through various agencies including GHCL Foundation (AF). GHCL shall endorses AF tree plantation movement of planting trees in entire Mandvi Taluka and 50,000 trees that mentioned, GHCL shall surely nurture those plants for five years.	operational units, so that failure of the control system shall shut down the respective operational unit. • High efficiency ESPs shall be provided in the flue gas path of the CFBC boilers for control of particulate matter. • Finely ground limestone will be added to the boiler combustion zone • together with coal/lignite to arrest the SO2 formed during combustion. • Lime stone dozing system to the furnace to be designed to achieve higher than 90% capture of SO2. Monitoring system (CEMS) of air pollutants SO2, NOx, NH3, PM10 and PM2.5 will be implemented. • So, the expected pollutants will be well within standard norms. • The air quality monitoring will be carried out on regular basis by approved agencies by CPCB/GSPCB. (refer Ch-6 and Ch-10 of EIA report) • GHCL will implement greenbelt /plantation program to ameliorate the pollutants and improve the aesthetics and ambient air quality. (refer Ch-10 of EIA report) • There is negligible cooling water requirement for power generation. There is no any	**EMP cost** • Recurring cost would include operation and maintenance of pollution control devices- 1.50 crore which is included in **EMP cost** • **Environmental monitoring Programme** • Capital cost include OCEMS, online weather station etc- 3.4 crore which is included in **EMP cost** • Recurring cost – 1.30 crore which is included in **EMP cost** • **Greenbelt Development** • Capital Cost- 20 Crore • Recurring Cost- 0.5 crore The capital and recurring cost of greenbelt development is included in **EMP cost**		

S. No.	Issue related to	Verbal/ written nos. of issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
					alternative effective system is available for soda ash plant. • There is no readily available infrastructure for transportation of fuel i.e. rail or water way. So, we have to transport through road. Traffic study is shown in section 3.2.3 of chapter-3 and impact due to transportation is show in 4.1.4.3 and 4.2.3 of Chapter-4 in EIA report. In future, any alternative option available will explore. • GHCL Foundation will also promoting plantation activities in nearby villages under CSR and CER activities			
6	Water pollutants (BOD, COD, Ammonia, Mercury, Sea Weed, Mangroves)	7	Regarding water related question by Koli society Regarding decrease in number of phytoplanktons and disruption of food chain Regarding temperature and presence of ammonia in waste water Regarding presence of mangroves Regarding setup of tunnel for intake of sea water, seismic zone in which company falls, liquification of land due to heat	Effluent will be highly alkaline so it will be mixed with HCL and then it will be disposed off in sea. Design of structure will done according to seismic zone V. In soda ash industry impact of ammonia is very low.	• Industry will provide adequate effluent management and monitoring system for disposal of treated water • Proper seawater intake and treated effluent disposal (ensure maximum dilution) shall be done as per recommendation Marine EIA report. • The water monitoring results of (surface and groundwater and marine) should be carefully evaluated to identify significant changes, if any, adverse change from the baseline accordingly, corrective measures will be	• **Water Pollution** • Capital cost would include cost of ETP, STP etc- 14 crore which is included in **EMP cost** • Recurring cost would include operation and maintenance of pollution control devices- 0.12 crore which is included in **EMP cost**	During operation phase	GHCL Limited

			Regarding discharge of effluents into sea containing ammonia and high temperature and death of fishes at Sutrapada plant Regarding quality of effluent in terms of BOD and COD		taken to ensure the sustenance of water quality. However, there is no ground water pollution is envisaged in such soda ash plant, • The ammonia concentration in treated waste water well	• **Environmental monitoring Programme** • Capital cost include online pH, NH3-N, Temp meter etc- 3.4 crore which is included in **EMP cost**		

S. No.	Issue related to	Verbal/ written nos. of issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
					within the limit specified by CPCB for soda ash industry. • There is no such fish kill cases due to treated effluent in existing plant. There are independent studies available which indicates there is no significant adverse impact on marine environment but there will be positive impact on environment. • During studies, there is no such mangroves identified in sea water intake and outfall line area. • Design of pipeline/tunnel will be done according to seismic zone V. In case of catastrophic failure/ liquification on land, there are no chances of	• Recurring cost including Fresh water & wastewater sample analysis charges and Marine area environment monitoring – 1.30 crore which is included in **EMP cost**		

7	Marine Life	1	Effect on marine life due to proposed project	No adverse impact on fish or marine animals and sea weed observed.	flooding as water transport through gravity. • Industry should be ensured that the effluent released to the sea meets the prescribed GPCB/ CPCB norms at all times. This should be verified through tracer studies after the outfall becomes operational. The effluent release scheme can then be adequately modified to ascertain necessary dilution, if required. The efficiency of the diffuser must be checked periodically and if necessary, it should be cleaned to revert back to the dilution ascertained through initial tracer studies.	• A provision of Rs. 1 crore to be earmarked for the biodiversity management plan to be implemented in the project area during construction phase and operation phase which is included in **EMP cost** • For periodic monitoring of the marine area environment during project Construction phase, a provision of Rs. 0.5 crore to earmarked. • For operation phase, Rs. 0.5 crore per year to be kept provision for the monitoring.	During construction and Operation phase	GHCL Limited

S. No.	Issue related to	Verbal/ written nos. of issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
					• There are independent studies available which indicates there is no significant adverse impact on environment but there will be positive impact on environment. • Design of pipeline/tunnel will be done according to seismic zone V. In case of catastrophic failure/ liquification on land, there are no chances of flooding as water transport through gravity.	• The cost of periodic monitoring of marine area is included in **EMP cost**		
8	Health & Hygiene (Ammonia Leakage)	2	Skin diseases due to Soda Ash Regarding the leakage of ammonia.	GHCL will take care of any such issues related to Health of local peoples and workers. All the necessary measures for handling of chemicals will be implemented to reduce its impact on health of peoples. This information is also provided in the EIA report. All the pockets will have leak detection and repair system technology. Moreover, periodical maintenance will also be carried out. GHCL will ensure that there will be no leakage and therefore, there will not be occupational health issues for workers or villagers working in the plant. Moreover, GHCL will also provide PPE kits to workers for their safety.	• Ammonia tanks should have latest instrumentation provision for pressure indication, temperature indication and level indication. The provision of instrumentation should be within 100 percent redundancy. Continues recording of major parameters pertaining to the storages shall be maintained in the control room. • Unit will provide all the safety measure for ammonia storage as well as also prepare onsite and offsite emergency plan and all the APCM with respective units to mitigate the air pollution. The best available technology-based pollution prevention and control shall used to meet the regulatory	• Capital cost would include cost of OHS center, PPEs, fire & safety instruments, automation system for ammonia storage – 3.4 crore which is included in **EMP cost** • Recurring cost would include maintenance charges and training, audit & health check-up etc.- 0.35 crore which is included in **EMP cost**	During operation phase	GHCL Limited

S. No.	Issue related to	Verbal/ written nos. of issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
					commissioned before commencement of operation of the project. Wherever possible, the control systems shall be interlinked with the operational units, so that failure of the control system shall shut down the respective operational unit. • There is no significant impact observed in the existing soda ash plants in Gujarat. • There are rare possibilities of ammonia leakage observed in soda ash plant however, recommendation of Disaster management plan and risk assessment will be followed.			
9	CER - Farmers	3	Facilities to be provided to nearby farmers How hygenic the plant will be?	GHCL Foundation is already providing subsidy for drip irrigation and GHCL will also consider to support this scheme	• Industry will Promote environment friendly and nature-based solutions to enhance productivity of	• GHCL Ltd will spend approx. **3.00 crore** towards Promoting environment friendly and	5 years	GHCL Limited

			How hygenic will be bada plant and what facility will be provided to the farmer.	further out of the CSR funds proposed for this project. To help agriculture, GHCL will help farmers as part of our CSR activity in consultation with villagers. The details and type of developmental work will be decided in consultation with villagers. GHCL foundation has been working for farmers through its different schemes like ground water recharge, water harvesting, zero chemical farming, drip irrigation	farming (Organic Farming) activities. It covers capacity building on farming techniques, provision of high-quality seeds/manure, efficient irrigation solutions, etc. under CSR and CER activities	nature-based solutions to enhance productivity of farming (Organic Farming) activities. It covers capacity building on farming techniques, provision of high-quality seeds/manure, efficient irrigation solutions, etc under **CER activities.**		
10	EIA Report & PH	14	EIA report is not correct	The terrestrial EIA report is	• It is requested to note that as			GHCL Limited

S. No.	Issue related to	Verbal/ written nos. of issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
	advertisement		Regarding the alternative of site Modhwa village. Regarding the NIO accreditation to prepare marine EIA report Regarding ToR granted and Study carried out prior of ToR granted. Regarding the advertisement of the PH Regarding NABET accreditation of consultant organization Regarding Marine EIA Regarding NEERI who has prepared EIA report Regarding the correction in EIA report Regarding the monitoring data collection Regarding accreditation certificate of additional studies for ecology. Regarding the studies mention in EIA report Regarding the study of ecology and Biodiversity in the study area Regarding the CRZ study	prepared by CSIR NEERI and Marine EIA report is prepared by NIO, Mumbai	per OM number J-17011/8/92-IA-III dated 8th August, 2019, there are 7 institutes/agencies authorized for preparation of CZMPS in consonance with the provision of CRZ notification, 2019 vide GSR 37(e) dated 18/01/2019. IRS anna university Chennai has prepared the CRZ map for GHCL LTD. CSIR -NIO is Expert hired to carry out the Marine EIA study. • EIA report has been prepared by CSIR-NEERI, which is reputed governmental body and QCI NABET accredited consultant. • An extensive study on the ecology and Biodiversity in the study area was conducted by the QCI NABET approved functional area expert.			
11	Vipassana	3	Project site is near Vipassana meditation centre	--	• Environmental Management Plan envisages the plans for the proper implementation of	• Cost of **Environment management plan (EMP)** including various	--	GHCL Limited

			The meditation centre will be disturbed due to industry. Ammonia used in the industry. Related to presence of Vipassana centre and other religious places in 15km radius of project site		mitigation measures to reduce the adverse impacts. • The EMP implementation will minimize the impact of atmospheric emissions, liquid effluents, solid wastes and noise generation on the surrounding environment. • The monitoring of all valued environmental components will be monitored as per the norms prescribed by GPCB/CPCB and the time to-	installations for Air Pollution, Water Pollution, Noise Control, Greenbelt Development, Occupational Health and Safety and other related activities- 318.08 crore • Recurring cost include maintaining and monitoring of all components- 7.53 crore.		

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S. No.	Issue related to	Verbal/ written nos. of issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
					time guidelines issued for soda ash manufacturing industry. • It is reported in CSIR NEERI report that there are no significant impact expected on man-made sensitive installations and habitations. On basis of study of present environment condition near project area and impact prediction and control measures proposed by GHCL Ltd. The proposed project will not have any significant negative impact on environment. Company operations are limited to the plant boundary and no negative impacts on Vipassana Centre are anticipated. The company will have robust peripheral Green Belt in order to attenuate noise and air emission due to plant operations.	• **Greenbelt Development** • Capital Cost- 20 Crore • Recurring Cost- 0.5 crore The capital and recurring cost of greenbelt development is included in **EMP cost.**		
12	CER - Animal Husbandry	3	Regarding arrangements for Animal husbandry to nearby villages Regarding distribution of kits to fisherman under CSR activity	GHCL Foundation will support nearby community by providing education and livelihood support to make them self – reliant.	• Unit will do promotion through providing support for breed improvement, animal health care, fodder improvement and providing veterinary doctor in nearby villages under CER and CSR	• GHCL Ltd will spend approx. **4.35 crore** towards Animal husbandry promotion through providing support for breed	5 years	GHCL Limited

			Regarding number of cattle present in the area		activities. • Unit will also promote development Initiatives for Fishing Communities such as Creation of infrastructure like ice plants, cold storages as well as provide operational inputs such as fishing boats, nets and engines • We have already provided veterinary doctor for nearby affected villages.	improvement, animal health care, Veterinary doctor and others as well as provides Fodder for cattle feeding nearby villages under **CER activities**		

S. No.	Issue related to	Verbal/ written nos. of issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
13	Site Selection	2	Regarding the alternative of site Modhwa village Regarding showing presence of marshy land near coastline	--	During the site selection, the alternative sites considered for setting-up of the proposed chemical complex project are given below: : Site 1 – Village Pingleswar, Taluka – Abdasa, Dist. Kutch Site 2 – Village Suthri, Taluka – Abdasa, Dist. Kutch Site 3 – Village Bambhdai, Taluka – Mandvi, Dist. Kutch Site 4 – Village Bada, Taluka – Mandvi, Dist. Kutch Site 5 – Village Modhva, Taluka Mandvi, Dist. Kutch The site at village bada is considered favorable based on the environmental and logistic advantages over other four sites. Justification of Site selection are given in Chapter-5 of EIA report.	--	--	GHCL Limited
14	Sand Dunes	2	Concern of presence of sand dunes at Bada coast	--	• There is no disturbance to existing sand dunes.	--	--	GHCL Limited

			Regarding digging of sand dunes for preparation of tunnels for water intake		• Tunnelling work (much below ground level) for laying pipeline through sand dunes will be done by adopting proven construction methodology like micro tunnelling. The detailed Studies on sand dune mapping and morphological changes near the project site was carried by National Institute of Oceanography (NIO), Goa. This report can be referred from CSIR NIO Marine EIA.			

S. No.	Issue related to	Verbal/ written nos. of issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
					• GHCL Ltd is committed for conservation plan for sea turtles and sand dunes as suggested by various studies.			
15	Turtle	3	Regarding presence of turtles on the coastline of Bada Regarding information on endangered species not mentioned in EIA report	--	• Study on Status Survey and Conservation Plan for Sea Turtles along Mandvi Taluka, Bhuj, Gujarat by **Zoological Survey of India**, **Kolkata (April,2019)** is attached with	• Contribution to Forest department for Sea Turtle Conservation Activities- 0.20 crore which is included in **EMP cost**	10 years	GHCL Ltd

			Regarding hatching and presence of sea turtles		EIA report. • ZSI study report mention that they did not any encounter any sea turtle and fresh/old nests or crawl marks of turtles on the beach. Since many of the factor for selection of a suitable nesting site are not conducive. • As per additional Ecological and Biodiversity study, suggests that the coast near the proposed project site may not be suitable for sea turtle nesting due to narrow supra tidal region, steep slope, dense vegetation and presence of predators such as dogs and jackals. Though, observations suggest that there may be no or negligible probability of sea turtle nesting. • GUIDE is also engaged for study of turtle survey and preparing conservation plan. Premiliary observation are found to be similar. GHCL Ltd is committed for conservation plan for sea turtles and sand dunes as suggested.			
16	Schedule 1 species (Peacock, Googal. Turtle,	4	Regarding presence of greater numbers of peacocks nearby and	--	• Details of schedule -1 species and conservation plan is	• The proposed budget	10 years	GHCL Ltd

S. No.	Issue related to	Verbal/ written nos. of issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
	Sandha and indian Monitor Lizard)		stated in report Presence of reptiles and amphibians not reported Related to study of presence of Indian Monitor Lizard in study area Regarding presence of gugal trees,		already incorporated in EIA report. • GHCL shall make financial allocations for taking up wildlife mitigation measures and for contribution to forest department for carrying out activities towards propagation, protection and conservation of wildlife. • GHCL Ltd have submitted Conservation Plan (Flap shell turtle, Green Sea turtle, Indian monitor lizard, Olive Ridley Sea turtle, Black shoulder kite, Eurasian Spoonbill, Indian Peafowl, Marsh Harrier, Oriental Honey Buzzard, Shikra, Short-toed Snake Eagle, Chinkara and Gugal - Schedule –I species and Critically Endangered species) to CWLW department of Gujarat.	allocation for conservation of Schedule 1 species for 10 years is 1.36 crore which is included in **EMP cost**		
17	Conservation Plan	2	Regarding conservation plan for Schedule 1 species	--	• GHCL shall make financial allocations for taking up wildlife	• The proposed budget allocation for	10 Years	GHCL Limited

			Concern regarding green sea turtles and conservation plan for them		• mitigation measures and for contribution to forest department for carrying out activities towards propagation, protection and conservation of wildlife. • The unit have submitted Conservation Plan (Flap shell turtle, Green Sea turtle, Indian monitor lizard, Olive Ridley Sea turtle, Black shoulder kite, Eurasian Spoonbill, Indian Peafowl, Marsh Harrier, Oriental Honey Buzzard, Shikra, Short-toed Snake Eagle, Chinkara and Gugal - Schedule –I species and Critically Endangered species) to CWLW	conservation of Schedule 1 species for 10 years is 1.36 crore which is included in **EMP cost**		

S. No.	Issue related to	Verbal/ written nos. of issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
					department of Gujarat.			
18	Form 1(Water Bodies, Temples, Schedule 1 Species)	5	Regarding presence of waterbody not shown in form-1 Regarding religious places and lakes not mentioned in PFR report Waterbody not mentioned in form-1 Data given in form-1 and EIA are different Waterbody not mentioned in form-1	--	• Environmental settings are given in Chapter-1 and Chapter-5 of EIA report. Approximate distance of water bodies, temples etc are given in EIA report. • Through drainage studies of the area, it was observed that there is one stream of 1st order entering the plant area from north. Although, it has small catchment area, it is proposed that this stream, will be diverted to nearby passing Vengadi River in the west. • There are also pond inside the premises. It is proposed that pond i.e. inside the premises will be used to store entire annual surface runoff plant use. If permitted by concern authority.	• Cost of drainage network of surface runoff, rainwater collection pond, EMS training and rain water harvesting system – 53 crores which is included in **EMP cost**	--	GHCL LTD
19	Govt. Land	3	Regarding type of land to be procured by the industry Regarding status of government land to be procured Providing data for proving gauchar land	--	• There is no gauchar land within proposed project site. M/s GHCL has applied to Industries Commissioner and District Collector for allotment of aforesaid land. Industries Commissioner has granted In Principle approval for Bonafied Industrial Purpose. District Collector has initiated actions for allotment of Govt. waste land.	--	--	GHCL LTD

20	CER - Fishing	8	Regarding details of Pagadia fisherman not mentioned and Marine EIA is misinterpreted	--	• Proper seawater intake and treated effluent disposal (ensure maximum dilution) shall be done as per	• A provision of Rs. 1 crore to be earmarked for the	During construction and	GHCL LTD

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S. No.	Issue related to	Verbal/ written nos. of issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
			Regarding disturbance to fishes due to presence of pipeline Regarding status of fishing near Bada and Mandvi Related to number of fishermen not incorporated in study Related to presence of dead fishes not reported in study, fishing carried out for commercial purpose Regarding presence of fisherman in study area Regarding the impact due to project activities on fishes Regarding chances of reduction in number of fishes		Marine EIA report prepared by NIO • Industry should be ensured that the effluent released to the sea meets the prescribed GPCB/ CPCB norms at all times. This should be verified through tracer studies after the outfall becomes operational. • Details of Fishery and fishermen including their family and population are given in Chapter-3 of marine EIA report. • Other than construction phase,	biodiversity management plan to be implemented in the project area during construction phase and operation phase which is included in **EMP cost** • For periodic monitoring of the marine area environment during project Construction phase, a provision of Rs. 0.5 crore to earmarked. • For operation phase, Rs. 0.5 crore per year to be kept provision for the monitoring.	Operation phase	

					there will be no any impact on Pagadiya fisher men. As shore line will remain undisturbed. • It is mentioned in marine EIA report that no large-scale commercial fishing operation prevail in the study area except for minor shore based and Gill net operations. • There are independent studies available which indicates there is no significant adverse impact on environment but there will be positive impact on environment. • Unit will also promote development Initiatives for Fishing Communities including Pagadiya under CER and CSR activities	• GHCL Ltd will spend approx. **1.0 crore** towards Development Initiatives for Fishing Communities including Pagadiya under **CER activities**		
21	Water Body (check dams)	2	Related to presence of seasonal river which passes near bada village and presence of dam over it	--	• Through drainage studies of the area, it was observed that there is one stream of 1st order entering the plant area from north. Although, it has small catchment area, it is proposed that this stream, may be diverted to nearby passing Vengadi River in the west, which has two check dams, one for salinity ingress check and on upstream side for storing fresh water.	• Cost of drainage network of surface runoff, rainwater collection	During construction and	GHCL LTD

S. No.	Issue related to	Verbal/ written nos. of issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
			Related to distance of river from project site		This will not cause any adverse impact on the downstream. For channelizing the monsoon run off from the area adjacent to plant it is required to construct peripheral drain along plant boundary so that flooding is avoided and run off find its way to the natural slope towards Arabian Sea. So, the present hydrological setting of the area will remain unaffected. So, the present hydrological setting of the area will remain unaffected. • The additional water enter into the vengadi river through drainage will not impact on check dam. As any additional water above the river and check dam shall overflow to the Arabian sea.	Pond, EMS training and rain water harvesting system – 53 crores which is included in **EMP cost**	Operation phase	
22	Traffic (RMH, Heavy Trucks, Road Usage)	4	Regarding number of trucks passing due to project for raw material Related to traffic study not mentioned in ToR, impact not carried out Concern regarding public roads	--	• Traffic study are shown in section 3.2.3 of chapter-3 and impact due to transportation is show in 4.1.4.3 and 4.2.3 of Chapter-4 in EIA report. • We will use existing road network as no other transportation i.e. rail/water	--		GHCL Limited

			Regarding number of trucks passing		ways are available. We have carried out calculation on			

S. No.	Issue related to	Verbal/ written nos. of issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
					Traffic study (Level of Service) and added on Form Part-C.			

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			Regarding past data of CSR		• GHCL's commitment towards the development of weaker sections of society has been a continuous initiative for more than two decades. Through its "GHCL Foundation Trust", GHCL has upgraded its CSR activities to cover a larger section of the society to provide support to the downtrodden, needy and marginalized citizens and also to create a social infrastructure for their sustenance. GHCL Foundation serves as the Corporate Social Responsibility arm of GHCL Limited and represents our commitment to the holistic development of our surrounding community. During year 2020-2021 GHCL has spent INR 9.03 Crores towards CSR activities. During year 2021-2022 GHCL has spent INR 10.62 Crores towards CSR activities			GHCL LTD
23	CER - General	1		GHCL has proposed CSR budget in the EIA report which will be utilized based on need identification and village development meetings. CSR will be implemented with CSR implementing agencies including GHCL Foundation is working in following area. 1. Agro-livelihood and animal husbandry, 2. Education and skill development, 3. Health, water, and sanitation.	• CSR projects/activities worth INR 19.09 Cr. were implemented. GHCL wide range of CSR projects have touched and benefitted more than 90,200 lives over the years. Promoting such activities like water conservation,	--	--	

S. No.	Issue related to	Verbal/ written nos. of issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
					Animal husbandry, health care, SHG Infrastructure development etc.			
24	Pollution and Environment General	4	Regarding pollution to be caused by industry Regarding solid waste management Regarding to dusting due to kiln and power plant, temperature of water Related to disposal of effluent water	Unit will follow all the rules and regulation with their subsequent amendments as directed by concerned authorities	• Environmental Management Plan envisages the plans for the proper implementation of mitigation measures to reduce the adverse impacts. • The EMP implementation will minimize the impact of atmospheric emissions, liquid effluents, solid wastes and noise generation on the surrounding environment. • The monitoring of all valued environmental components will be • Monitored as per the norms prescribed by GPCB/CPCB and the time to time guidelines issued for soda ash manufacturing industry.	• Cost of Environment management plant including various installations for Air Pollution, Water Pollution, Noise Control, Greenbelt Development, Occupational Health and Safety and other related activities. – 318.08 crore • Recurring cost include maintaining and monitoring of all components- 7.53 crore	--	GHCL Limited
			Related to distance of project site from forest area		• There is no forest land within the boundary of proposed			GHCL LTD

25	Forest area	2	Details regarding families dependent on forest	There is no classified forest area.	project site. However, some part of the unclassed forest area located south of the project site outside boundary. Sea water intake and outfall pipeline will pass through underground micro tunnel in specific corridor to cross forest area. The permission from the Forest Department is under process. • There will be no major impact on families dependent on forest. As the pipeline will be laid under ground through latest technology.	--	--	

S. No.	Issue related to	Verbal/ written nos. of issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
					• M/s GHCL has also applied to MoEF&CC for Forest Diversion of 0.9689 Ha. of un-class forest land vide' proposal no. FP/GJ/Others/147527/2021. • GHCL Ltd will support afforestation programme in consultation with local forest department.			
26	Supporting for Industrial Development to GHCL LTD	--	For Employment For Infrastructure development in nearby village Social upliftment towards nearby villages Health facilities Women empowerment Skill development	GHCL LTD team thanked for welcoming the industries	--	--	--	--
Total		**94**						

SECTION 7.5.8.5 DISASTER MANAGEMENT PLAN

DISASTER MANAGEMENT PLAN FOR TSUNAMI

1. TSUNAMI

Tsunami is Japanese word for "harbor wave which is a huge ocean wave that can travel at speeds up to 965 km/hr can have heights of up to 30m, wavelengths of up to 200 km and long periods, usually between 10 and 60 minutes. Sometimes incorrectly called a tidal wave, a tsunami is usually caused by an underwater earthquake or volcanic eruption and often causes extreme destruction when it strikes land. It is a series of waves which travel outward on the ocean surface in all directions in a kind of rippleeffect.

- Tsunamis are extremely rare events in Gujarat. No instrumental records or damage records are available for tsunami impact in the region.
- GHCL project has natural protection of Sand Dunes, which will restrain the storm surge to enter the project site, if Tsunami occurs.
- GHCL has designed the plant structures to face the wind speed of 60 m/sec (216 km/hr).
- GHCL has designed the plant drainage system in such a way that if Tsunami occurs, it will drain the water properly in a short period of time.

PLANNING & PREPAREDNESS:

- **Constitute** Emergency **Response Team(s) comprising of**

1. **Site in charge**
2. **Fire team member**
3. **Safety in charge**
4. **Security in charge**

- Each member of the team shall have a designated alternate member.

- **Control centers equipped with:**
- Communication facilities with IMD and other concerned Government departments.
- Emergency vehicles/ Equipment.
- List of emergency contacts.
- Occupational Health Facilities.

ACTION DURING EFFECTIVE PERIOD

- Do not panic.
- Assemble at emergency assembly point.
- Stand near columns or duck under sturdy furniture.
- Communication with Unit Head for immediate/Planned shutdown of Unit, if required.

TSUNAMI DO'S & DON'S

Before:

- We will make familiar with the tsunami warning signals.

- We will make aware the people living along the coast should consider an earthquake or a sizable ground rumbling as a warning signal. A noticeable rapid rise or fall in coastal waters is also a sign that a tsunami is approaching.
- We shall make sure that all family members know how to respond to a tsunami. We shall make evacuation plans and pick an inland location that is elevated. ·
- We shall ensure that after an earthquake or other natural disaster, roads in and out of the vicinity may be blocked and accordingly will pick more than one evacuation route.
- We shall provide awareness program & teach family members how and when to turn off gas, electricity, and water.
- We will make awareness program and taught Children in advance about the evacuation plans.
- We will prepare emergency kit beforehand. The emergency kit will contain Flashlight and extra batteries, First aid kit with essential medicines etc.

During:

We will listen to a radio or television to get the latest emergency information, and will be ready to evacuate, if asked to do so.

- If you hear a tsunami warning, move at once to higher ground and stay there until local authorities say it is safe to return home.
- Move in an orderly, calm and safe manner to the evacuation site ·
- Stay away from the beach. Never go down to the beach to watch a tsunami come in. If you can see the wave you are too close to escape it.
- Return home only after authorities advise it is safe to do so.

After:

- We will be stay tuned to a battery-operated radio for the latest emergency information.
- Help injured or trapped persons.
- Stay out of damaged buildings.
- Return home only when authorities say it is safe.
- Enter your home with caution.
- Use a flashlight/torch when entering damaged buildings.
- Check for electrical shorts and live wires. Do not use appliances or lights until an electrician has checked the electrical system.
- Open windows and doors to help dry the building.
- Check food supplies and test drinking water.
- Fresh food that has come in contact with flood waters may be contaminated and should be thrown out.

DISASTER MANAGEMENT PLAN FOR CYCLONE

2. CYCLONE

For tackling any anticipated emergency situation preparedness is required to accomplish optimum readiness so that the response to such a situation is swift and effective. Therefore, a state of readiness is essential to combat successfully any anticipated emergency situations.

- A cyclone is a storm accompanied by high speed whistling and howling winds. It brings torrential rains.

- Cyclone arrival this warning is issued 12 hours before a cyclone is due to hit the land. The warning gives information about cyclone and will continue until the winds subside. In sea ports, danger signal is hoisted about the impending cyclone.
- One feature of cyclones is that they build slowly, but strike suddenly. It involves an atmospheric system characterized by the rapid inward circulation of air masses about a low-pressure center, usually accompanied by stormy and destructive weather.
- Cyclones circulate counter-clockwise in the northern hemisphere and clockwise in the southern hemisphere.
- The calm centre may move at speeds near 50 km an hour. Cyclones can be predicted through satellite tracking, hours or even days before their occurrence.

How does a cyclone affect us?

- A cyclone causes heavy floods.
- It uproots electricity supply and telecommunication lines. Power supply shuts down and telephones stop functioning.
- A cyclone tears away wall sidings and blows off roofs of buildings.
- The speeding winds cause loose metal and wooden sheets to fly turning them to potential killers. Broken glass pieces can cause serious injuries.
- Lightweight structures, buildings without proper anchorage to the foundations, settlements located in low lying coastal areas, roads, fences, electricity or telephone poles, hoardings, light-pitched roofs, are usually under grave risk during cyclones. Disruption of water supply and sanitation may lead to the outbreak of epidemics. Breakdown of communication links would hinder smooth management efforts.

What to do before and during a cyclone?

- Buildings are being checked before a cyclone season starts and carry out whatever repairs that are needed.
- Communication to subordinate and explain about cyclones and emergency contact numbers.
- Create storm awareness by discussing effects of a cyclonic storm with all members so that everyone knows what one can and should do in an emergency. This helps to remove fear and anxiety and prepares everyone to respond to emergencies quickly.
- Ensure no blockage of storm water drain in plant and colony.
- Ensure a team of rigor with hydra/JCB operator is available.
- Ensure Lift operation is stopped.
- Keeping valuables and documents in containers, which cannot be damaged by water?
- Keep torches and spare batteries. These must be kept in secure places and handy.
- Keep trees and shrubs trimmed.
- All doors, windows and openings should be secured.
- Continue to listen to warning bulletins and keep in touch with local officials. Keep radio sets in working condition. Battery powered radio sets are desirable.
- Evacuate people to places of safety when advised.
- Remain calm.

What one should not do during a Cyclone attack?

- During the storm do not venture out unless advised to evacuate.
- Avoid remaining on the top floor of dwellings. Stay close to the ground.
- Avoid taking shelters near old and damaged buildings or near trees.
- Do not touch power lines. One may get electrocuted.

What to do after the cyclone?

- Watch out for broken glass and other sharp items in debris.
- Listen to the advice of local officials and emergency workers.
- It is advisable to wait for the "all clear message".
- Stay away from flooded areas.
- Organizing clearing-up so that normalcy returns as soon as possible
- All tall structures have proper lightening arrester to earth the lighting stroke
- Welfare team takes care of enough availability of food, drinking water and medical assistance to tackle an emergency situation arisen due to natural calamities like cyclone.

DISASTER MANAGEMENT PLAN FOR EARTHQUAKE

3. EARTHQUAKE

- Communicate the facts about earthquake to all members
- Arrange the training for first aid and fire fighting
- Keep important documents at safer place.
- Identify special skills of neighbour (medical, technical) so that it can be utilized in emergency.

During Earthquake

- Do not panic
- If already inside, then Stay indoors! Get under a heavy desk or table and hang on to it.
- If fire breaks out, drop on the floor and crawl towards the exist
- If you are out doors during the quake, keep away from buildings, trees and electricity lines. Walk towards open places, in a calm and composed manner.
- If you are driving, quickly but carefully move your vehicle as far as safer place and stop. Do not stop on or under a bridge or overpass or under trees, light posts, power lines, or signs. Stay inside the car until shaking stops.

After the Earthquake

- Do not be afraid of the aftershocks
- Listen to radio-TV and other media for Government Announcement
- Examine walls, floors, doors, staircases and windows to make sure that the building is not in danger of collapsing.
- Carry out head count in all plant area.
- Check for injuries in affected area. Give first aid.
- Extinguish fire, if any
- Do not enter into the unsafe or risky buildings
- Do not keep telephone lines busy unnecessarily
- Switch off electric lines

CHAPTER – 8
PROJECT BENEFITS

CORPORATE ENVIRONMENT RESPONSIBILITY (CER)

The Industry will provide **18.04 Crore** towards Corporate Environment Responsibility. Socio-economic development activities will be planned based as per general necessity in villages. The investment will be made after discussions with local administration.

Action Plan for Corporate Environment Responsibility Development Activities

SR. NO.	TYPE OF ACTIVITIES	AMOUNT TO BE SPENT PER YEAR (RS. IN CRORES)			TOTAL AMOUNT TO BE SPENT (RS. IN CRORES)
		1st YEAR	2nd YEAR	3rd YEAR	
1.	**Fodder /Animal husbandry**	1.45	1.45	1.45	**4.35**
2.	**Employment/ Promoting activities**	0.75	0.75	0.75	**2.25**
3.	**Health** Infrastructure development Such as primary healthcare units and the fulfilment of the basic amenities in PHCs including mobile medical van and Provide Bala- Rasayana to Malnutrition Children in Aanganwadi and PHC of nearby Villages under CER activities.	0.72	0.70	0.70	**2.12**
4.	**Education** Infrastructure development for quality of education, which will ultimately upgrade schools in nearby villages	0.83	0.82	0.82	**2.47**
5.	**Farmers** Promoting environment friendly and nature-based solutions to enhance productivity of farming	1	1	1	**3.00**
6.	**Fishing** Development Initiatives for Fishing Communities	0.34	0.33	0.33	**1.00**
7.	**Renewable Energy**	0.95	0.95	0.95	**2.85**
Total					**18.04**

CORPORATE SOCIAL RESPONSIBILITY (CSR)

Activities under Corporate Social Responsibility

SR. NO.	PROGRAMMES AND ACTIVITIES	PROPOSED BUDGET FOR FY 23-24 (RS. LAKHS)
1	Agriculture and Animal Husbandry Livelihood	152.94
2	Health	22
3	Education and Vocational Training Institute	28
4	Women Empowerment	5.80
5	Water Resource Development Program	30
6	Rural Development Project & national Heritage	31.50
7	Establishment & Other	8.30
Total		**278.54**

- GHCL Foundation serves as the Corporate Social Responsibility arm of GHCL Limited.
- For its work towards CSR Excellence and Sustainability GHCL Ltd. awarded with prestigious Mahatma Award 2021.

GHCL would carry out number of community welfare activities in the following areas:

- Health and Family Welfare
- Environmental activities
- Sanitation, Water supply and Fodder for animals etc.
- Education

Since FY 20, GHCL is doing various undertakes various corporate social responsibility (CSR) initiatives.

CHAPTER – 10
ENVIRONMENTAL MANAGEMENT PLAN

BUDGET ALLOCATION FOR ENVIRONMENT PROTECTION MEASURES

ASPECT OF ENVIRONMENTAL MANAGEMENT	CAPITAL		RECURRING	TOTAL CAPITAL COST	TOTAL	
				RS. IN CRORE	RECURRING COST	
					RS. (CRORE/ANNUM)	
	COMPONENTS	COSTING (RS. IN CORE)	COMPONENTS	COSTING		
Air Pollution	**Flue Gas Emissions** Individual ESP with 6 No. Boiler Scrubber and Dust Collector system with 6 No. Lime Kiln	12.03	Operation	1.5	**89.28**	**1.5**
	Process Gas Emissions Water Scrubber with Ammonia Recovery system (Including 2 no of stack)	2.70	Maintenance			
	Bag Filter- Lime Grinding System	1				
	Scrubber, Bag Filter - Calciner Unit	4.7				
	Scrubber- Densification	0.75				
	Bag filter- Sodium Bi-Carbonate Unit	1				
	DC bagging	1.5				
	DC_RMH	2.5				
	Bed Ash System (Fly ash management)	0.5				
	Dust Suppression system- Road	5.2				

	ESP- CFBC	30				
	68 m stack height -Lime Kilns	1				
	42 m stack height -Ammonia Recovery system					
	20 m stack height- Lime Grinding System/ Slacker					
	37 m stack height -Calciner Unit					
	30 m stack height -Sodium Bi-Carbonate Unit					
	43 m stack height - Densification					
	Dry Fog system	0.9				
	Wind Screen	0.5				
	130 m stack height -CFBC	25				
Water Pollution	ETP	1.50	Fresh water analysis	0.12	**14**	**0.12**
	STP	12.50	waste water analysis			
	Drainage network (marine area)	--	Operation			
AWH	Continues emission Monitoring System	2.4	Marine area environment monitoring during construction phase and operation phase. (Marine)	0.8	**3.4**	**1.30**
			Air (Stack, ambient)	0.48		
	online weather station	0.5	Water	0.010		
			Soil	0.00098		
	online pH, NH3-N, Temp meter	0.5	Solid waste	0.00046		
Noise	Acoustic Enclosures-TG	0.9	Monitoring of Noise	0.0035	**2.9**	**0.0035**
	Acoustic Enclosures-CO compressor	1.8				
	Acoustic Enclosures - DG set	0.2				

Hazardous/Solid waste management	Storage area	1			Transportation Cost	1	**1.05**	**1.10**
	Member Ship charges	0.05			Dumping			
					Used Oil Drum	0.034		
					E waste Management	0.009		
					Bio medical Waste Management	0.005		
Green Belt	4,50,000 No. of trees	20			Maintenance charges & Manpower salary	0.5	**20**	**0.5**
Fire safety cost	**SR. NO.**	**COMPONENTS**	**CAPACITY**	**QTY.* (NOS.)**	**COSTING**	**SR. NO.**	**COMPONENTS**	**COSTING**	**2.967**	**0.20**
	1	Jockey Pump	80 M^3/Hour	1	0.0282	1	Maintenance of Equipments and Periodic check-up	0.12		
	2	Electrical pump	410 M^3/Hour	1	0.1085	2	Safety officer	0.08		
		Diesel pump	410 M^3/Hour	1	0.18					
	3	Water storage tank (For Fire)	550M^3	2	0.15					
	4	Hose Pipe	63mm*15m	44	0.02326					
	5	Single Head Hydrant Post	63mm	127	0.06858					
	6	Automatic Sprinkler system (Alarm Valve)	--		0.05					
	7	CO_2 type Fire Extinguisher	4.5kg	16	0.0066064					
	8	ABC type Fire Extinguisher	6kg	463	0.159735					
	9	ABC type Fire Extinguisher	25kg	8	0.0093436					
	10	ABC type Fire Extinguisher	75kg	9	0.01728					
	11	Foam type Fire Extinguisher	9L	4	0.0045					
	12	Foam type Fire Extinguisher	50L	5	0.0075					

	13	Sand Bucket Stand	Nos.	30	0.00039			
	14	Foam	Liter	1000	0.008			
	15	Dry Chemical Powder	kg	1000	0.0137			
	16	Pump	Portable	1	0.013			
	17	fire proximate suit	PAA	3	0.008			
	18	Fire Hydrant line Installation cost	Meter	5556	1.2			
	19	foam trolley	3	33075	0.0099225			
	20	Fire Tender	8000L water	1	0.75			
	21	Automation for Handing of Chlorine and ammonia.	--	--	0.15			
Occupational health and safety	**SR. NO.**	**COMPONENTS**	**QTY.* (NOS.)**		**COSTING**	**COMPONENT**	**COSTING**	**0.44**	**0.15**
	1	Safety Audit	By yearly		0.03	Safety training/health awareness training to workers	375000		
	2	OHC and medical and health related periodical check ups	1544		0.03	Safety audit	375000		
	3	PPE kits (safety helmet, safety glasses, gloves, safety shoes, first aid kit, protective jacket,)	6928		0.27	OHC and medical and health related periodical check ups	375000		
	4	Antidots	12		0.00045	Mock drill	375000		
	5	SOP/Emergency preparedness plan	-		200000				
	6	Training cost	6		0.015				
	7	Safety boards	3600 sq ft		0.0886				
	8	Safety shower/ Eye	10		0.0064				

	Wash fountains					
Renewable Energy	Installation of Solar + Windmill	20 MW	--	--	**113**	**--**
Miscellaneous	Rain Water collection pond and rain water harvesting	8	Environment Management Cell	0.3	**53**	**2.66**
	Drainage Network for rain water	44.60	Sch-1 conservation plan	1.36		
	Environmental laboratory	0.25	Biodiversity management plan to be implemented in the project area during construction phase and operation phase. (Marine)	1		
	Environmental Management system, miscellaneous study, statutory application fees, audit, training cost etc.	0.15				
CER	**CER**	18			**18.04**	**--**
Total					**318.08**	**7.53**

Budgetary allocation towards Environmental Management

ASPECT OF ENVIRONMENTAL MANAGEMENT	COST IN CRORE [RS.]	RECURRING COST (CRORE /ANNUM) [RS.]	REMARKS
Air Pollution	89.28	1.50	Capital cost would include air pollution control devices like ESPs, Scrubbers, Dust extraction and suppression systems, Stacks, Dry Fog system, Wind screen and the recurring cost would include operation and maintenance of pollution control devices
Water Pollution	14	0.12	Capital cost would include cost of ETP, STP and recurring cost would include operation and maintenance of pollution control devices
Noise Pollution	2.9	0.0035	Capital cost would include providing adequate sound enclosures for TG, CO- compressor, DG Set
Hazardous / Solid Waste Management	1.05	1.10	Capital cost would include expense for providing storage area for hazardous waste and membership charges of TSDF/CHWIF Site and recurring cost would be for solid/ hazardous waste disposal charges and Sampling & analysis charges of solid waste.
Environmental monitoring Programme	3.4	1.30	Capital cost would include expense OCEMS, Online weather station, online pH, NH3-N, Temp meter and recurring cost would include monitoring and analysis of noise level., Sample analysis charges & ambient air & fugitive emission sampling & analysis charges etc., Fresh water & wastewater sample analysis charges etc. Soil: recurring cost would be for Soil Sample analysis., Marine area environment monitoring
Green Belt	20	0.5	Capital cost would include development of green belt within the project premises and recurring cost would include maintenance charges and manpower salary etc.
Renewable Energy	113	--	Capital cost would include Installation of Solar and Windmill
Fire safety & Occupational Health & Safety	3.4	0.35	Capital cost would include cost of OHS center, PPEs, fire & safety instruments and recurring cost would include maintenance charges and training, audit & health check-up etc.
Miscellaneous	53	2.66	Miscellaneous activity such as development of rain water harvesting system, Drainage Network for rain water, Environmental laboratory, Environmental Management system, miscellaneous study, statutory application fees, audit, training cost etc. and recurring cost would

			include biodiversity management plan, hiring of EMC and Conservation Plan for Schedule 1 species.
CER	18.04	--	Capital cost would include cost of CER activities such as promoting renewable energy, skill development Programme, Organic farming, water conservation (like village pond deepening), forestry etc. and develop infrastructure of schools, health facilities, Fishing activities, roads in nearby villages
Total (EMP + CER)	**318.08**	**7.53**	

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CHAPTER - 11

SUMMARY AND CONCLUSIONS

11.3 DESCRIPTION OF THE ENVIRONMENT

The baseline environmental quality has been carried out during Winter Season between December 2022 to February 2023 in the study area of project site for various environment components mainly air, water, soil, noise, ecology and socio-economics.

11.3.1 AMBIENT AIR QUALITY

Location Village	Results (98th Percentile)					
	$PM_{2.5}$ µg/m³	PM_{10} µg/m³	SO_2 µg/m³	NO_2 µg/m³	Ozone µg/m³	NH_3 µg/m³
Panchotiya	50.53	81.50	15.48	38.81	14.03	B.D.L (D.L-21)
Bada	42.35	75.94	14.21	33.63	9.57	B.D.L (D.L-21)
Bhinsara	43.31	68.69	13.62	31.77	12.39	B.D.L (D.L-21)
Bhada	51.29	83.33	16.78	41.46	17.50	B.D.L (D.L-21)
Mota Layja	27.60	59.70	8.19	22.38	19.45	B.D.L (D.L-21)
Padampur	38.50	68.40	12.84	30.37	11.63	B.D.L (D.L-21)
Mapar	36.76	65.95	11.70	33.13	12.50	B.D.L (D.L-21)
Bambhadai	47.52	72.88	10.84	28.40	10.36	B.D.L (D.L-21)
Dedhiya	32.53	58.41	9.77	25.61	11.81	B.D.L (D.L-21)
Nana Layja	47.28	80.66	17.26	36.37	10.93	B.D.L (D.L-21)
Permissible limit **[NAAQ standards-2009]**	**60 µg/m³**	**100 µg/m³**	**80 µg/m³**	**80 µg/m³**	**400 µg/m³**	**180 µg/m³**
Note:	CO: BDL, VOC: BDL, Lead: BDL, Arsenic: BDL, Nickel: BDL, Benzene: BDL & Benzo alpha Pyrene: BDL					

- All the above results are found well within the prescribed limits of National Ambient Air Quality standards for 24 hrs.

11.3.2 NOISE

- Sound levels had been recorded according to IS: 9989:1991 (Reaffirmed 2001). The maximum noise level (Leq.) measured in the study area was 62.0 dB (A) in day time and 52.9 dB (A) in night time at Bhada, which is below the stipulated standards in day time as well as in night time.
- Residential Zone: The noise levels (Leq) of the residential area within the impact zone varied from 42.1 – 50.3 dB (A) in the day time and 37.4 – 41.9 dB (A) in the night time.
- Commercial Zone: The noise levels (Leq) of the commercial area within the impact zone varied from 57.5 – 62.0 dB (A) in the day time and 44.4 – 52.9 dB (A) in the night time.
- Silence Zone: The noise levels (Leq) of the Silence area within the impact zone varied from 42.7 – 45.4 dB (A) in the day time and 35.0 – 35.8 dB (A) in the night time.
- Out of all the 10 locations measured for noise levels, recorded noise levels are found to be within the standard limits.

11.3.3. WATER QUALITY

Water samples were collected at 19 different locations, out of which 8 samples were selected from surface water sources and 11 samples selected from ground water sources for physico-chemical and biological parameters. Parameters like pH, Odour, Temperature, TDS and DO were analyzed at the time of sampling. TDS & DO were also analyzed in laboratory. For other Parameter analysis the samples were preserved as per the recommended techniques for various Elemental determinations as per `IS: 3025 (part I) 1987'.

Baseline data affirm that overall quality of both surface & ground water is suitable for domestic activity including agricultural activity as per drinking water quality standards IS 10500. Surface water and ground water of all locations can be used for domestic and agricultural purpose after appropriate treatment.

The important findings are listed below:

BASELINE DATA INTERPRETATION OF SURFACE WATER ANALYSIS

- pH is found between 7.37 to 8.38 which is well within the acceptable limits.
- Chloride is found within the range of 41.5 mg/L to 589 mg/L. The concentration is found higher than the acceptable limit at Janakpur pond and Vengadi river, but found well within the permissible limit. The higher concentration is may be due to the use of surfactants for domestic washing activities such as cloth and utensil washing. Also, the higher concentration can be due to the saline soil of study area.
- Total Hardness is found within the range of 70 mg/L to 890 mg/L. The concentration is found higher than the acceptable limit at all locations except Bambhadai pond, Mapar pond and Lilera talav. Total hardness was found higher than the permissible limit at only Vengadi river. It may be due to the saline soil due to nearby coastal area.
- Magnesium is found within the range of 8.1 mg/L to 126.4 mg/L. The value found higher than the acceptable limit at Bada pond and Vengadi river and found higher than the permissible limit at only Vengadi river.
- Calcium is found within the range of 12 mg/L to 148.3 mg/L. The value found higher than the acceptable limit at Bhinsara Pond, Janakpur pond and Vengadi river, but found well within the permissible limit.
- TDS is found within the range of 176 mg/L to 2472 mg/L. TDS found higher than the acceptable limit at all locations except Bambhadai pond, Mapar pond and Lilera talav. The TDS is found higher than the permissible limit at Vengadi river. It may be due to the salty soil of the study area. The sampling location is nearby the coastal area. Also, domestic washing activities may contribute to the higher results of TDS.
- DO is found within the range of 4.9 mg/L to 5.6 mg/L, which is quite good for aquatic life.
- COD is found within the range of 8.1 mg/L to 44.4 mg/L, which may be due to the agriculture run off and storm water runoff
- The concentration of iron found higher than the acceptable limit at Bhinsara pond and Bambhadai pond. It may be due to the iron content in the soils of the area.
- Total coliform was found at all locations. And it may be due to the cattle washing, presence of algae, and use of water for domestic activities, which may impact on health of persons who will use this water.
- Thus, surface water can be used for domestic and agricultural purpose after primary treatment as well as after disinfection.

BASELINE DATA INTERPRETATION OF GROUND WATER ANALYSIS

- pH is found between 7.46 to 8.22 which is within the acceptable limit.
- Chloride is found within range of 65.4 to 1026.9 mg/L. The concentration of chloride found higher than acceptable limit at Nana Layja, Bhada, Bhinsara, Padampur, Mota Layja-2, Bada, and Dedhiya. At Bada the concentration is found higher than the permissible limit. This may be due to river system flowing through the area have subsequently been overlain by the aeolian deposits. The texture is sandy to sandy loam with silty clay loam in areas. The salt content is very high with the sodium chloride as the dominant salt.
- Total Hardness within the range of 77.8 mg/L to 1611.1 mg/L. Total Hardness is found above the acceptable limit at all the locations except Bambhadai and found above the permissible limit at Bhinsara, Padampur and Bada. It may be due to whole area is saline area and near to the coastline.
- Calcium is found within the range of 8.9 mg/L to 320.6 mg/L. It was observed within the acceptable limit at only Bhada, Panchotiya, Bayath, Mota Layja-1 & Bambhadai. It was observed above the permissible limit at Bhinsara and Bada. It may be due to salinity of the area.
- Magnesium ranges between 13.5 mg/L to 197.1 mg/L. It was observed above the acceptable limit at all locations except Bambhadai. The results were observed within permissible limits except Bhinsara, Padampur and Bada. This may be due to Present near the seawater and after sodium most commonly found cation in seawater.
- Sulphate ranges between 12 mg/L to 419 mg/L. It was observed within the acceptable limit at all locations except Padampur but well within the permissible limits. This may be due to ground water moves through soil and rock formation that contain sulphate Minerals.
- TDS is found within the range of 196 mg/L to 4440 mg/L. TDS is found higher than the acceptable limits at all locations except Bambhadai. It was observed higher than the permissible limit at Bhinsara, Padampur and Bada It may be due to present of Salt contain is very high and presence of sufficient amount of gypsum in soil.
- Iron content found higher than the acceptable limit at Nana Layja, Bhinsara, and Padampur, which may be due to geological formation of that region. Higher concentration of iron may lead to health concern.
- Ground water is suitable for domestic and agricultural purpose after primary treatment and disinfection.

11.3.5 SOIL QUALITY

Ten soil samples were taken from 10 locations considering the land use pattern in the study area. Soil samples were collected from agricultural land, barren land and forest land.

- pH varied from 7.45 to 9.00 indicating that soil of the study area was moderately alkaline to highly alkaline in nature.
- The soil of project area found to be safe with respect to electrical conductivity (EC).
- Analytical results revealed that organic carbon content of soils was found low. Organic carbon works as buffer to salinity and alkalinity. A low organic matter content in the soils maybe a possible explanation for alkaline soil. Also, the study area falls under the acid region where evapo-transpiration more than precipitation and as a result of which salts move up to the surface.

- Cation exchange capacity (CEC) values of all most all the soil is having lower fertility. However, soil near mota layja village had high CEC value indicating high soil fertility with more clay content.
- Fertility status of soils of project area shows that soils were low in N and available P_2O_5 and high in K_2O.
- Calcium and magnesium salts in soils were founded more than critical levels. (Ca > 25% of CEC and Mg > 4% CEC). Calcium and magnesium values ranged from 23-43% and 5-11% respectively. There is a considerable amount of limestone present in the soil of Kutch. This maybe a possible reason for higher Ca content in soils of the Study area.
- SAR values were mostly low except the soils of Bambhdai, Bhinsara and Padampur which have medium value.
- Sodium content of the Soil samples was ranged from 1.38 to 2.97 (mg/g).
- Soil of project area was varied. Soil textural classes show that soils were sandy, loamy sand and sandy loam. The water holding capacity of sandy soil, loamy sand and sandy loam were in the ranges of 21.24 to 29.79, 24.71 to 29.27 and 22.95 to 30.86 respectively. By and large, WHC could be considered as medium.
- A compact soil has a higher value, while less compact soil has value. The bulk density value ranged from 1.07 to 1.58 (g/m^3). Based on results, soils of study area are easy to field operations.

11.3.6 ECOLOGY

- One of the necessary preconditions for the conservation of a species is, understanding of various ecological parameters controlling their population status and its distribution pattern. One of the fore most management strategies for the conservation of biological diversity is in situ conservation. This option suggests that maintenance and protection of wild plants and animal species in the wilderness or natural conditions or habitats in nature preserves such as biosphere reserves, national parks and sanctuaries.
- Protected Areas play a key role in conserving natural ecosystem and they contribute substantially to biodiversity conservation provided they are managed effectively. They ensure the continued flow of ecosystem services and also provide significant economic benefits to the dependent communities. This option is maintained by strict enforcement strict law.
- However, in the recent past it has been realized that, the conservation of biological diversity is not possibly without involving the dependent community. As a result of it there are many community-based forest protection programmes like, Joint Forest Management (JFM), Eco-development, Buffer Zone Management etc. have been initiated. This initiative will also suggest to start in this landscape.
- This study reported a total of 154 plant species, 10 herpetofauna, 58 birds and 12 species of mammals from the core and buffer zone of GHCL- Bada, Mandvi-Kutch Locality. However, no scientific data on ecology of each rare, endangered, and threatened species are available for this landscape and hence, need to be conducted a separate study in details is very necessary before initiate any project activities on site.
- In addition, once completed this detail study, there are also need to be marked the macro and micro habitats for each species along with local villagers and respective forest ranges for long-term conservation of wildlife corridors and habitats of important species including- birds, mammals, reptiles, and plant species mentioned.
- Identified and through interviews, mangrove patches are recorded far off from the project site with severe anthropogenic pressures.

- All the necessary conservation plans for recorded and referred threatened and scheduled animals' species are submitted along with this report in details.
- A detailed status survey of threatened floral species needs to be done and the habitats supporting high floral diversity should be identified and notified as Mini Core Areas (MCA) of the Bada Landscape. Strict protection should be given to these Mini Core Areas to prevent wood cutting, grazing and collection of other natural resources. Under restoration programme degraded habitats should be restored with the threatened species and their associate species.
- Even though many GSFD nurseries exist in the district, they generally develop common and fast-growing trees species for fuel wood, timber, avenue plantation and certain extent some medicinal plants under social forestry programmes. No priority was given to shrub and herbaceous species under social forestry scheme. Moreover, out of 16 species have been identified as threatened species, except Commiphora wightii (small tree or shrub) rest all were herb, shrub, under shrub, climber and ground runner. Hence, development of nursery, especially for the threatened species mentioned should be part of social forestry mandate.
- Many species are unique in Kutch landscape are also recorded in and around the proposed project localities, and hence, need to be discussed and clarity on long-term conservation of existing population of these species are very important.
- The recent development in the tract of community involvement is People's Biodiversity Register (PBR) programme under the Biological Diversity Act (BDA), 2002. It is aimed to document people's knowledge and perception of the status, uses, history, ongoing changes and forces driving these in the biological diversity resources of their own localities. The concept and outcome of this initiation has been widely discussed (Gadgil et al. 2000). For all the surrounding and adjoining villages of proposed site, PBR process will be started with concerned technical support group and the Gujarat Biodiversity Board (GBB), Gandhinagar.
- For above PBR process, and with respective Biodiversity Management Committee/s (BMCs), all other recorded species and detailed documented species like- recently recorded Sea Turtle Nesting sites, Vulture nesting sites, Dolphin sightings etc. by Forest Range Offices, Naturalists and local resource personals need to be conserved and protected with participatory approaches.

11.3.6 SOCIO-ECONOMIC STATUS

Study area Observation

SR. NO.	STUDY VILLAGE	FIELD OBSERVATION	MAJOR ISSUES
1	Bada	Anganwadi and government primary schools, secondary schools, and higher secondary schools are available. Agriculture and labour are the two most common occupations. Sub-post office and Primary Health Centre are available. Major crops are Cotton, Groundnuts, and wheat.	Road, Drainage problem and Employment
2	Bhinsara	Anganwadi and Government primary school are present. Mobile van Healthcare facility, Post office and Community Hall available.	Drinking water, Healthcare facilities and employment

SR. NO.	STUDY VILLAGE	FIELD OBSERVATION	MAJOR ISSUES
3	Panchatiya	Anganwadi and primary school are available. Agriculture and labor are the main occupations in the village. Major sources of drinking water are well and tap water. Sub-post office and ration shop are available in the village. Cotton, Groundnut and till are major crops	Drainage problem, Road
4	Layja Mota	There are anganwadis and government primary schools and secondary schools. The Primary Health Centre, the Community Hall, and bus facilities are available for transportation. Tap water is a major source of drinking water.	Drinking Water & Employment
5	Layja Nana	Primary education is provided by Anganwadis and Government primary schools. The main occupations are daily labour and fishing. Three Community Halls and Sub-post office are available. Cotton, groundnuts, and wheat are the major crops	Education facilities, Health facilities and employment
6	Bhada	Anganwadi and government primary and secondary schools are available for education. Primary Health Centre facility, Community Hall, sub-post office and for transpotation bus facilities are available. Major drinking water source is tap water.	Drainage problem, toilet, PHC and employment
7	Bayath	Anganwadi and Government primary school and High School are present for education. Primary Health Centre facilility, Community Hall, sub-post office and for transpotation bus facilities are available. Major drinking water source is tap water.	Drinking water facilities and Employment
8	Mapar	Anganwadi and Government primary school are present for primary education. Major occupation are labour work and agriculture. Community Hall and Sub-post office are available. Major crops are Cotton, Ground nut, Wheat and Pearl Millet	Road facility and Health facility and Employment
9	Bambhadai	Anganwadi and Government primary school are present for primary education. Major occupation are labour work and fishing. Community Hall facility and Sub-post office available. Major crops are Cotton, Ground nut, Wheat	The available drinking water has high TDS, which is not suitable for consumption purpose. Road Facility is not proper- Kachha road, Drainage system not available, PHC not available, High rate of Un-employment

SR. NO.	STUDY VILLAGE	FIELD OBSERVATION	MAJOR ISSUES
10	Padamapar	Anganwadi, Government Primary School is available for primary education system. Most of the population is employed in agriculture and labour work. Major drinking water source is tap water, all types of road facilities available Pakka Drainage facility present, Community Hall available and also Bank available, ration shops present in the village Major cultivation is Cotton, Ground nuts.	Health and Drinking water facilities

SECTION 11.8 PROJECT BENEFITS

Action Plan for Corporate Environment Responsibility Development Activities

SR. NO.	TYPE OF ACTIVITIES	AMOUNT TO BE SPENT PER YEAR (RS. IN CRORES)			TOTAL AMOUNT TO BE SPENT (RS. IN CRORES
		1st YEAR	2nd YEAR	3rd YEAR	
1.	**Fodder /Animal husbandry**	1.45	1.45	1.45	**4.35**
2.	**Employment/ Promoting activities**	0.75	0.75	0.75	**2.25**
3.	**Health** Infrastructure development Such as primary healthcare units and the fulfilment of the basic amenities in PHCs including mobile medical van and Provide Bala- Rasayana to Malnutrition Children in Aanganwadi and PHC of nearby Villages under CER activities.	0.72	0.70	0.70	**2.12**
4.	**Education** Infrastructure development for quality of education, which will ultimately upgrade schools in nearby villages	0.83	0.82	0.82	**2.47**
5.	**Farmers** Promoting environment friendly and nature-based solutions to enhance productivity of farming	1	1	1	**3.00**
6.	**Fishing** Development Initiatives for Fishing Communities	0.34	0.33	0.33	**1.00**
7.	**Renewable Energy**	0.95	0.95	0.95	**2.85**
TOTAL					**18.04 Crore**

Activities under Corporate Social Responsibility

SR. NO.	PROGRAMMES AND ACTIVITIES	PROPOSED BUDGET FOR FY 23-24 (RS. LAKHS)
1	Agriculture and Animal Husbandry Livelihood	152.94
2	Health	22
3	Education and Vocational Training Institute	28
4	Women Empowerment	5.80
5	Water Resource Development Program	30
6	Rural Development Project & national Heritage	31.50
7	Establishment & Other	8.30
Total		**278.54 Lakhs**

SECTION 11.10 ENVIRONMENTAL MANAGEMENT PLAN

ASPECT OF ENVIRONMENTAL MANAGEMENT	COST IN CRORE [RS.]	RECURRING COST (CRORE /ANNUM) [RS.]	REMARKS
Air Pollution	89.28	1.50	Capital cost would include air pollution control devices like ESPs, Scrubbers, Dust extraction and suppression systems, Stacks, Dry Fog system, Wind screen and the recurring cost would include operation and maintenance of pollution control devices
Water Pollution	14	0.12	Capital cost would include cost of ETP, STP and recurring cost would include operation and maintenance of pollution control devices
Noise Pollution	2.9	0.0035	Capital cost would include providing adequate sound enclosures for TG, CO- compressor, DG Set
Hazardous / Solid Waste Management	1.05	1.10	Capital cost would include expense for providing storage area for hazardous waste and membership charges of TSDF/CHWIF Site and recurring cost would be for solid/ hazardous waste disposal charges and Sampling & analysis charges of solid waste.
Environmental monitoring Programme	3.4	1.30	Capital cost would include expense OCEMS, Online weather station, online pH, NH3-N, Temp meter and recurring cost would include monitoring and analysis of noise level., Sample analysis charges & ambient air & fugitive emission sampling & analysis charges etc., Fresh water & wastewater

			sample analysis charges etc. Soil: recurring cost would be for Soil Sample analysis., Marine area environment monitoring
Green Belt	20	0.5	Capital cost would include development of green belt within the project premises and recurring cost would include maintenance charges and manpower salary etc.
Renewable Energy	113	--	Capital cost would include Installation of Solar and Windmill
Fire safety & Occupational Health & Safety	3.4	0.35	Capital cost would include cost of OHS center, PPEs, fire & safety instruments and recurring cost would include maintenance charges and training, audit & health check-up etc.
Miscellaneous	53	2.66	Miscellaneous activity such as development of rain water harvesting system, Drainage Network for rain water, Environmental laboratory, Environmental Management system, miscellaneous study, statutory application fees, audit, training cost etc. and recurring cost would include biodiversity management plan, hiring of EMC and Conservation Plan for Schedule 1 species.
CER	18.04	--	Capital cost would include cost of CER activities such as promoting renewable energy, skill development Programme, Organic farming, water conservation (like village pond deepening), forestry etc. and develop infrastructure of schools, health facilities, Fishing activities, roads in nearby villages
Total (EMP + CER)	**318.08**	**7.53**	

M/s. Greenfield Chemical Complex of GHCL Ltd., Kutch

Project Site: Village Bada, Taluka Mandvi, District Kutch, Gujarat.

BASELINE NETWORK DESIGN

Geo Co-ordinates:

22°53'53.19" N,
69°09'26.63"E

Prepared by:	Checked by:	Approved by:
Hiral Shah	Malav Dalwadi	T. R. Patel

PROJECT PLANNING FOR BASELINE MONITORING

Plan order to conduct field studies in systematic manner, a check list has been prepared by T.R. Associates. This would help the concerned ECs and FAEs for effective planning of the study.

PRE VISIT CHECK LIST

Pre visit check list LU Monitoring

Sr. no	Description	Checklist
1	Prepare 10 km Radius TOPOMAP	Annexure - 1
2	Prepare 1,5,10 km radius Google map	Annexure - 2
3	Identified Level 1, level 2, level 3 Land use classification based on Google image and prepare desk report for site monitoring.	--

Pre visit check list for SE Monitoring

Sr. no	Description	Checklist
1	Prepare List of villages, total population, house hold, covered in the 10 km radius map provided by Land use expert based on latest Census, report	R-10 E
2	Prepare sociology status indicator of study area (i.e. Physical, Demographic, Health, Education, Agriculture, Trade commerce, Economic(income source), public utilities, Transportation/communication, other indicators)	
3	Check questionnaire incorporating project specific information	

Pre visit check list Ambient air quality Monitoring

Sr. no	Description	Checklist
1.	Collect secondary data on meteorology for the past 10 yrs.	
2.	Identified Valuable environmental component from the TOPOMAP and verified status on Google earth for finalization of the monitoring location. (i.e. Reserve forest, Eco sensitive zone, major water body etc.)	R-10 A
3.	Prepare or Down load wind-rose diagram of the district from Meteoblue website and plot it onto the study area.	
4.	Identify/locate the Down wind direction and village fall into predominant down wind direction (one in core zone 0 to 5 km and one buffer zone 5 to 10 km) and upwind direction (one location).	
5.	Segregate no of ambient air location according to 10 km land use area (I.e. Agriculture, Industrial, Domestic, and Vehicular or traffic location). (Approximate identified from the Google earth data)	

PROJECT PLANNING FOR BASELINE MONITORING

Pre visit check list Water Monitoring

Sr. no	Description	Checklist
1.	Identified Major Surface water location within 10 km study area from the Google earth.	R-10 B
2.	Prepare no of Ground water location according to land use of the 10 km study area. (i.e., Agriculture, Domestic, Industrial etc.)	
3.	If major river available select upstream and downstream of the river by checking drainage pattern on Google earth.	
4.	Identified major population available in the study area for domestic water quality check location selection.	
5.	Identified any GIDC within the study area for check water quality of industrial activities.	
6.	Identified Agriculture land within study area for check water quality used for agriculture (irrigation).	
7.	Identified the impact due to source emission on the nearest water body by identified pre dominant down wind direction map given by AP expert.	
8.	Identified observations on local surrounding areas of sampling locations	

Pre visit check list Noise Monitoring

Sr. no	Description	Checklist
1.	Identified No. of monitoring location according to CPCB Guideline (Commercial, residential, silence, Industrial)	R-10 D
2.	Identified core zone and buffer zone for selection of noise monitoring location.	
3.	Identified location for traffic study within study area using Google map provided by land use expert.	
4.	Identified local activities at the sampling location affecting noise environment	

Pre visit check list Soil Monitoring

Sr. no	Description	Checklist
1.	Identified No. of monitoring location based on satellite image of 10 km radius map provided by expert. (Agriculture land, non-cultivated land, Forest land, waste dump, ETP Site etc.)	R-10 C

PROJECT PLANNING FOR BASELINE MONITORING

Pre visit check list EB Monitoring

Sr. no	Description	Checklist
1.	Collected information of local flora & fauna of the study area from secondary sources including Forest department	
2.	Prepare 10 km radius topo map and identified type of habitat/ land use in 10 km radius map. (i.e. Forest / Natural vegetation, Type of forest (Tropical dry-deciduous, Tropical moist deciduous, Semi-ever green, Wet ever-green, etc.), Water bodies and Marshy land / Mangroves, Grazing land, Agricultural land, Human Settlements, Barren land, etc.	--
3.	Determine seasonal variation of the habitats and identified ecological characteristics of each habitat based on secondary information	
4.	Prepare wind rose diagram and overlay it on to the Google image to identify the predominant down wind direction and upwind direction and identify project surroundings	
5.	Identify the secondary source data (flora & fauna) and check Critically Endangered (CR), Endangered (EN), Vulnerable (VU), Near Threatened (NT), Least Concern (LC), Data Deficient (DD), Not Evaluated (NE) etc.	

- **After successfully completion of the above exercise (BASELINE NETWORK DESIGN) Project coordinator will finalize the sampling location and allotment the work to TRA laboratory through TRA/EIA/R05 document.**
- **After that project coordinator will prepare baseline planning document coordinating with project proponent. Project coordinator will inform to PP for basic arrangement i.e., number of car, local manpower, and accommodation facilities required for monitoring team. Take prior approval from the local villages identified in the baseline network design for air monitoring. Project coordinator also informs to project proponent to make prior discussion with local sarpanch and talati for their village need base assessment study. In addition to that also informed regarding basic requirements of all Monitoring team (i.e. breakfast, lunch etc.)**

DURING VISIT

- **After reach at the project site, first introduce our team to project proponent. Vice versa project proponent will introduce their team. Once completion of introduction, project coordinator will segregate the team according to pre-desk study document as per prefixed requirement of functional area (i.e., water sampling team, Air sampling, noise sampling, Soil sampling, Socio Economy study, etc.)**

PROJECT PLANNING FOR BASELINE MONITORING

- **Take photograph of the team and start work according to allotted functional area for Baseline data collection.**
- **All FAE will get informed by project coordinator to collect precise baseline data for better understanding regarding site surrounding. It is also informed to collect the photographic evidence for representing objects for specific functional area and observation must be put into respective FAE field log book.**
- **Once all the primary baseline data will be collected by respective functional area, FAA, FAE and Project coordinator will planning for return at destination with fulfilling all necessary requirement (i.e., ice, other sample preservatives etc.)**
- **Water sample will be stored into the laboratory refrigerator with proper identification.**

POST BASELINE VISIT

- **On the next day water sample from the laboratory will be sent to subcontracted laboratory (NABL Accredited) for biological parameter analysis.**
- **Project coordinator will collect evidence of the baseline data collection (i.e., photographs from FAE) and save into the respective company folder for further data interpretation procedure.**
- **Project coordinator will inform to FAE to provide quality checks of their primary data collection and also ask to provide their report within stipulated time frame given into Bar chart.**

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QUALITY COUNCIL® OF INDIA
Creating an Ecosystem for Quality

National Accreditation Board for Education and Training

Certificate of Accreditation

T R Associates, Ahmedabad

A-401, S.G Business Hub, Between Sola Bhagwat and Gota overbridge, Near Urniya Campus, S.G. Highway, Ahmedabad, Gujarat-380060

*The organization is accredited as **Category-A** under the QCI-NABET Scheme for Accreditation of EIA Consultant Organizations, Version 3: for preparing EIA-EMP reports in the following Sectors –*

S. No	Sector Description	Sector (as per)		Cat.
		NABET	MoEFCC	
1	Thermal power plants	4	1 (d)	A
2	Metallurgical industries (ferrous and non-ferrous)	8	3 (a)	A
3	Cement Plants	9	3 (b)	A
4	Chlor-alkali industry	13	4 (d)	A
5	Soda ash Industry	14	4 (e)	A
6	Pesticides industry and pesticide specific intermediates	17	5 (b)	A
7	Synthetic organic chemicals industry	21	5 (f)	A
8	Building and construction projects	38	8 (a)	B

Note: Names of approved EIA Coordinators and Functional Area Experts are mentioned in RAAC minutes dated July 14, 2023, posted on the QCI-NABET website.

The Accreditation shall remain in force subject to continued compliance with the terms and conditions mentioned in QCI-NABET's letter of accreditation bearing no. QCI/NABET/ENV/ACO/23/2872 dated September 6, 2023. The accreditation needs to be renewed before the expiry date by T R Associates, Ahmedabad following the due process of assessment.

Sr. Director, NABET
Dated: September 6, 2023

Certificate No.
NABET/EIA/2326/RA 0293

Valid up to
April 8, 2026

For the updated List of Accredited EIA Consultant Organizations with approved Sectors please refer to the QCI-NABET website.

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Sl.No	Sector Description	Sector (as per)		Cat.
		NABET	MoEFCC	
1.	Mining of minerals including opencast /underground mining	1	1 (a) (i)	A
2.	Thermal power plants	4	1 (d)	A
3.	Metallurgical industries (ferrous & non-ferrous)	8	3 (a)	A
4.	Cement plants	9	3 (b)	B
5.	Chlor-alkali industry	13	4 (d)	A
6.	Soda ash Industry	14	4 (e)	A
7.	Pesticides industry and pesticide specific intermediates (excluding formulations)	17	5 (b)	A
8.	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	21	5 (f)	A
9.	Building and construction projects	38	8 (a)	B

Note: Names of approved EIA Coordinators and Functional Area Experts are mentioned in SA AC minutes dated September 29, 2021 and supplementary assessment minutes dated February 25 and June 3, 2022 posted on QCI-NABET website.

The Accreditation shall remain in force subject to continued compliance to the terms and conditions mentioned in QCI-NABET's letter of accreditation bearing no. QCI/NABET/ENV/ACO/22/2276 dated March 14, 2022. The accreditation needs to be renewed before the expiry date by T.R Associates, Ahmedabad following due process of assessment.

Sr. Director, NABET
Dated: June 23, 2022

Certificate No.
NABET/EIA/1922/SA 0153 (Rev.01)

Valid up to
April 08, 2023

For the updated List of Accredited EIA Consultant Organizations with approved Sectors please refer to QCI-NABET website.

National Accreditation Board for Testing and Calibration Laboratories

CERTIFICATE OF ACCREDITATION

T.R. ASSOCIATES LABORATORY

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2017

"General Requirements for the Competence of Testing & Calibration Laboratories"

for its facilities at

SURVEY NO. 272/3, ROYAL ENFIELD SHOWROOM LANE,S.G HIGHWAY, AHMEDABAD, GUJARAT, INDIA

in the field of

TESTING

Certificate Number: TC-7896

Issue Date: 25/11/2022 **Valid Until:** 24/11/2024

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the relevant requirements of NABL.
(To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Name of Legal Identity : T.R. Associates

Signed for and on behalf of NABL

N. Venkateswaran
Chief Executive Officer

National Accreditation Board for Testing and Calibration Laboratories

CERTIFICATE OF ACCREDITATION

T.R. ASSOCIATES LABORATORY

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for its facilities at

SURVEY NO. 272/3, ROYAL ENFIELD SHOWROOM LANE,S.G HIGHWAY, AHMEDABAD, GUJARAT, INDIA

in the field of

TESTING

Certificate Number: TC-7896

Issue Date: 25/11/2020 **Valid Until:** 24/11/2022

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the relevant requirements of NABL.
(To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Name of Legal Identity : T.R. Associates

Signed for and on behalf of NABL

N. Venkateswaran
Chief Executive Officer

1883

National Accreditation Board for Testing and Calibration Laboratories

CERTIFICATE OF ACCREDITATION

GUJARAT LABORATORY

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2017

"General Requirements for the Competence of Testing & Calibration Laboratories"

for its facilities at

F-16,17 MADHAVPURA MARKET, SHAHIBAUG, AHMEDABAD, GUJARAT, INDIA

in the field of

TESTING

Certificate Number: TC-5961

Issue Date: 12/03/2022 **Valid Until:** 11/03/2024

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the relevant requirements of NABL.
(To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Name of Legal Identity : Gujarat Laboratory

Signed for and on behalf of NABL

N. Venkateswaran
Chief Executive Officer

National Accreditation Board for Testing and Calibration Laboratories

CERTIFICATE OF ACCREDITATION

IND RESEARCH & DEVELOPMENT HOUSE PVT. LTD.

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2017

"General Requirements for the Competence of Testing & Calibration Laboratories"

for its facilities at

C-10, II FLOOR, SECTOR 06, NOIDA, UTTAR PRADESH, INDIA

in the field of

TESTING

Certificate Number: TC-5912

Issue Date: 30/06/2022 **Valid Until:** 29/06/2024

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the relevant requirements of NABL.
(To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Name of Legal Identity : IND RESEARCH & DEVELOPMENT HOUSE PVT. LTD.

Signed for and on behalf of NABL

N. Venkateswaran
Chief Executive Officer

1885

National Accreditation Board for Testing and Calibration Laboratories

CERTIFICATE OF ACCREDITATION

GO GREEN MECHANISMS PRIVATE LIMITED (TESTING LABORATORY)

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2017

"General Requirements for the Competence of Testing & Calibration Laboratories"

for its facilities at

DAYAL ESTATE, NATIONAL HIGHWAY NO.8, BAREJA,JETALPUR, AHMEDABAD, GUJARAT, INDIA

in the field of

TESTING

Certificate Number: TC-7073

Issue Date: 09/11/2022 **Valid Until:** 08/11/2024

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the relevant requirements of NABL.
(To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Name of Legal Identity: Go Green Mechanisms Pvt Ltd

Signed for and on behalf of NABL

N. Venkateswaran
Chief Executive Officer

A-401, S.G.Business Hub, Between Sola Bhagwat & Gota Over Bridge, Near Umiya Campus, S.G. Highway, Ahmedabad - 380060. Gujarat. | P : +91 98253 71099, +91 97241 49800 | E : adm.trassociates@gmail.com

OUR SERVICES : ENVIRONMENTAL CONSULTANT | ENVIRONMENTAL LABORATORY
EXPLOSIVE CONSULTANT | PROJECT CONSULTANT | CHARTERED ENGINEER

T. R. ASSOCIATES

UNDERTAKING

I, Mr. T. R. Patel, Proprietor of T. R. Associates, a QCI/NABET accredited consultant for Soda Ash Industry and Thermal Power Plant, here confirm that we have checked/verified the Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP) report for the "Greenfield Chemical Complex" of GHCL Ltd., at Bada, Kutch.

We have verified the EIA/EMP report, and prepared an addendum report describing our findings and observations. This report conveys our satisfaction with the data presented in the EIA/EMP report.

Furthermore, it is important to note that a fresh baseline study has been conducted by T. R. Associates Laboratory, a NABL accredited laboratory. This study was conducted during the winter season from December 2022 to February 2023. The results of this baseline study have been incorporated into the EIA Addendum report.

Date: 30.01.2024

Place: Ahmedabad

Mr. T. R. Patel,

Proprietor,

T. R. Associates

-TRUE COPY-

ANNEXURE R/29

GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE
(IA DIVISION-INDUSTRY-3 SECTOR)
*****

Dated: 12.2.2024

MINUTES OF THE 74th EXPERT APPRAISAL COMMITTEE (INDUSTRY-3 SECTOR) MEETING HELD ON 6th FEBRUARY, 2024

Venue: Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi-110003 through Video Conferencing (VC)

Time: 10:30 AM onwards

(i) Opening Remarks by the Chairman

Prof. (Dr.) A.B. Pandit, Chairman welcomed the Committee members and opened the EAC meeting for further deliberations.

(ii) Details of Agenda items by the Member Secretary

The Member Secretary apprised the Committee that proposal of M/s Transworld Furtichem Pvt. Ltd [proposal no. IA/MH/IND3/437576/2023] was considered in the 69th EAC meeting of Industry-3 Sector held during 16-17 November, 2023 through Video Conferencing (VC) and the Committee noted that Dhatav Village is part of ESAs of Western Ghats as per the Draft Notification published vide S.O. 3072(E) dated 6.7.2022 and also desired to obtain views/comments of ESZ division. Accordingly, ESZ Division has provided the comments regarding the applicability of the Western Ghats ESA regulations for the instant industry. As far the applicability of the Western Ghats ESA regulations for the instant industry is concerned it is mentioned that as of now Dhatav village is part of Western Ghats ESA and is listed in draft notification. Therefore, all the provisions [prohibited/regulated activities; as stated in para '3' (1) & (2)], as contained in draft notification on Western Ghats ESA dated 6.7.2022 are applicable to the projects. It may be mentioned that while the draft Western Ghats ESA notification re-published on 06.07.2022 is under finalization, the directions issued by this Ministry vide its O.M No. 1-4/2012-RE(Pt), dated 13.11.2013 and its amendment issued vide O.M No. 1/9/2018-ESZ, dated 03.12.2018 are in force and valid on date. Therefore, the said case can not be considered by the EAC (Industry -3).

The Member Secretary then apprised the Committee about the details of Agenda items to be discussed during this Expert Appraisal Committee (EAC) meeting.

(iii) Confirmation of Minutes of the 73rd EAC Meeting held on 16th-17th January, 2024.

in manufacturing of 3 inorganic chemicals - Sodium Chloride, Ammonium Chloride & Potassium Chloride. Since production of inorganic compounds are not in purview of EIA Notification 2006, Environment Clearance was not required for production of existing inorganic products. The Committee noted that PP has not submitted the Certified compliance report issued by MPCB for the existing CTO. Accordingly, the committee suggested that PP shall submit the CCR highlighting compliance of each condition in the letter head of RO, MPCB.

- PP presented that industrial effluent will be segregated into Low TDS/COD and High TDS/COD effluent streams. Low TDS/COD effluent stream will be treated in the ETP comprising primary , secondary and tertiary treatment including RO. High TDS/COD will be treated through solvent stripper followed by Evaporator. Sewage will be treated in the STP. No effluent/treated water will be discharged outside the premises and ZLD will be followed. The Committee suggested to submit the same in writing.

Accordingly, proposal was deferred for want of above additional information. Above all additional information shall be submitted online to the PARIVESH portal for further consideration by EAC.

Agenda No.74. 2

Proposed project to produce Light Soda Ash (LSA) of 11,00,000 TPA capacity, 5,00,000 TPA of Dense Soda Ash (DSA) and 2,00,000 TPA Sodium Bicarbonate (SBC) located at near village Bada, Taluka - Mandvi, District - Kutch in the Gujarat state by "Greenfield Chemical Complex" of GHCL Ltd- Reconsideration of Environmental Clearance

[Proposal no: IA/GJ/IND3/408164/2022, File No. IA-J-11011/293/2021-IA-II(I)]

1. The proposal is for Environmental Clearance to the Proposed project to produce Light Soda Ash (LSA) of 11,00,000 TPA capacity, 5,00,000 TPA of Dense Soda Ash (DSA) and 2,00,000 TPA Sodium Bicarbonate (SBC) located at near village Bada, Taluka - Mandvi, District - Kutch in the Gujarat state by "Greenfield Chemical Complex" of GHCL Ltd

2. The project/activity is covered under Category 'A' of Item 4 (e) soda ash industry of Schedule of Environment Impact Assessment (EIA) Notification, 2006 (as amended) and requires appraisal at Central Level by the Expert Appraisal Committee (EAC) as the project is located outside the notified industrial area.

3. The ToR was issued by the Ministry, vide letter no. IA-J-11011/293/2021-IA-II(I) dated 10th August, 2021. The PP applied for the Environment Clearance in the Common Application Form and submitted the EIA/EMP Report and other documents. The PP in the CAF reported that it is a **Fresh**

EC case. The proposal was placed in 72nd EAC Meeting held on 2nd January, 2024 in which EAC deferred the proposal now the proposal is placed in this 74th EAC meeting held on 6th Februay,2024 where project was wherein the PP and an accredited Consultant, M/s. T. R Associates [NABET accreditation till **NABET Accreditation Number: NABET/EIA/2326/RA 0293 valid till 8th April, 2026**], made a detailed presentation on the salient features of the project and informed the following:

4. The PP reported that the Total land area is **5463200 m^2;** no additional land will be used **for proposed project** and no R& R is involved in the Project. The details of various products are as follows:

Sr. No.	**Name of the Product**	**Production Capacity (MT/Month)**	**CAS Number**	**End use**
1	Light Soda Ash	11,00,000 TPA	497-19-8	Manufacturing of glass, usage in chemical industry, paper and detergent manufacturing, and food industry
2	Dense Soda Ash	5,00,000 TPA	497-19-8	
3	Sodium bicarbonate	2,00,000 TPA	144-55-8	
Captive Co-generation Power plant Steam (CFBC boilers)			120 MW	
Emergency DG Set			5 MVA	
Note- The production capacities are planned in phased manner and for Phase 1 production capacity for LSA: 5,50,000 TPA, Dense Soda Ash: 2,50,000 TPA, SBC: 1,00,000 TPA and 60 MW for Captive Co-generation Power plant.				

5. The PP reported that there is no violation case as per the Notification No. S.O.804(E) dated 14.03.2017 and no direction is issued under E(P) Act/Air Act/Water Act.

6. The PP reported that there is no National Parks, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site. **Marine National Park and Sanctuary, Jamnagar are located at 75 km aerial distance in South direction and Narayan Sarovar Sanctuary is located at more than 100 km aerial distance in North-West directions**. Flap shell turtle, Green Sea turtle, Indian monitor lizard, Olive Ridley Sea turtle, Black shoulder kite, Eurasian Spoonbill, Indian Peafowl, Marsh Harrier, Oriental Honey Buzzard, Gugal Schedule-I species were found in the study area for which conservation plan has been preapred and submitted to PCCF and Chief wildlife warden dated 9.11.2023.

7. The PP reported that the diversion of 0.9689 ha unclass forest for laying part of sea water intake and effluent disposal pipeline and passage for related construction equipment movement in Kachchh has been obtained vide ketter dated 18. 7.2023.

8. The PP reported the Unit has received the Final recommendation letter from GZMA vide file no ENV/ 10/ 2021/184/ T- cell dated 26.12.2023. CRZ details are as:

Activities	**Zone**
Construction of process plant and utilities etc.	Outside CRZ area
Effluent collection	Outside CRZ area
Seawater Intake system i.e. sump and pump house	CRZ III
Intake Pipeline	CRZ IA, CRZ IB and CRZ IV
Outfall Pipeline	CRZ IA, CRZ IB and CRZ IV

Laying of Seawater Intake and effluent disposal underground pipeline through tunnel from unclassified Forest area, Sand dune area, intertidal area outside project boundary.

9. The PP reported that Ambient air quality monitoring was carried out at 10 locations during December 2019 – February 2020. The baseline data indicates the ranges of concentrations as: PM_{10} (19 µg/m^3 to 53 µg/m^3), $PM_{2.5}$ (8 µg/ m3 to 17 µg/ m3), SO_2 (1 µg/m^3 to 14 µg/m^3), NOx (5 µg/m^3 to 16 µg/m^3), Ammonia (6 µg/m^3 to 19 µg/m^3), Ozone (2 µg/m^3 to 8 µg/m^3), Carbon Monoxide (0.09 mg/m^3 to 0.21 mg/m^3), Hydrocarbons [Methane hydrocarbons (0.23 µg/m^3 to 1.27 µg/m^3) and Non-Methane hydrocarbons (0.11 µg/m^3 to 0.19 µg/m^3)], Lead (Pb) (0.05 µg/m^3 to 0.27 µg/m^3), Arsenic (As) (0.02 ng/m^3 to 0.11 ng/m^3), Nickel (Ni) (0.11 ng/m^3 to 0.18 ng/m^3), Benzo(α)pyrene(B[a]P) (ND to 0.03 ng/m^3) and Benzene (ND to 0.16 µg/m^3). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 3.05 µg/m^3 in case of Lignite, Coal and Petcoke with respect to PM_{10}, 10.98 µg/m^3 in case of Lignite, 2.55 µg/m^3 in case of Coal and 13.26 µg/m^3 in case of Petcoke with respect to SO_2 and 11.37 µg/m^3 in case of lignite, 7.3 µg/m^3 in case of coal and 5.62 µg/m^3 in case of Petcoke with respect to NO_x. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

10. The PP reported that the Total water requirement for project will be 15,20,060 m^3/day in case of Dry Lime process or 13,63,878 m^3/day in case of Wet Lime process which will be met from Sea water. Total Effluent of 15,88,570 m^3/day (Domestic - 160 m^3/day + Industrial – 15,88,410 m^3/day) in case of Dry Lime process or 14,48,818 m^3/day (Domestic - 160 m^3/day + Industrial – 14,48,658

m^3/day) in case of Wet Lime process. The Process effluent generated i.e. from distiller waste, brine purification reject, RO/DM rejects will be disposed off along with once through return cooling water/fresh seawater into Arabian Sea as per recommendation of NIO. The characteristics of the discharge water are within the norms prescribed by CPCB.

11. The PP reported that the Power requirement for proposed project will be 120 MW and will be met from Captive Co-generation Power plant. D. G. Set (5 MVA X 1) [Fuel: HSD (60 KL)] shall be provided and used only in case of power failure. Stack (30 meter) and Retrofit shall provide as per CPCB norms to the DG sets. Industry will provide six Steam Boiler (150 TPH) for captive power plant, six lime kilns and D G sets

12. **Details of process emissions generation and its management:**

SR.NO.	**Stack attached to**	**Capacity**	**Height of the stack (m)**	**Fuel & its Consumption**	**Expected Pollutant**	**APC System**	**GPCB Limit**
1	CPP with flue gas desulphurization CFBC Boiler (6 Nos.)	150 TPH	130 m	Imported Coal/Lignite/ Pet coke (Imported Coal: 13,14,000 TPA, Lignite :19,71,000 TPA, Pet coke: 9,12,500 TPA)	SPM SO_2 NO_2 Hg	Individual ESP with each Boiler	PM ≤ 30 mg/Nm^3 SO_2 ≤ 100 mg/Nm^3 NO_2 ≤ 100 mg/Nm^3 Hg ≤ 0.03 mg/Nm^3
2	D G Set (2/3 Nos.)	5 MVA	30 m	HSD (60 KL)	HC CO PM NO_x	Retrofitting	NOx 710 ppmv NMHC 100 mg/Nm3

							PM 75 mg/Nm 3 CO 150 mg/Nm 3
3	Lime Kiln 1		68 m	Coke or Briquette or Anthracite (Coke - 1,30,000 TPA, Briquette- 1,55,000 TPA, Anthracite - 1,10,000 TPA)	SPM SO_2 NO_2	Scrubber and Dust Collector system	SPM ≤ 150 mg/Nm^3 SO_2 ≤ 100 ppm NO_2 ≤ 50 ppm
4	Lime Kiln 2		68 m			Scrubber and Dust Collector system	
5	Lime Kiln 3		68 m			Scrubber and Dust Collector system	
6	Lime Kiln 4		68 m			Scrubber and Dust Collector system	
7	Lime Kiln 5		68 m			Scrubber and Dust Collector system	
8	Lime Kiln 6		68 m			Scrubber and Dust Collector system	

SR.NO.	**Stack attached to**	**Height of the stack (m)**	**Expected Pollutant**	**APC System**
1	Ammonia Recovery system	42 m	Ammonia	Water scrubber

2	Lime grinding system / Slaker	65 / 20 m	PM / Water vapor	Bag filter / Adequate stack height
3	Calciner unit	37 m	PM	Scrubber, Bag filter
4	Densification	43 m	PM	Scrubber
5	Sodium Bi-Carbonate Unit	30 m	PM	Bag filter
6	Lime Kiln	Closed system	PM	Scrubber and Wet ESP

13. **Details of Solid Waste/ Hazardous Waste Generation and Its Management**:

Sr. No.	Type of Waste	Mode of Disposal
1	ETP Sludge from treatment of effluent generated from captive power plant & RO/DM Plant	The effluent from power plant, RO/DM plant will require only neutralization & it will have negligible BOD/COD. Sludge will be disposed off in nearby landfill site.
2	Used Oil / Used Cotton	It will be sold to MoEF&CC/CPCB registered recyclers only. Approx. 12 KL
3	Discarded Drums	It will be sold to approve traders. Approx. 5 MT/yr
	Discarded Bags	It will be sent back to supplier for reuse.
4	Spent Ion exchange resin	To be sold to authorized recyclers or will be incinerated at MoEF&CC/CPCB approved TSDF for which plant will obtain membership. Approx. 3000 l/yr
5	Lead acid Batteries	It will be sold to authorized agency through auction.
6	Ash (Fly ash & Bottom Ash) from Boiler	The Boiler ash will be used for cement Manufacturing/ Brick Manufacturing. Approx. 750 TPD
7	Limestone rejects	It can be used in Boiler for desulphurization and as a sweetener in cement industry, road making, pavement etc. 5% of lime stone consumption.

8	Settled sludge	Since settled sludge, non-hazardous in nature, it is proposed to be disposed off in Nearby landfill site.

14. The Budget earmarked towards the Environmental Management Plan (EMP) is ₹ **205.07 crore** (capital) and the Recurring Cost (operation and maintenance) will be about ₹ **6.98 Crore** per Annum. Industry proposes to allocate ₹ **18.04 Crore** towards CER.

15. The PP reported that Public Hearing for the Proposed project has been conducted by the State Pollution Control Board at the project site on **17.10.2022**. The main issues raised during the public hearing are related to the air pollutants, water pollutants, schedule 1 conservation plan, fishing, traffic etc.

16. The PP proposed to set up an Environment Management Cell (EMC) by engaging Environment officals for the functioning of EMC.

17. The PP submitted the Disaster and Onsite and Offsite Emergency Plans in the EIA report.

18. The estimated total project cost is **Rs 3550 Crores**. Total Employment will be **1200** persons as direct.

19. Intake pipeline and outfall pipeline fall in CRZ 1A, 1B and IV area as per demarcation. It was reported that construction of process plant and utilities fall outside the CRZ area. SCZMA recommendation has been obtained for Laying of Seawater Intake and effluent disposal underground pipeline through tunnel from unclassified Forest area, Sand dune area, intertidal area outside project boundary.

20. The Public Hearing earlier was scheduled to be held on 16-04-2022 at 11:00 Hrs, Venue: Project Site, Survey no. 432, Village: Bada, Taluka: Mandvi, District: Kutch, Public hearing was then time being postponed due to unavoidable circumstances. After that public hearing was completed on **17-10-2022 at 11.00 Hrs.** Venue: Project Site, Survey no. 432, Village: Bada, Taluka: Mandvi, District: Kutch, Gujarat. Which was presided over by Shri Chetan Mishan(GAS), Sub Divisonal Magistrate & Deputy Collector, Mundra- Kutch. Public hearing Details as given below:

S.No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
1	CSR–Fodder	4	Steps to be taken for cattle Care about Maldhari community Security regarding fodder supply for livestock.	Fodder will be provided as well as provision for veterinary doctor will be carried out by GHCL foundation under CSR activity.	• Activities for fodder supply will be carried out under CSR and CER activities for strengthening the bond between the project authorities and the local population. (refer Ch-8 and Table 10.4 in Ch-10). Fodder field will be developed on the Government/allocate land to nearby villages. • Unit will do promotion through providing support for breed improvement, animal health care, fodder improvement and providing veterinary doctor in nearby villages under CER and CSR activities for communities. • During year 2020-2021, GHCL foundation has spent INR 9.03 Crores towards CSR activities. CSR projects/activities worth INR 19.09 Cr. were implemented. GHCL wide range of CSR projects have touched and benefitted more than 90,200 lives over the years. Promoting	• As per MoEF&CC Office Memorandum F.NO. 22-67/2017-IA III, MoEF&CC, New Delhi, dated on 1st May 2018 GHCL Ltd has earmarked 0.5 % of capital investment (appro. Rs. 18.04 crore), towards the Corporate Environment Responsibility in 5 years • GHCL Ltd will spend approx. **4.35 crore*** towards Animal husbandry promotion through providing support for breed improvement, animal health care, Veterinary doctor and others as well as provides Fodder for cattle feeding nearby villages as per requirement under CER activities (*value may defer as per actual requirement)	5 years	GHCL Limited
2	Employment	5	For employment of local villagers Number of employment opportunities to be Priority must be given to nearby 10 villages Regarding priority to nearby villages	Information on employment opportunities has given by Project Proponent that there are different types of employment opportunities in the two phase of the projects i.e. construction	• The proposed project has a potential for employment of skilled, semiskilled and unskilled employees during	• GHCL Ltd will spend approx. 2.25 crore towards Promoting activities for skill building to improve	During construction and Operation phase	GHCL Limited

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
			for labor work Regarding employment for local communities.	phase and operational phase of the project. GHCL will strive to provide these employment opportunities to the local people, for which work will be done for their skill development and employment opportunities will be provided to the local people. As per requirement, training will be given to local people in coordination with HR department. Priority will be given for employment of local people. In nearby villages a group of women can be formed so that they can work in Gruhudhyogs (Home- based business). M/s. GHCL shall provide employment to women as per their skills and qualification.	operational phase. The plant will create direct employment in phased manner for about 1200 (operational phase) skilled as well as semi-skilled staff and indirectly large number ofunskilled manpower will be engaged for the project. For Employment, local people will get first priority as per suitability and requirement. People will also get employed by the contractors for various project related activities. (Refer Ch-8 of EIA report) • GHCL foundation will carry out skill development Programme for local youth to improve their employment opportunities, women empowerment under CSR and CER activities.	employment opportunities and women empowerment in nearby villages under CER activities.		
3	CSR-Health	1	Regarding health facilities under CSR activities	Will provide mobile health van facility and upgradation of existing healthcare infrastructure	• Industry will provide Mobile Health Care, Health Camps, and Specialized Check Up Camps in nearby villages. Necessary support and help will be extended for advanced diagnosis and treatment wherever identified, Free medical health checkup under CSR and CER activities.(Refer Ch-8 of EIA report). We have already initiated mobile health van facility for nearby affected villages of project site.	• GHCL Ltd will spend approx.. 1.12 crore towards Infrastructure development Such as primary healthcare units and the fulfilment of the basic amenities in PHCs including mobile medical van and Provide Bala-Rasayana to Malnutrition Children in Aanganwadi and PHC of nearby Villages under CER activities. • GHCL Foundation will spend approx..	5 years	GHCL Limited
4	CSR-Education	3	Regarding scholarship under CSR activity Regarding skill development of youth and improvement of	Will build school in future as per requirement and will also upgrade the existing school infrastructure and will carry out	• Unit will be directed at two levels viz. school and skill building to improve employment opportunities. At		5 years	GHCL Limited

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
			Conditions To provide educational facilities	skill development activities	school level we intend to promote quality of education and learnability, develop infrastructure of Government schools, provide vocational training as per the requirement under CSR and CER activities. • GHCL foundation will support local government and NGO to make that program more effective. • GHCL foundation will carry out skill development Programme for local youth to improve their employment opportunities, women empowerment under CSR and CER activities. • During year 2020-2021, GHCL Foundation has spent INR 9.03 Crores towards CSR activities. CSR projects/activities worth INR 19.09 Cr. were implemented. GHCL wide range of CSR projects have touched and benefitted more than 90,200 lives over the years. Promoting such activities like water conservation, Animal husbandry, health care, SHG, Infrastructure development etc.	towards Infrastructure development for quality of education, which will ultimately upgrade schools in nearby villages under CER activities.		
5	Air Pollutants (SOx, NOx, Dust)	6	Height of chimney to be installed Levels of Sox and NOx Regarding acid rain cause by Sox Emission of PM during transportation and Emission of heavy metal such as	For minimizing Air Pollution, requisite height of the stacks will be provided as per the NAAQS norms. Besides this, Modern technology equipment's like Dust collector, Electrostatic Precipitator, Scrubber will	• The best available technology-based pollution prevention and control shall used to meet the regulatory standards and these pollution control systems will be commissioned before	• Air pollution • Capital cost would include air pollution control devices like ESPs, Scrubbers, Dust extraction	During operation phase	GHCL Limited

S.No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
			mercury. Regarding once through cooling for 120 MW. Regarding linkage of fuel and how they are going to use it	installed. As a result, the pollution level will be within standard limits. GHCL will continue to support development of green belt in the surrounding villages through various agencies including GHCL Foundation (AF). GHCL shall endorses AF tree plantation movement of planting trees in entire Mandvi Taluka and 50,000 trees that mentioned, GHCL shall surely nurture those plants for five years.	commencement of operation of the project. Wherever possible, the control systems shall be interlinked with the operational units, so that failure of the control system shall shut down the respective operational unit. • High efficiency ESPs shall be provided in the flue gas path of the CFBC boilers for control of particulate matter. • Finely ground limestone will be added to the boiler combustion zone • together with coal/lignite to arrest the SO2 formed during combustion. • Lime stone dozing system to the furnace to be designed to achieve higher than 90% capture of SO2. Monitoring system(CEMS) of air pollutants SO2, NOx, NH3, PM10 and PM2.5 will be implemented. • So, the expected pollutants will be well within standard norms. • The air quality monitoring will be carried out on regular basis by approved agencies by CPCB/GSPCB. (refer Ch-6 and Ch-10 of EIA report) • GHCL will implement greenbelt /plantation program to ameliorate the pollutants and improve the aesthetics and ambient air quality. (refer Ch-10 of EIA report) • There is negligible cooling water requirement for power generation. There is no any alternative effective system is available for soda ash plant.	Stacks, Dry Fog system, Wind screen etc- 89.28 crore • recurring cost would include operation and maintenance of pollution control devices- 1.50 crore • **Environmental monitoring Programme** capital cost include OCEMS, online weather station etc- 3.4 crore • Recurring cost – 0.95 crore • Greenbelt • Capital Cost- 20 Crore • Recurring Cost- 0.5 crore		

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
					• There is no readily available infrastructure for transportation of fuel i.e. rail or water way. So, we have to transport through road. Traffic study are shown in section 3.2.3 of chapter-3 and impact due to transportation is show in 4.1.4.3 and 4.2.3 of Chapter-4 in EIA report. In future, any alternative option available will explore. • GHCL Foundation will also promoting plantation activities in nearby villages under CSR and CER activities			
6	Water pollutants (BOD,COD,Ammonia, Mercury, Sea Weed, Mangroves)	7	Regarding water related question by Koli society Regarding decrease in number of phytoplanktons and disruption of food chain Regarding temperature and presence of ammonia in waste water Regarding presence of mangroves Regarding setup of tunnel for intake of sea water, seismic zone in which company falls, liquification of land due to heat Regarding discharge of effluents into sea containing ammonia and high temperature and death of fishes at Sutrapada plant Regarding quality of effluent in terms of BOD and COD	Effluent will be highly alkaline so it will be mixed with HCL and then it will be disposed off in sea. Design of structure will have done according to seismic zone V. In soda ash industry impact of ammonia is very low.	• Industry will provide adequate effluent management and monitoring system for disposal of treated water • Proper seawater intake and treated effluent disposal (ensure maximum dilution) shall be done as per recommendation Marine EIA report. • The water monitoring results of (surface and groundwater and marine) should be carefully evaluated to identify significant changes, if any, adverse change from the baseline accordingly, corrective measures will be taken to ensure the sustenance of water quality. However, there is no ground water pollution is envisage in such soda ash plant, • The ammonia concentration in treated waste water well	• Capital cost would include cost of ETP, STP etc- 14 crore • recurring cost would include operation and maintenance of pollution control	During operation phase	GHCL Limited

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
					within the limit specified by CPCB for soda ash industry. • There is no such fish kill cases due to treated effluent in existing plant. There are independent studies available which indicates there is no significant adverse impact on marine environment but there will be positive impact on environment. • During studies, there is no such mangroves identified in sea water intake and outfall line area. • Design of pipeline/tunnel will be done according to seismic zone V. In case of catastrophic failure/ liquification on land, there are no chances of flooding as water transport through gravity.			
7	Marine Life	1	Effect on marine life due to proposed project	No adverse impact on fish or marine animals and sea weed observed.	• Industry should be ensured that the effluent released to the sea meets the prescribed GPCB/ CPCB norms at all times. This should be verified through tracer studies after the outfall becomes operational. The effluent release scheme can then be adequately modified to ascertain necessary dilution, if required. The efficiency of the diffuser must be checked periodically and if necessary, it should be cleaned to revert back to the dilution ascertained through initial tracer studies. • There are independent studies available which indicates there is no significant adverse	• A provision of Rs. 1 crore to be earmarked for the biodiversity management plan to be implemented in the project area during construction phase and operation phase. • For periodic monitoring of the marine area environment during project • construction phase, a provision of Rs. 0.5 crore to earmarked. • For operation phase, Rs. 0.3 crore per year to be kept provision	During constructio n and Operation phase	GHCL Limited

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
					impact on environment but there will be positive impact on environment. • Design of pipeline/tunnel will be done according to seismic zone V. In case of catastrophic failure/ liquification on land, there are no chances of flooding as water transport through gravity.			
8	Health & Hygiene(Ammonia Leakge)	2	Skin diseases due to Soda Ash Regarding the leakage of ammonia.	GHCL will take care of any such issues related to Health of local peoples and workers. All the necessary measures for handling of chemicals will be implemented to reduce its impact on health of peoples. This information is also provided in the EIA report. All the pockets will have leak detection and repair system technology. Moreover, periodical maintenance will also be carried out. GHCL will ensure that there will be no leakage and therefore, there will not be occupational health issues for workers or villagers working in the plant. Moreover, GHCL	• Ammonia tanks should have latest instrumentation provision for pressure indication, temperature indication and level indication. The provision of instrumentation should be within 100 percent redundancy. Continues recording of major parameters pertaining to the storages shall be maintained in the control room. • Unit will provide all the safety measure for ammonia storage	• Capital cost would include cost of OHS center, PPEs, fire & safety instruments, automation system for ammonia storage – 3.4 crore • Recurring cost would include maintenance charges and training, audit & health check-up etc.- 0.35	During operation phase	GHCL Limited

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
					commissioned before commencement of operation of the project. Wherever possible, the control systems shall be interlinked with the operational units, so that failure of the control system shall shut down the respective operational unit. There is no significant impact observed in the existing soda ash plants in Gujarat.. • There are rare possibilities of ammonia leakage			
9	CSR - Farmers	3	Facilities to be provided How hygenic the plant will How hygenic will be bada plant and what facility will be provided to the farmer.	GHCL Foundation is already providing subsidy for drip irrigation and GHCL will also consider to support this scheme further out of the CSR funds proposed for this project. To help agriculture, GHCL will help farmers as part of our CSR activity in consultation with villagers. The details and type of developmental work will be decided in consultation with villagers. GHCL foundation has been working for farmers through its different schemes like ground water recharge, water harvesting	• Industry will Promote environment friendly and nature-based solutions to enhance productivity of farming (Organic Farming) activities. It covers capacity building on farming techniques, provision of high-quality seeds/manure, efficient irrigation solutions, etc. under CSR and CER activities	• GHCL Ltd will spend approx.. 3.00 crore towards Promoting environment friendly and nature-based solutions to enhance productivity of farming (Organic Farming) activities. It covers capacity	5 years	GHCL Limited
10	EIA Report & PH	14	EIA report is not correct	The terrestrial EIA report	• It is requested to note that as			GHCL Limited

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
	advertisement		Regarding the alternative of site modhwa village. Regarding the NIO accreditation to prepare marine EIA report Regarding ToR granted and Study carried out prior of ToR granted. Regarding the advertisement of the PH Regarding NABET accreditation of consultant organization Regarding Marine EIA Regarding NEERI who has prepared EIA report Regarding the correction in EIA report Regarding the monitoring data collection Regarding accreditation certificate of additional studies for ecology.	prepared by CSIR NEERI and Marine EIA report is prepared by NIO, Mumbai	per OM number J-17011/8/92-IA-III dated 8th August, 2019, there are 7 institutes/agencies authorized for preparation of CZMPS in consonance with the provision of CRZ notification, 2019 vide GSR 37(e) dated 18/01/2019. IRS anna university Chennai has prepared the CRZ map for GHCL LTD. CSIR - NIO is Expert hired to carryout the Marine EIA study. • EIA report has been prepared by CSIR-NEERI, which is reputed governmental body and QCI NABET accredited consultant.			
11	Vipassana	3	Project site is near Vipassana meditation center The meditation center will be disturbed due to industry. Ammonia used in the industry. Related to presence of Vipassana center and other religious places in 15km radius of project site	--	• Environmental Management Plan envisages the plans for the proper implementation of mitigation measures to reduce the adverse impacts. • The EMP implementation will minimize the impact of atmospheric emissions, liquid effluents, solid wastes and noise generation on the surrounding environment.	• Cost of Environment management plant including various installations for Air	--	GHCL Limited

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
					ash manufacturing industry. • It is reported in CSIR NEERI report that there are no significant impact expected on man-made sensitive installations and habitations. On basis of study of present environment condition near project area and impact prediction and control measures proposed by GHCL Ltd. The proposed project will not have any significant negative impact on environment. Company operations are limited to the plant boundary and no negative impacts on Vipassana Centre are anticipated. The company will have robust peripheral Green Belt in	• Recurring Cost- 0.5 crore		
12	CSR - Animal Husbandry	3	Regarding arrangements for Animal Regarding distribut Regarding number of cattle present in the area	GHCL Foundation will support nearby community by providing education and livelihood support to make them self – reliant.	• Unit will do promotion through providing support for breed improvement, animal health care, fodder improvement and providing veterinary doctor in nearby villages under CER and CSR activities. • Unit will also promote development Initiatives for Fishing Communities such as Creation of infrastructure like ice plants, cold storages as well as provide operational inputs such as fishing boats, nets and engines • We have already provided veterinary doctor for	• GHCL Ltd will spend approx.. 4.35 crore towards Animal husbandry promotion through providing support for breed improvement, animal health care, Veterinary doctor and others as well as provides	5 years	GHCL Limited

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
13	Site Selection	2	Regarding the alternative of site modhwa village. Regarding showing presence of marshy land near coastline	--	During the site selection, the alternative sites considered for setting-up of the proposed chemical complex project are given below: : Site 1 – Village Pingleswar, Taluka – Abdasa, Dist. Kutch Site 2 – Village Suthri, Taluka – Abdasa, Dist. Kutch Site 3 – Village Bambhdai, Taluka – Mandvi, Dist. Kutch Site 4 – Village Bada, Taluka – Mandvi, Dist. Kutch Site 5 – Village Modhva, Taluka Mandvi, Dist. Kutch The site at village bada is considered favorable based on the environmental and logistic advantages over other four sites. Justification	--	--	GHCL Limited
14	Sand Dunes	2	Concern of presence of sand dunes at bada coast Regarding digging of sand dunes for preparation of tunnels for water intake	--	• There is no disturbance to existing sand dunes. • Tunnelling work (much below ground level) for laying pipeline through sand dunes will be done by adopting proven construction methodology like micro tunnelling. The detailed Studies on sand dune mapping and morphological changes near the project site was carried by National Institute of	--	--	GHCL Limited

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
15	Turtle	3	Regarding presence of turtles on the coastline of bada Regarding information on endangered species not mentioned in EIA report Regarding hatching and presence of sea turtles	--	• Study on Status Survey and Conservation Plan for Sea Turtles along Mandvi Taluka, Bhuj, Gujarat by **Zoological Survey of India, Kolkata (April,2019)** is attached with EIA report. • ZSI study report mention that they did not any encounter any sea turtle and fresh/old nests or crawl marks of turtles on the beach. Since many of the factor for selection of a suitable nesting site are not conducive. • As per additional Ecological and Biodiversity study, suggests that the coast near the proposed project site may not be	• Contribution to Forest department for Sea Turtle Conservation Activities- 0.20 crore	10 years	GHCL Ltd
16	Schedule 1 species	4	Regarding presence of greater numbers of	--	• Details of schedule -1	• the proposed	10 years	GHCL Ltd

S. No.	Issue related to	Nos. Issues	Concern in PH	G HCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
	Sandha and indian Monitor Lizard)		stated in report Presence of reptiles and amphibians not reported Related to study of presence of Indian Monitor Lizard in study area Regarding presence of gugal trees,		already incorporated in EIA report. • GHCL shall make financial allocations for taking up wildlife mitigation measures and for contribution to forest department for carrying out activities towards propagation, protection and conservation of wildlife. • GHCL Ltd have submitted Conservation Plan (Flap shell turtle, Green Sea turtle, Indian monitor lizard, Olive Ridley Sea turtle, Black shoulder kite, Eurasian Spoonbill, Indian Peafowl, Marsh Harrier, Oriental Honey Buzzard, Shikra, Short-toed Snake	Allocation for conservation of Schedule 1 species for 10 years is 1.25 crore		
17	Conservation Plan	2	Regarding conservation plan for Schedule 1 species Concern regarding green sea turtles and conservation plan for them	--	• GHCL shall make financial allocations for taking up wildlife • mitigation measures and for contribution to forest department for carrying out activities towards propagation, protection and conservation of wildlife. • The unit have submitted Conservation Plan (Flap shell turtle, Green Sea turtle, Indian monitor lizard, Olive Ridley Sea turtle, Black shoulder kite, Eurasian Spoonbill, Indian Peafowl, Marsh Harrier, Oriental Honey Buzzard, Shikra, Short-toed Snake Eagle,	• the proposed budget allocation for conservation of Schedule 1 species for 10 years is 1.25 crore	10 Years	GHCL Limited

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
					department of			
18	Form 1(Water Bodies, Temples, Schedule 1 Species)	5	Regarding presence of waterbody not shown in form-1 Regarding religious places and lakes not mentioned in PFR Waterbody not mentioned in form-1 Data given in form-1 and EIA are different Waterbody not mentioned in form-1	--	• Environmental settings are given in Chapter-1 and Chapter-5 of EIA report. Approximate distance of water bodies, temples etc are given in EIA report. • Through drainage studies of the area, it was observed that there is one stream of 1st order entering the plant area from north. Although, it has small catchment area, it is proposed that this stream, will be diverted to nearby passing Vengadi River in the west. • There are also pond inside the premises. It is	• -Cost of drainage network of surface runoff, rainwater collection pond and rain water harvesting system – 53 crores (included in EMP)	--	GHCL LTD
19	Govt. Land	3	Regarding type of land to be procured by the industry Regarding status of government land to be procured Providing data for proving gauchar land	--	• There is no gauchar land within proposed project site. M/s GHCL has applied to Industries Commissioner and District Collector for allotment of aforesaid land. Industries Commissioner has granted In Principle approval for Bonafied Industrial Purpose. District Collector has initiated actions for	--	--	GHCL LTD
20	Fishing	8	Regarding details of Pagadia fisherman not mentioned and Marine EIA is misinterpreted	--	• Proper seawater intake and treated effluent disposal (ensure maximum	• A provision of Rs. 1 crore to be earmarked for the	During construction and	GHCL LTD

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
			Regarding disturbance to fishes due to presence of pipeline Regarding status of fishing near bada and Mandvi Related to number of fisherman not incorporated in study -- Related to presence of dead fishes not reported in study, fishing carried out for commercial purpose Regarding presence of fisherman in study area		Marine EIA report prepared by NIO Industry should be ensured that the effluent released to the sea meets the prescribed GPCB/ CPCB norms at all times. This should be verified through tracer studies after the outfall becomes operational. Details of Fishery and fishermen including their family and population are given in Chapter-3 of marine EIA report. Other than construction phase, there will be no any impact on pagadiya fisher men. As shore line will remain undisturbed. It is mentioned in marine EIA report that no large-scale commercial fishing operation prevail in the study area except for minor shore based and Gill net operations. There are independent studies available which indicates there is no significant adverse impact on environment but there will be positive impact on environment. Unit will also promote development Initiatives for Fishing Communities including pagadiya under CER and CSR activities	implemented in the project area during construction phase and operation phase. • For periodic monitoring of the marine area environment during project • construction phase, a provision of Rs. 0.5 crore to earmarked. • For operation phase, Rs. 0.3 crore per year to be kept provision for • the monitoring. • GHCL Ltd will spend approx.. 0.75 crore towards Development Initiatives for Fishing Communities	Operation phase	
21	Water Body (check dams)	2	Related to presence of seasonal river which passes near bada village and presence of dam over it	--	Through drainage studies of the area, it was observed that there is one stream of 1st order	• Cost of drainage network of surface	During construction and	GHCL LTD

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
			Related to distance of river from project site		entering the plant area from north. Although, it has small catchment area, it is proposed that this stream, may be diverted to nearby passing Vengadi River in the west, which has two check dams, one for salinity ingress check and on upstream side for storing fresh water. This will not cause any adverse impact on the downstream. For channelizing the monsoon run off from the area adjacent to plant it is required to construct peripheral drain along plant boundary so that flooding is avoided and run off find its way to the natural slope towards Arabian Sea. So, the present hydrological setting of the area will remain unaffected. So, the present hydrological setting of the area will remain unaffected. The additional water enter into the vengadi river through drainage will not impact on check dam. As any additional water above the river and check dam shall overflow to the Arabian sea.	pond and rain water harvesting system – 53 crores (included in EMP)	Operation phase	
22	Traffic (RMH, Heavy Trucks, Road Usage)	4	Regarding number of trucks passing due to project for raw Related to traffic study not mentioned in ToR, impact not carried out Concern regarding public roads Regarding number of trucks passing	--	Traffic study are shown in section 3.2.3 of chapter-3 and impact due to transportation is show in 4.1.4.3 and 4.2.3 of Chapter-4 in EIA report. We will use existing road network as no other transportation i.e. rail/water ways are available. We have carried out calculation on	--		GHCL Limited

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
					Traffic study (Level of Service) and added on Form Part-C.			
23	CSR General	1	Regarding past data of CSR --	GHCL has proposed CSR budget in the EIA report which will be utilized based on need identification and village development meetings. CSR will be implemented with CSR implementing agencies including GHCL Foundation is working in following area. 1. Agro-livelihood and animal husbandry, 2. Education and skill development, 3. Health, water, and sanitation.	• GHCL's commitment towards the development of weaker sections of society has been a continuous initiative for more than two decades. Through its "GHCL Foundation Trust", GHCL has upgraded its CSR activities to cover a larger section of the society to provide support to the downtrodden, needy and marginalized citizens and also to create a social infrastructure for their sustenance. GHCL Foundation serves as the Corporate Social Responsibility arm of GHCL Limited and represents our commitment to the holistic development of our surrounding community. During year 2020-2021	--	--	GHCL LTD

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
					Infrastructure d evelopment etc.			
			Regarding pollution to be caused by industry -- Regarding to dusting due to kiln and power plant,		• Environmental Management Plan envisages the plans for the proper implementation of mitigation measures to reduce the adverse	• Cost of Environment management plant including various installations for		GHCL Limited

24	Pollution and Environment General	4	Related to disposal of effluent water	Unit will follow all the rules and regulation with their subsequent amendments as directed by concerned authorities	impacts. • The EMP implementation will minimize the impact of atmospheric emissions, liquid effluents, solid wastes and noise generation on the surrounding environment	Air Pollution, Water Pollution, Noise Control, Greenbelt Development, Occupational Health and Safety and other related activities.- 205.07 crore	--	
25	Forest area	2	Related to distance of project site from forest area Details regarding families dependent on forest	There is no classified forest area.	• There is no forest land within the boundary of proposed project site. However, some part of the unclassed forest area located south of the project site outside boundary. Sea water intake and outfall pipeline will pass through underground micro tunnel in specific corridor to cross forest area. The permission from the Forest Department is	--	--	GHCL LTD

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
					of 0.9689 Ha. of un-class forest			
26	Supporting for Industrial Development to GHCL LTD	--	For Employment For Infrastructure development in nearby village Social upliftment towards nearby villages Health facilities Women empower ment Skill	GHCL LTD team thanked for welcoming the industries	--	--	--	--
	Total	94						

21. The Proposal was considered in the 72nd **EAC Meeting held on 2.1.2024** wherein the EAC deferred the proposal for want of requisite information. Reply to the same was submitted by the PP vide letter dated 30.1.2024, which is as follows:

<table>
<tr><th>S. No.</th><th>Queries Raised by EAC</th><th>Reply by PP</th></tr>
<tr><td></td><td>Action plan for disposal of gypsum and fly ash generated from desulphursation plant</td><td>The Fly Ash and Gypsum generated from the Desulphurization plant is provided in the below table followed by the Action Plan for the Disposal of Fly Ash and Gypsum.
<table>
<tr><th>SR. NO.</th><th>FUEL</th><th>FUEL CONSUMPTION TPH</th><th>FLY ASH GENERATION, TPD</th><th>GYPSUM GENERATION, TPD</th><th>TOTAL GENERAT TPD</th></tr>
<tr><td>1</td><td>Coal</td><td>150</td><td>405.216</td><td>117.457</td><td>796.588</td></tr>
<tr><td>2</td><td>Lignite</td><td>225</td><td>765.828</td><td>880.924</td><td>2726.847</td></tr>
<tr><td>3</td><td>Pet Coke</td><td>104.17</td><td>10.675</td><td>741.519</td><td>1389.667</td></tr>
</table>

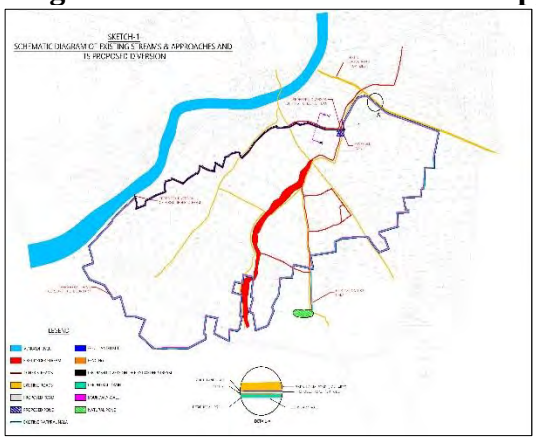
While utilization of Coal as fuel the percentage of Fly ash and Gypsum in the total Ash generated will be 50.87% and 14.74% respectively.
While utilization of Lignite as fuel the percentage of Fly ash and Gypsum in the total Ash generated will be 28.08% and 32.31 % respectively.
While utilization of Pet coke as fuel the percentage of Fly ash and Gypsum in the total Ash generated will be 0.77% and 53.36 % respectively.
It is noted that gypsum and fly ash separation is not possible in the dry desulfurization system. However we assure that the unit will primarily use Coal and Lignite as fuel. Pet coke will only be utilized as a fuel alternative in the circumstances when Coal and Lignite are unavailable. Action Plan For The Disposal Of Fly Ash And Gypsum Letter From Cement Industry is submitted.
</td></tr>
<tr><td></td><td>Action plan for management and disposal</td><td>PP reported that :

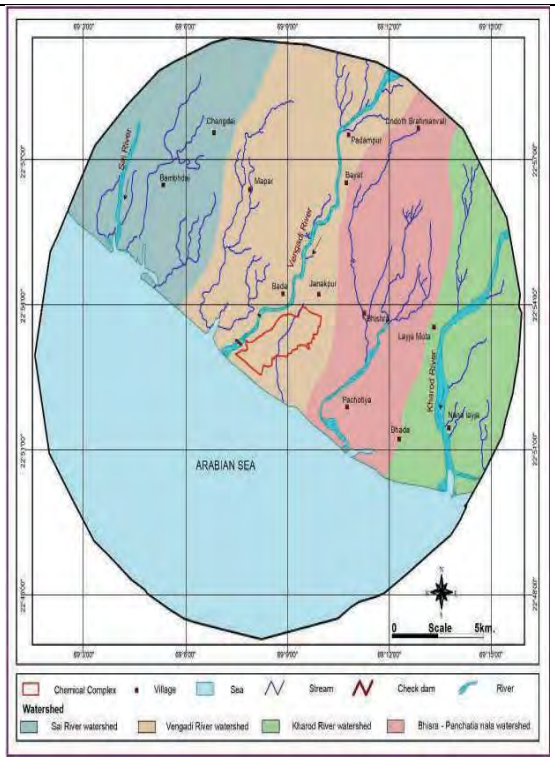
➢ Main source of $CaCl_2$ and $CaSO_4$ Contain wastewater will be from distillation process wastewater.</td></tr>
</table>

	of $CaCl_2$ and $CaSO_4$.	➢ The **concentration of $CaSO_4$ and $CaCl_2$** in the wastewater from Distillation unit will be **0.13 % and 11.35 %** respectively. ➢ The discharge of final effluent into the deep sea with an average **dilution of 30 to 40 times** will further **dilute the concentration of $CaSO_4$ and $CaCl_2$.** ➢ The concentration of **$CaSO_4$** in the final effluent will be reduced from **0.13 % to less than 0.07%** while the concentration of **$CaCl_2$** will be reduced from **11.35 % to less than 6.09%.** ➢ Other impurities in the final effluent will contain CaO, MgO, NaCl, $MgCl_2$, $CaCO_3$ and Silica etc. ➢ The characterization of the wastewater stream, suggests that the composite effluent discharged into the Arabian Sea will maintain the concentrations well within the CPCB norms. ➢ **As a result, it is anticipated that the effluent will have no adverse impact on the marine environment and the nearby terrestrial habitat.** **CHARACTERIZATION OF WASTEWATER STREAM**

SR. NO.	**PARAMETERS**	**WASTEWATER STREAMS**						
		RO/DM PLANT REJECT	**BRINE PURIFICATION REJECT**	**DISTILLER WASTE**	**BOILER BLOWDOWN**	**ONCE THROUGH COOLING**	**FRESH SEA WATER FOR DILUTION**	**COMPOSITE EFFLUENT AT DISCHARGE POINT***
		EFFLUENT QUANTITY, m^3/day						
		97,160	2,550	27,000	120	8,07,000	5,14,678	14,48,508
1	pH	7.2	12	9.8	10.0	8.0	7.5	6.5- 9.0

		2	Temperature	30-35°C	30-35°C	95°C	90°C	30-35°C	30-35°C	Will not exceed 5°C above the ambient temperature of the receiving water body
		3	Suspended Solids	Nil	54,000 mg/l	45,430 mg/l	100 mg/l	Nil	Nil	<1000 mg/l
		4	Ammonical Nitrogen	Nil	Nil	40-45 mg/l	Nil	Nil	Nil	< 50 mg/l
		5	Oil & Grease	Nil	Nil	Nil	Nil	Nil	Nil	< 5.0 mg/l (Occasionally)

	Details of existing natural drains within the proposed project site as well as proposal for diversion if any. Details of measures to be taken to maintain the flow	➢ By conducting the drainage studies of the area, it is observed that there is a one stream of 1st order entering the plant area from north. ➢ Although, it has small catchment area, it is proposed that this stream, may be diverted to nearby passing Vengadi river in the west has two check dams, one for salinity ingress check and on upstream side for storing fresh water. ➢ It is proposed that this pond may be deepened by 2 metres so as to store entire annual surface runoff for ground water recharge and for plant use. ➢ With the proposed deepening, there will not be any possibility of any overflow in the plant. ➢ While the other two rivers will continue to flow as these are not being affected by the setting up of the plant. ➢ So, the present hydrological setting of the area will remain unaffected. ➢ Detailed Hydrogeology Assessment study report prepared by Hydro-Geosurvey Consultants Pvt. Ltd. , Jodhpur. Report is verified by **CSIR NEERI and T R Associates.** ➢ **Hydrogeological assessment Study is submitted which comprises of :** **Schematic arrangement for stream diversion and approach roads**  **DRAINAGE AND WATERSHED MAP OF BUFFER ZONE**



- Project Site is superimposed on the drainage and watershed map with red color boundary.
- Proposed project is fall under the Vengadi river Water shed.
- 1st order stream passing through the project site is demarcated in blue color.
- 1st order stream will be diverted into the Vengadi river followed by Arabian sea.

VENGADI WATERSHED

- Vengadi watershed within buffer zone covers area of **84.43 km^2** with gradient of about **2.20 m/km** towards Arabian sea.
- The catchment yield of Vengadi watershed is estimated as **4.40 mcm** taking average annual rain, which amounts to **434 mm.**
- Average value of Strange's run off percentage of the buffer area is calculated from Strange's monsoon rainfall-runoff curves considering the catchment area as good and the run off % for **catchments is found as 12%.**

CONSTRUCTION OF FLOOD DISCHARGE OF FOUR STREAMS IN BUFFER ZONE

The peak flood discharges of the stream have been calculated by Dicken's formula method:

Dicken's formula

Dicken's formula states that:

$QP = CA^{3/4}$

Where,

Q_P = High flood or peak discharge in cumec

A = Catchment area

C = A constant, taken c = 6 for the study area.

PEAK FLOOD DISCHARGE (QP) IN CUMECS

S. NO.	STREAM	TOTAL CATCHMENT AREA (KM^2)	DICKEN'S	LEAN PERIOD DISCHARGE (CUMEC)
1.	Sai river	194.89	312.96 cumecs	0cumec
2.	Vengadi river	160.80	270.93 cumecs	0cumec
3.	Bhisra-Panchatia nala	63.92	135.63 cumecs	0cumec
4.	Kharod river	329.52	464.04 cumecs	0cumec

The peak flood discharges of the stream have been calculated by Dicken's formula method:

Dicken's formula

Dicken's formula states that: **$QP = CA^{3/4}$**

Where,

Q_P = High flood or peak discharge in cumec

A = Catchment area = 0.12 km^2

C = A constant, taken c = 6 for the study area.

PEAK FLOOD DISCHARGE (Q_P) IN CUMEC	

S. NO.	CATCHMENT	DICKEN'S	LEAN PERIOD DISCHARGE (M^3/S)
1.	Plant stream	1.22 m^3/s	0 m^3/s

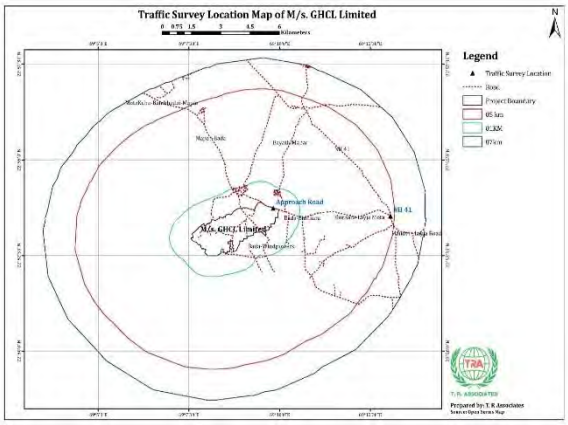
❖ **COST FOR NATURAL DRAIN DIVERSION**

- The cost incurred for the Drainage network and Nala diversion will be **44.60 Crores.**
- Cost is consider into the Environmental Management Plan cost.

(	Status of land acquisition including government and pvt. land as well as permission for landuse change for industrial purpose.	➢ The Status of land acquisition including Government as well as Private land along with permission for **land use change for industrial purpose has been received from Industry Centre.** ➢ The type of land involved along with the area bifurcation into Government and private land. **SR. NO.** / **TYPE OF LAND** / **AREA (SQ. M.)** 1 / Government Land / 10,16,351 2 / Private Land / 48,06,632 3 / Private Land with NA permission / 1,72,473 **Total** / **59,95,456** **M/s. GHCL Limited has applied for Environmental Clearance (EC) for plot area admeasuring <u>54,63,200 sq. mt.</u>** **<u>Land acquisition letter is submitted.</u>**
(	It was observed that baseline study was conducted during December 2019 – February 2020, which is more than 3 years old.	➢ It is requested to note that as per OM F.No. IA3-22/10/2022-IA.III [E 177258] dated 08-06-2022 baseline data should not be older than three years at the time of submission of the proposal for the grant of Environmental Clearance (EC). ➢ Project proponent have submitted EC proposal on Parivesh portal dated **30-11-2022.** ➢ The baseline period was December 2019 to February 2020 and the baseline data validity was up to **December 2022.** M/s GHCL informed that baseline data is line with OM dated 8.6.2022 for validity of baseline data, wherein it is mentioned that baseline data used for preparation of EIA/EMP report may be collected at any stage of the EC process or even before the grant of TOR. In this case, they have reconducted **3-month** Baseline data from **December, 2022 to February, 2023, which is less than 3 years old.**

	As per OM, PP shall conduct fresh 3 months study	➢ However, M/s GHCL had already appointed **T. R. Associates** for conducting the **3-month** Baseline Monitoring in November 2022. ➢ The Baseline study was conducted during the period **December, 2022 to February, 2023 and it is incorporated in Addendum of EIA Report submitted on 1.02.2024.** ➢ **Baseline details is submitted.**
	It was noted that EIA - EMP report is prepared by NEERI, which is not QCI /NABET accredited consultant for soda ash. PP informed that now T R Associate has been hired for the proposed project who is a QCI /NABET accredited consultant for soda ash. The Committee suggested that new consultant shall undertake site visit and verify/check the entire	➢ The authorization letter dated 10.01.2024 for engaging T.R. Associates, a QCI/NABET accredited consultant for the Soda Ash Industry, to verify and check the entire data and the EIA-EMP report prepared by NEERI. Further, M/s T.R. Associates has undertaken site visit and examine the existing EIA-EMP report. ➢ T. R. Associates vide letter dated 30.01.2024 have undertaken the task of visiting and thoroughly checking the entire data of the EIA-EMP report provided by NEERI. ➢ Additionally, it is important to note that T.R. Associates has subsequently prepared an Addendum to the EIA report. .

<table>
<tr><td></td><td>data as well as EIA - EMP report. They should give undertaking that they are satisfied with data and own the data provided in the EIA-EMP report. PP shall also submit authorizatio n letter for new Consultan</td><td></td></tr>
<tr><td></td><td>Revised water balance to be submitted. STP’s treatment process shall include secondary treatment</td><td>Revised water balance is submitted.
Initial processing of domestic wastewater occurs in a Sewage Treatment Plant (STP) with a focus on utilizing treated water for plantation and Greenbelt development in the vicinity.
The wastewater undergoes preliminary treatment involving a Bar Screen Chamber and an Oil & Grease Trap tank to capture extraneous and floating matter effectively.
Subsequently, the sewage is directed to a Collection Tank cum Equalization tank, where it undergoes equalization processes.
The equalized sewage is then pumped for secondary treatment in an Aeration tank and Secondary Clarifier, with the clear supernatant being collected in a holding tank.
Further as polishing treatment the effluent is passed through a two-stage process, involving a Pressure Sand Filter (PSF) and an Activated Carbon Filter (ACF).
Upon completion of the polishing treatment, the treated wastewater undergoes disinfection before being employed for landscaping and gardening purposes.
The biological sludge generated during the treatment process is directed to a sludge drying bed, with the resulting treated sludge utilized as manure in gardening activities
<table><tr><th>SR. NO.</th><th>NAME OF THE UNITS</th><th>NO. OF UNIT</th><th>CAPACITY OF UNIT</th></tr><tr><td>1</td><td>Bar Screen</td><td>1</td><td>10.5 m^3/hr</td></tr></table></td></tr>
</table>

		2	Oil and Grease trap Tank	1	60 KL
		3	Collection Tank cum Equalization tank	1	80 KL
		4	Aeration tank	1	80 KL
		5	Secondary Clarifier	1	40 KL
		6	Holding tank	1	80 KL
		7	Activated Carbon Filter	1	10.5 m^3/hr
		8	Pressure Sand Filter	1	10.5 m^3/hr
		9	Disinfection (Chlorine contact tank)	1	80 KL
(	PP informed that widening of approach road to project site is being carried out. PP shall submit road wideining action plan. Traffic study to be conducted	**TRAFFIC FLOW ANALYSIS** Traffic study was carried out on following roads: 1. **NH41 (old NH-8A)** i.e. Mandvi - Narayan Sarovar, which is 5.5 km (by road) away from project site in East direction (via Bhinsara - Mota Layja road) and 2. The **approach road** (Bada- Bhinsara- Mota Layaja road) to GHCL proposed site. **(Note: Government considered as Coastal Highway.)**  The traffic survey study was conducted for traffic flow on both sides. Studied route is shown in above figure.		

		Traffic Count Data existing - NH-41 [Narayan Sarovar to Mandvi is submitted **Traffic Count Data existing - NH-41 [Narayan Sarovar to Mandvi is submitted** **Traffic Count Data Existing-Approach Road (Bada- Bhinsara- Mota Layja Road) to M/s. GHCL Ltd is submitted.** **Traffic Count Data after proposed project - Approach Road (Bada- Bhinsara- Mota Layja Road) to M/s. GHCL Ltd is is submitted.** PP reported that it can be concluded that even for considering the worst case; there will be **minor increase in vehicular load** due to the Proposed project.
(	Air quality modeling for line source shall also be incorporate and cumulative impact of line and point source shall provided	➢ They have used AERMOD 12.0.0 latest version to perform Air Quality Modeling for Point Source . ➢ The Emission rate of (PM_{10}, SO_2, NOx) by utilization of different fuels is given in below table

Sr. No	**Fuel**	**% Ash**	**% Sulphur**	**% Nitrogen**	**SO_2 Emission rate, g/s**	**NOx Emission rate, g/s**	**PM_{10} Emission rate, g/s**
1	Coal	16.08	0.77	1.13	1.94	69.9	4.75
2	Lignite	20.26	3.85	0.39	14.45	38.17	4.92
3	Pet coke	0.61	7	1.77	12.16	74.91	4.57

Sr. No.	Process	NH_3 Emission rate, g/s
1	Ammonia Recovery system	1.04
2	Filtration/Calcination Vent	0.52

- The emission rates were calculated considering following efficiencies of Air Pollution Control Measures:

SR. NO.	APCM	Efficiency of APCM (%)
1	Dust Collector	60 %
2	Bag filter	92%
3	Scrubber	95%
4	Desulfurization system and injection of Sodium Bicarbonate	99.7%
5	Electrostatic Precipitator (ESP)	99.99%

The incremental concentration of (PM_{10}, SO_2, NOx,) by utilization of different fuels are given in below Table:

Sr. no.	Fuel	Incremental Concentration of PM_{10} ($\mu g/m^3$)	Incremental Concentration o SO_2 ($\mu g/m^3$)
1	Coal	1.21	0.229
2	Lignite	**1.23**	**1.71**
3	Pet coke	1.19	1.44

- The incremental concentration in case of NH_3 will be 2.39 $\mu g/m^3$.

Considering Worst Case Scenario the cumulative Concentrations of the PM_{10} ($\mu g/m^3$) will be

Sr. No.	Monitoring Location	Distance (km)	Direction	Existing monitored maximum PM_{10} Concentration ($\mu g/m^3$)	Maximum GLC from Point Source ($\mu g/m^3$)	Maximum GLC from Line Source ($\mu g/m^3$)	Total PM_{10} Concentrations ($\mu g/m^3$)
1	Panchotiya*	3.00	SE	81.53	1.23	1.3	84.06
2	Bada	0.34	NW	76.56			79.09
3	Bhinsara	2.28	E	68.99			71.52
4	Bhada*	5.68	SE	83.48			86.01
5	Mota Layja	7.00	NNE	59.73			62.26
6	Padampur	5.25	NNW	68.74			71.27
7	Mapar	5.09	NNW	65.94			68.47
8	Bambhadai	7.11	NW	72.99			75.52
9	Dedhiya	9.97	NNW	58.68			61.21
10	Nana Layja	7.25	ESE	81.98			84.51

- **After considering the worst case scenario the cumulative concentration of PM_{10} remains well within the NAAQS.**
- **After considering the worst case scenario the cumulative concentration of PM_{10} remains well within the NAAQS.**

Sr. No.	Monitoring Location	Distance (km)	Direction	Existing monitored maximum SO_2 Concentration ($\mu g/m^3$)	Predicted SO_2 Concentration ($\mu g/m^3$)	Total SO_2 Concentrations ($\mu g/m^3$)
1	Panchotiya *	3.00	SE	15.6	1.71	17.31
2	Bada	0.34	NW	14.82		16.53
3	Bhinsara	2.28	E	13.68		15.39
4	Bhada*	5.68	SE	16.92		18.63
5	Mota Layja	7.00	NNE	8.25		9.96
6	Padampur	5.25	NNW	12.92		14.63
7	Mapar	5.09	NNW	11.78		13.49
8	Bambhadai	7.11	NW	10.94		12.65
9	Dedhiya	9.97	NNW	9.85		11.56
10	Nana Layja	7.25	ESE	17.38		19.09

- **After considering the worst case scenario the cumulative concentration of SO_2 remains well within the NAAQS.**
- **Considering Worst Case Scenario the cumulative Concentrations of the NO_2 ($\mu g/m^3$) will be:**

Sr. No.	Monitoring Location	Distance (km)	Direction	Existing monitored maximum NO_2 Concentration ($\mu g/m^3$)	Maximum GLC from Point Source ($\mu g/m^3$)	Maximum GLC from Line Source ($\mu g/m^3$)	Total NO_2 Concentrations ($\mu g/m^3$)
1	Panchotiya*	3.00	SE	38.88	9.50	7.59	55.97
2	Bada	0.34	NW	33.67			50.76
3	Bhinsara	2.28	E	31.81			48.9
4	Bhada*	5.68	SE	41.49			58.58
5	Mota Layja	7.00	NNE	22.71			39.8
6	Padampur	5.25	NNW	30.38			47.47
7	Mapar	5.09	NNW	33.62			50.71
8	Bambhadai	7.11	NW	28.45			45.54
9	Dedhiya	9.97	NNW	25.65			42.74
10	Nana Layja	7.25	ESE	36.43			53.52

After considering the worst case scenario the cumulative concentration of NO_2 remains well within the NAAQS

- In addition, Baseline concentration of **NH_3** found at all the locations are **B.D.L(D. L - 21)**, however **incremental concentration is found 2.39 $\mu g/m^3$** by using AERMOD software, considering worst case scenario cumulative ammonia concentration is **well within the stipulated norms of NAAQS, 2009.**

		➢ Baseline concentration of **CO** found at all the locations are **B.D.L(D. L - 0.5 mg/m^3),** however Maximum GLC from Line Source is found **4.81 µg/m^3** by using AERMOD software, considering worst case scenario cumulative CO concentration is **well within the stipulated norms of NAAQS, 2009.** ➢ Baseline concentration of **HC** (Benzene and Benzo alpha Pyrene) found at all the locations are **B.D.L(D. L - 1 mg/m^3 of Benzene and D. L - 1 ng/m^3 of Benzo alpha Pyrene),** however Maximum GLC from Line Source is found **0.31 µg/m^3** by using AERMOD software, considering worst case scenario cumulative HC concentration is **well within the stipulated norms of NAAQS, 2009.**
(	As per point source air quality modeling, incremental levels of SO2 and NOx have been estimated to be 10.98 µg/m^3 and 11.37 µg/m^3, which are in higher side. PP shall reduce the incremental values after taking suitable pollution control measures	PP reported the same reply as mentioned in the above row.
(	Villages are located 500-600 m away	➢ The **nearest village Janakpur is located at 0.55 km** and **project site village Bada is at 0.58 km** from the proposed project site boundary.

	from the project site. PP shall elaborate various measures to be taken for the surrounding villages	➢ Moreover, the unit will install **adequate Air pollution control equipment** to abate the air pollution arising from the manufacturing unit. ➢ Also, the effluent generating from the unit will be properly disposed into deep sea which will not impose any risk to soil/land/ground water pollution. ➢ The Solid/Hazardous waste will be efficiently collected, stored and disposed to TSDF/CHWIF site or sold to registered recyclers or reused within premises. ➢ Additionally, the **unit will develop dense greenbelt all around the periphery of the project site.** ➢ The unit will provide **acoustic hood** at highly noise generated equipment's as well as **acoustic building** to abate the noise pollution generating from the process and machineries. ➢ The unit will also carry out various CSR activities for the upliftment of the surrounding villagers
(	Details representations received by SPCB/MoEF&CC agains the project, if any. Action plan to address the issues raised in writted/represntations received by SPCB /MoEF&CC	➢ The Public Hearing was scheduled to be held on 16-04-2022 at 11:00 Hrs, Venue: Project Site, Survey no. 432, Village: Bada, Taluka: Mandvi, District: Kutch, Public hearing was then time being postponed due to unavoidable circumstances. After that public hearing was completed on **17-10-2022 at 11.00 Hrs.** Venue: Project Site, Survey no. 432, Village: Bada, Taluka: Mandvi, District: Kutch, Gujarat. Which was presided over by Shri Chetan Mishan (GAS), Sub Divisional Magistrate & Deputy Collector, Mundra- Kutch. ➢ The public hearing was attended by **106 people.** ➢ Total 1154 written questions (representation received by GPCB) and 1066 verbal questions were asked by people in public hearing that we have summarized in 94 Concerns and it will further identified in 26 different head to address Public Hearing Action Plan. ➢ **The Action Plan Addressing the Written & Verbal Questions Received During Public Hearing is Submitted**
(	Details of issues raised by local fishermen if any. Action plan to address the said issues.	The issues raised by local fishermen have been addressed in the Public Hearing Action Plan **CONCERN IN PH** | **ACTION PLAN** | **FUND REQUIRED** | **RESPONSIBILITY**

		Regarding details of Pagadia fisherman not mentioned and Marine EIA is misinterpreted Regarding disturbance to fishes due to presence of pipeline Regarding status of fishing near Bada and Mandvi Related to number of fishermen not incorporated in study Related to presence of dead fishes not reported in study, fishing carried out for commercial purpose Regarding presence of fisherman in study area Regarding the impact due to project activities on fishes Regarding chances of reduction in number of fishes	• Other than construction phase, there will be no any impact on Pagadiya fisher men. As shore line will remain undisturbed. • Details of Fishery and fishermen including their family and population are given in **Chapter-3 of Marine EIA report** is prepared by CSIR - NIO. • It is mentioned in marine EIA report that no large-scale commercial fishing operation prevail in the study area except for minor shore based and Gill net operations.	• Biodiversity management plan to be implemented in the project area during construction phase and operation phase which is included in **EMP cost.** • For periodic monitoring of the marine area environment during project Construction phase, a provision of **Rs. 0.5 crore** to earmarked. • For operation phase**, Rs. 0.5 crore** per year to be kept provision for the monitoring. • GHCL Ltd will spend approx. **Rs.**	**GHCL Limited**

			• Unit will also promote development Initiatives for Fishing Communities including Pagadiya under CER activities. For the Development Initiatives for Fishing Communities Unit will provide **1 Crore Rupees.**	**1.0 crore** towards Development Initiatives for Fishing Communities including Pagadiya under CER activities.	
	Copy of stage I forest Clearance and SCZMA recommendations	Copy of stage I forest Clearance and stage II and SCZMA recommendations has been obtained vide letter ENV/10/2021/184/T-cell dated 26.12.2023.			
	Commitment for Disaster Management Plan in case of Tsunami, earthquake and cyclone to be prepared and submitted to the respective authority.	• Detailed Disaster Management Plan has been submitted. Additional Studies of the Environment Impact Assessment Report prepared by CSIR-NEERI. • Disaster Management Plan of Tsunami, Earthquake and Cyclone has been prepared and will be submitted to Director Industrial Safety and Health (DISH) after getting EC from the Concerned authority. Report is also submitted to MOEF&CC. • Disaster management plan is submitted.			

22. **Deliberations by the EAC:**

After detailed deliberations, EAC desired the following additional information:

(i) The Committee was of the view that PP shall compare the baseline data collected during December -February 2020 and data collected during December 2022 -February 2023. Accordingly, PP shall also carry out trend analysis of previous baseline data by conducting latest additional one-month baseline data.

(ii) The Committee noted that several representations have been received from various level of public raising several issues. The Committee was of the view that representations shall be forwarded to the PP for their response. The Committee also recommended that in the next meeting they will go through the video of proceedings of public hearing. The Committee will go through the response of PP then decide further course of action accordingly.

Accordingly, proposal was deferred for want of above additional information. Above all additional information shall be submitted online to the PARIVESH portal for further consideration by EAC.

List of the Expert Appraisal Committee (Industry-3) members participated during Video Conferencing (VC) meeting held on 06.02.2024

S. No	Name of Member	Designation
1.	**Prof. (Dr.) A.B. Pandit**	Chairman
2.	**Dr. Suresh Panwar**	Member
3.	**Dr. (ER.) Dibakar Swain**	Member
4.	**Shri Dinabandhu Gouda**	Member
5.	**Dr. Kishore Malviya**	Member
6.	**Dr. P. Jagannadha Rao**	Member
7.	**Shri Dinesh Runiwal,**	Member
8.	**Prof. (Dr.) Suneet Dwivedi**	Member
9.	**A N Singh**	Member Secretary
MOEFCC		
1.	**Dr. Kanchan Puri**	Scientist-B
2.	**Dr. S. Pradeep kumar**	Scientist-B

***

MOM approved by



(Prof. Aniruddha B. Pandit)
Chairman
***

-TRUE COPY-

ANNEXURE R/30

GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE
(IA DIVISION-INDUSTRY-3 SECTOR)
*****

Dated: 13.5.2024

MINUTES OF THE 78th EXPERT APPRAISAL COMMITTEE (INDUSTRY-3 SECTOR) MEETING HELD ON 30thAPRIL, 2024.

Venue: Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi-110003 through Video Conferencing (VC)

Time: 10:30 AM onwards

(i) Opening Remarks by the Chairman

Prof. (Dr.) A.B. Pandit, Chairman welcomed the Committee members and opened the EAC meeting for further deliberations.

(ii) Details of Agenda items by the Member Secretary

The Member Secretary then apprised the Committee about the details of Agenda items to be discussed during this Expert Appraisal Committee (EAC) meeting.

Parivesh 1.0

Agenda No. 78.1

Proposed project to produce Light Soda Ash (LSA) of 11,00,000 TPA capacity, 5,00,000 TPA of Dense Soda Ash (DSA) and 2,00,000 TPA Sodium Bicarbonate (SBC) located at near village Bada, Taluka - Mandvi, District - Kutch in the Gujarat by "Greenfield Chemical Complex" of GHCL Ltd- Reconsideration of Environmental Clearance

[Proposal no: IA/GJ/IND3/408164/2022, File No. IA-J-11011/293/2021-IA-II(I)]

1. The proposal is for Environmental Clearance to the Proposed project to produce Light Soda Ash (LSA) of 11,00,000 TPA capacity, 5,00,000 TPA of Dense Soda Ash (DSA) and 2,00,000 TPA Sodium Bicarbonate (SBC) located at near village Bada, Taluka - Mandvi, District - Kutch in the Gujarat state by "Greenfield Chemical Complex" of GHCL Ltd

2. The project/activity is covered under Category 'A' of Item 4 (e) soda ash industry of Schedule of Environment Impact Assessment (EIA) Notification, 2006 (as amended) and requires appraisal at Central Level by the Expert Appraisal Committee (EAC) as the project is located outside the notified industrial area.

3. The ToR was issued by the Ministry, vide letter no. IA-J-11011/293/2021-IA-II(I) dated 10th August, 2021. The PP applied for the Environment Clearance in the Common Application Form and submitted the EIA/EMP Report and other documents. The PP in the CAF reported that it is a **Fresh EC case. The proposal was placed in 72nd EAC Meeting held on 2nd January, 2024**, **74th EAC meeting held on 6th Februay,2024 wherein the proposal was deferred for want of requisite information now the proposal is placed in this 78th EAC meeting ng held on 30th April,2024** where project was wherein the PP and an accredited Consultant, M/s. T. R Associates [NABET accreditation till **NABET Accreditation Number: NABET/EIA/2326/RA 0293 valid till 8th April, 2026**], made a detailed presentation on the salient features of the project and informed the following:

4. The PP reported that the Total land area is **5463200 m^2;** no additional land will be used **for proposed project** and no R& R is involved in the Project. The details of various products are as follows:

Sr. No.	**Name of the Product**	**Production Capacity (MT/Month)**	**CAS Number**	**End use**
1	Light Soda Ash	11,00,000 TPA	497-19-8	Manufacturing of glass, usage in chemical industry, paper and detergent manufacturing, and food industry
2	Dense Soda Ash	5,00,000 TPA	497-19-8	
3	Sodium bicarbonate	2,00,000 TPA	144-55-8	
Captive Co-generation Power plant Steam (CFBC boilers)			120 MW	
Emergency DG Set			5 MVA	
Note- The production capacities are planned in phased manner and for Phase 1 production capacity for LSA: 5,50,000 TPA, Dense Soda Ash: 2,50,000 TPA, SBC: 1,00,000 TPA and 60 MW for Captive Co-generation Power plant.				

5. The PP reported that there is no violation case as per the Notification No. S.O.804(E) dated 14.03.2017 and no direction is issued under E(P) Act/Air Act/Water Act.

6. The PP reported that there is no National Parks, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site. **Marine National Park and Sanctuary,**

Jamnagar are located at 75 km aerial distance in South direction and Narayan Sarovar Sanctuary is located at more than 100 km aerial distance in North-West directions. Flap shell turtle, Green Sea turtle, Indian monitor lizard, Olive Ridley Sea turtle, Black shoulder kite, Eurasian Spoonbill, Indian Peafowl, Marsh Harrier, Oriental Honey Buzzard, Gugal Schedule-I species were found in the study area for which conservation plan has been prepared and submitted to PCCF and Chief wildlife warden dated 9.11.2023.

7. The PP reported that the diversion of 0.9689 ha un-class forest for laying part of sea water intake and effluent disposal pipeline and passage for related construction equipment movement in Kachchh has been obtained vide letter dated 18. 7.2023.

8. The PP reported the Unit has received the Final recommendation letter from GZMA vide file no ENV/ 10/ 2021/184/ T- cell dated 26.12.2023. CRZ details are as:

Activities	**Zone**
Construction of process plant and utilities etc.	Outside CRZ area
Effluent collection	Outside CRZ area
Seawater Intake system i.e. sump and pump house	CRZ III
Intake Pipeline	CRZ IA, CRZ IB and CRZ IV
Outfall Pipeline	CRZ IA, CRZ IB and CRZ IV

Laying of Seawater Intake and effluent disposal underground pipeline through tunnel from unclassified Forest area, Sand dune area, intertidal area outside project boundary.

9. The PP reported that Ambient air quality monitoring was carried out at 10 locations during December 2019 – February 2020. The baseline data indicates the ranges of concentrations as: PM_{10} (19 µg/m^3 to 53 µg/m^3), $PM_{2.5}$ (8 µg/ m3 to 17 µg/ m3), SO_2 (1 µg/m^3 to 14 µg/m^3), NOx (5 µg/m^3 to 16 µg/m^3), Ammonia (6 µg/m^3 to 19 µg/m^3), Ozone (2 µg/m^3 to 8 µg/m^3), Carbon Monoxide (0.09 mg/m^3 to 0.21 mg/m^3), Hydrocarbons [Methane hydrocarbons (0.23 µg/m^3 to 1.27 µg/m^3) and Non-Methane hydrocarbons (0.11 µg/m^3 to 0.19 µg/m^3)], Lead (Pb) (0.05 µg/m^3 to 0.27 µg/m^3), Arsenic (As) (0.02 ng/m^3 to 0.11 ng/m^3), Nickel (Ni) (0.11 ng/m^3 to 0.18 ng/m^3), Benzo(α)pyrene(B[a]P) (ND to 0.03 ng/m^3) and Benzene (ND to 0.16 µg/m^3). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 3.05 µg/m^3 in case of Lignite, Coal and Petcoke with respect to PM_{10}, 10.98 µg/m^3 in case of Lignite, 2.55 µg/m^3 in case of Coal and 13.26 µg/m^3 in case of Petcoke with respect to SO_2 and 11.37 µg/m^3 in case of lignite, 7.3 µg/m^3 in case of coal and 5.62 µg/m^3 in case of Petcoke with respect to NO_x. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

10. The PP reported that the total water requirement for project will be 15,20,060 m^3/day in case of Dry Lime process or 13,63,878 m^3/day in case of Wet Lime process which will be met from Sea water. Total Effluent of 15,88,570 m^3/day (Domestic - 160 m^3/day + Industrial – 15,88,410 m^3/day) in case of Dry Lime process or 14,48,818 m^3/day (Domestic - 160 m^3/day + Industrial – 14,48,658 m^3/day) in case of Wet Lime process. The Process effluent generated i.e. from distiller waste, brine purification reject, RO/DM rejects will be disposed off along with once through return cooling water/fresh seawater into Arabian Sea as per recommendation of NIO. The characteristics of the discharge water are within the norms prescribed by CPCB.

11. The PP reported that the Power requirement for proposed project will be 120 MW and will be met from Captive Co-generation Power plant. D. G. Set (5 MVA X 1) [Fuel: HSD (60 KL)] shall be provided and used only in case of power failure. Stack (30 meter) and Retrofit shall provide as per CPCB norms to the DG sets. Industry will provide six Steam Boiler (150 TPH) for captive power plant, six lime kilns and D G sets

12. **Details of process emissions generation and its management:**

SR.NO.	Stack attached to	Capacity	Height of the stack (m)	Fuel & its Consumption	Expected Pollutant	APC System	GPCB Limit
1	CPP with flue gas desulphurization CFBC Boiler (6 Nos.)	150 TPH	130 m	Imported Coal/Lignite/ Pet coke (Imported Coal: 13,14,000 TPA, Lignite :19,71,000 TPA, Pet coke: 9,12,500 TPA)	SPM SO_2 NO_2 Hg	Individual ESP with each Boiler	PM ≤ 30 mg/Nm^3 SO_2 ≤ 100 mg/Nm^3 NO_2 ≤ 100 mg/Nm^3 Hg ≤ 0.03 mg/Nm^3
2	D G Set (2/3 Nos.)	5 MVA	30 m	HSD (60 KL)	HC CO PM NO_x	Retrofitting	NOx 710 ppmv NMHC 100 mg/Nm3 PM 75 mg/Nm3

							CO 150 mg/Nm3
3	Lime Kiln 1		68 m	Coke or Briquette or Anthracite (Coke - 1,30,000 TPA, Briquette- 1,55,000 TPA, Anthracite - 1,10,000 TPA)	SPM SO_2 NO_2	Scrubber and Dust Collector system	SPM ≤ 150 mg/Nm^3 SO_2 ≤ 100 ppm NO_2 ≤ 50 ppm
4	Lime Kiln 2		68 m			Scrubber and Dust Collector system	
5	Lime Kiln 3		68 m			Scrubber and Dust Collector system	
6	Lime Kiln 4		68 m			Scrubber and Dust Collector system	
7	Lime Kiln 5		68 m			Scrubber and Dust Collector system	
8	Lime Kiln 6		68 m			Scrubber and Dust Collector system	

SR.NO.	**Stack attached to**	**Height of the stack (m)**	**Expected Pollutant**	**APC System**
1	Ammonia Recovery system	42 m	Ammonia	Water scrubber
2	Lime grinding system / Slaker	65 / 20 m	PM / Water vapor	Bag filter / Adequate stack height
3	Calciner unit	37 m	PM	Scrubber, Bag filter

4	Densification	43 m	PM	Scrubber
5	Sodium Bi-Carbonate Unit	30 m	PM	Bag filter
6	Lime Kiln	Closed system	PM	Scrubber and Wet ESP

13. **Details of Solid Waste/ Hazardous Waste Generation and Its Management**:

Sr. No.	Type of Waste	Mode of Disposal
1	ETP Sludge from treatment of effluent generated from captive power plant & RO/DM Plant	The effluent from power plant, RO/DM plant will require only neutralization & it will have negligible BOD/COD. Sludge will be disposed off in nearby landfill site.
2	Used Oil / Used Cotton	It will be sold to MoEF&CC/CPCB registered recyclers only. Approx. 12 KL
3	Discarded Drums	It will be sold to approve traders. Approx. 5 MT/yr
	Discarded Bags	It will be sent back to supplier for reuse.
4	Spent Ion exchange resin	To be sold to authorized recyclers or will be incinerated at MoEF&CC/CPCB approved TSDF for which plant will obtain membership. Approx. 3000 l/yr
5	Lead acid Batteries	It will be sold to authorized agency through auction.
6	Ash (Fly ash & Bottom Ash) from Boiler	The Boiler ash will be used for cement Manufacturing/ Brick Manufacturing. Approx. 750 TPD
7	Limestone rejects	It can be used in Boiler for desulphurization and as a sweetener in cement industry, road making, pavement etc. 5% of lime stone consumption.
8	Settled sludge	Since settled sludge, non-hazardous in nature, it is proposed to be disposed off in Nearby landfill site.

14. The Budget earmarked towards the Environmental Management Plan (EMP) is ₹ **205.07 crore** (capital) and the Recurring Cost (operation and maintenance) will be about ₹ **6.98 Crore** per Annum. Industry proposes to allocate ₹ **18.04 Crore** towards CER.

15. The PP reported that Public Hearing for the Proposed project has been conducted by the State Pollution Control Board at the project site on **17.10.2022**. The main issues raised during the public hearing are related to the air pollutants, water pollutants, schedule 1 conservation plan, fishing, traffic etc.

16. The PP proposed to set up an Environment Management Cell (EMC) by engaging Environment officals for the functioning of EMC.

17. The PP submitted the Disaster and Onsite and Offsite Emergency Plans in the EIA report.

18. The estimated total project cost is **Rs. 3550 Crores**. Total Employment will be **1200** persons as direct.

19. Intake pipeline and outfall pipeline fall in CRZ 1A, 1B and IV area as per demarcation. It was reported that construction of process plant and utilities fall outside the CRZ area. SCZMA recommendation has been obtained for Laying of Seawater Intake and effluent disposal underground pipeline through tunnel from unclassified Forest area, Sand dune area, intertidal area outside project boundary.

20. The Public Hearing earlier was scheduled to be held on 16-04-2022 at 11:00 Hrs, Venue: Project Site, Survey no. 432, Village: Bada, Taluka: Mandvi, District: Kutch, Public hearing was then time being postponed due to unavoidable circumstances. After that public hearing was completed on **17-10-2022 at 11.00 Hrs.** Venue: Project Site, Survey no. 432, Village: Bada, Taluka: Mandvi, District: Kutch, Gujarat. Which was presided over by Shri Chetan Mishan(GAS), Sub Divisonal Magistrate & Deputy Collector, Mundra- Kutch. Public hearing Details as given below:

o.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	
	CSR–Fodder	4	Steps to be taken for cattle Care about Maldhari community Security regarding fodder supply for livestock.	Fodder will be provided as well as provision for veterinary doctor will be carried out by GHCL foundation under CSR activity.	• Activities for fodder supply will be carried out under CSR and CER activities for strengthening the bond between the project authorities and the local population. (refer Ch-8 and Table 10.4 in Ch-10). Fodder field will be developed on the Government/allocate land to nearby villages. • Unit will do promotion through providing support for breed improvement, animal health care, fodder improvement and providing veterinary doctor in nearby villages under CER and CSR activities for communities. • During year 2020-2021, GHCL foundation has spent INR 9.03 Crores towards CSR activities. CSR projects/activities worth INR 19.09 Cr. were implemented. GHCL wide range of CSR projects have touched and benefitted more than 90,200 lives over the years. Promoting	• As per MoEF&CC Office Memorandum F.NO. 22-67/2017-IA III, MoEF&CC, New Delhi, dated on 1st May 2018 GHCL Ltd has earmarked 0.5 % of capital investment (appro. Rs. 18.04 crore), towards the Corporate Environment Responsibility in 5 years • GHCL Ltd will spend approx. **4.35 crore*** towards Animal husbandry promotion through providing support for breed improvement, animal health care, Veterinary doctor and others as well as provides Fodder for cattle feeding nearby villages as per requirement under CER activities (* value may defer as per actual requirement)	5 years	C
	Employment	5	For employment of local villagers Number of employment opportunities to be Priority must be given to nearby 10 villages Regarding priority to nearby villages	Information on employment opportunities has given by Project Proponent that there are different types of employment opportunities in the two phase of the projects i.e. construction	• The proposed project has a potential for employment of skilled, semiskilled and unskilled employees during	• GHCL Ltd will spend approx. 2.25 crore towards Promoting activities for skill building to improve	During construction and Operation phase	C

o.	Issue related to	Nos. Issues	Concern in PH	GHCL L'TD reply	Action Plan	Fund Required	Timeline
			for labor work Regarding employment for local communities.	phase and operational phase of the project. GHCL will strive to provide these employment opportunities to the local people, for which work will be done for their skill development and employment opportunities will be provided to the local people. As per requirement, training will be given to local people in coordination with HR department. Priority will be given for employment of local people. In nearby villages a group of women can be formed so that they can work in Gruhudhyogs (Home- based business). M/s. GHCL shall provide employment to women as per their skills and qualification.	operational phase. The plant will create direct employment in phased manner for about 1200 (operational phase) skilled as well as semi-skilled staff and indirectly large number ofunskilled manpower will be engaged for the project. For Employment, local people will get first priority as per suitability and requirement. People will also get employed by the contractors for various project related activities. (Refer Ch-8 of EIA report) • GHCL foundation will carry out skill development Programme for local youth to improve their employment opportunities, women empowerment under CSR and CER activities.	employment opportunities and women empowerment in nearby villages under CER activities.	
3	CSR - Health	1	Regarding health facilities under CSR activities	Will provide mobile health van facility and upgradation of existing healt hcare infrastructure	• Industry will provide Mobile Health Care, Health Camps, and Specialized Check Up Camps in nearby villages. Necessary support and help will be extended for advanced diagnosis and treatment wherever identified, Free medical health checkup under CSR and CER activities.(Refer Ch-8 of EIA report). We have already initiated mobile health van facility for nearby affected villages of project site.	• GHCL Ltd will spend approx.. 1.12 crore towards Infrastructure development Such as primary healthcare units and the fulfilment of the basic amenities in PHCs including mobile medical van and Provide Bala-Rasayana to Malnutrition Children in Aanganwadi and PHC of nearby Villages under CER activities. • GHCL Foundation will spend approx..	5 years
4	CSR - Education	3	Regarding scholarship under CSR activity Regarding skill development of youth and improvement of	Will build school in future as per requirement and will also upgrade the existing school infrastructure and will carry out	• Unit will be directed at two levels viz. school and skill building to improve employment opportunities. At		5 years

o.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timelin e
			Conditions To provide educational facilities	skill development activities	school level we intend to promote quality of education and learnability, develop infrastructure of Government schools, provide vocational training as per the requirement under CSR and CER activities. • GHCL foundation will support local government and NGO to make that program more effective. • GHCL foundation will carry out skill development Programme for local youth to improve their employment opportunities, women empowerment under CSR and CER activities. • During year 2020-2021, GHCL Foundation has spent INR 9.03 Crores towards CSR activities. CSR projects/activities worth INR 19.09 Cr. were implemented. GHCL wide range of CSR projects have touched and benefitted more than 90,200 lives over the years. Promoting such activities like water conservation, Animal husbandry, health care, SHG, Infrastructure development etc.	towards Infrastructure development for quality of education, which will ultimately upgrade schools in nearby villages under CER activities.	
5	Air Pollutants (SOx, NOx, Dust)	6	Height of chimney to be installed Levels of Sox and NOx Regarding acid rain cause by Sox Emission of PM during transportation and Emission of heavy metal such as	For minimizing Air Pollution, requisite height of the stacks will be provided as per the NAAQS norms. Besides this, Modern technology equipment's like Dust collector, Electrostatic Precipitator Scrubber will	• The best available technology-based pollution prevention and control shall used to meet the regulatory standards and these pollution control systems will be commissioned before	• Air pollution • Capital cost would include air pollution control devices like ESPs, Scrubbers, Dust extraction	During operati on phase

o.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline
			mercury. Regarding once through cooling for 120 MW. Regarding linkage of fuel and how they are going to use it	installed. As a result, the pollution level will be within standard limits. GHCL will continue to support development of green belt in the surrounding villages through various agencies including GHCL Foundation (AF). GHCL shall endorses AF tree plantation movement of planting trees in entire Mandvi Taluka and 50,000 trees that mentioned, GHCL shall surely nurture those plants for five years.	commencement of operation of the project. Wherever possible, the control systems shall be interlinked with the operational units, so that failure of the control system shall shut down the respective operational unit. • High efficiency ESPs shall be provided in the flue gas path of the CFBC boilers for control of particulate matter. • Finely ground limestone will be added to the boiler combustion zone • together with coal/lignite to arrest the SO2 formed during combustion. • Lime stone dozing system to the furnace to be designed to achieve higher than 90% capture of SO2. Monitoring system(CEMS) of air pollutants SO2, NOx, NH3, PM10 and PM2.5 will be implemented. • So, the expected pollutants will be well within standard norms. • The air quality monitoring will be carried out on regular basis by approved agencies by CPCB/GSPCB. (refer Ch-6 and Ch-10 of EIA report) • GHCL will implement greenbelt /plantation program to ameliorate the pollutants and improve the aesthetics and ambient air quality. (refer Ch-10 of EIA report) • There is negligible cooling water requirement for power generation. There is no any alternative effective system is available for soda ash plant.	Stacks, Dry Fog system, Wind screen etc- 89.28 crore • recurring cost would include operation and maintenance of pollution control devices- 1.50 crore • **Environmental monitoring Programme** capital cost include OCEMS, online weather station etc- 3.4 crore • Recurring cost – 0.95 crore • Greenbelt • Capital Cost- 20 Crore • Recurring Cost- 0.5 crore	

o.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	R
					• There is no readily available infrastructure for transportation of fuel i.e. rail or water way. So, we have to transport through road. Traffic study are shown in section 3.2.3 of chapter-3 and impact due to transportation is show in 4.1.4.3 and 4.2.3 of Chapter-4 in EIA report. In future, any alternative option available will explore. • GHCL Foundation will also promoting plantation activities in nearby villages under CSR and CER activities			
	Water pollutants (BOD,COD,Ammonia, Mercury, Sea Weed, Mangroves)	7	Regarding water related question by Koli society Regarding decrease in number of phytoplanktons and disruption of food chain Regarding temperature and presence of ammonia in waste water Regarding presence of mangroves Regarding setup of tunnel for intake of sea water, seismic zone in which company falls, liquification of land due to heat Regarding discharge of effluents into sea containing ammonia and high temperature and death of fishes at Sutrapada plant Regarding quality of effluent in terms of BOD and COD	Effluent will be highly alkaline so it will be mixed with HCL and then it will be disposed off in sea. Design of structure will have done according to seismic zone V. In soda ash industry impact of ammonia is very low.	• Industry will provide adequate effluent management and monitoring system for disposal of treated water • Proper seawater intake and treated effluent disposal (ensure maximum dilution) shall be done as per recommendation Marine EIA report. • The water monitoring results of (surface and groundwater and marine) should be carefully evaluated to identify significant changes, if any, adverse change from the baseline accordingly, corrective measures will be taken to ensure the sustenance of water quality. However, there is no ground water pollution is envisage in such soda ash plant, • The ammonia concentration in treated waste water well	• Capital cost would include cost of ETP, STP etc- 14 crore • recurring cost would include operation and maintenance of pollution control	During operation phase	G

o.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Respo
					within the limit specified by CPCB for soda ash industry. • There is no such fish kill cases due to treated effluent in existing plant. There are independent studies available which indicates there is no significant adverse impact on marine environment but there will be positive impact on environment. • During studies, there is no such mangroves identified in sea water intake and outfall line area. • Design of pipeline/tunnel will be done according to seismic zone V. In case of catastrophic failure/ liquification on land, there are no chances of flooding as water transport through gravity.			
	Marine Life	1	Effect on marine life due to proposed project	No adverse impact on fish or marine animals and sea weed observed.	• Industry should be ensured that the effluent released to the sea meets the prescribed GPCB/ CPCB norms at all times. This should be verified through tracer studies after the outfall becomes operational. The effluent release scheme can then be adequately modified to ascertain necessary dilution, if required. The efficiency of the diffuser must be checked periodically and if necessary, it should be cleaned to revert back to the dilution ascertained through initial tracer studies. • There are independent studies available which indicates there is no significant adverse	• A provision of Rs. 1 crore to be earmarked for the biodiversity management plan to be implemented in the project area during construction phase and operation phase. • For periodic monitoring of the marine area environment during project • construction phase, a provision of Rs. 0.5 crore to earmarked. • For operation phase, Rs. 0.3 crore per year to be kept provision	During constructio n and Operation phase	GHCL

o.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	
					impact on environment but there will be positive impact on environment. • Design of pipeline/tunnel will be done according to seismic zone V. In case of catastrophic failure/ liquification on land, there are no chances of flooding as water transport through gravity.			
3	Health & Hygiene(Ammonia Leakge)	2	Skin diseases due to Soda Ash Regarding the leakage of ammonia.	GHCL will take care of any such issues related to Health of local peoples and workers. All the necessary measures for handling of chemicals will be implemented to reduce its impact on health of peoples. This information is also provided in the EIA report. All the pockets will have leak detection and repair system technology. Moreover, periodical maintenance will also be carried out. GHCL will ensure that there will be no leakage and therefore, there will not be occupational health issues for workers or villagers working in the plant. Moreover, GHCL will also provide PPE kits to workers for their safety.	• Ammonia tanks should have latest instrumentation provision for pressure indication, temperature indication and level indication. The provision of instrumentation should be within 100 percent redundancy. Continues recording of major parameters pertaining to the storages shall be maintained in the control room. • Unit will provide all the safety measure for ammonia storage as well as also prepare onsite and offsite emergency plan and all the APCM with respective units to mitigate the air pollution. The best available technology-based pollution prevention and control shall used to meet the regulatory standards and these pollution control systems will be	• Capital cost would include cost of OHS center, PPEs, fire & safety instruments, automation system for ammonia storage – 3.4 crore • Recurring cost would include maintenance charges and training, audit & health check-up etc.- 0.35 crore	During operation phase	G

o.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Res
					commissioned before commencement of operation of the project. Wherever possible, the control systems shall be interlinked with the operational units, so that failure of the control system shall shut down the respective operational unit. There is no significant impact observed in the existing soda ash plants in Gujarat.. • There are rare possibilities of ammonia leakage observed in soda ash plant however, recommendation of Disaster management plan and risk assessment will be followed.			
	CSR - Farmers	3	Facilities to be provided to nearby How hygenic the plant will be? How hygenic will be bada plant and what facility will be provided to the farmer.	GHCL Foundation is already providing subsidy for drip irrigation and GHCL will also consider to support this scheme further out of the CSR funds proposed for this project. To help agriculture, GHCL will help farmers as part of our CSR activity in consultation with villagers. The details and type of developmental work will be decided in consultation with villagers. GHCL foundation has been working for farmers through its different schemes like ground water recharge, water harvesting, zero chemical farming, drip irrigation etc.	• Industry will Promote environment friendly and nature-based solutions to enhance productivity of farming (Organic Farming) activities. It covers capacity building on farming techniques, provision of high-quality seeds/manure, efficient irrigation solutions, etc. under CSR and CER activities	• GHCL Ltd will spend approx.. 3.00 crore towards Promoting environment friendly and nature-based solutions to enhance productivity of farming (Organic Farming) activities. It covers capacity building on farming techniques, provision of high-quality seeds/manure, efficient irrigation	5 years	GHC
0	EIA Report & PH	14	EIA report is not correct	The terrestrial EIA report	• It is requested to note that as			GHC

o.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Resp
	advertisement		Regarding the alternative of site modhwa village. Regarding the NIO accreditation to prepare marine EIA report Regarding ToR granted and Study carried out prior of ToR granted. Regarding the advertisement of the PH Regarding NABET accreditation of consultant organization Regarding Marine EIA Regarding NEERI who has prepared EIA report Regarding the correction in EIA report Regarding the monitoring data collection Regarding accreditation certificate of additional studies for ecology.	prepared by CSIR NEERI and Marine EIA report is prepared by NIO, Mumbai	per OM number J-17011/8/92-IA-III dated 8th August, 2019, there are 7 institutes/agencies authorized for preparation of CZMPS in consonance with the provision of CRZ notification, 2019 vide GSR 37(e) dated 18/01/2019. IRS anna university Chennai has prepared the CRZ map for GHCL LTD. CSIR -NIO is Expert hired to carryout the Marine EIA study. • EIA report has been prepared by CSIR-NEERI, which is reputed governmental body and QCI NABET accredited consultant. • An extensive study on the ecology and Biodiversity in the study area was conducted by the QCI NABET approved functional area expert.			
1	Vipassana	3	Project site is near Vipassana meditation center The meditation center will be disturbed due to industry. Ammonia used in the industry. Related to presence of Vipassana center and other religious places in 15km radius of project site	--	• Environmental Management Plan envisages the plans for the proper implementation of mitigation measures to reduce the adverse impacts. • The EMP implementation will minimize the impact of atmospheric emissions, liquid effluents, solid wastes and noise generation on the surrounding environment. • The monitoring of all valued environmental components will be monitored as per the norms prescribed by GPCB/CPCB and the time to- time guidelines issued for soda	• Cost of Environment management plant including various installations for Air Pollution, Water Pollution, Noise Control,	--	GHC

o.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibilit
					ash manufacturing industry. • It is reported in CSIR NEERI report that there are no significant impact expected on man-made sensitive installations and habitations. On basis of study of present environment condition near project area and impact prediction and control measures proposed by GHCL Ltd. The proposed project will not have any significant negative impact on environment. Company operations are limited to the plant boundary and no negative impacts on Vipassana Centre are anticipated. The company will have robust peripheral Green Belt in order to attenuate noise and air emission due to plant operations.	• Recurring Cost- 0.5 crore		
2	CSR - Animal Husbandry	3	Regarding arrangements for Animal husbandry to Regarding distribution of kits to fisherman Regarding number of cattle present in the area	GHCL Foundation will support nearby community by providing education and livelihood support to make them self – reliant.	• Unit will do promotion through providing support for breed improvement, animal health care, fodder improvement and providing veterinary doctor in nearby villages under CER and CSR activities. • Unit will also promote development Initiatives for Fishing Communities such as Creation of infrastructure like ice plants, cold storages as well as provide operational inputs such as fishing boats, nets and engines • We have already provided veterinary doctor for nearby affected villages.	• GHCL Ltd will spend approx.. 4.35 crore towards Animal husbandry promotion through providing support for breed improvement, animal health care, Veterinary doctor and others as well as provides Fodder for cattle feeding nearby villages under CER activities	5 years	GHCL Limite

o.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Res
3	Site Selection	2	Regarding the alternative of site modhwa village. Regarding showing presence of marshy land near coastline	--	During the site selection, the alternative sites considered for setting-up of the proposed chemical complex project are given below: : Site 1 – Village Pingleswar, Taluka – Abdasa, Dist. Kutch Site 2 – Village Suthri, Taluka – Abdasa, Dist. Kutch Site 3 – Village Bambhdai, Taluka – Mandvi, Dist. Kutch Site 4 – Village Bada, Taluka – Mandvi, Dist. Kutch Site 5 – Village Modhva, Taluka Mandvi, Dist. Kutch The site at village bada is considered favorable based on the environmental and logistic advantages over other four sites. Justification of Site selection are given in Chapter-5 of EIA report.	--	--	GH
4	Sand Dunes	2	Concern of presence of sand dunes at bada coast Regarding digging of sand dunes for preparation of tunnels for water intake	--	• There is no disturbance to existing sand dunes. • Tunnelling work (much below ground level) for laying pipeline through sand dunes will be done by adopting proven construction methodology like micro tunnelling. The detailed Studies on sand dune mapping and morphological changes near the project site was carried by National Institute of Oceanography (NIO), Goa. This report can be referred from CSIR NIO Marine EIA. • GHCL Ltd is committed for conservation plan for sea turtles and sand dunes as suggested by various studies.	--	--	GH

o.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	
5	Turtle	3	Regarding presence of turtles on the coastline of bada Regarding information on endangered species not mentioned in EIA report Regarding hatching and presence of sea turtles	--	• Study on Status Survey and Conservation Plan for Sea Turtles along Mandvi Taluka, Bhuj, Gujarat by **Zoological Survey of India**, **Kolkata (April,2019)** is attached with EIA report. • ZSI study report mention that they did not any encounter any sea turtle and fresh/old nests or crawl marks of turtles on the beach. Since many of the factor for selection of a suitable nesting site are not conducive. • As per additional Ecological and Biodiversity study, suggests that the coast near the proposed project site may not be suitable for sea turtle nesting due to narrow supra tidal region, steep slope, dense vegetation and presence of predators such as dogs and jackals. Though, observations suggest that there may be no or negligible probability of sea turtle nesting. • GUIDE is also engaged for study of turtle survey and preparing conservation	• Contribution to Forest department for Sea Turtle Conservation Activities- 0.20 crore	10 years	G
6	Schedule 1 species (Peacock	4	Regarding presence of greater numbers of peacocks nearby and not	--	• Details of schedule - 1 species and conservation	• the proposed	10 years	G

o.	Issue related to	Nos. Issues	Concern in PH	G HCL LTD reply	Action Plan	Fund Required	Timelin
	Sandha and indian Monitor Lizard)		stated in report Presence of reptiles and amphibians not reported Related to study of presence of Indian Monitor Lizard in study area Regarding presence of gugal trees,		already incorporated in EIA report. • GHCL shall make financial allocations for taking up wildlife mitigation measures and for contribution to forest department for carrying out activities towards propagation, protection and conservation of wildlife. • GHCL Ltd have submitted Conservation Plan (Flap shell turtle, Green Sea turtle, Indian monitor lizard, Olive Ridley Sea turtle, Black shoulder kite, Eurasian Spoonbill, Indian Peafowl, Marsh Harrier, Oriental Honey Buzzard, Shikra, Short-toed Snake Eagle, Chinkara and Gugal - Schedule –I species and Critically Endangered species) to CWLW department of Gujarat.	Allocation for conservation of Schedule 1 species for 10 years is 1.25 crore	
7	Conservation Plan	2	Regarding conservation plan for Schedule 1 species Concern regarding green sea turtles and conservation plan for them	--	• GHCL shall make financial allocations for taking up wildlife • mitigation measures and for contribution to forest department for carrying out activities towards propagation, protection and conservation of wildlife. • The unit have submitted Conservation Plan (Flap shell turtle, Green Sea turtle, Indian monitor lizard, Olive Ridley Sea turtle, Black shoulder kite, Eurasian Spoonbill, Indian Peafowl, Marsh Harrier, Oriental Honey Buzzard, Shikra, Short-toed Snake Eagle, Chinkara and Gugal - Schedule –I species and Critically Endangered species) to CWLW	• the proposed budget allocation for conservation of Schedule 1 species for 10 years is 1.25 crore	10 Years

o.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	R
					department of Gujarat.			
3	Form 1(Water Bodies, Temples, Schedule 1 Species)	5	Regarding presence of waterbody not shown in form-1 Regarding religious places and lakes not mentioned in PFR report. Waterbody not mentioned in form-1 Data given in form-1 and EIA are different Waterbody not mentioned in form-1	--	• Environmental settings are given in Chapter-1 and Chapter-5 of EIA report. Approximate distance of water bodies, temples etc are given in EIA report. • Through drainage studies of the area, it was observed that there is one stream of 1st order entering the plant area from north. Although, it has small catchment area, it is proposed that this stream, will be diverted to nearby passing Vengadi River in the west. • There are also pond inside the premises. It is proposed that pond i.e. inside the premises will be used to store entire annual surface runoff plant use. If permitted by concern authority.	• -Cost of drainage network of surface runoff, rainwater collection pond and rain water harvesting system – 53 crores (included in EMP)	--	GH
9	Govt. Land	3	Regarding type of land to be procured by the industry Regarding status of government land to be procured Providing data for proving gauchar land	--	• There is no gauchar land within proposed project site. M/s GHCL has applied to Industries Commissioner and District Collector for allotment of aforesaid land. Industries Commissioner has granted In Principle approval for Bonafied Industrial Purpose. District Collector has initiated actions for allotment of Govt. waste land.	--	--	GH
0	Fishing	8	Regarding details of Pagadia fisherman not mentioned and Marine EIA is misinterpreted	--	• Proper seawater intake and treated effluent disposal (ensure maximum • dilution) shall be done as per	• A provision of Rs. 1 crore to be earmarked for the biodiversity management plan	During constructi o n and	GH

o.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeli
			Regarding disturbance to fishes due to presence of pipeline		Marine EIA report prepared by NIO Industry should be ensured that the effluent released to the sea meets the prescribed GPCB/ CPCB norms at all times. This should be verified through tracer studies after the outfall becomes operational. Details of Fishery and fishermen including their family and population are given in Chapter-3 of marine EIA report. Other than construction phase, there will be no any impact on pagadiya fisher men. As shore line will remain undisturbed. It is mentioned in marine EIA report that no large-scale commercial fishing operation prevail in the study area except for minor shore based and Gill net operations. There are independent studies available which indicates there is no significant adverse impact on environment but there will be positive impact on environment. Unit will also promote development Initiatives for Fishing Communities including pagadiya under CER and CSR activities	implemented in the project area during construction phase and operation phase. • For periodic monitoring of the marine area environment during project • construction phase, a provision of Rs. 0.5 crore to earmarked. • For operation phase, Rs. 0.3 crore per year to be kept provision for • the monitoring. • GHCL Ltd will spend approx.. 0.75 crore towards Development Initiatives for Fishing Communities including pagadiya under CER activities	Operatio phase
			Regarding status of fishing near bada and Mandvi				
			Related to number of fisherman not incorporated in study				
			--				
			Related to presence of dead fishes not reported in study, fishing carried out for commercial purpose				
			Regarding presence of fisherman in study area				
1	Water Body (check dams)	2	Related to presence of seasonal river which passes near bada village and presence of dam over it	--	Through drainage studies of the area, it was observed that there is one stream of 1st order	• Cost of drainage network of surface runoff, rainwater	During construc and

No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timelin
			Related to distance of river from project site		entering the plant area from north. Although, it has small catchment area, it is proposed that this stream, may be diverted to nearby passing Vengadi River in the west, which has two check dams, one for salinity ingress check and on upstream side for storing fresh water. This will not cause any adverse impact on the downstream. For channelizing the monsoon run off from the area adjacent to plant it is required to construct peripheral drain along plant boundary so that flooding is avoided and run off find its way to the natural slope towards Arabian Sea. So, the present hydrological setting of the area will remain unaffected. So, the present hydrological setting of the area will remain unaffected. The additional water enter into the vengadi river through drainage will not impact on check dam. As any additional water above the river and check dam shall overflow to the Arabian sea.	pond and rain water harvesting system – 53 crores (included in EMP)	Operatio phase
2	Traffic (R MH, Heavy Trucks, Road Usage)	4	Regarding number of trucks passing due to project for raw Related to traffic study not mentioned in ToR, impact not carried out Concern regarding public roads Regarding number of trucks passing	--	Traffic study are shown in section 3.2.3 of chapter-3 and impact due to transportation is show in 4.1.4.3 and 4.2.3 of Chapter-4 in EIA report. We will use existing road network as no other transportation i.e. rail/water ways are available. We have carried out calculation on	--	

No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	R
					Traffic study (Level of Service) and added on Form Part-C.			
3	CSR General	1	Regarding past data of CSR	GHCL has proposed CSR budget in the EIA report which will be utilized based on need identification and village development meetings. CSR will be implemented with CSR implementing agencies including GHCL Foundation is working in following area. 1. Agro-livelihood and animal husbandry, 2. Education and skill development, 3. Health, water, and sanitation.	• GHCL's commitment towards the development of weaker sections of society has been a continuous initiative for more than two decades. Through its "GHCL Foundation Trust", GHCL has upgraded its CSR activities to cover a larger section of the society to provide support to the downtrodden, needy and marginalized citizens and also to create a social infrastructure for their sustenance. GHCL Foundation serves as the Corporate Social Responsibility arm of GHCL Limited and represents our commitment to the holistic development of our surrounding c ommunity. During year 2020-2021	--	--	GH

No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline
					Infrastructure d evelopment etc.		
			Regarding pollution to be caused by industry -- Regarding to dusting due to kiln and power plant,		• Environmental Management Plan envisages the plans for the proper implementation of mitigation measures to reduce the adverse	• Cost of Environment management plant including various installations for	

4	Pollution and Environment General	4	Related to disposal of effluent water	Unit will follow all the rules and regulation with their subsequent amendments as directed by concerned authorities	impacts. • The EMP implementation will minimize the impact of atmospheric emissions, liquid effluents, solid wastes and noise generation on the surrounding environment	Air Pollution, Water Pollution, Noise Control, Greenbelt Development, Occupational Health and Safety and other related activities.- 205.07 crore	--
5	Forest area	2	Related to distance of project site from forest area Details regarding families dependent on forest	There is no classified forest area.	• There is no forest land within the boundary of proposed project site. However, some part of the unclassed forest area located south of the project site outside boundary. Sea water intake and outfall pipeline will pass through underground micro tunnel in specific corridor to cross forest area. The permission from the Forest Department is	--	--

No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Resp
					of 0.9689 Ha. of un-class forest			
	Supporting for Industrial Development to GHCL LTD	--	For Employment For Infrastructure development in nearby village Social upliftment towards nearby villages Health facilities Women empower ment Skill	GHCL LTD team thanked for welcoming the industries	--	--	--	--
	Total	94						

21. The Proposal was considered in the 72nd **EAC Meeting held on 2.1.2024** wherein the EAC deferred the proposal for want of requisite information. Reply to the same was submitted by the PP vide letter dated 30.1.2024, and again the proposal was considered in the 74th EAC meeting Reply for the same was submitted on 28.3.2024.

S. No.	Queries Raised by EAC	Reply by PP
(i)	The Committee was of the view that PP shall compare the baseline data collected during December -February 2020 and data collected during December 2022 -February 2023. Accordingly, PP shall also carry out trend analysis of previous baseline data by conducting latest additional one-month baseline data	T R Associates have compared the baseline data collected during December 2019 - February 2020 and data collected during December 2022 - February 2023. Accordingly, T R Associates have carried out the trend analysis of previous baseline data by conducting latest additional one-month (February 2024) baseline data.
(ii)	The Committee noted that several representations have been received from various level of public raising several issues. The Committee was of the view that representations shall be forwarded to the PP for their response. The Committee also recommended that in the next meeting they will go through the video of proceedings of public hearing. The Committee will go through the response of PP then decide further course of action accordingly	PP informed that same type of questions have been raised in approximately 410 emails. The concerns raise are similar to issue raised in public hearing and samr has been replied in public hearing MoM. The committee deliberated on the each issues raised.

13. **Deliberations by the EAC**

The Committee members have reviewed the public hearing proceeding during the 78th EAC meeting held on 30th April 2024. Committee members have observed that 1st public hearing was scheduled on 6th April 2022. Advertisement of the public hearing schedule was given in the local daily newspaper in Gujarati Newspaper: Divya Bhaskar, dated 3rd March 2022 and English Newspaper, Times of INDIA, dated 4th March 2022, which is 30 days before the Public hearing, as mentioned in the EIA notification 2006 and their amendment also Submitted Draft EIA report to Concern authorities and Executive summary to Affected villages in line with EIA notification. However, it was postponed due to unavoidable circumstances.

A public hearing was rescheduled to 17th October 2022, as per the notification date of 9th May 2022, which states that in the event of any such postponement, the time duration for convening the rescheduled public hearing should not be less than forty-five days from the date of the first advertisement already published in accordance with the initial date of the public hearing. It shall be ensured that a minimum notice period of fifteen days shall be provided to the public before the re-scheduled date of the public hearing to furnish the responses in writing. The rescheduled advertisement was circulated in the daily local newspaper Divya Bhaskar on 30th September 2022 and Times of INDIA on 1st October 2022, 15 days before the public hearing as given in to the EIA notification 2006 and their amendment. Also, GPCB has Submitted an EIA report to

Concerned authorities and an Executive summary to the Affected villages in line with EIA notification. PP informed that Approximately 1,000-1,500 individuals may have attended the public hearing. However, only 106 people signed the signature sheet circulated by the GPCB concerned person during the public hearing. Therefore, GPCB reported 106 attendees in the proceedings. In the video film, it was observed that people who were opposing the project, have been given full opportunity to raise the issues before PH committee. Further, 1066 no. Issues were raised by the local people, and a point-wise reply from the project proponent was provided to them. The public hearing continued for about 10-11 hours. Sufficient time was given, the procedure was duly followed, and the concerns raised by the public were addressed, too. 1154, no. of written representations were received, including concerns raised, supporting letters from the affected local people, and replies to the written representation, which were also incorporated into the public hearing proceedings. Most issues raised during the public hearing were the Conservation of sand dunes, Environmental management plan, Vipassana meditation center, Conservation of Ecology and Biodiversity, Accreditation of Consultants, environmentally sensitive receptor distances, employment and other support provided by the project proponent after plant commissioning, etc.

Concerning the project, the proponent informed that it is essential to note the significant contributions of various organizations. The Marine Environment Impact assessment report was prepared by NIO, Mumbai, while the CRZ classification report, complete with a 1:4000 scale demarcation map, was prepared by IRS, Chennai. The sand dune and Biodiversity Conservation plan was developed by GUIDE Institute, Kutch, and the Sea turtle conservation plan was prepared by the Zoological Survey of INDIA (ZSI). Each of these organizations played a crucial role in ensuring the project's compliance with environmental regulations and preserving local biodiversity.

Based on the above details, report representation to the technical committee of GCZMA and give recommendations for CRZ clearance to GHCL Limited. The unit has also received Stage I and II approval from the Concerned forest authority.

PP informed that in the point of NABET accreditation, the project proponent informed that they awarded the project to NEERI in 2018. No NABET-accredited consultant accredited under sector 4 (e) was available during that period. NEERI is a nationally reputed organisation, and it also prepared EIA reports earlier for similar soda ash industries. Later, the unit reviewed and revalidated the EIA report with the NABET-accredited consultant M/s. T R Associates. T R Associates has also submitted the undertaking that they have verified the EIA/EMP report and prepared an addendum report describing our findings and observations. T R Associates has presented the committee that they have not observed any significant deviation in the EIA report prepared by the national repute organisation NEERI. The report discussed in the public consultation is as good as the report prepared by the accredited consultant and is factually correct. Additionally, the structure of the EIA report was complied with according to the EIA notification 2006 and its amendments.

After detailed deliberation, the Committee was of the view that since proposal involves CRZ clearance, views/comments of the CRZ division may also be obtained on the proposal from CRZ angle. The Comments /views of CRZ Division may be placed before the EAC (Industry -3) for consideration of the project. PP shall also submit clearcut land holding title of the proposed project site.

Project proposal was deferred for want of above additional information. Additional information shall be submitted online to the PARIVESH portal for further consideration by EAC.

-TRUE COPY-

ANNEXURE R/31

GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE
(IA DIVISION-INDUSTRY-3 SECTOR)
*****

Dated:17.6.2024

MINUTES OF THE 80th EXPERT APPRAISAL COMMITTEE (INDUSTRY-3 SECTOR) MEETING HELD ON 7th JUNE, 2024

Venue: Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi-110003 through Video Conferencing (VC)

Time: 10:30 AM onwards

(i) Opening Remarks by the Chairman

Prof. (Dr.) A.B. Pandit, Chairman welcomed the Committee members and opened the EAC meeting for further deliberations.

(ii) Details of Agenda items by the Member Secretary

The Member Secretary then apprised the Committee about the details of Agenda items to be discussed during this Expert Appraisal Committee (EAC) meeting.

(iii) Confirmation of Minutes of the 79th EAC Meeting held on 8th-9th May, 2024.

The EAC noted that the final minutes of the above meeting were issued after incorporating the comments offered by the members and approved by the Chairman.

Parivesh 1.0

Agenda No.1

Proposed project to produce Light Soda Ash (LSA) of 11,00,000 TPA capacity, 5,00,000 TPA of Dense Soda Ash (DSA) and 2,00,000 TPA Sodium Bicarbonate (SBC) located at near village Bada, Taluka - Mandvi, District - Kutch in the Gujarat by "Greenfield Chemical Complex" of GHCL Ltd- Reconsideration of Environmental Clearance

[Proposal no: IA/GJ/IND3/408164/2022, File No. IA-J-11011/293/2021-IA-II(I)]

1. The proposal is for Environmental Clearance to the Proposed project to produce Light Soda Ash (LSA) of 11,00,000 TPA capacity, 5,00,000 TPA of Dense Soda Ash (DSA) and 2,00,000 TPA Sodium Bicarbonate (SBC) located at near village Bada, Taluka - Mandvi, District - Kutch in the Gujarat state by "Greenfield Chemical Complex" of GHCL Ltd

2. The project/activity is covered under Category 'A' of Item 4 (e) soda ash industry and 1(d) of Schedule of Environment Impact Assessment (EIA) Notification, 2006 (as amended) and requires appraisal at Central Level by the Expert Appraisal Committee (EAC) as the project is located outside the notified industrial area.

3. The ToR was issued by the Ministry, vide letter no. IA-J-11011/293/2021-IA-II(I) dated 10th August, 2021. The PP applied for the Environment Clearance in the Common Application Form and submitted the EIA/EMP Report and other documents. The PP in the CAF reported that it is a **Fresh EC case. The proposal was placed in 72nd EAC Meeting held on 2nd January, 2024**, **74th EAC meeting held on 6th Februay,2024, 78th EAC meeting held on 30th April,2024 wherein the proposal was deferred for want of requisite information now the proposal is placed in this 80th EAC meeting held on 7th June, 2024** where project was wherein the PP and an accredited Consultant, M/s. T. R Associates [NABET accreditation till **NABET Accreditation Number: NABET/EIA/2326/RA 0293 valid till 8th April, 2026**], made a detailed presentation on the salient features of the project and informed the following:

4. The PP reported that the Total land area is **5463200 m^2;** no additional land will be used **for proposed project** and no R& R is involved in the Project. The details of various products are as follows:

Sr. No.	**Name of the Product**	**Production Capacity (MT/Month)**	**CAS Number**	**End use**
1	Light Soda Ash	11,00,000 TPA	497-19-8	Manufacturing of glass, usage in chemical industry, paper and detergent manufacturing, and food industry
2	Dense Soda Ash	5,00,000 TPA	497-19-8	
3	Sodium bicarbonate	2,00,000 TPA	144-55-8	
Captive Co-generation Power plant Steam (CFBC boilers)			120 MW	
Emergency DG Set			5 MVA	
Note- The production capacities are planned in phased manner and for Phase 1 production capacity for LSA: 5,50,000 TPA, Dense Soda Ash: 2,50,000 TPA, SBC: 1,00,000 TPA and 60 MW for Captive Co-generation Power plant.				

5. The PP reported that there is no violation case as per the Notification No. S.O.804(E) dated 14.03.2017 and no direction is issued under E(P) Act/Air Act/Water Act.

6. The PP reported that there is no National Parks, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site. **Marine National Park and Sanctuary, Jamnagar are located at 75 km aerial distance in South direction and Narayan Sarovar Sanctuary is located at more than 100 km aerial distance in North-West directions**. Flap shell turtle, Green Sea turtle, Indian monitor lizard, Olive Ridley Sea turtle, Black shoulder kite, Eurasian Spoonbill, Indian Peafowl, Marsh Harrier, Oriental Honey Buzzard, Gugal Schedule-I species were found in the study area for which conservation plan has been prepared and submitted to PCCF and Chief wildlife warden dated 9.11.2023.

7. The PP reported that the diversion of 0.9689 ha un-class forest for laying part of sea water intake and effluent disposal pipeline and passage for related construction equipment movement in Kachchh has been obtained vide letter dated 18. 7.2023.

8. The PP reported the Unit has received the Final recommendation letter from GZMA vide file no ENV/ 10/ 2021/184/ T- cell dated 26.12.2023. CRZ details are as:

Activities	**Zone**
Construction of process plant and utilities etc.	Outside CRZ area
Effluent collection	Outside CRZ area
Seawater Intake system i.e. sump and pump house	CRZ III
Intake Pipeline	CRZ IA, CRZ IB and CRZ IV
Outfall Pipeline	CRZ IA, CRZ IB and CRZ IV

Laying of Seawater Intake and effluent disposal underground pipeline through tunnel from unclassified Forest area, Sand dune area, intertidal area outside project boundary.

9. The PP reported that **Ambient air** quality monitoring was also carried out at **10 locations** during **December 2022 – February 2023**. The baseline data indicates the ranges of concentrations as: PM_{10} (50.31 **µg/m^3 to 83.48 µg/m^3**), $PM_{2.5}$ (**21.65 µg/ m^3 to 51.31 µg/ m^3**), SO_2 (BDL (DL=5) **to 17.38 µg/m^3**), NOx (**16.38 µg/m^3 to 41.49 µg/m^3**), Ozone (BDL (DL=10) **to 19.62 µg/m^3**), Ammonia, Carbon Monoxide, Lead (Pb), Arsenic (As), Nickel (Ni), Benzo(α)pyrene(B[a]P) and Benzene results were observed Below Detectable Limit. AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be **1.23** µg/m^3 in case of Lignite, **1.21** µg/m^3 in case of Coal and **1.19** µg/m^3 in case of Petcoke with respect to PM10, **1.71** µg/m^3 in case of Lignite, **0.229** µg/m^3 in case of Coal and **1.44** µg/m^3 in case of Petcoke with respect to SO_2 and **5.08**

μg/m^3 in case of lignite, **8.82** μg/m^3 in case of coal and **9.50** μg/m^3 in case of Petcoke with respect to NO_x, 2.39 μg/m^3 in case of NH_3. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

10. The PP reported that the total water requirement for project will be **14,61,038 m^3/day** which will be met from **Sea water.** Total Effluent of **14,48,508 m^3/day** [Domestic - **160 m^3/day** + Industrial – **14,48,348 m^3/day** (fresh seawater for dilution – 5,14,678 m^3/day + effluent generation from soda ash & CPP plant – 1,26,830 m^3/day + once through cooling – 8,07,000 m^3/day] will be generated. The industrial effluent generated (14,48,508 m^3/day) i.e. from RO/DM rejects, brine purification reject, distiller waste and boiler blowdown will be mixed with fresh seawater for dilution and wastewater from once-through cooling and treated and disposed into the Arabian Sea as per the recommendation of NIO. The characteristics of the discharge water are within the norms prescribed by CPCB. Domestic effluent (**160 m^3/day**) will be treated in sewage treatment plant and treated sewage will be reused in landscaping & gardening purposes.

11. The PP reported that the Power requirement for proposed project will be 120 MW and will be met from Captive Co-generation Power plant. D. G. Set (5 MVA X 1) [Fuel: HSD (60 KL)] shall be provided and used only in case of power failure. Stack (30 meter) and Retrofit shall provide as per CPCB norms to the DG sets. Industry will provide six Steam Boiler (150 TPH) for captive power plant, six lime kilns and D G sets

12. **Details of process emissions generation and its management:**

SR.NO.	Stack attached to	Capacity	Height of the stack (m)	Fuel & its Consumption	Expected Pollutant	APC System	GPCB Limit
1	CPP with flue gas desulphurization CFBC Boiler (6 Nos.)	150 TPH	130 m	Imported Coal/Lignite/ Pet coke (Imported Coal: 13,14,000 TPA, Lignite :19,71,000 TPA, Pet coke: 9,12,500 TPA)	SPM SO_2 NO_2 Hg	Individual ESP with each Boiler	PM ≤ 30 mg/Nm^3 SO_2 ≤ 100 mg/Nm^3 NO_2 ≤ 100 mg/Nm^3 Hg ≤ 0.03 mg/Nm^3

2	D G Set (2/3 Nos.)	5 MVA	30 m	HSD (60 KL)	HC CO PM NO_x	Retrofitting	NOx 710 ppmv NMHC 100 mg/Nm3 PM 75 mg/Nm3 CO 150 mg/Nm3
3	Lime Kiln 1		68 m	Coke or Briquette or Anthracite (Coke - 1,30,000 TPA, Briquette- 1,55,000 TPA, Anthracite - 1,10,000 TPA)	SPM SO_2 NO_2	Scrubber and Dust Collector system	SPM ≤ 150 mg/Nm^3 SO_2 ≤ 100 ppm NO_2 ≤ 50 ppm
4	Lime Kiln 2		68 m			Scrubber and Dust Collector system	
5	Lime Kiln 3		68 m			Scrubber and Dust Collector system	
6	Lime Kiln 4		68 m			Scrubber and Dust Collector system	
7	Lime Kiln 5		68 m			Scrubber and Dust Collector system	
8	Lime Kiln 6		68 m			Scrubber and Dust Collector system	

SR.NO.	**Stack attached to**	**Height of the stack (m)**	**Expected Pollutant**	**APC System**

1	Ammonia Recovery system	42 m	Ammonia	Water scrubber
2	Lime grinding system / Slaker	65 / 20 m	PM / Water vapor	Bag filter / Adequate stack height
3	Calciner unit	37 m	PM	Scrubber, Bag filter
4	Densification	43 m	PM	Scrubber
5	Sodium Bi-Carbonate Unit	30 m	PM	Bag filter
6	Lime Kiln	Closed system	PM	Scrubber and Wet ESP

13. **Details of Solid Waste/ Hazardous Waste Generation and Its Management**:

Sr. No.	Type of Waste	Category	Quantity	Mode of Disposal
1	Settled Sludge from treatment of effluent generated from captive power plant & RO/DM Plant	35.3	1.0 MT/Annum	Collection, storage and disposal at approved TSDF site
2	Used Oil	5.1	12 KL	Collection, storage and used within premises as a lubricant / sold to registered recycler
3	Discarded Drums and Bags	33.1	6.45 MT/Annum	Collection, storage & sold to authorized vendor
4	Spent Ion exchange resin	35.2	3000 Lit/Annum	Collection, storage and disposal at approved TSDF site
5	Used Cotton	33.2	5 MT/Annum	Collection, storage and disposal at approved CHWIF site
6	Lead acid Batteries	Schedule-IV (17)	5 MT	Collection, storage & sold to authorized agency through auction

7	E-Waste	Schedule-I of E-Waste (Management) Rules, 2022	5 MT/ Annum	Collection, storage & sold to authorized agency through auction
8	Plastic Waste	-	2295 MT/Annum	Collection, Storage and Disposal to CPCB/SPCB authorized recyclers under EPR of Plastic Waste Management
9	Bio-medical Waste	-	0.035 MT/Annum	Collection, storage and disposal at as per Bio-medical Waste Management Rules, 2016
10	Construction and Demolition Waste	-	20 TPD	Collection, storage and utilize internally for area filling, road making etc.

Non-Hazardous Solid Waste Details

Sr. No.	Type of Waste	Source of Generation	Quantity	Mode of Disposal
1	STP sludge	STP	1152 MT/Annum	Reused as Manure in Greenbelt Development
2	Kitchen Waste	Canteen	0.01 MT/Day	Collected and composted in Composter and further used as manure for gardening in the premises
3	Ash (Fly ash & Bottom Ash)	Boiler	2726.847 TPD	Collection, storage & sold to cement Manufacturing/ Brick Manufacturing
4	Limestone rejects	Desulphurization Process	1,00,000 MT/Annum	Collection and reused in Boiler for desulphurization and as a sweetener in cement industry, road making, pavement etc.

14. The Budget earmarked towards the Environmental Management Plan (EMP) is ₹ **318.08 crore** (capital) and the Recurring Cost (operation and maintenance) will be about ₹ **6.98 Crore** per Annum. Industry proposes to allocate ₹ **18.04 Crore** per annum towards CER.

15. The PP proposed to set up an Environment Management Cell (EMC) by engaging Environment officals for the functioning of EMC.

16. The PP submitted the Disaster and Onsite and Offsite Emergency Plans in the EIA report.

17. The estimated total project cost is **Rs. 3563.08 Crores**. Total Employment will be **1200** persons as direct.

18. Intake pipeline and outfall pipeline fall in CRZ 1A, 1B and IV area as per demarcation. It was reported that construction of process plant and utilities fall outside the CRZ area. SCZMA recommendation has been obtained for Laying of Seawater Intake and effluent disposal underground pipeline through tunnel from unclassified Forest area, Sand dune area, intertidal area outside project boundary.

19. The Public Hearing earlier was scheduled to be held on 17.10.2022 at 11:00 Hrs, Venue: Project Site, Survey no. 432, Village: Bada, Taluka: Mandvi, District: Kutch, Public hearing was then time being postponed due to unavoidable circumstances. After that public hearing was completed on **17-10-2022 at 11.00 Hrs.** Venue: Project Site, Survey no. 432, Village: Bada, Taluka: Mandvi, District: Kutch, Gujarat. Which was presided over by Shri Chetan Mishan(GAS), Sub Divisonal Magistrate & Deputy Collector, Mundra- Kutch. Public hearing Details as given below:

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
1	CSR – Fodder	4	Steps to be taken for cattle Care about Maldhari Security regarding fodder supply for livestock.	Fodder will be provided as well as provision for veterinary doctor will be carried out by GHCL foundation under CSR activity.	Activities for fodder supply will be carried out under CSR and CER activities for strengthening the bond between the project authorities and the local population. (refer Ch-8 and Table 10.4 in Ch-10). Fodder field will be developed on the Government/allocate land to nearby villages. Unit will do promotion through providing support for breed improvement, animal health care, fodder improvement and providing veterinary doctor in nearby villages under CER and CSR activities for communities. During year 2020-2021, GHCL foundation has spent INR 9.03 Crores towards CSR activities. CSR projects/activities worth INR 19.09 Cr. were implemented. GHCL wide range of CSR projects have touched and benefitted more than 90,200 lives over the years. Promoting	As per MoEF&CC Office Memorandum F.NO. 22-67/2017-IAIII, MoEF&CC, New Delhi, dated on 1st May 2018 GHCL Ltd has earmarked 0.5 % of capital investment (appro. Rs. 18.04 crore), towards the Corporate Environment Responsibility in 5 years GHCL Ltd will spend approx. 4.35 crore* towards Animal husbandry promotion through providing support for breed improvement, animal health care, Veterinary doctor and others as well as provides Fodder for cattle feeding nearby villages as per requirement under CER activities (* value may defer as per actual requirement)	5 years	GHCL Limited
2	Employment	5	For employment of local villagers Number of employment opportunities to be generated Priority must be given to nearby 10 villages Regarding priority to nearby villages	Information on employment opportunities has given by Project Proponent that there are different types of employment opportunities in the two phase of the projects i.e. construction	The proposed project has a potential for employment of skilled, semiskilled and unskilled employees during construction phase as well as	GHCL Ltd will spend approx. 2.25 crore towards Promoting activities for skill building to improve	During construction and Operation phase	GHCL Limited

S.No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
			for labor work Regarding employment for local communities.	phase and operational phase of the project. GHCL will strive to provide these employment opportunities to the local people, for which work will be done for their skill development and employment opportunities will be provided to the local people. As per requirement, training will be given to local people in coordination with HR department. Priority will be given for employment of local people. In nearby villages a group of women can be formed so that they can work in Gruhudhyogs (Home- based business). M/s. GHCL shall provide employment to women as per their skills and qualification.	operational phase. The plant will create direct employment in phased manner for about 1200 (operational phase) skilled as well as semi-skilled staff and indirectly large number of unskilled manpower will be engaged for the project. For Employment, local people will get first priority as per suitability and requirement. People will also get employed by the contractors for various project related activities. (Refer Ch-8 of EIA report) GHCL foundation will carry out skill development Programme for local youth to improve their employment opportunities, women empowerment under CSR and CER activities.	employment opportunities and women empowerment in nearby villages under CER activities.		
3	CSR - Health	1	Regarding health facilities under CSR activities	Will provide mobile health van facility and upgradation of existing healthcare infrastructure	Industry will provide Mobile Health Care, Health Camps, and Specialized Check Up Camps in nearby villages. Necessary support and help will be extended for advanced diagnosis and treatment wherever identified, Free medical health checkup under CSR and CER activities.(Refer Ch-8 of EIA report). We have already initiated mobile health van facility for nearby affected villages of project site.	• GHCL Ltd will spend approx.. 1.12 crore towards Infrastructure development Such as primary healthcare units and the fulfilment of the basic amenities in PHCs including mobile medical van and Provide Bala-Rasayana to Malnutrition Children in Aanganwadi and PHC of nearby Villages under CER activities. • GHCL Foundation will spend approx..	5 years	GHCL Limited
4	CSR - Education	3	Regarding scholarship under CSR activity Regarding skill development of youth and improvement of	Will build school in future as per requirement and will also upgrade the existing school infrastructure and will carry out	• Unit will be directed at two levels viz. school and skill building to improve employment opportunities. At		5 years	GHCL Limited

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
			Conditions To provide educational facilities	skill development activities	school level we intend to promote quality of education and learnability, develop infrastructure of Government schools, provide vocational training as per the requirement under CSR and CER activities. • GHCL foundation will support local government and NGO to make that program more effective. • GHCL foundation will carry out skill development Programme for local youth to improve their employment opportunities, women empowerment under CSR and CER activities. • During year 2020-2021, GHCL Foundation has spent INR 9.03 Crores towards CSR activities. CSR projects/activities worth INR 19.09 Cr. were implemented. GHCL wide range of CSR projects have touched and benefitted more than 90,200 lives over the years. Promoting such activities like water conservation, Animal husbandry, health care, SHG, Infrastructure development etc.	towards Infrastructure development for quality of education, which will ultimately upgrade schools in nearby villages under CER activities.		
5	Air Pollutants (SOx, NOx, Dust)	6	Height of chimney to be installed Levels of Sox and NOx Regarding acid rain cause by Sox Emission of PM during transportation and Emission of heavy metal such as	For minimizing Air Pollution, requisite height of the stacks will be provided as per the NAAQS norms. Besides this, Modern technology equipment's like Dust collector, Electrostatic Precipitator, Scrubber will	• The best available technology-based pollution prevention and control shall used to meet the regulatory standards and these pollution control systems will be commissioned before	• Air pollution • Capital cost would include air pollution control devices like ESPs, Scrubbers, Dust extraction	During operation phase	GHCL Limited

S.No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
			mercury. Regarding once through cooling for 120 MW. Regarding linkage of fuel and how they are going to use it	installed. As a result, the pollution level will be within standard limits. GHCL will continue to support development of green belt in the surrounding villages through various agencies including GHCL Foundation (AF). GHCL shall endorses AF tree plantation movement of planting trees in entire Mandvi Taluka and 50,000 trees that mentioned, GHCL shall surely nurture those plants for five years.	commencement of operation of the project. Wherever possible, the control systems shall be interlinked with the operational units, so that failure of the control system shall shut down the respective operational unit. • High efficiency ESPs shall be provided in the flue gas path of the CFBC boilers for control of particulate matter. • Finely ground limestone will be added to the boiler combustion zone • together with coal/lignite to arrest the SO2 formed during combustion. • Lime stone dozing system to the furnace to be designed to achieve higher than 90% capture of SO2. Monitoring system(CEMS) of air pollutants SO2, NOx, NH3, PM10 and PM2.5 will be implemented. • So, the expected pollutants will be well within standard norms. • The air quality monitoring will be carried out on regular basis by approved agencies by CPCB/GSPCB. (refer Ch-6 and Ch-10 of EIA report) • GHCL will implement greenbelt /plantation program to ameliorate the pollutants and improve the aesthetics and ambient air quality. (refer Ch-10 of EIA report) • There is negligible cooling water requirement for power generation. There is no any alternative effective system is available for soda ash plant.	Stacks, Dry Fog system, Wind screen etc- 89.28 crore • recurring cost would include operation and maintenance of pollution control devices- 1.50 crore • **Environmental monitoring Programme** capital cost include CCEMS, online weather station etc- 3.4 crore • Recurring cost – 0.95 crore • Greenbelt • Capital Cost- 20 Crore • Recurring Cost- 0.5 crore		

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
					• There is no readily available infrastructure for transportation of fuel i.e. rail or water way. So, we have to transport through road. Traffic study are shown in section 3.2.3 of chapter-3 and impact due to transportation is show in 4.1.4.3 and 4.2.3 of Chapter-4 in EIA report. In future, any alternative option available will explore. • GHCL Foundation will also promoting plantation activities in nearby villages under CSR and CER activities			
6	Water pollutants (BOD,COD,Ammonia, Mercury, Sea Weed, Mangroves)	7	Regarding water related question by Koli society Regarding decrease in number of phytoplanktons and disruption of food chain Regarding temperature and presence of ammonia in waste water Regarding presence of mangroves Regarding setup of tunnel for intake of sea water, seismic zone in which company falls, liquification of land due to heat Regarding discharge of effluents into sea containing ammonia and high temperature and death of fishes at Sutrapada plant Regarding quality of effluent in terms of BOD and COD	Effluent will be highly alkaline so it will be mixed with HCL and then it will be disposed off in sea. Design of structure will have done according to seismic zone V. In soda ash industry impact of ammonia is very low.	• Industry will provide adequate effluent management and monitoring system for disposal of treated water • Proper seawater intake and treated effluent disposal (ensure maximum dilution) shall be done as per recommendation Marine EIA report. • The water monitoring results of (surface and groundwater and marine) should be carefully evaluated to identify significant changes, if any, adverse change from the baseline accordingly, corrective measures will be taken to ensure the sustenance of water quality. However, there is no ground water pollution is envisage in such soda ash plant, • The ammonia concentration in treated waste water well	• Capital cost would include cost of ETP, STP etc- 14 crore • recurring cost would include operation and maintenance of pollution control	During operation phase	GHCL Limited

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
					within the limit specified by CPCB for soda ash industry. • There is no such fish kill cases due to treated effluent in existing plant. There are independent studies available which indicates there is no significant adverse impact on marine environment but there will be positive impact on environment. • During studies, there is no such mangroves identified in sea water intake and outfall line area. • Design of pipeline/tunnel will be done according to seismic zone V. In case of catastrophic failure/ liquification on land, there are no chances of flooding as water transport through gravity.			
7	Marine Life	1	Effect on marine life due to proposed project	No adverse impact on fish or marine animals and sea weed observed.	• Industry should be ensured that the effluent released to the sea meets the prescribed GPCB/ CPCB norms at all times. This should be verified through tracer studies after the outfall becomes operational. The effluent release scheme can then be adequately modified to ascertain necessary dilution, if required. The efficiency of the diffuser must be checked periodically and if necessary, it should be cleaned to revert back to the dilution ascertained through initial tracer studies. • There are independent studies available which indicates there is no significant adverse	• A provision of Rs. 1 crore to be earmarked for the biodiversity management plan to be implemented in the project area during construction phase and operation phase. • For periodic monitoring of the marine area environment during project • construction phase, a provision of Rs. 0.5 crore to earmarked. • For operation phase, Rs. 0.3 crore per year to be kept provision	During constructio n and Operation phase	GHCL Limited

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
					impact on environment but there will be positive impact on environment. • Design of pipeline/tunnel will be done according to seismic zone V. In case of catastrophic failure/ liquification on land, there are no chances of flooding as water transport through gravity.			
8	Health & Hygiene(Ammonia Leakge)	2	Skin diseases due to Soda Ash Regarding the leakage of ammonia.	GHCL will take care of any such issues related to Health of local peoples and workers. All the necessary measures for handling of chemicals will be implemented to reduce its impact on health of peoples. This information is also provided in the EIA report. All the pockets will have leak detection and repair system technology. Moreover, periodical maintenance will also be carried out. GHCL will ensure that there will be no leakage and therefore, there will not be occupational health issues for workers or villagers working in the plant. Moreover, GHCL will also provide PPE kits to workers for their safety.	• Ammonia tanks should have latest instrumentation provision for pressure indication, temperature indication and level indication. The provision of instrumentation should be within 100 percent redundancy. Continues recording of major parameters pertaining to the storages shall be maintained in the control room. • Unit will provide all the safety measure for ammonia storage as well as also prepare onsite and offsite emergency plan and all the APCM with respective units to mitigate the air pollution. The best available technology-based pollution prevention and control shall used to meet the regulatory standards and these pollution control systems will be	• Capital cost would include cost of OHS center, PPEs, fire & safety instruments, automation system for ammonia storage – 3.4 crore • Recurring cost would include maintenance charges and training, audit & health check-up etc.- 0.35 crore	During operation phase	GHCL Limited

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
					commissioned before commencement of operation of the project. Wherever possible, the control systems shall be interlinked with the operational units, so that failure of the control system shall shut down the respective operational unit. There is no significant impact observed in the existing soda ash plants in Gujarat.. • There are rare possibilities of ammonia leakage observed in soda ash plant however, recommendation of Disaster management plan and risk assessment will be followed.			
9	CSR - Farmers	3	Facilities to be provided to nearby How hygenic the plant will be? How hygenic will be bada plant and what facility will be provided to the farmer.	GHCL Foundation is already providing subsidy for drip irrigation and GHCL will also consider to support this scheme further out of the CSR funds proposed for this project. To help agriculture, GHCL will help farmers as part of our CSR activity in consultation with villagers. The details and type of developmental work will be decided in consultation with villagers. GHCL foundation has been working for farmers through its different schemes like ground water recharge, water harvesting, zero chemical farming, drip irrigation etc.	• Industry will Promote environment friendly and nature-based solutions to enhance productivity of farming (Organic Farming) activities. It covers capacity building on farming techniques, provision of high-quality seeds/manure, efficient irrigation solutions, etc. under CSR and CER activities	GHCL Ltd will spend approx.. 3.00 crore towardsPromoting environment friendly and nature-based solutions to enhance productivity of farming (Organic Farming) activities. It covers capacity building on farming techniques, provision of high-quality seeds/manure, efficient irrigation solutions, etc under CER activities.	5 years	GHCL Limited
10	EIA Report & PH	14	EIA report is not correct	The terrestrial EIA report	• It is requested to note that as			GHCL Limited

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
	advertisement		Regarding the alternative of site modhwa village. Regarding the NIO accreditation to prepare marine EIA report Regarding ToR granted and Study carried out prior of ToR granted. Regarding the advertisement of the PH Regarding NABET accreditation of consultant organization Regarding Marine EIA Regarding NEERI who has prepared EIA report Regarding the correction in EIA report Regarding the monitoring data collection Regarding accreditation certificate of additional studies for ecology.	prepared by CSIR NEERI and Marine EIA report is prepared by NIO, Mumbai	per OM number J-17011/8/92-IA-III dated 8th August, 2019, there are 7 institutes/agencies authorized for preparation of CZMPS in consonance with the provision of CRZ notification, 2019 vide GSR 37(e) dated 18/01/2019. IRS anna university Chennai has prepared the CRZ map for GHCL LTD. CSIR - NIO is Expert hired to carryout the Marine EIA study. EIA report has been prepared by CSIR-NEERI, which is reputed governmental body and QCI NABET accredited consultant. An extensive study on the ecology and Biodiversity in the study area was conducted by the QCI NABET approved functional area expert.			
11	Vipassana	3	Project site is near Vipassana meditation center The meditation center will be disturbed due to industry. Ammonia used in the industry. Related to presence of Vipassana center and other religious places in 15km radius of project site	--	Environmental Management Plan envisages the plans for the proper implementation of mitigation measures to reduce the adverse impacts. The EMP implementation will minimize the impact of atmospheric emissions, liquid effluents, solid wastes and noise generation on the surrounding environment. The monitoring of all valued environmental components will be monitored as per the norms prescribed by GPCB/CPCB and the time to- time guidelines issued for soda	Cost of Environment management plant including various installations for Air Pollution, Water Pollution, Noise Control, Greenbelt Development, Occupational Health and Safety and other related activities.- 205.07 crore	--	GHCL Limited

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
					ash manufacturing industry. It is reported in CSIR NEERI report that there are no significant impact expected on man-made sensitive installations and habitations. On basis of study of present environment condition near project area and impact prediction and control measures proposed by GHCL Ltd. The proposed project will not have any significant negative impact on environment. Company operations are limited to the plant boundary and no negative impacts on Vipassana Centre are anticipated. The company will have robust peripheral Green Belt in order to attenuate noise and air emission due to plant operations.	• Recurring Cost- 0.5 crore		
12	CSR - Animal Husbandry	3	Regarding arrangements for Animal husbandry to Regarding distribution of kits to fisherman Regarding number of cattle present in the area	GHCL Foundation will support nearby community by providing education and livelihood support to make them self – reliant.	• Unit will do promotion through providing support for breed improvement, animal health care, fodder improvement and providing veterinary doctor in nearby villages under CER and CSR activities. • Unit will also promote development Initiatives for Fishing Communities such as Creation of infrastructure like ice plants, cold storages as well as provide operational inputs such as fishing boats, nets and engines • We have already provided veterinary doctor for nearby affected villages.	• GHCL Ltd will spend approx.. 4.35 crore towards Animal husbandry promotion through providing support for breed improvement, animal health care, Veterinary doctor and others as well as provides Fodder for cattle feeding nearby villages under CER activities	5 years	GHCL Limited

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
13	Site Selection	2	Regarding the alternative of site modhwa village. Regarding showing presence of marshy land near coastline	--	During the site selection, the alternative sites considered for setting-up of the proposed chemical complex project are given below: : Site 1 – Village Pingleswar, Taluka – Abdasa, Dist. Kutch Site 2 – Village Suthri, Taluka – Abdasa, Dist. Kutch Site 3 – Village Bambhdai, Taluka – Mandvi, Dist. Kutch Site 4 – Village Bada, Taluka – Mandvi, Dist. Kutch Site 5 – Village Modhva, Taluka Mandvi, Dist. Kutch The site at village bada is considered favorable based on the environmental and logistic advantages over other four sites. Justification of Site selection are given in Chapter-5 of EIA report.	--	--	GHCL Limited
14	Sand Dunes	2	Concern of presence of sand dunes at bada coast Regarding digging of sand dunes for preparation of tunnels for water intake	--	• There is no disturbance to existing sand dunes. • Tunnelling work (much below ground level) for laying pipeline through sand dunes will be done by adopting proven construction methodology like micro tunnelling. The detailed Studies on sand dune mapping and morphological changes near the project site was carried by National Institute of Oceanography (NIO), Goa. This report can be referred from CSIR NIO Marine EIA. • GHCL Ltd is committed for conservation plan for sea turtles and sand dunes as suggested by various studies.	--	--	GHCL Limited

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
15	Turtle	3	Regarding presence of turtles on the coastline of bada Regarding information on endangered species not mentioned in EIA report Regarding hatching and presence of sea turtles	--	• Study on Status Survey and Conservation Plan for Sea Turtles along Mandvi Taluka, Bhuj, Gujarat by **Zoological Survey of India**, **Kolkata (April,2019)** is attached with EIA report. • ZSI study report mention that they did not any encounter any sea turtle and fresh/old nests or crawl marks of turtles on the beach. Since many of the factor for selection of a suitable nesting site are not conducive. • As per additional Ecological and Biodiversity study, suggests that the coast near the proposed project site may not be suitable for sea turtle nesting due to narrow supra tidal region, steep slope, dense vegetation and presence of predators such as dogs and jackals. Though, observations suggest that there may be no or negligible probability of sea turtle nesting. • GUIDE is also engaged for study of turtle survey and preparing conservation	• Contribution to Forest department for Sea Turtle Conservation Activities- 0.20 crore	10 years	GHCL Ltd
16	Schedule 1 species (Peacock	4	Regarding presence of greater numbers of peacocks nearby and not	--	• Details of schedule - 1 species and conservation	• the proposed	10 years	GHCL Ltd

S. No.	Issue related to	Nos. Issues	Concern in PH	G HCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
	Sandha and indian Monitor Lizard)		stated in report Presence of reptiles and amphibians not reported Related to study of presence of Indian Monitor Lizard in study area Regarding presence of gugal trees,		already incorporated in EIA report. • GHCL shall make financial allocations for taking up wildlife mitigation measures and for contribution to forest department for carrying out activities towards propagation, protection and conservation of wildlife. • GHCL Ltd have submitted Conservation Plan (Flap shell turtle, Green Sea turtle, Indian monitor lizard, Olive Ridley Sea turtle, Black shoulder kite, Eurasian Spoonbill, Indian Peafowl, Marsh Harrier, Oriental Honey Buzzard, Shikra, Short-toed Snake Eagle, Chinkara and Gugal - Schedule –I species and Critically Endangered species) to CWLW department of Gujarat.	Allocation for conservation of Schedule 1 species for 10 years is 1.25 crore		
17	Conservation Plan	2	Regarding conservation plan for Schedule 1 species Concern regarding green sea turtles and conservation plan for them	--	• GHCL shall make financial allocations for taking up wildlife • mitigation measures and for contribution to forest department for carrying out activities towards propagation, protection and conservation of wildlife. • The unit have submitted Conservation Plan (Flap shell turtle, Green Sea turtle, Indian monitor lizard, Olive Ridley Sea turtle, Black shoulder kite, Eurasian Spoonbill, Indian Peafowl, Marsh Harrier, Oriental Honey Buzzard, Shikra, Short-toed Snake Eagle, Chinkara and Gugal - Schedule –I species and Critically Endangered species) to CWLW	• the proposed budget allocation for conservation of Schedule 1 species for 10 years is 1.25 crore	10 Years	GHCL Limited

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
					department of Gujarat.			
18	Form 1(Water Bodies, Temples, Schedule 1 Species)	5	Regarding presence of waterbody not shown in form-1 Regarding religious places and lakes not mentioned in PFR report. Waterbody not mentioned in form-1 Data given in form-1 and EIA are different Waterbody not mentioned in form-1	--	• Environmental settings are given in Chapter-1 and Chapter-5 of EIA report. Approximate distance of water bodies, temples etc are given in EIA report. • Through drainage studies of the area, it was observed that there is one stream of 1st order entering the plant area from north. Although, it has small catchment area, it is proposed that this stream, will be diverted to nearby passing Vengadi River in the west. • There are also pond inside the premises. It is proposed that pond i.e. inside the premises will be used to store entire annual surface runoff plant use. If permitted by concern authority.	• -Cost of drainage network of surface runoff, rainwater collection pond and rain water harvesting system – 53 crores (included in EMP)	--	GHCL LTD
19	Govt. Land	3	Regarding type of land to be procured by the industry Regarding status of government land to be procured Providing data for proving gauchar land	--	• There is no gauchar land within proposed project site. M/s GHCL has applied to Industries Commissioner and District Collector for allotment of aforesaid land. Industries Commissioner has granted In Principle approval for Bonafied Industrial Purpose. District Collector has initiated actions for allotment of Govt. waste land.	--	--	GHCL LTD
20	Fishing	8	Regarding details of Pagadia fisherman not mentioned and Marine EIA is misinterpreted	--	• Proper seawater intake and treated effluent disposal (ensure maximum • dilution) shall be done as per	• A provision of Rs. 1 crore to be earmarked for the biodiversity management plan	During constructi o n and	GHCL LTD

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
			Regarding disturbance to fishes due to presence of pipeline Regarding status of fishing near bada and Mandvi Related to number of fisherman not incorporated in study -- Related to presence of dead fishes not reported in study, fishing carried out for commercial purpose Regarding presence of fisherman in study area		Marine EIA report prepared by NIO Industry should be ensured that the effluent released to the sea meets the prescribed GPCB/ CPCB norms at all times. This should be verified through tracer studies after the outfall becomes operational. Details of Fishery and fishermen including their family and population are given in Chapter-3 of marine EIA report. Other than construction phase, there will be no any impact on pagadiya fisher men. As shore line will remain undisturbed. It is mentioned in marine EIA report that no large-scale commercial fishing operation prevail in the study area except for minor shore based and Gill net operations. There are independent studies available which indicates there is no significant adverse impact on environment but there will be positive impact on environment. Unit will also promote development Initiatives for Fishing Communities including pagadiya under CER and CSR activities	implemented in the project area during construction phase and operation phase. • For periodic monitoring of the marine area environment during project • construction phase, a provision of Rs. 0.5 crore to earmarked. • For operation phase, Rs. 0.3 crore per year to be kept provision for • the monitoring. • GHCL Ltd will spend approx.. 0.75 crore towards Development Initiatives for Fishing Communities including pagadiya under CER activities	Operation phase	
21	Water Body (check dams)	2	Related to presence of seasonal river which passes near bada village and presence of dam over it	--	Through drainage studies of the area, it was observed that there is one stream of 1st order	• Cost of drainage network of surface runoff, rainwater	During constructio n and	GHCL LTD

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
			Related to distance of river from project site		entering the plant area from north. Although, it has small catchment area, it is proposed that this stream, may be diverted to nearby passing Vengadi River in the west, which has two check dams, one for salinity ingress check and on upstream side for storing fresh water. This will not cause any adverse impact on the downstream. For channelizing the monsoon run off from the area adjacent to plant it is required to construct peripheral drain along plant boundary so that flooding is avoided and run off find its way to the natural slope towards Arabian Sea. So, the present hydrological setting of the area will remain unaffected. So, the present hydrological setting of the area will remain unaffected. The additional water enter into the vengadi river through drainage will not impact on check dam. As any additional water above the river and check dam shall overflow to the Arabian sea.	pond and rain water harvesting system – 53 crores (included in EMP)	Operation phase	
22	Traffic (RMH, Heavy Trucks, Road Usage)	4	Regarding number of trucks passing due to project for raw material Related to traffic study not mentioned in ToR, impact not carried out Concern regarding public roads Regarding number of trucks passing	--	Traffic study are shown in section 3.2.3 of chapter-3 and impact due to transportation is show in 4.1.4.3 and 4.2.3 of Chapter-4 in EIA report. We will use existing road network as no other transportation i.e. rail/water ways are available. We have carried out calculation on	--		GHCL Limited

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
					Traffic study (Level of Service) and added on Form Part-C.			
23	CSR General	1	Regarding past data of CSR	GHCL has proposed CSR budget in the EIA report which will be utilized based on need identification and village development meetings. CSR will be implemented with CSR implementing agencies including GHCL Foundation is working in following area. 1. Agro-livelihood and animal husbandry, 2. Education and skill development, 3. Health, water, and sanitation.	GHCL's commitment towards the development of weaker sections of society has been a continuous initiative for more than two decades. Through its "GHCL Foundation Trust", GHCL has upgraded its CSR activities to cover a larger section of the society to provide support to the downtrodden, needy and marginalized citizens and also to create a social infrastructure for their sustenance. GHCL Foundation serves as the Corporate Social Responsibility arm of GHCL Limited and represents our commitment to the holistic development of our Surrounding community. During year 2020-2021 GHCL has spent INR 9.03 Crores towards CSR activities. During year 2021-2022 GHCL has spent INR 10.62 Crores towards CSR activities CSR projects/activities worth INR 19.09 Cr. were implemented. GHCL wide range of CSR projects have touched and benefitted more than 90,200 lives over the years. Promoting such activities like water conservation, Animal husbandry, health care, SHG,	--	--	GHCL LTD

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
					Infrastructure d evelopment etc.			

24	Pollution and Environment General	4	Regarding pollution to be caused by industry -- Regarding to dusting due to kiln and power plant, temperature of Related to disposal of effluent water	Unit will follow all the rules and regulation with their subsequent amendments as directed by concerned authorities	• Environmental Management Plan envisages the plans for the proper implementation of mitigation measures to reduce the adverse impacts. • The EMP implementation will minimize the impact of atmospheric emissions, liquid effluents, solid wastes and noise generation on the surrounding environment. • The monitoring of all valued environmental components will be • monitored as per the norms prescribed by GPCB/CPCB and the time to time guidelines issued for soda ash manufacturing industry.	• Cost of Environment management plant including various installations for Air Pollution, Water Pollution, Noise Control, Greenbelt Development, Occupational Health and Safety and other related activities.-205.07 crore • Recurring cost include maintaining and monitoring of all components-6.98 crore	--	GHCL Limited
25	Forest area	2	Related to distance of project site from forest area Details regarding families dependent on forest	There is no classified forest area.	• There is no forest land within the boundary of proposed project site. However, some part of the unclassed forest area located south of the project site outside boundary. Sea water intake and outfall pipeline will pass through underground micro tunnel in specific corridor to cross forest area. The permission from the Forest Department is under process. • There will be no major impact on families dependent on forest. As the pipeline will be laid under ground through latest	--	--	GHCL LTD

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
					of 0.9689 Ha. of un-class forest			
26	Supporting for Industrial Development to GHCL LTD	--	For Employment For Infrastructure development in nearby village Social upliftment towards nearby villages Health facilities Women empower ment Skill	GHCL LTD team thanked for welcoming the industries	--	--	--	--
	Total	94						

21. The proposal was considered by the EAC in its meetings held on 2nd January 2024, 6th, February, 2024, 30th April 2024, & 28.3.2024 and reply of the queries raised during the last meeting are as follows:

<table>
<tr><th>S. No.</th><th>Queries Raised by EAC</th><th>Reply by CRZ division</th></tr>
<tr><td></td><td>The Committee was of the view that since proposal involves CRZ clearance, views/comments of the CRZ division may also be obtained on the proposal from CRZ angle. The Comments /views of CRZ Division may be placed before the EAC (Industr</td><td>Comments of CRZ have been obtained. It was informed that the project activity is permissible as per para 3 (I) (a), 4(ii) (d), 8 I(i) (b), (ii) (b), 8 III A(iii)j,k, 8(IV) of CRZ Notification 2011. The Gujarat CZMA has recommended the proposal vide letter dated ENV/10/2021/187/T-Cell, dated 26/12/2023.

CRZ Division suggested that the adequacy of the Marine Environment Plan, DMP, studies carried out by CSIR-NIO, GUIDE and ZSI, and proposed mitigation measures related to the project may be examined along with GCZMA recommended conditions by the concerned EAC / Sector (Industry-3) during the appraisal process of the project. Accordingly, the Committee deliberated upon the reports submitted.

The proposed project site area of M/s. GHCL Limited has acquired 375.558 ha., including government and private land.

The unit has acquired 76.9669 ha. of government land and 298.5911 ha. of private land in the core plant area
The Status of land acquisition including Government as well as Private land along with permission for land use change for industrial purpose has been received from Industry Centre.
The type of land involved along with the area bifurcation into Government and private land is provided in below table

<table>
<tr><th>SR. NO.</th><th>TYPE OF LAND</th><th>TOTAL LAND SANCTIONED (Ha.)</th></tr>
<tr><td>1</td><td>Private Land</td><td>444.6849</td></tr>
</table>
</td></tr>
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y -3) for consideration of the project. PP shall also submit clear-cut land holding title of the proposed project site.

2	Government Land	101.6351	76.9669
Total		546.3200	375.558

M/s. GHCL Limited has applied for Environmental Clearance (EC) for a plot area measuring 546.32 Ha.

- **M/s. GHCL Limited** has **acquired 76.9669 hectares**.
- Correspondence regarding the land allocation includes:
  - **A letter from the Industry Centre regarding the allotment of 101.6351 hectares of government land to M/s. GHCL Limited.**
  - **An allotment letter from the Government of Gujarat (GOG) to the Collector.**
  - **A letter from the Collector to M/s. GHCL Limited for the plot area measuring 76.9669 hectares.**
  - **The challan paid for the government land by M/s. GHCL Limited.**

These documents are provided in the subsequent slides

SR. NO.	TYPE OF LAND	TOTAL LAND SANCTIONED (Ha.)	LAND ACQUIRED (Ha.)	LAND ACQUISITION UNDER PROCESS (Ha.)
1	**Government Land**	**101.6351**	**76.9669**	**24.6682**

Land Acquisition letter regarding opinion regarding giving prior permission for certified Industrial Use M/s GHCL Limited vide letter dated 22.1.2024 is submitted.

Allotment letter of Government land to M/s GHCL Limited vide letter 16.5.2024 has been submitted.

Challan Paid for the Government land by the industry has been submitted.

STATUS OF PRIVATE LAND ACQUISITION

- **M/s. GHCL Limited** has **acquired 298.5911 hectares.**

SR. NO.	TYPE OF LAND	TOTAL LAND SANCTIONED (Ha.)	LAND ACQUIRED (Ha.)	LAND ACQUISITION UNDER PROCESS (Ha.)
1	Private Land	444.6849	298.5911	146.0938

13. **Deliberations by the EAC**

The Committee deliberated upon the additional information provided by the PP.

The Committee noted that there is an OM dated 7th October, 2014 for status of land acquisition w.r.t. project site while considering the case for environment clearance under EIA Notification, 2006. PP has submitted the relevant information in compliance to the said OM.

The committee was satisfied with the response provided by PP on above information. Further, Committee desired to submit the above information in writing. Accordingly, PP has submitted the desired information and EAC found the information/commitments satisfactory.

The Committee noted that Terms of reference (TOR) were granted by MoEF&CC on 10 August 2021. Further, PP has carried out various studies required for EIA and CRZ clearance namely (i) EIA Report; (ii) Marine EIA Report prepared by CSIR- NIO (Mumbai, Goa); (iii) Marine EIA Addendum Report prepared by CSIR- NIO (Mumbai, Goa); (iv) CRZ Report prepared by IRS, Anna University, Chennai; (v) CRZ Approved Maps prepared by IRS, Anna University, Chennai; (vi) Conservation Plan of Sea Turtle prepared by ZSI, Kolkata; (vii) Conservation & management plan for the conservation of Significant species prepared by GUIDE, Kachchh (viii) Conservation Plan of Sand Dune by CSIR-NIO, Mumbai etc. Further, based on EAC recommendations, M/s T R Associates, NABET-accredited consultant has carried out additional 3 months data collection as well as additional 1 month data to valid the existing study and also submitted the undertaking that they have verified the EIA/EMP report and prepared an addendum report describing findings and observations. It was also presented that they have not observed any significant deviation in the

EIA report prepared by the national repute organisation NEERI. The Committee also noted that PP has obtained CRZ Recommendation letter from GCZMA; Approval for Conservation Plan of Significant Species from PCCF, Gandhinagar as well as Stage-I and Stage-II Forest Clearances.

It was also noted that the public hearing was conducted on 17.10.2022 presided by SDM/Dy Collector as per Notification dated 9th May 2022. Approximately 1,000-1,500 individuals have attended the public hearing. The Committee also saw video of public proceedings and observed that several people are against the project while several others in favour of project. However, only 106 people signed the signature sheet circulated by the GPCB concerned person during the public hearing. Therefore, GPCB reported 106 attendees in the proceedings. Further, 1066 Issues were raised by the local people, and a point-wise reply from the project proponent was provided. The public hearing continued for about 10-11 hours. As per SPCB, sufficient time was given, the procedure was duly followed, and the concerns raised by the public were addressed. 1154, no. of written representations was received, including concerns raised and supporting letters from the affected local people and replies to the written representation, which were also incorporated into the public hearing proceedings. The action plan, including the public hearing issues, was incorporated into the Final EIA report and submitted seeking environmental clearance. The Matter was also examined by the CRZ Division,

The proposal was considered by the EAC in its meetings held on 2nd January 2024, 6th, February, 2024, 30th April 2024, & 28.3.2024 and deliberated on the above issues. Accordingly, the proposal of M/s GHCL **namely Greenfield Chemical Complex** may be recommended for grant of environmental clearance and CRZ clearance subject compliance of the following specific and General conditions:

The committee was satisfied with the response provided by PP on above information. Further, Committee desired to submit the above information in writing. Accordingly, PP has submitted the desired information and EAC found the information/commitments satisfactory.

The EAC constituted under the provisions of the EIA Notification, 2006 comprising expert members /domain experts in various fields, examined the proposal submitted by the PP in desired format along with the EIA/EMP reports prepared and submitted by the Consultant accredited by the QCI/ NABET on behalf of the PP.

The EAC noted that the PP has given an undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the EIA/EMP reports. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the PP.

The EAC noted that the EIA reports are in compliance with the ToR issued for the project, reflecting the present environmental status and the projected scenario for all the environmental components. The EAC deliberated on the proposed mitigation measures towards Air, Water, Noise

and Soil pollutions. The EAC advised that the storage of toxic/explosive raw materials/products shall be undertaken with utmost precautions and following the safety norms and best practices.

The EAC deliberated on the Onsite and Offsite Emergency plans and various mitigation measures to be proposed during the implementation also of the project and advised the PP to implement the provisions of the Rules and guidelines issued under the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996.

The EAC deliberated on the proposal with due diligence in the process as notified under the provisions of the EIA Notification, 2006, as amended from time to time and accordingly made the recommendations to the proposal. The expert members of the EAC found the proposal in order and recommended for grant of environmental clearance.

The EAC is of the view that its recommendation and grant of environmental clearance by the regulatory authority to the project/activity is strictly under the provisions of the EIA Notification 2006 and its subsequent amendments. It does not tantamount/construe to approvals/consent/permissions etc. required to be obtained or standards/conditions to be followed under any other Acts/ Rules/ Subordinate legislations, etc., as may be applicable to the project. The PP shall obtain necessary permission as mandated under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, as applicable from time to time, from the State Pollution Control Board, prior to construction & operation of the project.

23. **The EAC, after detailed deliberations, <u>recommended</u> the project for the grant of environmental clearance, <u>subject to the compliance of the terms and conditions</u> as under, and general terms and conditions in Annexure-I:**

(i) PP shall ensure that recommendations of SCZMA issued vide letter dated ENV/10/2021/187/T-Cell, dated 26/12/2023 for proposed greenfield chemical complex, sea water intake and effluent disposal facilities shall be implemented. Recommendations mentioned in Marine EIA Report; Conservation Plan of Sea Turtle report; Conservation & management plan for the conservation of Significant species prepared by GUIDE, Kachchh; Conservation Plan of Sand Dune by CSIR-NIO, Mumbai.

(ii) PP shall ensure that condition stipulated in letter dated 18.07.2023 for diversion of 0.96ha unclass forest and letter dated 4.01.2024 for final stage II.

(iii) ESP alongwith Stack height of 130 m shall be provided to Imported Coal/Lignite/ Pet coke fired with flue gas desulphurization 150TPH CFBC Boiler (6 Nos.) to control the particulate emission as per CPCB norms. Stack height of 30 m shall be provided to 5 MvA

DG set(2/3 nos). Scrubber and Dust Collector system alongwith stack height of 68 m shall be provided to Coke or Briquette or Anthracite fired lime kiln to control the particulate emission as per CPCB norms. Water scrubber system alongwith stack height of 42m shall be provided to ammonia recovery system. Bagfilter alongwith adequate stack height shall be provided to lime grinding system/slaker. Scrubber, Bag filter shall be provided to Calciner unit. Scrubber shall be provided to Densification. Bagfilter shall be provided to Sodium bicarbonate unit. ESP and wet Scrubber shall be provided to lime kiln.

(iv) Total fresh water requirement from sea water shall not exceed 14,61,038 m^3/day.

(v) NOC from the Concerned Local authority shall be obtained before start of the construction of plant and drawing of the ground water for the project activities, State Pollution Control Board / Pollution Control Committees shall not issue the Consent to Operate (CTO) under Air (Prevention and Control of Pollution) Act and Water (Prevention and Control of Pollution) Act till the project proponent shall obtain such permission.

(vi) Total Effluent generation shall not exceed **14,48,508 m^3/day** [Domestic - **160 m^3/day** + Industrial – **14,48,348 m^3/day** (fresh seawater for dilution – 5,14,678 m^3/day + effluent generation from soda ash & CPP plant – 1,26,830 m^3/day + once through cooling – 8,07,000 m^3/day]. The industrial effluent generated (14,48,508 m^3/day) i.e. from RO/DM rejects, brine purification reject, distiller waste and boiler blowdown shall be mixed with fresh seawater for dilution and wastewater from once-through cooling and treated and disposed into the Arabian Sea as per the recommendation of NIO and after achieving the prescribed norms of CPCB/SPCB. Domestic effluent (**160 m^3/day**) shall be treated in sewage treatment plant and treated sewage will be reused in landscaping & gardening purposes.

(vii) The unit shall meet the effluent norms notified by MoEF&CC vide GSR(424 E) dated 01.06.2011 for soda ash industry.

(viii) The PP shall develop greenbelt of at least 5-10 m width over an area of 18,02,856 m^2 (33%) within the project site mainly along the plant periphery, preferably within a year of the grant of EC. The tree saplings selected for the plantation should be of sufficient height, preferably 6-ft shall be planted in greenbelt area. The budget earmarked for the plantation shall be kept in a separate account and should be audited annually. The PP shall annually submit the audited statement along with proof of activities viz. photographs (before & after with geo-location date & time), details of expert agency engaged, details of species planted, number of species planted, survival rate, density of plantation etc. to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

(ix) A separate Environmental Management Cell (having qualified persons with Environmental Science/Environmental Engineering/specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions and shall also engage Environment Officials. IN addition to this one

safety & health officer as per the qualification given in Factories Act 1948 shall be engaged within a month of grant of EC. PP should annually submit the audited statement of amount spent towards the engagement of qualified persons in EMC along with details of person engaged to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

(x) The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented. The budget proposed under EMP is ₹ 318.08 crore (Capital cost) and ₹ 7.53 Crore per annum (Recurring cost) shall be kept in separate account and should be audited annually. The PP should submit the annual audited statement along with proof of implementation of activities proposed under EMP duly supported by photographs (before & after with geo-location date & time) and other document as applicable to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

(xi) No banned chemicals shall be manufactured by the project proponent. No banned raw materials shall be used in the unit. The project proponent shall adhere to the notifications/guidelines of the Government in this regard.

(xii) The project proponent shall utilize modern technologies for capturing of carbon emitted and shall also develop carbon sink/carbon sequestration resources capable of capturing more than emitted. The implementation report shall be submitted to the IRO, MoEF&CC in this regard.

(xiii) All the hazardous waste shall be managed and disposed as per the HWM Rules 2016. Hazardous waste such as Distillation Residue and Off Specification Products shall be either sent to common incineration site or sent for coprocessing. Solid waste shall be segregated into dry and wet garbage at site in accordance to the Solid Waste Management Rules, 2016. Wet waste shall be converted into compost and used as manure for greenbelt development. Fly ash shall be stored in silos and handed over to the Cement manufacturers/ Cement Industry.

(xiv) All necessary precautions shall be taken to avoid accidents and action plan shall be implemented for avoiding accidents. The project proponent shall implement the onsite/offsite emergency plan/mock drill etc. and mitigation measures as prescribed under the rules and guidelines issued in the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996. The occupier of new as well as expansion projects shall be required to comply with the provisions of the MSHIC Rules, 1989 including notifying their activities or seeking site approval from the concerned authorities, to address operational

safety aspects. In doing so, various schedule, particularly Schedule-5 of the said rules may be referred.

(xv) The volatile organic compounds (VOCs)/Fugitive emissions shall be controlled at 99.97 % with effective chillers/modern technology. Regular monitoring of VOCs shall be carried out.

(xvi) Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB servers. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.

(xvii) The storage of toxic/hazardous raw material shall be bare minimum with respect to quantity and inventory. Quantity and days of storage shall be submitted to the Regional Office of Ministry and SPCB along with the compliance report.

(xviii) The occupational health centre for surveillance of the worker's health shall be set up. The health data shall be used in deploying the duties of the workers. All workers & employees shall be provided with required safety kits/mask for personal protection.

(xix) Training shall be imparted to all employees on safety and health aspects for handling chemicals. Safety and visual reality training shall be provided to employees. Action plan for mitigation measures shall be properly implemented based on the safety and risk assessment studies.

(xx) The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire-fighting system shall be as per the norms.

(xxi) The solvent management shall be carried out as follows: (a) Reactor shall be connected to chilled brine condenser system. (b) Reactor and solvent handling pump shall have mechanical seals to prevent leakages. (c) Solvents shall be stored in a separate space specified with all safety measures. (d) Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done. (e) Entire plant shall be fire proof. The solvent storage tanks shall be provided with breather valve to prevent losses. (f) All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.

(xxii) The storm water from the roof top shall be channelized through pipes to the storage tank constructed for harvesting of rain water in the premises and harvested water shall be used for various industrial processes in the unit. No recharge shall be permitted within the premises. Process effluent/ any wastewater shall not be allowed to mix with storm water.

(xxiii) The PP shall undertake waste minimization measures as below (a) Metering and control of quantities of active ingredients to minimize waste; (b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes. (c) Use of automated filling to minimize spillage. (d) Use of Close Feed system into batch reactors. (e) Venting equipment through vapor recovery system. (f) Use of high pressure-hoses for equipment cleaning to reduce wastewater generation.

(xxiv) PP shall sensitize and create awareness among the people working within the project area as well as its surrounding area on the ban of Single Use Plastic in order to ensure the compliance of Notification published by MOEFCC on 12th August, 2021. A report along with photographs on the measures taken shall also be included in the six-monthly compliance report being submitted to concerned authority.

(xxv) The activities and the action plan proposed by the project proponent to address the issues raised during the public hearing as well as the related socio-economic issues in the study area shall be completed as per the schedule presented before the Committee and as described in the EIA report in letter and spirit.

Agenda No. 2.0

Establishment of new natural and synthetic surfactant chemical manufacturing unit Mouza Kulepairi, P.S. Bagnan, Dist-Howrah, West Bengal by M/s Detergeo Chem (EAST) Private Limited (DCEPL) - Consideration of Environmental Clearance

[Proposal No.: IA/WB/IND3/256360/2020, File No.: IA-J-11011/1/2020-IA-II(I)]

1. The proposal is for Environmental Clearance to the Establishment of new natural and synthetic surfactant chemical manufacturing unit Mouza Kulepairi, P.S. Bagnan, District -Howrah, West Bengal by M/s Detergeo Chem (EAST) Private Limited (DCEPL).

Annexure-II

List of members of the Expert Appraisal Committee (Industry-3) attended Video Conferencing (VC) meeting in Day -2

S. No.	Name of Member	Designation
1.	**Prof. (Dr.) A.B. Pandit**	Chairman
2.	**Dr. Suresh Panwar**	Member
3.	**Prof. (Dr.) Vijayanand S. Moholkar**	Member
4.	**Dr. (ER.) Dibakar Swain**	Member
5.	**Shri Dinabandhu Gouda**	Member
6.	**Dr. Kishore Malviya**	Member
7.	**Shri Dinesh Runiwal,**	Member
8	**Prof. (Dr.) Suneet Dwivedi**	Member
9	**Dr. P. Jagannadha Rao**	Member
10.	**Dr. D. S. Pai**	Member
11.	**Shri A N Singh**	Member Secretary
MOEFCC		
1.	**Dr. Kanchan Puri**	Scientist-B
2.	**Dr. S. Pradeep Kumar**	Scientist-B
3.	**Dr. Bhawana Kapkoti Negi**	Technical Officer

(Day-2)

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MOM approved by



(Prof. Aniruddha B. Pandit)

Chairman

-TRUE COPY-

have satisfactorily complied with the conditions stipulated in the existing EC(s) and satisfactorily fulfilled all the commitments made during the earlier public hearing/consultation proceedings and also the commitments given while granting previous expansion, as may be applicable. This shall be duly recorded in the certified compliance report (CCR) issued by the IRO/CPCB/SPCB, which should not be more than one year old at the time of submission of application." The Committee was of the view that the ATR on the partly complied point was not verified by the IRO. Therefore, the same should be verified and should be recorded in the CCR by the IRO for further consideration of the proposal by EAC (Industry -3).

(iii) Water balance for monsoon and non-monsoon season to be submitted.

Accordingly, proposal was deferred for want of above additional information. Above all additional information shall be submitted online to the PARIVESH portal for further consideration by EAC.

Any Other Item

Agenda No. 84.20

Proposed project to produce Light Soda Ash (LSA) of 11,00,000 TPA capacity, 5,00,000 TPA of Dense Soda Ash (DSA) and 2,00,000 TPA Sodium Bicarbonate (SBC) located at near village Bada, Taluka - Mandvi, District - Kutch in the Gujarat by "Greenfield Chemical Complex" of GHCL Ltd- Reconsideration of Environmental Clearance

[Proposal no: IA/GJ/IND3/408164/2022, File No. IA-J-11011/293/2021-IA-II(I)]

1. Ministry has received project proposal seeking environmental clearance to produce Light Soda Ash (LSA) of 11,00,000 TPA capacity, 5,00,000 TPA of Dense Soda Ash (DSA) and 2,00,000 TPA Sodium Bicarbonate (SBC) located at near village Bada, Taluka - Mandvi, District - Kutch in the Gujarat by "Greenfield Chemical Complex" of GHCL Ltd.
2. The proposal was considered by the EAC (Industry-3) in its 80thmeeting held on 7th June, 2024 and recommended the proposal for environmental clearance. Further, matter was examined in the Ministry and observed that the large number of written representations received in the ministry and the issues involved. Accordingly, it was decided to undertake site visit by the sub-committee of EAC (Industry -3) to understand the ground situation. Based on the outcome of the same, project may be reconsidered by the EAC for further decision.
3. After detailed deliberations, the EAC constituted a sub-Committee comprising the members namely Dr. Suresh Panwar, Dr. Kishore Malviya and representative of the Ministry to undertake a site visit and submit the report to the Committee for further consideration of the proposal.

ANNEXURE-II

GENERAL EC CONDITIONS

- No further expansion or modifications in the plant, other than mentioned in the EIA Notification, 2006 and its amendments, shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change/SEIAA, as applicable. In case of deviations or alterations in the project proposal from those submitted to this Ministry for clearance, a fresh reference shall be made to the Ministry/SEIAA, as applicable, to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.
- The PP shall strictly comply with the rules and guidelines issued under the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996, and Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016 and other rules notified under various Acts.
- The energy source for lighting purpose shall be preferably LED based, or advanced having preference in energy conservation and environment betterment.
- The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under the Environment (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).
- The company shall undertake all relevant measures for improving the socio-economic conditions of the surrounding area. The activities shall be undertaken by involving local villages and administration. The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment.
- The company shall earmark sufficient funds towards capital cost and recurring cost per annum to implement the conditions stipulated by the Ministry of Environment, Forest and Climate Change as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so earmarked for environment management/ pollution control measures shall not be diverted for any other purpose.
- A copy of the clearance letter shall be sent by the PP to concerned Panchayat, ZillaParishad/Municipal Corporation, Urban local Body and the local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal.
- The PP shall also upload/submit six monthly reports on PARIVESH Portal on the status of compliance of the stipulated Environmental Clearance conditions including results of monitored data to the respective Integrated Regional Office of MoEF&CC, the respective Zonal Office of CPCB and SPCB. A copy of Environmental Clearance and six monthly compliance status report shall be posted on the website of the company.
- The environmental statement for each financial year ending 31st March in Form-V as is mandated shall be submitted to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Integrated Regional Office of MoEF&CC by e-mail.
- The PP shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB/Committee and may also be seen at Website of the Ministry and at **https://parivesh.nic.in/**. This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are

widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the concerned Regional Office of the Ministry.

- The project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of the project.
- This Environmental clearance is granted subject to final outcome of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, if any, as may be applicable to this project.

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Annexure-I

List of the Expert Appraisal Committee (Industry-3) members participated in Day -I during Video Conferencing (VC) meeting

S. No.	Name of Member	Designation
1.	Prof. (Dr.) A.B. Pandit	Chairman
2.	Dr. Suresh Panwar	Member
3.	Dr. (ER.) Dibakar Swain	Member
4.	Shri Dinabandhu Gouda	Member
5.	Dr. Kishore Malviya	Member
6.	Shri Amit Vashisht	Member
7.	Dr. P. Jagannadha Rao	Member
8.	Prof. (Dr.) Vijay S. Moholkar	Member
9.	Sh. Ashok Kumar Patre	Member
10.	Shri A N Singh	Member Secretary
MoEFCC		
1.	Dr. Kanchan Puri	Scientist-B
2.	Dr.Bhawana Kapkoti Negi	Technical Officer

List of the Expert Appraisal Committee (Industry-3) members participated in Day -II during Video Conferencing (VC) meeting

S. No.	Name of Member	Designation
1.	Prof. (Dr.) A.B. Pandit	Chairman
2.	Dr. Suresh Panwar	Member
3.	Dr. (ER.) Dibakar Swain	Member
4.	Shri Dinabandhu Gouda	Member
5.	Dr. Kishore Malviya	Member
6.	Shri Amit Vashisht	Member
7.	Dr. P. Jagannadha Rao	Member
8.	Prof. (Dr.) Vijay S. Moholkar	Member
9.	Sh. Ashok Kumar Patre	Member
10.	Shri A N Singh	Member Secretary
MoEFCC		
1.	Dr. Kanchan Puri	Scientist-B
2.	Dr.Bhawana Kapkoti Negi	Technical Officer

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MoM approved by



ANNEXURE R/33

GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE
(IA DIVISION-INDUSTRY-3 SECTOR)
*****

Dated: 24.10.2024

MINUTES OF THE 87th EXPERT APPRAISAL COMMITTEE (INDUSTRY-3 SECTOR) MEETING FOR PROJECTS LISTED FROM "PARIVESH 1 PORTAL" HELD ON 21st October 2024

Venue: Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi-110003 through Video Conferencing (VC)

Time: 10:30 AM onwards

(i) Opening Remarks by the Chairman

Prof. (Dr.) A.B. Pandit, Chairman welcomed the Committee members and opened the EAC meeting for further deliberations.

(ii) Details of Agenda items by the Member Secretary

The Member Secretary then apprised the Committee about the details of Agenda items to be discussed during this Expert Appraisal Committee (EAC) meeting.

(iii) Confirmation of Minutes of the 86th EAC Meeting held on 30th September & 1st October, 2024.

The EAC noted that the final minutes of the above meeting were issued after incorporating the comments offered by the members and approved by the Chairman.

PARIVESH 1 Portal

Agenda No. 87.1

Proposed expansion project for manufacturing of Marine Chemicals, Fertilizers and Captive Co-Gen Power Plant located at Greater Rann of Kutch, Nr. Village Dhordo, Tal: Bhuj, Dist. Kutch, Gujarat by M/s. Agrocel Industries Pvt. Ltd. - Consideration of Environmental Clearance

[Proposal no: IA/GJ/IND3/277411/2020, F.NO.: IA-J-11011/269/2020-IA-II(I)]

1. The proposal is for the environmental clearance Proposed expansion project for manufacturing of Marine Chemicals, Fertilizers and Captive Co-Gen Power Plant located at Greater Rann of Kutch, Nr. Village Dhordo, Tal: Bhuj, Dist. Kutch, Gujarat by M/s. Agrocel Industries Pvt. Ltd.

2. The project/activity is covered under Category 'A' of item 5 (a)- **Chemical fertilizers** of Schedule of Environment Impact Assessment (EIA) Notification, 2006 (as amended).

3. ToR letter was granted from MoEFCC vide File No. IA-J-11011/269/2020-IA-II(I) dated 07th November 2020. The PP reported that it is an **expansion case**. The proposal is placed in the 87th EAC meeting 21-22 October 2024. Project Proponent and an accredited Consultant, San Envirotech Pvt. Ltd.,

Any Other Item(s)

Item No. 1

Proposed project to produce Light Soda Ash (LSA) of 11,00,000 TPA capacity; 5,00,000 TPA of Dense Soda Ash (DSA) and 2,00,000 TPA Sodium Bicarbonate (SBC) located at near village Bada, Taluka – Mandvi, District – Kutch in the Gujarat by "Greenfield Chemical Complex" of GHCL Ltd. – Reconsideration of Environmental Clearance

[Proposal No.: IA/GJ/IND3/408164/2022, File No.: IA-J-11011/293/2021-IA-II(I)]

1. **Deliberations by the EAC:**

The proposed production of Light Soda Ash (LSA) of 11,00,000 TPA capacity, 5,00,000 TPA of Dense Soda Ash (DSA) and 2,00,000 TPA Sodium Bicarbonate (SBC) located at near village Bada, Taluka - Mandvi, District - Kutch in the Gujarat by "Greenfield Chemical Complex" of GHCL Ltd.- Site Visit Report

As per minutes of the 84th Expert Appraisal Committee (Industry-3) meeting held during 21st - 22nd August, 2024, a site visit of **"Greenfield Chemical Complex" of GHCL Ltd.** was undertaken by the sub-Committee comprising Dr. Suresh Panwar, Dr. Kishore Malviya and Sh. A N Singh, Scientist F, Ministry of Enonment, Forest & Climate Change to assess the existing environmental scenario of the proposed project site.

The Sub-Committee alongwith Dr. Yogesh Kumar, Scientist – C, IRO, MoEF&CC, Gandhinagar and Mr Naresh Chaudhari, GPCB RO Kutch (West) visited the site of **"Greenfield Chemical Complex" of GHCL Ltd.** on 09.10.2024.

(A) **The following officials of GHCL Ltd. were present at site during inspection:**

1. (A) Mr N N Radia- COO- GHCL
2. Mr Jayesh Patel- Projected Head GHCL
3. Mr Malav Dalwadi- CEO T R Associates and Environment Pvt Ltd.
4. Mr Jay Ram- Environmental Engineer GHCL

At the outset, Officials of **M/s. GHCL Ltd. welcomed the Sub-committee and** briefed the Sub-Committee about the proposed project, location of unit, land acquisition status, layout map, entry and exit of the proposed plant area, seawater intake and outfall pipeline area, proposed air emissions control system, effluent management system, greenbelt etc. The Sub-Committee visited the project site and had general round of the proposed project site, outfall point.

A. Background

(i) Project location

The proposed project site is located near village Bada Village in Mandavi Taluka, District Kutch, Gujarat, which is geographically located at the Arabian Sea Coast off Bada Village. It is located about 70 km from district headquarter Bhuj, 25 km from Mandavi and the road connectivity of Bada Village through NH 41 which is connecting Mandavi and Naliya.

(ii) The details of various proposed products to be manufactured are as follows:

Sr. No.	Name of the Product	Production Capacity (MT/Month)	CAS Number	End use
1	Light Soda Ash	11,00,000 TPA	497-19-8	Manufacturing of glass, usage in chemical industry, paper and detergent manufacturing, and food industry
2	Dense Soda Ash	5,00,000 TPA	497-19-8	
3	Sodium bicarbonate	2,00,000 TPA	144-55-8	
Captive Co-generation Power plant Steam (CFBC boilers)			120 MW	
Emergency DG Set			5 MVA	
Note- The production capacities are planned in phased manner and for Phase 1 production capacity for LSA: 5,50,000 TPA, Dense Soda Ash: 2,50,000 TPA, SBC: 1,00,000 TPA and 60 MW for Captive Co-generation Power plant.				

The proposed project also involves sea water intake pump house of 16 x 10^5 m^3/day (2x 8 x 10^5 m^3/day) and Effluent disposal facility of 15.8 x 10^5 m^3/day (2x 7.9x 10^5 m^3/day).

The soda ash process is in principal based on the well known (solvay) ammonia process.

(iii) Plot Area

As per EIA report, total plot area required for the proposed project is 546 ha. Break up of land and its acquisition details are as given below:

S.N.	Type of Land	Total Land Sanctioned (Ha)	Land Acquired	Remaining land acquisition under finalisation	Total acquired /finalisation	Remaining land acquisition under process
1	**Government Land**	**101.6351 (Letter from Industry Centre has been submitted**	**76.9669 (Letter from Collector to GHCL for**	**24.6682**	**101.6351**	**--**

		for allotment of land)	acquired plot)			
2	Private Land	444.6849	298.5911 (M/s GHCL has acquired)	23.3502	321.9413	122.7357
		546.32	375.558	48.0184	423.5764	122.74

It is proposed that out of 546.32 ha land, area earmarked for greenbelt is 180 .2856 ha (33 %).

As per proposal, M/s GHCL will withdraw water from two intake locations and disposal of effluent at two outfall locations and length of sea water intake and outfall effluent disposal is as given below:

- **(i) Intake pipeline 1 length is 1381.99 m.**
- **(ii) Intake pipeline 2 length is 1388.64 m**
- **(iii) Outfall pipeline 1 length is 2770.17 m**
- **(iv) Outfall pipeline 2 length is 3281.88 m**

It is reported that Pipelines will be laid through micro tunnelling. The pipelines for sea water intake and effluent disposal will be laid in a safe manner so that sand dunes stretch between the plant boundary and respective land fall points (LFP) are protected without any disturbance to their natural appearance and stability.

GCZMA recommendations

Forest & Environment Department, Government of Gujarat vide file no ENV/10/2021/184/T-Cell dated 26th December, 2023 has conveyed the GCZMA recommendations for grant of CRZ clearance for seawater intake and effluent disposal facilities. Baseline Marine Environmental Assessment, Effluent Dispersion Modeling Sand Dune Morphology study have been carried out by CSIR, NIO, Goa, Mumbai. It is reported that as per findings, suitable corridor for laying seawater intake and outfall were identified. Coast near site is stable based on satellite image analysis and sand dunes are found to be stable and suitable for tunnelling activities. A study on status survey and conservation plan for sea turtles along Mandavi Taluka of Bhuj, Gujarat was conducted by Zoological Survey of India and submitted its report in April, 2019. It is reported that Mandvi taluka is reported to have maximum sandy beaches and no presence of mangroves. The Kutch coastlines reported to have stabilized dunes specially around Mandavi. It is reported that no sea turtle nest/ fresh crawl marks were observed along the shore /beach surveyed. It is also reported that there is no existence of mangroves in proposed project area along route of the proposed lying intake and outfall pipelines and there would not be any impact on mangroves due to proposed activities.

Forest Clearance :

Regional Office, Gandhinagar, MoEF&CC vide letter dated 04.01.2024 has granted final (stage - II) approval of Central Government under Forest (Conservation) Act, 1980 for proposed diversion of 0.9689 ha un class forest land for laying part of sea water intake and effluent disposal pipeline and passage for related construction pipeline and passage for construction equipment movement in Kachchh District. One of the conditions stipulated is compensatory afforestation shall be taken up by the Forest Department over 2.00 ha de-graded forest land at Village Dhokda, Taluka Mandavi, District Kuchchh at the cost of user agency.

NABET-accredited consultant

Initially EIA-EMP report for the proposed **Greenfield Chemical Complex of M/s GHCL Ltd.** was prepared by CSIR, NEERI. Further based on recommendation of the EAC (Industry -3), EIA-EMP report was updated and validated by QCI-NABET Environmental Consultant for item 4 (e) category A of schedule of EIA Notification 2006, namely by M/s T R Associates. NABET-accredited consultant has carried out additional 3 months data collection as well as additional 1 month data to validate the existing study and also submitted the undertaking that they have verified the EIA/EMP report and prepared an addendum report describing findings and observations. It was also presented that they have not observed any significant deviation in the EIA report prepared by the national repute organisation NEERI.

Conservation of Ecology and Biodiversity

As per report prepared by Gujarat Institute of Desert Ecology, the project site does not fall in 10 km periphery of any protected areas such as National Park or Sanctuary or Eco-sensitive Zone. Major landuse land cover in the study area observed to be waste land, rain fed agriculture land, water bodies, Arabian sea and sand dunes and transport network. Due to sandy nature of shoreline the mangrove system is found to be absent at project site.

Approval of conservation plan for schedule – 1 species :

Chief Wildlife Warden, Gujarat vide letter no WLP/32/A/50-52/2023-24 dated 24.04.2023 has granted approval of conservation plan of selected schedule -1 species for greenfield project of M/s GHCL at Bada Village, Mandavi, Kutch, Gujarat. The Conservation plan of Rs. 136.50 Lakhs has been approved which includes components of Habitat Conservation, Protection and improvement; Research and Monitoring; Education and Awareness; Miscellaneous and monitoring.

Environmental Management Plan

1. **Details of process emissions generation and its management:**

SR.NO.	Stack attached to	Capacity	Height of the stack (m)	Fuel & its Consumption	Expected Pollutant	APC System	GPCB Limit
1	CPP with flue gas desulphurization CFBC Boiler (6 Nos.)	150 TPH	130 m	Imported Coal/Lignite/ Pet coke (Imported Coal: 13,14,000 TPA, Lignite :19,71,000 TPA,	SPM SO_2 NO_2 Hg	Individual ESP with each Boiler with desulphurisation	PM ≤ 30 mg/Nm^3 SO_2 ≤ 100 mg/Nm^3 NO_2 ≤ 100

				Pet coke: 9,12,500 TPA)			mg/Nm^3 Hg ≤ 0.03 mg/Nm^3
2	D G Set (2/3 Nos.)	5 MVA	30 m	HSD (60 KL)	HC CO PM NO_x	Retrofitting	NOx 710 ppmv NMHC 100 mg/Nm3 PM 75 mg/Nm3 CO 150 mg/Nm3
3	Lime Kiln 1		68 m	Coke or Briquette or Anthracite (Coke - 1,30,000 TPA, Briquette- 1,55,000 TPA, Anthracite - 1,10,000 TPA)	SPM SO_2 NO_2	Scrubber and Dust Collector system	SPM ≤ 150 mg/Nm^3 SO_2 ≤ 100 ppm NO_2 ≤ 50 ppm
4	Lime Kiln 2		68 m			Scrubber and Dust Collector system	
5	Lime Kiln 3		68 m			Scrubber and Dust Collector system	
6	Lime Kiln 4		68 m			Scrubber and Dust Collector system	
7	Lime Kiln 5		68 m			Scrubber and Dust Collector system	
8	Lime Kiln 6		68 m			Scrubber and Dust Collector system	

SR.NO.	**Stack attached to**	**Height of the stack (m)**	**Expected Pollutant**	**APC System**
1	Ammonia Recovery system	42 m	Ammonia	Water scrubber followed by acid aquas solution
2	Lime grinding system / Slaker	65 / 20 m	PM / Water vapor	Bag filter / Adequate stack height

3	Calciner unit	37 m	PM	Scrubber, Bag filter
4	Densification	43 m	PM	Scrubber
5	Sodium Bi-Carbonate Unit	30 m	PM	Bag filter
6	Lime Kiln	Closed system	PM	Scrubber and Wet ESP

2. **Details of Solid Waste/ Hazardous Waste Generation and Its Management**:

Sr. No.	Type of Waste	Category	Quantity	Mode of Disposal
1	Settled Sludge from treatment of effluent generated from captive power plant & RO/DM Plant	35.3	1.0 MT/Annum	Collection, storage and disposal at approved TSDF site
2	Used Oil	5.1	12 KL	Collection, storage and used within premises as a lubricant / sold to registered recycler
3	Discarded Drums and Bags	33.1	6.45 MT/Annum	Collection, storage & sold to authorized vendor
4	Spent Ion exchange resin	35.2	3000 Lit/Annum	Collection, storage and disposal at approved TSDF site
5	Used Cotton	33.2	5 MT/Annum	Collection, storage and disposal at approved CHWIF site
6	Lead acid Batteries	Schedule-IV (17)	5 MT	Collection, storage & sold to authorized agency through auction
7	E-Waste	Schedule-I of E-Waste (Management) Rules, 2022	5 MT/ Annum	Collection, storage & sold to authorized agency through auction
8	Plastic Waste	-	2295 MT/Annum	Collection, Storage and Disposal to CPCB/SPCB authorized recyclers under EPR of Plastic Waste Management

9	Bio-medical Waste	-	0.035 MT/Annum	Collection, storage and disposal at as per Bio-medical Waste Management Rules, 2016
10	Construction and Demolition Waste	-	20 TPD	Collection, storage and utilize internally for area filling, road making etc.

Non-Hazardous Solid Waste Details

Sr. No.	Type of Waste	Source of Generation	Quantity	Mode of Disposal
1	STP sludge	STP	1152 MT/Annum	Reused as Manure in Greenbelt Development
2	Kitchen Waste	Canteen	0.01 MT/Day	Collected and composted in Composter and further used as manure for gardening in the premises
3	Ash (Fly ash & Bottom Ash)	Boiler	2726.847 TPD	Collection in silo, storage & sold to cement Manufacturing/ Brick Manufacturing
4	Limestone rejects	Desulphurization Process	1,00,000 MT/Annum	Collection and reused in Boiler for desulphurization and as a sweetener in cement industry, road making, pavement etc.

3. Wastewater management :

The liquid effluents from the soda ash process includes wastewater from distillation, brine purification and cooling waters from lime kiln gas washers, absorption, distillation towers and calcination. Wastewater shall be treated and solids will be separated in the Effluent Treatment Plant. The treated and diluted effluents will be disposed off into Arabian sea at designated point as per dispersion modelling studies and recommendation of SCZMA. Online pH, temperature, flow meter, SS and TOC analyser shall be provided for online monitoring and records shall be maintained. Sewage will be treated in the STP and treated water will be recycled for horticulture purpose.

4. Capital Cost and recurring cost earmarked for EMP and its break up is as given below:

S.N	EMP			Capital cost in Rs Crore	Recurring cost Crore per annum
		Components	Cost		

1	Air Pollution	Flue Gas Emissions Individual ESP with 6 No. Boiler Scrubber and Dust Collector system with 6 No. Lime Kiln	12.03	89.280	1.5
		Process Gas Emissions Water Scrubber with Ammonia Recovery system (Including 2 no of stack)	2.70		
		Bag Filters & Scrubbers	11.45		
		ESP- CFBC	30		
		Dust Suppression& Bed Ash System(Fly ash management) including Wind Screen	6.2		
		Various Stacks	26		
		Dry Fog system	0.9		
2	Water Pollution	ETP & STP	14	14	0.12
3	Environmental Monitoring	Continuous Emission & Effluent Monitoring System	3.4	3.4	1.3
4	Noise Pollution	Acoustic Enclosures	2.9	2.9	0.0035
5	Hazardous /Solid Waste Management	Storage area & Membership Charges	1.05	1.05	1.10
6	Greenbelt Development	Thick Greenbelt Development as per EMP	20	20	0.5
7	Fire & Safety	Fire Hydrant System	2.539	2.916	0.2
		Fire extinguisher	0.227		
		Automation for Chlorine and ammonia storage area	0.15		

8	Occupational Health & Safety	OHC, PPE'S, Mock drill, Safety Audit, & Misc	0.444	0.444	0.15
9	Miscellaneous	Rain water harvesting System, Env. Lab & Misc.	8.40	53	2.66
		Drainage Network for rain water	44.6		
10	CER	Promoting renewable energy, skill development Programme, Organic farming, water conservation (like village pond deepening), forestry etc. and develop infrastructure of schools, health facilities, Fishing activities, roads in nearby villages	18.04	18.04	-
	Total A			205.03	7.53
11	Renewable Energy (B)	Installation of Solar + Windmill (Capacity – 20 MW)	113	113	--
	Total A + B			318.03	7.53

Break up of CER activities is as given below:

S.N	Type of Activities	Yearly amount to be spent in CER activities (Rs. In Crore)					Total Amount to be spent (Rs. in crore)
1	Provision of Solar light, solar panel and its maintenance in nearby villages within 10 km of study area;	0.1	0.1	0.1	0.1	0.1	0.5
2	Infrastructure development Such as primary healthcare units and the fulfilment of the basic amenities in PHCs including	0.00	0.27	0.29	0.31	0.35	1.22

	mobile medical van and Provide Bala-Rasayana to Malnutrition Children in Aanganwadi and PHC of nearby Villages						
3	Animal husbandry promotion through providing support for breed improvement, animal health care, Veterinary doctor and others as well as provides Fodder for cattle feeding nearby villages	0.8	0.85	0.9	0.9	0.9	4.35
4	Infrastructure development for quality of education, which will ultimately upgrade schools in nearby villages	0.25	0.27	0.29	0.31	0.35	1.47
5	Development Initiatives for Fishing Communities such as Creation of infrastructure like ice plants, cold storages as well as provide operational inputs such as fishing boats, nets and engines	0.15	0.15	0.15	0.15	0.15	0.75
6	Promoting environment friendly and nature-based solutions to enhance productivity of farming (Organic Farming) activities. It covers capacity building on farming techniques, provision of highquality seeds/manure, efficient irrigation solutions, etc.	0.6	0.6	0.6	0.6	0.6	3.0
7	Promoting activities for skill building to improve employment	0.45	0.45	0.45	0.45	0.45	2.25

	opportunities and women empowerment in nearby villages						
8	Development of facilities within nearby villages such as roads	0.20	0.20	0.20	0.20	0.20	1.00
9	Activities for water conservation like deepening of nearby village ponds for storage of rainwater for domestic use of villagers	0.50	0.50	0.50	0.50	0.50	2.5
10	Promoting plantation activities through Forests by Heartfulness Institute in nearby villages	0.20	0.20	0.20	0.20	0.20	1.00
	Total	3.25	3.59	3.68	3.72	3.80	18.04

B. <u>During site visit, following observations were made:</u>

Visit Point 1: Project Site Entry

The starting plot while coming from Bhuj was explained and showcased on the toposheet. Enough road width was observed for the entry and exit point for at the proposed project site. It was observed that Bada village is quite away from the project site entry and it was informed by the PP that the raw material and finished goods trucks will never move towards the village. During visit, no construction activities at the project site was observed. It was observed that cotton cultivation was taking place at vacant land of the project site and its surrounding. PP informed that they are using the proposed land for temporary agriculture purpose and land use has been changed for non-agriculture purpose /industrial purpose for the acquired land. The surrounding land are private land owned by people. The study area is located in arid landscape with minimum rainfall. In the buffer area of the study area i.e. outside the project site, check dam was observed at northern side of buffer area within 10 km distance of project site and these also include seasonal rivers, rivulets streams and small nallahs in buffer area.

It was suggested by the committee to develop enough parking space inside the premises, with full fledge infrastructure for truck drivers. Parking area should be paved to avoid fugitive dust emissions. There should be a learning centre over road behaviour for the drivers. At no point of time the trucks should create any hindrance to the local movements of the nearby villagers.

Following statistics have brought into the notice of EAC Committee:

<u>Population</u>

- Bada population – 2011 census – 2719 Nos, 592 houses .
- Details of Distance w.r.t. plot boundary and main plant as given below:

S.N.	Locations	Distance from Plot Boundary (mtrs)	Distance from Main Plant (mtrs)
1	Vipasana Center	630	1800
2	Government High School	920	2330
3	Bada Primary School	610	2290
4	Bada Village	580	2000
5	Bhimnath Mahadev (It is a shrine worship place for specific Community)	190	1500

Note: All distances are from 546.32 Ha (Land Boundary). All the above locations are towards N and NW direction from the project site. It was noted that Vipasana Centre is located at an arial distance of 630 m from the project boundary, which is also separated by a seasonal water stream i.e. situated opposite bank of seasonal stream.
It is observed that the seasonal water stream width starts from 81m to 96.6 m at the tip of the vipassana land. The water stream's check dam is 316m wide at the check dam point and the Vipasana center is 630m away from the plant boundary. Seasonal water stream is 314 m away from the proposed plant boundary. It was informed that land between stream and boundary is a private land acquired by people and same is not a part of proposed project. The wind rose diagram submitted in the EIA report and the orientation of wind mills in the area clearly describes that there will be minimal impact from the stack of the proposed plant.

The committee travelled all the area along seasonal stream banks to gain the holistic view on the impact of emissions from the plant on Vipasanna meditation center. Taking the distance from the plant boundary, river width and the wind direction into consideration, there will be minimal impact on the vipassana centre due to upcoming project. However, as a precautionary measures, the sub-Committee has further advised to develop 100m width green belt as buffer along the boundary towards Vipasana meditation centre. It was also advised that PP shall ensure that no /untreated/treated water from the project site shall be discharged into seasonal water stream.

Visit Point 2: Seawater Intake
The committee saw the sea water intake point which is passing under the sand dunes along the coast. It was observed that Dune height was varied from 1.5 to 5 m height with beach grass and binder. It was stabilized dunes. It was observed that flat sandy seashore. It was noted that Plant/complex will be established away from shore line and sand dune area. The sand dune and shore area will be used for laying seawater intake and effluent disposal pipelines. The pipelines will be laid through tunnelling in sand dune stretch to avoid and disturbance to sand dune area. The laying of pipeline will be one-time activities and restricted only for construction only. Since the line will be placed through tunnelling, there will be minimal adverse impact on the sand dunes of the area.

It was observed that wind mills are located in and around the project site. It was informed that out of which, four wind mills are located inside the proposed site. out of which two windmills will be relocated outside from the plant boundary. NOC has been given by the M/s GSFC. The same has no adverse impact on the proposed project.

Visit point 3: Seawater out fall point:

The committee walked down along the unclassified forest area, crossed sand dunes and reached upto the seashoreline area. No habitation was observed on the way of passing through forest area towards seaside. The area was dominated by plant species namely *Prosopis juliflora*, in certain patches a dominant herbs was seen which plays an important role in sand dune stabilization. It was advised to conserve plant species and try to increase the density in the sand dune area by artificial plantation. The best model in Gujarat for sand dunes stabilization and density improvement shall be taken up by the project proponent in consultation with State Forest Department.

It was observed that, proposed route of the outer pipeline is passing through stable sand dunes. There are no sand dunes observed near the outfall of seasonal water stream into sea. It is observed that outfall of natural water stream to sea is a rocky beach. It was observed that steep slope is there and high tide water line marking was seen up to sand dune bottom. No fishing boats were observed at seashore side. However, Paghadiya fishing nets were observed.

It was informed that the tunnelling of pipelines will not cause any hindrance to local fisherman if they want to carry out any fishing activity. The effluent will be monitored regularly by the concerned authorities and additional studies will be carried out periodically by institute of repute like NIO.

Visit point 4: Vipassana Centre

The committee moved around the area of vipasana centre and observed that the sewage water is accumulated into the pond beside the premises of vipasana centre. In addition, experts had visited into the Vipassana centre but no communication had been established at the site. It brought into the notice of Committee that the M/s GHCL will take up initiatives to restore the water quality of the pond under CSR. The committee moved around the Bada village and observed that the government school Bada village is approx. at an arial distance of 960 m from the project site. It was informed that approach road to the project site is much before the Bada village so there will be no adverse impact towards village side due to transportation activities.

Visit point 5: Visit of vocational training centre

It was informed that three courses were undergoing, which are approved under National Skill Development Centre. These courses provided by GHCL foundation under CSR at free of cost to the youths of surrounding villages.

GHCL is carrying out CSR activities in the area of education, animal husbandry including fodder, fodder plot development, veterinary service with veterinary van. GHCL is also working in area of health with mobile clinic, agriculture and fisheries. They have spent around 6.5 crores in last three years in surrounding villages under CSR.

The committee had discussed regarding the dust emission due to transportation of the lignite/coal in which project proponent informed that covered vehicles, covered shed, covered gantry will be provide for storage and conveying of fuel. Over and above said precaution sprinklers and windshield shall be utilise to avoid any fugitive emission. After above said precaution there will be dense green belt as advised by MoEF&CC.

Recommendations of the Sub-Committee:

(i) Storage of raw materials shall be either in silos or in covered areas to prevent dust pollution and other fugitive emissions. All stockpiles should be constructed over impervious soil and garland drains with catch pits to trap runoff material shall be provided. coal shall be stored in covered sheds and wind breaking walls/curtains shall be provided around biomass storage area to prevent its suspension during high wind speed. Fly ash shall be collected in Silo. All Internal roads shall be paved. Industrial vacuum cleaner shall be provided to sweep the internal roads. The Air Pollution Control System shall be interlocked with process plant/machinery for shutdown in case of operational failure of Air Pollution Control Equipment.

(ii) There shall be adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products and no parking to be allowed outside on public places. Out of the total project area, 15% shall be allotted solely for parking purposes with facilities like rest rooms with full fledge infrastructure for truck drivers etc. Parking area should be paved to avoid fugitive dust emissions. There should be a learning centre over road behaviour for the drivers.

(iii) PP shall develop 100m thick green belt as buffer along the boundary of project site towards Vipasana meditation centre.

(iv) PP shall install continuous air quality monitoring station towards Vipasana Centre to monitor real time ambient air quality status of the area.

(v) Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. In case of the treated effluent is to be utilized for gardening, real time monitoring system shall be installed at the ETP outlet.

(vi) PP should establish in house (at project site) environment laboratory for measurement of environment parameter with respect to air quality and water (surface and ground. A dedicated team to oversee environment management shall be setup which should comprise of Environment Engineers, Laboratory chemist and staff for monitoring of air, water quality parameters on routine basis. Any non- compliance or infringement should be reported to the concerned authority.

(vii) The Pipeline of seawater intake and effluent disposal shall be laid in a safe manner (using tunnelling) so that the sand dunes stretch between the plant boundary and respective land fall points are protected without any disturbance to their natural appearance and stability.

(viii) PP shall ensure that no /untreated/treated water from the project site shall be discharged into seasonal water stream.

(ix) PP shall ensure the implementation of conservation plan of Rs. 136.50 Lakhs for schedule – I species as approved by Chief Wildlife Warden, Gujarat vide letter no WLP/32/A/50-52/2023-24 dated 24.04.2023 for greenfield project of M/s GHCL at Bada Village, Mandavi, Kutch, Gujarat.

(x) PP shall ensure the time bound implementation of CER activities of Rs. 18.01 Crores.

(xi) M/s GHCL shall take up initiatives to restore the water quality of the water pond located near Vipasna Centre. M/s GHCL shall carry out tree plantation drive along road of Bada Village in consultation with Village Administration.

(xii) PP shall provide training to 10 local youth every quarter on environment management including air pollution control device, ETP, solid waste management, fly ash based brick manufacturing, green belt development as part of skill development programme.

(xiii) PP shall set up occupational health Centre for surveillance of the worker's health within and outside the plant on a regular basis. The health data shall be used in deploying the duties of the workers. All workers & employees shall be provided with required safety kits/mask for personal protection.

(xiv) Comprehensive water audit to be conducted on annual basis and report to the concerned Regional Office of MEF&CC. Outcome from the report to be implemented for conservation scheme.

The proposal was considered by the EAC in its meeting held on 21st October, 2024 and the Committee discussed the site visit report undertaken by the Sub- Committee. Further the issues were also discussed with project proponent.

The Committee noted that the proposal was earlier considered by the EAC in its 80th meeting held on 7th June, 2024 and the Committee recommended the proposal for grant of EC.

Deliberations by the EAC (Industry -3) :

i. PP informed the following :

1. M/s. GHCL Limited will acquire a total of **546.3200 hectares** for the proposed project. In alignment with this requirement, steps have been initiated in accordance with the terms outlined in a Memorandum of Understanding (MOU) with consolidators. While the acquisition process is progressing, advances related to this have been planned and are being executed to ensure the necessary land acquisitions are in place prior to the commissioning of the project. Furthermore, 33% of the total identified area will be allocated for the development of a dedicated greenbelt, reinforcing our environmental commitment.
2. That M/s. GHCL Limited is committed to developing and maintaining an average **100 m wide greenbelt** (towards Vipassana centre/Bada village) in NW and North direction facing the

entrance road. Also approximately an average **30-50 m wide greenbelt** in NE direction within the plant boundary, as per its environmental responsibility, which will be a part of total 33% greenbelt area.

3. That M/s. GHCL Limited will provide a Continuous Ambient Air Quality Monitoring Station (CAQMS) within the plant, towards the Vipassana Center, to ensure continuous monitoring and compliance.
4. That the M/s. GHCL Limited will provide an intermittent sprinkling system on both sides of the road and transportation route within plant, extending up to the storage yard, to effectively mitigate and control fugitive emissions during the transportation.
5. That the M/s. GHCL Limited ensures that paghadiya fishing activities will not be disrupted due to the project activities, during both the construction and operation phases due to micro tunnelling operation in inter-tidal zone. The company commits to taking all necessary measures to prevent any interference with local paghadiya fishing practices.
6. That the M/s. GHCL limited will install flow meters at the effluent discharge system. Also, SS monitoring system shall be installed if reliable system is available.
7. PP informed that the depth of micro-tunnelling depends on the topography. It will be approximately 14-15 meters below MSL and 5-6 meters below the seabed, extending beyond the intertidal zone.
8. The PP informed that local employment will be provided for the project as per the norms of State Government .
9. PP submitted the following revised CER activities :

Sr. No.	**Type of Activities**	**Yearly amount to be spent in CER activities (Rs. In Crore)**					**Total Amount to be spent (Rs. in crore)**
		1st Year	**2nd Year**	**3rd Year**	**4th Year**	**5th Year**	
1.	**Provision of Solar light, solar panel and its maintenance in nearby villages within 10 km of study area.**	**0.10**	**0.10**	**0.10**	**0.10**	**0.10**	**0.50**
2.	**Infrastructure development Such as primary healthcare units and the fulfilment of the basic amenities in PHCs including mobile medical van and Provide Bala-Rasayana to Malnutrition Children in Aanganwadi and PHC of nearby Villages.**	**0.00**	**0.27**	**0.29**	**0.31**	**0.35**	**1.22**

3.	**Animal husbandry promotion through providing support for breed improvement, animal health care, Veterinary doctor and others as well as provides Fodder for cattle feeding nearby villages.**	**0.80**	**0.85**	**0.90**	**0.90**	**0.90**	**4.35**
4.	**Infrastructure development for quality of education, which will ultimately upgrade schools in nearby villages.**	**0.25**	**0.27**	**0.29**	**0.31**	**0.35**	**1.47**
5.	**Development Initiatives for Fishing Communities such as Creation of infrastructure like ice plants, cold storages as well as provide operational inputs such as fishing boats, nets and engines.**	**0.15**	**0.15**	**0.15**	**0.15**	**0.15**	**0.75**
6.	**Promoting environment friendly and nature-based solutions to enhance productivity of farming (Organic Farming) activities. It covers capacity building on farming techniques, provision of highquality seeds/manure, efficient irrigation solutions, etc.**	**0.60**	**0.60**	**0.60**	**0.60**	**0.60**	**3.00**
7.	**Promoting activities for skill building to improve employment opportunities and women empowerment in nearby villages.**	**0.45**	**0.45**	**0.45**	**0.45**	**0.45**	**2.25**
8.	**Development of facilities within nearby villages such as roads.**	**0.20**	**0.20**	**0.20**	**0.20**	**0.20**	**1.00**

9.	**Activities for water conservation like deepening of nearby village ponds for storage of rainwater for domestic use of villagers.**	**0.50**	**0.50**	**0.50**	**0.50**	**0.50**	**2.50**
10.	**Promoting plantation activities through Forests by Heartfulness Institute in nearby villages.**	**0.20**	**0.20**	**0.20**	**0.20**	**0.20**	**1.00**
11.	**Installation of 100 solar street lights in nearby villages, namely Bada, Janakpur, Bhinsara, Panchotiya, Layja Mota, Layja Nana, Bhada, Bayath, Mapar, Bambhadai, Modhkuba and Padamapar. (Already 200 solar lights have been considered in point no. 1)**	**0.05**	**0.05**	**0.05**	**0.05**	**0.05**	**0.25**
12.	**Installation of a suitable capacity Sewage Treatment Plant with proper consultation with local administration in Bada Village.**	**-**	**0.10**	**2**	**0.30**	**-**	**2.40**
Total		3.30	3.74	5.73	4.07	3.85	20.69

10. PP submitted the revised capital cost and recurring cost earmarked for implementation of EMP

ASPECT OF ENVIRONMENTAL MANAGEMENT	**COST IN CRORE [RS.]**	**RECURRING COST (CRORE /ANNUM) [RS.]**	**REMARKS**
Air Pollution	89.28	1.50	Capital cost would include air pollution control devices like ESPs, Scrubbers, Dust extraction and suppression systems, Stacks, Dry Fog system, Wind screen and the recurring cost would include operation and maintenance of pollution control devices

Water Pollution	14	0.12	Capital cost would include cost of ETP, STP and recurring cost would include operation and maintenance of pollution control devices
Noise Pollution	2.9	0.0035	Capital cost would include providing adequate sound enclosures for TG, CO- compressor, DG Set
Hazardous / Solid Waste Management	1.05	1.10	Capital cost would include expense for providing storage area for hazardous waste and membership charges of TSDF/CHWIF Site and recurring cost would be for solid/ hazardous waste disposal charges and Sampling & analysis charges of solid waste.
Environmental monitoring Programme	3.4	1.30	Capital cost would include expense OCEMS, Online weather station, online pH, NH3-N, Temp meter and recurring cost would include monitoring and analysis of noise level., Sample analysis charges & ambient air & fugitive emission sampling & analysis charges etc., Fresh water & wastewater sample analysis charges etc. Soil: recurring cost would be for Soil Sample analysis., Marine area environment monitoring
Green Belt	20	0.5	Capital cost would include development of green belt within the project premises and recurring cost would include maintenance charges and manpower salary etc.
Renewable Energy	113	--	Capital cost would include Installation of Solar and Windmill
Fire safety & Occupational Health & Safety	3.41	0.35	Capital cost would include cost of OHS center, PPEs, fire & safety instruments and recurring cost would include maintenance charges and training, audit & health check-up etc.

Miscellaneous	53	2.66	Miscellaneous activity such as development of rain water harvesting system, Drainage Network for rain water, Environmental laboratory, Environmental Management system, miscellaneous study, statutory application fees, audit, training cost etc. and recurring cost would include biodiversity management plan, hiring of EMC and Conservation Plan for Schedule 1 species.
CER	20.69	--	Capital cost would include cost of CER activities such as promoting renewable energy, skill development Programme, Organic farming, water conservation (like village pond deepening), forestry etc. and develop infrastructure of schools, health facilities, Fishing activities, roads in nearby villages, Installation of additional solar street lights in nearby villages and Installation of a suitable capacity Sewage Treatment Plant with proper consultation with local administration in Bada Village.
Total (EMP + CER)	320.73	7.53	

23. **The EAC, after detailed deliberations, recommended the project for the grant of environmental clearance, subject to the compliance of the terms and conditions as under, and general terms and conditions in Annexure-I:**

(i) PP shall ensure that recommendations of SCZMA issued vide letter dated ENV/10/2021/187/T-Cell, dated 26/12/2023 for proposed greenfield chemical complex, sea water intake and effluent disposal facilities shall be implemented. Recommendations mentioned in Marine EIA Report; Conservation Plan of Sea Turtle report; Conservation & management plan for the conservation of Significant species prepared by GUIDE, Kachchh; Conservation Plan of Sand Dune by CSIR-NIO, Mumbai.

(ii) PP shall ensure that condition stipulated in letter dated 18.07.2023 for diversion of 0.96ha unclass forest and letter dated 4.01.2024 for final stage II.

(iii) ESP alongwith Stack height of 130 m shall be provided to Imported Coal/Lignite/ Pet coke fired with flue gas desulphurization 150TPH CFBC Boiler (6 Nos.) to control the particulate emission as per CPCB norms. Stack height of 30 m shall be provided to 5 MvA DG set(2/3 nos). Scrubber and Dust Collector system alongwith stack height of 68 m shall be provided to Coke or Briquette or Anthracite fired lime kiln to control the particulate emission as per CPCB norms. Water scrubber system alongwith stack height of 42m shall be provided to ammonia recovery system. Bagfilter

alongwith adequate stack height shall be provided to lime grinding system/slaker. Scrubber, Bag filter shall be provided to Calciner unit. Scrubber shall be provided to Densification. Bagfilter shall be provided to Sodium bicarbonate unit. Scrubber and wet ESP shall be provided to lime kiln.

(iv) PP shall install continuous ambient air quality monitoring station towards Vipasana Centre to monitor real time ambient air quality status of the area.

(v) Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB servers. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.

(vi) Total fresh water requirement from sea water shall not exceed 14,61,038 m^3/day.

(vii) NOC from the Concerned Local authority shall be obtained before start of the construction of plant and drawing of the ground water for the project activities, State Pollution Control Board / Pollution Control Committees shall not issue the Consent to Operate (CTO) under Air (Prevention and Control of Pollution) Act and Water (Prevention and Control of Pollution) Act till the project proponent shall obtain such permission.

(viii) Total Effluent generation shall not exceed **14,48,508 m^3/day** [Domestic - **160 m^3/day** + Industrial – **14,48,348 m^3/day** (fresh seawater for dilution – 5,14,678 m^3/day + effluent generation from soda ash & CPP plant – 1,26,830 m^3/day + once through cooling – 8,07,000 m^3/day]. The industrial effluent generated i.e. from RO/DM rejects, brine purification reject, distiller waste and boiler blowdown shall be mixed with fresh seawater for dilution and wastewater from once-through cooling and treated and disposed into the Arabian Sea as per the recommendation of NIO and after achieving the prescribed norms of CPCB/SPCB. Domestic effluent (**160 m^3/day**) shall be treated in sewage treatment plant and treated sewage will be reused in landscaping & gardening purposes.

(ix) The Pipeline of seawater intake and effluent disposal shall be laid in a safe manner (using tunnelling) so that the sand dunes stretch between the plant boundary and respective land fall points are protected without any disturbance to their natural appearance and stability.

(x) GHCL Limited shall ensure that paghadiya fishing activities shall not be disrupted due to the project activities, during both the construction and operation phases due to micro tunnelling operation in inter-tidal zone. The company commits to taking all necessary measures to prevent any interference with local paghadiya fishing practices

(xi) PP shall ensure that no /untreated/treated water from the project site shall be discharged into seasonal water stream.

(xii) PP shall ensure the implementation of conservation plan of Rs. 136.50 Lakhs for schedule – I species as approved by Chief Wildlife Warden, Gujarat vide letter no WLP/32/A/50-52/2023-24 dated 24.04.2023 for greenfield project of M/s GHCL at Bada Village, Mandavi, Kutch, Gujarat.

(xiii) The PP shall develop greenbelt of at least 30-50 m width over an area of 18,02,856 m^2 (33%) within the project site mainly along the plant periphery, preferably within a year of the grant of EC. PP shall develop and maintain an average **100 m wide greenbelt** (towards Vipassana centre/Bada village) in NW and North direction facing the entrance road. Also approximately an average **30-50 m wide greenbelt** in NE direction within the plant boundary, as per its environmental responsibility, which will be a part of total 33% greenbelt area. The tree saplings selected for the plantation should be of sufficient height, preferably 6-ft shallbe planted in greenbelt area. The budget earmarked for the plantation shall be kept in a separate account and should be audited annually. The PP shall annually submit the audited statement along with proof of activities viz. photographs (before & after with geo-location date & time), details of expert agency engaged, details of species planted, number of species planted, survival rate, density of plantation etc. to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

(xiv) Plantation of saplings shall be carried out as a part of tree plantation campaign "EK PED MA ke NAAM" and details of the same to be uploaded in the MeriLiFE portal (https://merilife.nic.in) in respect to this Ministry's OM No. IA3-22/3/2024-IA.III(E-241594) dated 24th July 2024.

(xv) A separate Environmental Management Cell (having qualified persons with Environmental Science/Environmental Engineering/specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions and shall also engage Environment Officials. IN addition to this one safety & health officer as per the qualification given in Factories Act 1948 shall be engaged within a month of grant of EC. PP should annually submit the audited statement of amount spent towards the engagement of qualified persons in EMC along with details of person engaged to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

(xvi) The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented. The budget proposed under EMP is ₹ 320 crore (Capital cost) and ₹ 7.53 Crore per annum (Recurring cost) shall be kept in separate account and should be audited annually. The PP should submit the annual audited statement along with proof of implementation of activities proposed under EMP duly supported by photographs (before & after with geo-location date & time) and other document as applicable to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

(xvii) PP shall ensure the time bound implementation of CER activities of Rs. 20.69 Crores

(xviii) M/s GHCL shall take up initiatives to restore the water quality of the water pond located near Vipasna Centre. M/s GHCL shall carry out tree plantation drive along road of Bada Village in consultation with Village Administration.

(xix) No banned chemicals shall be manufactured by the project proponent. No banned raw materials shall be used in the unit. The project proponent shall adhere to the notifications/guidelines of the Government in this regard.

(xx) The project proponent shall utilize modern technologies for capturing of carbon emitted and shall also develop carbon sink/carbon sequestration resources capable of capturing more than emitted. The implementation report shall be submitted to the IRO, MoEF&CC in this regard.

(xxi) All the hazardous waste shall be managed and disposed as per the HWM Rules 2016. Hazardous waste such as Distillation Residue and Off Specification Products shall be either sent to common incineration site or sent for coprocessing. Solid waste shall be segregated into dry and wet garbage at site in accordance to the Solid Waste Management Rules, 2016. Wet waste shall be converted into compost and used as manure for greenbelt development. 570 MT/A Fly ash shall be stored under covered silos handed over to the Cement manufacturers/ Cement Industry.

(xxii) Storage of raw materials shall be either in silos or in covered areas to prevent dust pollution and other fugitive emissions. All stockpiles should be constructed over impervious soil and garland drains with catch pits to trap runoff material shall be provided. coal shall be stored in covered sheds and wind breaking walls/curtains shall be provided around biomass storage area to prevent its suspension during high wind speed. Fly ash shall be collected in Silo. All Internal roads shall be paved. Industrial vacuum cleaner shall be provided to sweep the internal roads. The Air Pollution Control System shall be interlocked with process plant/machinery for shutdown in case of operational failure of Air Pollution Control Equipment.

(xxiii) There shall be adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products and no parking to be allowed outside on public places. Out of the total project area, 15% shall be allotted solely for parking purposes with facilities like rest rooms with full fledge infrastructure for truck drivers etc. Parking area should be paved to avoid fugitive dust emissions. There should be a learning centre over road behaviour for the drivers.

(xxiv) All necessary precautions shall be taken to avoid accidents and action plan shall be implemented for avoiding accidents. The project proponent shall implement the onsite/offsite emergency plan/mock drill etc. and mitigation measures as prescribed under the rules and guidelines issued in the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996. The occupier of new as well as expansion projects shall be required to comply with the provisions of the MSHIC Rules, 1989 including notifying their activities or seeking site approval from the concerned authorities, to address operational safety aspects. In doing so, various schedule, particularly Schedule-5 of the said rules may be referred.

(xxv) The volatile organic compounds (VOCs)/Fugitive emissions shall be controlled at 99.97 % with effective chillers/modern technology. Regular monitoring of VOCs shall be carried out.

(xxvi) The storage of toxic/hazardous raw material shall be bare minimum with respect to quantity and inventory. Quantity and days of storage shall be submitted to the Regional Office of Ministry and SPCB along with the compliance report.

(xxvii) PP should establish in house (at project site) environment laboratory for measurement of environment parameter with respect to air quality and water (surface and ground. A dedicated team to oversee environment management shall be setup which should comprise of Environment Engineers, Laboratory chemist and staff for monitoring of air, water quality parameters on routine basis. Any non- compliance or infringement should be reported to the concerned authority

(xxviii) PP shall set up occupational health Centre for surveillance of the worker's health within and outside the plant on a regular basis. The health data shall be used in deploying the duties of the workers. All workers & employees shall be provided with required safety kits/mask for personal protection.

(xxix) Training shall be imparted to all employees on safety and health aspects for handling chemicals. Safety and visual reality training shall be provided to employees. Action plan for mitigation measures shall be properly implemented based on the safety and risk assessment studies.

(xxx) PP shall provide training to 10 local youth every quarter on environment management including air pollution control device, ETP, solid waste management, fly ash based brick manufacturing, green belt development as part of skill development programme.

(xxxi) Comprehensive water audit to be conducted on annual basis and report to the concerned Regional Office of MEF&CC. Outcome from the report to be implemented for conservation scheme.

(xxxii) The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire-fighting system shall be as per the norms.

(xxxiii) The solvent management shall be carried out as follows: (a) Reactor shall be connected to chilled brine condenser system. (b) Reactor and solvent handling pump shall have mechanical seals to prevent leakages. (c) Solvents shall be stored in a separate space specified with all safety measures. (d) Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done. (e) Entire plant shall be fire proof. The solvent storage tanks shall be provided with breather valve to prevent losses. (f) All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.

(xxxiv) The storm water from the roof top shall be channelized through pipes to the storage tank constructed for harvesting of rain water in the premises and harvested water shall be used for various industrial processes in the unit. No recharge shall be permitted within the premises. Process effluent/ any wastewater shall not be allowed to mix with storm water.

(xxxv) The PP shall undertake waste minimization measures as below (a) Metering and control of quantities of active ingredients to minimize waste; (b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes. (c) Use of automated filling to minimize spillage. (d) Use of Close Feed system into batch reactors. (e) Venting equipment through vapor recovery system. (f) Use of high pressure-hoses for equipment cleaning to reduce wastewater generation.

(xxxvi) PP shall sensitize and create awareness among the people working within the project area as well as its surrounding area on the ban of Single Use Plastic in order to ensure the compliance of Notification published by MOEFCC on 12th August, 2021. A report along with photographs on the measures taken shall also be included in the six-monthly compliance report being submitted to concerned authority.

(xxxvii) The activities and the action plan proposed by the project proponent to address the issues raised during the public hearing as well as the related socio-economic issues in the study area shall be completed as per the schedule presented before the Committee and as described in the EIA report in letter and spirit.

Annexure-I

List of the Expert Appraisal Committee (Industry-3) members participated in Day - I during Video Conferencing (VC) meeting

S. No.	Name of Member	Designation
1.	Prof. (Dr.) A.B. Pandit	Chairman
2.	Dr. Suresh Panwar	Member
3.	Dr. (ER.) Dibakar Swain	Member
4.	Shri Dinabandhu Gouda	Member
5.	Dr. Kishore Malviya	Member
6.	Shri Amit Vashisht	Member
7.	Dr. P. Jagannadha Rao	Member
8.	Dr. Vijay S Moholkar	Member
9.	Prof. Suneet Dwivedi	Member
10.	Shri A N Singh	Member Secretary
MoEFCC		
1.	Dr. Kanchan Puri	Scientist-B
2.	Dr. Bhawana Kapkoti Negi	Technical Officer

***

MoM approved by

(Prof. Aniruddha B. Pandit)
Chairman

-TRUE COPY-

GHCL Limited

To,
Director and Member Secretary (Industry III),
Ministry of Environment, Forest & Climate Change,
3rd Floor, Vayu Wing, Indira Paryavaran Bhavan,
Jor Bagh Road, Ali Ganj,
New Delhi- 110003.

Date: 25/10/2024

Subject: Submission of ADS reply to obtain Environmental Clearance for the Proposed Greenfield project of M/s. GHCL Limited
Proposal no.: IA/GJ/IND3/408164/2022

Respected Sir,

We are submitting our responses to the concerns raised during the 87th EAC meeting held on 21.10.2024. The point-wise replies are provided below:

SR NO.	POINTS	REPLY
1	Provide an undertaking for the following: • Intention for land acquisition. • Greenbelt development, including a 100-meter-wide greenbelt towards the Vipassana Center/Bada village and towards entrance road. Also, provide 30-50 m wide greenbelt in the northeast direction. • Installation of a Continuous Ambient Air Quality Monitoring Station (CAQMS) at the plant, facing the Vipassana Center. • Installation of a sprinkling system on both sides of the road leading to the storage yard. • Confirmation that paghadiya fishing activities will not be disturbed due to project activities. • Provide flow meters at the effluent discharge system along with SS monitoring system.	We, M/s. GHCL Limited, acknowledge the concerns raised by the Expert Appraisal Committee (EAC) regarding our proposed project. We hereby confirm that we will fully address the points raised, and the formal undertaking, covering all aspects as required by the EAC, is attached as **Annexure 1** for your kind reference.

GHCL Limited

2	Provide information regarding the CER activities to be carried out as part of the additional CER, and include their costs in the EMP.	Please note that, as per the committee's suggestions, we are willing to provide the following as part of the additional CER activities. • Installation of 100 solar street lights in nearby villages, namely Bada, Janakpur, Bhinsara, Panchotiya, Layja Mota, Layja Nana, Bhada, Bayath, Mapar, Bambhadai, Modhkuba and Padamapar. • Installation of a suitable capacity Sewage Treatment Plant with proper consultation with local administration in Bada Village. • The additional CER will be implemented over a period of 5 years is attached as **Annexure 2**. It has been included in the EMP, and the revised EMP is attached as **Annexure 3** for your reference.
3	Provide information regarding the depth of the micro-tunneling.	The depth of micro-tunnelling depends on the topography. It will be approximately 14-15 meters below MSL and 5-6 meters below the seabed, extending beyond the intertidal zone.
4	Confirm the length of the intake and outfall pipelines from the plant boundary.	It is requested to note that the plant boundary falls within the CRZ area (500-meter line). The total lengths of the intake and outfall pipelines as per the GCZMA recommendation dated 26 December 2023 which are as follows: **Pipeline** / **Length of pipeline as per GCZMA recommendation in meters** Intake Pipeline 1 — 1381.99 Intake Pipeline 2 — 1388.64 Outfall Pipeline 1 — 2770.17 Outfall Pipeline 2 — 3281.88

Thanking You.
Yours faithfully,

For GHCL Ltd.
[N. N. Radia - Chief Operating officer]

GHCL House, Swastik Society, Opp. Punjabi Hall, Navrangpura, Ahmedabad, Gujarat-380009, India Ph. : +91-079-26434100
CIN : L24100GJ1983PLC006513, E-mail : ghclinfo@ghcl.co.in, Website : www.ghcl.co.in

Head Office : GHCL House, B - 38, Institutional Area, Sector - 1, Noida, Uttar Pradesh - 201301, India. Ph. : +91-120-2535335, 3358000, Fax : +91-120-2535209

GHCL Limited

Undertaking

I, **N.N. Radia**, Chief Operating Officer of **M/s. GHCL Limited**, located at Village Bada, Taluka Mandvi, District Kutch, Gujarat, do hereby solemnly affirm and state as follows:

1. M/s. GHCL Limited will acquire a total of **546.3200 hectares** for the proposed project. In alignment with this requirement, steps have been initiated in accordance with the terms outlined in a Memorandum of Understanding (MOU) with consolidators. While the acquisition process is progressing, advances related to this have been planned and are being executed to ensure the necessary land acquisitions are in place prior to the commissioning of the project. Furthermore, 33% of the total identified area will be allocated for the development of a dedicated greenbelt, reinforcing our environmental commitment.
2. That M/s. GHCL Limited is committed to developing and maintaining an average **100 m wide greenbelt** (towards Vipassana centre/Bada village) in NW and North direction facing the entrance road. Also approximately an average **30-50 m wide greenbelt** in NE direction within the plant boundary, as per its environmental responsibility, which will be a part of total 33% greenbelt area.
3. That M/s. GHCL Limited will provide a Continuous Ambient Air Quality Monitoring Station (CAQMS) within the plant, towards the Vipassana Center, to ensure continuous monitoring and compliance.
4. That the M/s. GHCL Limited will provide an intermittent sprinkling system on both sides of the road and transportation route within plant, extending up to the storage yard, to effectively mitigate and control fugitive emissions during the transportation.
5. That the M/s. GHCL Limited ensures that paghadiya fishing activities will not be disrupted due to the project activities, during both the construction and operation phases due to micro tunnelling operation in inter-tidal zone. The company commits to taking all necessary measures to prevent any interference with local paghadiya fishing practices.
6. That the M/s. GHCL limited will install flow meters at the effluent discharge system. Also, SS monitoring system shall be installed if reliable system is available.

This undertaking is given in good faith to meet the specific environmental condition and with full understanding of my obligations under the law.

Date: 25.10.2024
Place: Mandvi

GHCL LIMITED AHMEDABAD

N.N. Radia
Chief Operating Officer
M/s. GHCL Limited, Village Bada, Taluka Mandvi, District Kutch, Gujarat

Annexure 2- Proposed CER Activities

Sr. No.	Type of Activities	Yearly amount to be spent in CER activities (Rs. In Crore)					Total Amount to be spent (Rs. in crore)
		1st Year	2nd Year	3rd Year	4th Year	5th Year	
1.	Provision of Solar light, solar panel and its maintenance in nearby villages within 10 km of study area.	0.10	0.10	0.10	0.10	0.10	0.50
2.	Infrastructure development Such as primary healthcare units and the fulfilment of the basic amenities in PHCs including mobile medical van and Provide Bala-Rasayana to Malnutrition Children in Aanganwadi and PHC of nearby Villages.	0.00	0.27	0.29	0.31	0.35	1.22
3.	Animal husbandry promotion through providing support for breed improvement, animal health care, Veterinary doctor and others as well as provides Fodder for cattle feeding nearby villages.	0.80	0.85	0.90	0.90	0.90	4.35
4.	Infrastructure development for quality of education, which will ultimately upgrade schools in nearby villages.	0.25	0.27	0.29	0.31	0.35	1.47
5.	Development Initiatives for Fishing Communities such as Creation of infrastructure like ice plants, cold storages as well as provide operational inputs such as fishing boats, nets and engines.	0.15	0.15	0.15	0.15	0.15	0.75
6.	Promoting environment friendly and nature-based solutions to enhance productivity of farming (Organic Farming) activities. It covers capacity building on farming techniques, provision of highquality seeds/manure, efficient irrigation solutions, etc.	0.60	0.60	0.60	0.60	0.60	3.00

7.	Promoting activities for skill building to improve employment opportunities and women empowerment in nearby villages.	0.45	0.45	0.45	0.45	0.45	2.25
8.	Development of facilities within nearby villages such as roads.	0.20	0.20	0.20	0.20	0.20	1.00
9.	Activities for water conservation like deepening of nearby village ponds for storage of rainwater for domestic use of villagers.	0.50	0.50	0.50	0.50	0.50	2.50
10.	Promoting plantation activities through Forests by Heartfulness Institute in nearby villages.	0.20	0.20	0.20	0.20	0.20	1.00
11.	Installation of 100 solar street lights in nearby villages, namely Bada, Janakpur, Bhinsara, Panchotiya, Layja Mota, Layja Nana, Bhada, Bayath, Mapar, Bambhadai, Modhkuba and Padamapar. (Already 200 solar lights have been considered in point no. 1)	0.05	0.05	0.05	0.05	0.05	0.25
12.	Installation of a suitable capacity Sewage Treatment Plant with proper consultation with local administration in Bada Village.	-	0.10	2	0.30	-	2.40
	Total	**3.30**	**3.74**	**5.73**	**4.07**	**3.85**	**20.69**

Annexure 3- Revised EMP

ASPECT OF ENVIRONMENTAL MANAGEMENT	COST IN CRORE [RS.]	RECURRING COST (CRORE /ANNUM) [RS.]	REMARKS
Air Pollution	89.28	1.50	Capital cost would include air pollution control devices like ESPs, Scrubbers, Dust extraction and suppression systems, Stacks, Dry Fog system, Wind screen and the recurring cost would include operation and maintenance of pollution control devices
Water Pollution	14	0.12	Capital cost would include cost of ETP, STP and recurring cost would include operation and maintenance of pollution control devices
Noise Pollution	2.9	0.0035	Capital cost would include providing adequate sound enclosures for TG, CO- compressor, DG Set
Hazardous / Solid Waste Management	1.05	1.10	Capital cost would include expense for providing storage area for hazardous waste and membership charges of TSDF/CHWIF Site and recurring cost would be for solid/ hazardous waste disposal charges and Sampling & analysis charges of solid waste.
Environmental monitoring Programme	3.4	1.30	Capital cost would include expense OCEMS, Online weather station, online pH, NH3-N, Temp meter and recurring cost would include monitoring and analysis of noise level., Sample analysis charges & ambient air & fugitive emission sampling & analysis charges etc., Fresh water & wastewater sample analysis charges etc. Soil: recurring cost would be for Soil Sample analysis., Marine area environment monitoring
Green Belt	20	0.5	Capital cost would include development of green belt within the project premises and recurring cost would include maintenance charges and manpower salary etc.
Renewable Energy	113	--	Capital cost would include Installation of Solar and Windmill

Fire safety & Occupational Health & Safety	3.41	0.35	Capital cost would include cost of OHS center, PPEs, fire & safety instruments and recurring cost would include maintenance charges and training, audit & health check-up etc.
Miscellaneous	53	2.66	Miscellaneous activity such as development of rain water harvesting system, Drainage Network for rain water, Environmental laboratory, Environmental Management system, miscellaneous study, statutory application fees, audit, training cost etc. and recurring cost would include biodiversity management plan, hiring of EMC and Conservation Plan for Schedule 1 species.
CER	20.69	--	Capital cost would include cost of CER activities such as promoting renewable energy, skill development Programme, Organic farming, water conservation (like village pond deepening), forestry etc. and develop infrastructure of schools, health facilities, Fishing activities, roads in nearby villages, Installation of additional solar street lights in nearby villages and Installation of a suitable capacity Sewage Treatment Plant with proper consultation with local administration in Bada Village.
Total (EMP + CER)	**320.73**	**7.53**	

ANNEXURE R/35

D. M. Thaker
Director (Environment) &
Member Secretary (GCZMA)

Government of Gujarat
Forest & Environment Department
Block No-14/8th Floor,
Sachivalaya, Gandhinagar

Phone:079- 23255854
E-mail: direnv@gujarat.gov.in

File no. ENV/10/2021/184/T-cell

Date: 26 DEC 2023

To,
Dr. H. Kharkwal
Director (CRZ)
Ministry of Environment, Forest and Climate Change,
Government of India,
Room No. 215, 2nd Floor, Agni Block
Indira Paryavaran Bhavan, Jor Baugh,
Aliganj Road, New Delhi – 110 003.

Subject: CRZ Clearance for Proposed Greenfield Chemical Complex seawater intake and effluent disposal facilities at village Bada, Ta –Mandvi, Dist-Kutchh by M/s.Gujarat Heavy Chemicals Limited(GHCL).

Reference: CRZ application dated.11.10.2021

Dear Sir,

M/s. Gujarat Heavy Chemicals Limited (GHCL)vide application dated. 11-10-2021 submitted an application seeking recommendation from Gujarat Coastal Zone Management Authority (GCZMA) for obtaining CRZ Clearance from the Ministry of Environment, Forests and Climate Change, Government of India for Greenfield Chemical Complex seawater intake and effluent disposal facilities at village Bada, Taluka Mandvi, Dist-Kutchh.

M/s. GHCL has submitted the following documents along with their application and processing fees:

1. Form -1 as per CRZ Notification 2011,

2. CRZ Maps in 1:4000 scale, prepared by Institute of Remote sensing, Anna University, Chennai,
3. EIA report prepared by Council of Scientific & Industrial Research (CSIR) and NEERI.
4. Marine EIA prepared by CSIR- National Institute of Oceanography.
5. Feasibility study report by STUP Consultant Private Limited, Ahmedabad.
6. Consent to Establish from Gujarat Pollution Control Board issued on 09.09.2011.
7. NOC from GMB issued on 10.02.2022.
8. Various Undertaking Submitted by Project Proponent for CRZ Clearance.

M/s. Gujarat Heavy Chemicals Limited (GHCL) submitted EIA report including introduction and project overview (chapter – 1), Project Description (Chapter - 2), Description Environment (chapter – 3), Anticipated impacts & Mitigation Measures (chapter – 4), Analysis of Alternatives (chapter – 5), Environmental Monitoring Program (chapter – 6), Additional Studies (chapter – 7), Project Benefits (chapter – 8), Environmental Cost Benefit Anlysis (chapter – 9), Environmental Management Plan (chapter – 10), Summary and Conclusions (chapter – 11) and Disclosure of Consultant Engaged (chapter – 12). Council of Scientific & Industrial Research (CSIR) and NEERI consultant carried out EIA.

The Proposal of GHCL was discussed in the GCZMA committee during 67th meeting held on 4th August 2023.

The Member Secretary, GCZMA apprised the Authority that M/s. GHCL presented their case in GCZMA meeting held on 17.01.2022. Additional detail sought (ADS) by GCZMA via mail on 01.02.22. PP replied on 29.11.22 & 26.12.22 and requested for conducting site-visit. GCZMA constituted a sub- committee and got visited the site on 27.04.23.

PP submitted details sought by the committee vide its letter dated 29.04.23. PP submitted final EIA report and public hearing details submitted on 29.11.22 to GCZMA. As forestland involved in the proposed project, they got Stage-1 approval on

18.07.23 and submitted Olive Riddly Turtle conservation plan approved on 24.04.23 from Forest Department along with Sand dunes conservation plan on 29.11.22.

The representative of M/s GHCL Ltd made a detailed presentation before the Authority and submitted that GHCL is a diversified company with footprint in Chemicals, Textiles and Consumer product segment. In Chemical sector, the company is mainly in the business of manufacturing Soda Ash (i.e. Anhydrous Sodium Carbonate) and Sodium Bicarbonate. It is one of the leading producers of Soda Ash in the country since 1988.

- The site is in proximity to Sea, which is the only source available for uninterrupted water supply to manufacturing plant. Seawater is required for meeting requirements for RO-DM plant, process cooling, dilution requirements, domestic use etc.

- A huge and increasing focus on renewable energy with government and private sector investment in such sources is strongly driving global demand for soda ash. This project will also support the demand of Soda Ash as it is a key raw material in the processing of lithium, a key component of lithium-ion batteries which is used in electric vehicles. Another key downstream product manufactured from Soda Ash, is emerging as a solution of choice for emission control applications.

- GHCL had signed an M.O.U in Jan-2017 during Vibrant Gujarat Summit, 2017 for establishment of Greenfield Chemical complex in district Kutch, Gujarat. GHCL proposes to set up a Greenfield Chemical complex having
  - ✓ Light Soda Ash (11,00,000 TPA),
  - ✓ Dense Soda Ash (5,00,000 TPA) and
  - ✓ Sodium bicarbonate (2, 00,000 TPA) manufacturing plants
  - ✓ supported by utilities like solid fuel based captive Co-generation power plant (120 MW),
  - ✓ seawater intake (16,00,000 m3/day) and
  - ✓ effluent outfall system (15, 80,000 m3/day),
  - ✓ RO-DM system and associated infrastructure.

- As per the proposal, M/s GHCL will withdraw 16,00,000 m^3/day of water from two intake locations and the disposal of 15,80,000 m^3/day of effluent at two out fall locations and its co-ordination are as follows,

Label	Latitude	
Intake Point 1	22^0 52' 1.070'' N	69^0 7' 28.900'' E
Intake Point 2	22^0 51' 57.440'' N	69^0 7' 32.440'' E
Outfall Point 1	22^0 52' 15.790'' N	69^0 6' 14.350'' E
Outfall Point 2	22^0 52' 6.650'' N	69^0 5' 59.080'' E

- Total length of sea water intake and out fall effluent disposal pipeline falls in various CRZ area are as follows,

Pipeline	CRZ- Classification	Length in m
Intake Pipeline 1	CRZ IA	267.17
	CRZ IB	60.25
	CRZ III (200 m to 500 m from HTL)	105.81
	CRZ IVA	948.76
	Total	**1381.99**
Intake Pipeline 2	CRZ IA	270.37
	CRZ IB	57.44
	CRZ III (200 m to 500 m from HTL)	98.57
	CRZ IVA	962.26
	Total	**1388.64**
Outfall Pipeline 1	CRZ IA	380.92
	CRZ IB	81.78
	CRZ III (No Development Zone)	17.88
	CRZ III (200 m to 500 m from HTL)	66.4
	CRZ IVA	2101.48
	Outside CRZ	121.71
	Total	**2770.17**
Outfall Pipeline 2	CRZ IA	379.67
	CRZ IB	83.36
	CRZ III (No Development Zone)	17.88
	CRZ III (200 m to 500 m from HTL)	67.66
	CRZ IVA	2623.88
	Outside CRZ	110.03
	Total	**3281.88**

As per the CRZ map prepared by the Institute of Remote Sensing, Anna University, Chennai. Proposed project activities are permissible under the clauses no. 3 (I) (a) , 4 (II) (d), 8 I (i)-b, (ii)- b, 8 III A(iii) j, k , 8 (IV) a of CRZ notification, 2011. Activity wise details of CRZ zone are as under:

Activities	Zone
Construction of process plant and utilities etc.	outside CRZ area
Effluent collection	outside CRZ area
Seawater Intake system i.e. sump and pump house	CRZ III
Intake Pipeline	CRZ IA, CRZ IB and CRZ IV
Outfall Pipeline	CRZ IA, CRZ IB and CRZ IV

Following Studies have been conducted by Project Proponent:

- Baseline Marine Environmental assessment, Effluent Dispersion Modeling, Sand dune Morphology by CSIR NIO (Goa, Mumbai). As per the findings, Suitable Corridor for laying seawater intake and outfall identified. Coast near site is Stable based on satellite image analysis and Sand dunes are found to be stable and suitable for tunneling activity.
- Conservation plan of Schedule - 1 Species by Gujarat Institute of Desert Ecology, Gujarat
- Status Survey and Conservation by Zoological Survey of India, Kolkata: Finding of the study stated that during monitoring period any turtle, fresh /old nests or crawl marks were not found. Due to narrow beach width, vegetation cover, slope, presence of pebbles and rubbles and presence of predators at project site which are unfavorable for sea turtle nesting.
- Gujarat Sea Turtle: Status Survey and Conservation by Gujarat Institute of Desert Ecology,
- Seawater Intake & Effluent Disposal Feasibility Consultancy by STUP Consultancy, Ahmedabad.

As the study on Biodiversity and Wild life, No notified protected area within Study area, Presence of critically endangered plant species Commiphora wightii in

buffer area, Conservation plan suggested for Schedule I Flora and Fauna & approved by forest department and No important wetland or bird areas are located within project vicinity.

Design and detailed construction methodology:

- Micro tunneling are done using the pipe jacking method. The pipelines for seawater intake and effluent disposal are required to be laid in a safe manner so that the sand dunes stretch between the plant boundary and respective land fall points (LFP) are protected without any disturbance to their natural appearance and stability.
- In such sensitive and difficult terrains tunneling offers a reliable technological solution. The treated effluent will be discharged at a suitable location off Bada coast through buried pipeline up to shore and submarine pipeline up to disposal location in sea.
- Minor change of alignment of pipeline may be required as per required depth for intake well construction & hydraulics requirement without changing landfall point and CRZ corridor. Reputed agency M/s RHDHV is engaged .
- For sand dune stretch the effluent disposal pipeline will be laid through tunneling. There will be no disturbance to stable sand dunes along the coast, as pipeline will be laid underground through micro tunneling method.
- The predicted max. water temperature in a small area around diffuser 33°Which is lower than threshold of 35°C. Incremental increase of SS in a limited area around diffuser is unlikely to negatively influence the biota even in the vicinity of diffuser. Fine SS particles would remain in suspension for longer duration and impart a milky hue around diffuser, as SS in effluent is non toxic this will not impact the water quality. Estimated benthic loss due to seawater intake is about 141.6 kg. and 331 kg. For outfall. Such loss is unlikely to be reflected on overall bio potential of Bada coast. This loss would be temporary and benthos will recolonize in due course after construction phase gets completed. The new structures will provide additional surface area for sub-tidal benthos to colonies.
- As the study on Biodiversity and Wild life, No notified protected area within Study area, Presence of critically endangered plan species Commiphora wightii

in buffer area, Conservation plan suggested for Schedule I Flora and Fauna & approved by forest department and No important wetland or bird areas are located within project vicinity.

- It was further submitted by the representative of GHCL that there is no existence of mangrove in proposed project areas for lying of intake and outfall pipelines and there would not be any impact on mangroves due to proposed activities.

Diffuser details:

Installation depth of water at the outfall location-OF2_1	: 9.4 m CD
Installation depth of water at the outfall location-OF2_2	: 10.7 m CD
Outfall Pipe Diameter (ID)	: 2.0 m
Number of outfall pipelines	: 2 Nos.
Length of the pipelines(L)	: 2185 & 2686 m
Design outfall flow rate (Q)	: 1580 MLD
HDPE Inner Diameter of Pipe	: 2000 mm
Pipe friction factor	: 0.001
Density of sea water	: 1025 kg/m^3
Effective depth for dilution	: 9.4 to 10.7m
No. of ports provided	: 20 in each diffuser
Diameter of port	: 440 mm
Length of Diffuser Block	: 100m each
Height of vertical riser	: 1.0m
Ports space	:@ 6000 mm c/c
The main diffuser pipe is buried	:2.0 m below the sea bed
Initial dilution estimated as	30 to 40 times.
Diffuser Port Velocity	: 3.01 m/sec

The port configuration consists of a riser pipe of 440 mm diameter at 15 degrees to the main diffuser pipe segment with a height of 1500 mm below the sea bed and 500 mm above the sea bed. From the model results, it is found that the average dilutions of 30 to 40 times would be achieved along with the tidal variation in the case of 1580000 m^3/day discharge. To get this dilution time, the diffuser system should

contain 40 ports having a 0.44 m diameter. The diffusers should be separated at a distance of 6 m. The elevation of ports from the sea bed should be 0.5 m. The velocity of release of effluent should be maintained at 3.01 m/s.

Details of Environment Protection Measures:

- It was submitted that as per the numerical flow model run for seawater intake of 1600 MLD and dispersion model for effluent disposal of 1580 MLD, Model run for post monsoon and pre monsoon for various tidal conditions. No significant changes in flow regime are observed due to continuous withdrawal from recommended seawater intake locations.
- CSIR NIO has recommended effluent disposal points after evaluating 03 alternative options.
- Ambient conditions for temperature, SS, Ammonical nitrogen will be attained within 300 m distance from the diffuser.
- CSIR NIO Goa study suggested that sand dunes along the coast are stable and recommended suitable Landfall points and tunneling method for pipelines.
- From the model results, it is found that the average dilutions of 30 to 40 times would be achieved along with the tidal variation in the case of 1580000 m^3/day discharge. To get this dilution time, the diffuser system should contain 40 ports having a 0.44 m diameter. The diffusers should be separated at a distance of 6 m.
- The elevation of ports from the sea bed should be 0.5 m. The velocity of release of effluent should be maintained at 3.01 m/s.

MS, GCZMA appraised the authority that, GCZMA constituted a sub- committee and got visited the site on 27.04.23. As per the report of the sub-committee, GHCL submitted final EIA, public hearing details, copy of approved conservation plan for significant species, conservation management plan for sand dunes. As included in the report there will no impact on sand dunes due to underground construction of tunnel for the sea water suction and disposal of treated water into sea. As informed by PP, they will use highest technology to underground tunnel construction and due to which no major impacts will be on the sand dunes.

After the detailed discussion and deliberation on the presentation, it was decided by the GCZMA to recommend the project of M/s Gujarat Heavy Chemicals Limited located

at village Bada, ta - Mandvi, District -Kutch for Proposed Greenfield Chemical Complex seawater intake and effluent disposal facilities to the Ministry of Environment, Forest and Climate Change, Government of India for granting CRZ clearance with specific condition.

In view of the above the State Government hereby recommend to the Ministry of Environment, Forests and Climate Change, Government of India grant CRZ clearance for Proposed Greenfield Chemical Complex seawater intake and effluent disposal facilities of M/s. Gujarat Heavy Chemicals Limited with following conditions:

1. The effluent not meeting with the GPCB norms shall not be discharged and shall be stored in the Guard Ponds and recycled back into the Effluent Treatment Plant for further treatment to achieve the GPCB norms. M/s GHCL shall install necessary facilities for this purpose and shall strictly ensure the compliance with the GPCB norms, round the clock.
2. The pipelines for seawater intake and effluent disposal shall be laid in a safe manner so that the sand dunes stretch between the plant boundary and respective land fall points (LFP) are protected without any disturbance to their natural appearance and stability.
3. The pipeline shall be monitored regularly by the company and it shall be ensured that there is no leak from the pipeline. In case of any such eventualities, the company shall immediately stop disposal through the said pipeline and take the corrective measures in consultation with the GPCB and the District Collector.
4. There shall not be any blockage of creek/river etc. due to laying of pipeline and free flow of water shall be maintained.
5. M/s. GHCL shall carry out mangrove plantation in 50 ha area in consultation with Forest Department/Gujarat Ecology Commission (GEC). The amount for the same shall be deposited within 06 months to Forest Department/GEC.
6. All the recommendations and mitigation measures suggested for sea turtle conservation plan shall be complied with by the GHCL.
7. The GHCL shall ensure that there will not disturbance to nearby Ecologically Sensitive area for their proposed project.

8. The pipeline shall be monitored regularly by the company and it shall be ensured that there is no leak from the pipeline. In case of any such eventualities, the company shall take immediate corrective measures.
9. Project proponent (PP) shall have to carry out marine water quality environment monitoring regularly on quarterly basis and submit the report to GCZMA, GPCB, IRO & MOEF & CC, GoI.
10. PP shall contribute through its CER fund for environmental infrastructure up-gradation, awareness programs etc.
11. PP shall obtain all necessary clearances from competent authorities/ departments before construction and commissioning of the activities.
12. No groundwater shall be taped to meet with the water requirements during the construction and/or operation phases.
13. There shall no discharge of any kind of wastewater / sewage / effluent/ wastes into the creek or sea or in CRZ areas except allowed by this permission.
14. PP shall implement all the suggestions / recommendations given by their consultants in their EIA report.
15. PP shall develop 33% greenbelt within premises and shall maintain greenbelt.
16. PP shall prepare and execute Disaster Management Plan and submit to the concerned offices including the District Authorities.
17. PP shall ensure that the labour construction camps are kept outside the CRZ areas and the construction labour are provided with adequate amenities like drinking water, fuel, sanitation, etc. to ensure that the existing environmental condition is not deteriorated by them.
18. PP shall bear the cost of the external agency that may be appointed by this Department for supervision / monitoring of proposed activities.
19. PP shall take up socio-economic upliftment activities in consultation with the District Collector / DDO. A separate budget shall be provided for this purpose.
20. PP shall regularly submit the half-yearly compliance report on the conditions stipulated by this Department/GCZMA/ MoEFCC.
21. The provisions of the CRZ notification, 2011 and as amended from time to time shall be strictly adhered to by the PP.
22. PP shall obtain consents/ authorisation/ permission of the Gujarat Pollution Control Board under applicable Water (Prevention and Control of Pollution) Act, 1974, Air (Prevention and Control of Pollution) Act'1981 and Rules made

under Environment (Protection) Act' 1986. Discharge of pollutants shall not exceed the limits prescribed under the Environmental Acts/ Rules.

23. PP shall adopt the necessary soil conservation measures to prevent any exposed soil from being eroded or blown over.
24. A Disaster Management Plan to meet with any eventualities that may arise during construction and/or operation phase shall be prepared and implemented.
25. A separate Environmental Cell with qualified personnel shall be created to implement the Environmental Management Plan and a separate budget shall be provided for this purpose.
26. Any additional conditions that may be imposed by MoEF&CC, this Department/GCZMA shall be complied by the PP

Thanking you,

D. M. Thaker 26/12/2013

(D. M. Thaker)

Copy to:
Chief Operating Officer,
M/s. Gujarat Heavy Chemical Limited,
GHCL House, Swastik Society, opp Punjabi Hall, Navarangpura ,
Ahmedabad-380009---------- For Your kind information

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ANNEXURE R/36

National Accreditation Board for Education and Training

QCI/NABET/ENV/GHCL/23/2652 January 27, 2023

To,

Sh. N. N. Radia
Chief Operating Officer (COO),
GHCL Ltd.
Sutrapada, Distt. Gir-Somnath,
Gujarat-362275

Sub.: Clarification on the starting date of accreditation of consultants for sector-4(e), i.e., Soda ash Industry
Ref.: Letter no- GHCL/AHD/ENVMOEF&CC/22-23/03 dated 24.1.2023

Dear Sir,

This refers to the communication (in hard and soft copy) received through the letter and subject as mentioned above.

2. QCI-NABET may like to submit that the EIA consultant organizations are accredited for the sectors listed as per the schedule of EIA notification, 2006, who fulfills the requirements of the QCI-NABET's scheme for the Accreditation of EIA Consultant Organizations. The scheme was voluntarily launched in August 2007. Thereafter, made mandatory by MoEF&CC through a gazetted notification dated March 2016. The existing version 3 of the scheme is effective from September 1, 2015.

3. Further, M/s T. R. Associates, Ahmedabad was the first organization that received accreditation from QCI-NABET in sector-4(e)/Soda Ash Industry in December 2019.

4. Also, two more consultant organizations namely M/s Kadam Environmental Consultants, Vadodara, and M/s Aqua-Air Environmental Engineers Pvt. Ltd., Surat accredited in the same sector i.e., sector-4(e).

With best regards.

(A K Jha)
Senior Director
QCI-NABET

Institute of Town Planners India, 6th Floor, 4-A, Ring Road, I.P Estate, New Delhi-110 002, India
Tel. : +91-11-233 23 416, 417, 418, 419, 420, 421, 423 E-mail : ceo.nabet@qcin.org Website : www.qcin.org

-TRUE COPY-

No.J-11013/41/2006-IA-II(I)(Part)
Government of India
Ministry of Environment, Forests and Climate Change
Impact Assessment Division
.....

Indira Paryavaran Bhawan,
Jor Bagh Raod, Aliganj
New Delhi-110 003

Dated the 7th November, 2014

OFFICE MEMORANDUM

Subject: Issues on Appraisal- clarification regarding.

The Ministry of Environment, Forests and Climate Change, vide Office Memoranda of even No. dated 22.03.2010, 22.08.2014 and 08.10.2014 prescribed a time limit for validity of Terms of Reference (TORs) for a period of three years for submission of EIA and EMP reports after public consultation and also that this period would be extendable to fourth year, based on proper justification and recommendation of the EAC/SEAC, as the case may be. Thus an outer limit of four years for the validity of TORs has been prescribed for any developmental project, except River Valley and HEP Projects, where the outer limit validity of TOR is five years. The aforesaid Office Memoranda also clarified that the date of public hearing and the primary data used in preparation of EIA / EMP report submitted after public consultation should not be more than three years old and in case these conditions are not met, the proponent will have to start the process *de novo* after obtaining fresh TORs.

2. The matter has been further examined in the Ministry in the light of decision taken as part of clearance reform and it is felt that it would not be logical to start the process of environment clearance *de novo* including taking fresh Terms of Reference(TORs), if the base line data collected for preparation of EIA / EMP report and/or public consultation are more than three years old.

3. Thus it has been decided to substitute para 2(v) of the above referred Office Memorandum No. J-11013/41/2006-IA.II(I) (part) dated 22.08.2014 with the following:

"(v)

(a) All the projects which have been recommended by the Expert Appraisal Committee(EAC) shall be considered by the Competent Authority even if the data collected has become more than three years old as the ToRs itself used to have three years validity and extendable by one more year.

...2/-

(b) All the projects where the project proponent have already submitted their EIA/EMP Report for consideration by the EAC though the cases have still not been placed before the EAC and meanwhile the data had become more than three years old, shall be considered for the same reason as given in the para (a) above.

(c) In case of project proponent seeking Environment Clearance for expansion of the existing unit but had committed certain violation and the project proponent has submitted all the information and details but the State has not filed case under Section 15/19 of Environment (Protection) Act, 1986, such cases shall also be considered by the Authority, as the project proponent is not at fault."

4. The earlier Office Memorandum dated 22.08.2014 may be treated as amended to this an extent. The other stipulations stated in the Office Memorandum dated 22.08.2014 will continue to apply.

3. This issues with the approval of the Competent Authority.

07.11.2014

(Dr. Satish C. Garkoti)
Scientist 'F'

Copy to:

1. All the officers of IA Division
2. Chairperson/ Member Secretaries of all the SEIAAs/SEACs
3. Chairman of all the Expert Appraisal Committees
4. Chairman, CPCB
5. Chairpersons/ Member Secretaries of all SPCBs/ UTPCCs

Copy for information:

1. PS to MOS(Independent Charge)
2. PPS to Secretary(EF&CC)
3. PPS to AS(SS)
4. PS to JS(MKS)
5. Website, MoEF&CC
6. Guard File

F. No. IA3-22/10/2022-IA.III [E 177258]
Government of India
Ministry of Environment, Forest and Climate Change
(IA Division)

Indira Paryavaran Bhawan
Jor Bagh Road, Aliganj,
New Delhi - 110003

Dated: 8th June, 2022

OFFICE MEMORANDUM

Subject: Standardizing the validity of baseline data and public consultation reports for submission of proposal within the validity period of Terms of Reference (ToR) under the provisions of EIA Notification, 2006 - regarding.

As per the provisions of EIA Notification, 2006, Terms of References (ToR) are being accorded to the various developmental projects listed in the schedule to the EIA Notification, 2006 except schedule 8(a) for undertaking EIA/EMP study. In this regard, Ministry issued Office Memorandum No. J-11013/41/2006-IA-II (I) (Part) dated 29th August 2017 stating that the validity period of ToR as three years for all the projects/activities and four years for River Valley and HEP Projects. This validity period could be further extended by a maximum period of one year, thereby making the outer limit for validity of ToR as four years for all projects/activities and five years for River Valley and HEP projects.

2. Further, in the above-mentioned O.M, it is also stated that the baseline data used for preparation of EIA/EMP reports may be collected at any stage, irrespective of the request for ToR or the issue thereof. However, such baseline data and the public consultation should not be older than three years, at the time of submission of the proposal, for grant of Environmental Clearance (EC), as per ToRs prescribed.

3. Thereafter, MoEF&CC also issued a gazette notification vide S.O.751 (E) dated 17/02/2020 stating that the Terms of Reference for the projects or activities except for River valley and Hydro-electric projects, issued by the concerned regulatory authority, shall have the validity of four years from the date of issue. In case of the River valley and Hydro-electric projects, the validity of ToR will be for five years.

4. Instances have been brought to the notice of this Ministry wherein the application for Environment Clearance are being submitted by the project proponent well within the validity period of the ToR but the baseline data is older than three years. In such situation, project proponent is required to start the entire process of baseline data collection *de novo*. Many a times, it is also observed that the delay in submission of EC proposal happens due to delay in rescheduling and conduct of public hearing for reasons beyond the control of project proponent.

5. In many such cases where proposals are submitted with baseline data older than three years, the EAC prescribes for revalidation of data with fresh baseline data of 15 days/1 month/ 1 season on a case to case basis.

6. The aforesaid matter has been examined in the Ministry. In order to address this issue in a practical manner and to bring uniformity in handling such proposals, the following standard procedures shall be followed with immediate effect:

i. Baseline data used for preparation of EIA/EMP reports may be collected at any stage of the EC process or even before the grant of ToR.

ii. Public consultation shall be conducted after the grant of ToR. The Public consultation conducted after the expiry of ToR shall not be accepted by the Regulatory Authority.

iii. The baseline data and Public Hearing shall not be more than three years old at the time of submission of application for consideration of EC.

iv. At the time of application for EC, in case baseline data is older than three years, but less than five years old in the case of River valley and HEP Projects, or less than four years old in the case of other projects, the same shall be considered, subject to the condition that it is revalidated with one season fresh non-monsoon data collected after three years of the initial baseline data.

v. In case the proposal for EC along with EIA/EMP reports based on the ToRs prescribed is not submitted within the validity period of ToRs, and/or not complying with the above-mentioned criteria, the concerned Member Secretary shall not accept the proposal and process shall be initiated *de novo* by the PP.

7. This O.M. is issued in supersession of OM no. J-11013/41/2006-IA-II (I) (Part) dated 29th August 2017 and with the approval of the Competent Authority.

3/5/22

(Sundar Ramanathan)
Scientist E

To

1. Chairman, Central Pollution Control Board (CPCB).
2. Chairman of all the Expert Appraisal Committees
3. Chairperson/Member Secretaries of all the SEIAAs/SEACs
4. Chairpersons/Member Secretaries of all SPCBs/UTPCCs
5. All the Officers of I.A. Division

Copy for information to:

1. PS to Hon'ble Minister for Environment, Forest and Climate Change
2. PS to Hon'ble MoS (EF&CC)
3. PPS to Secretary (EF&CC)
4. PPS to DGF&SS (EF&CC)
5. PPS to AS(TK)/PPS to JS (SKB)
6. Website, MoEF&CC/Guard file.

-TRUE COPY-

ANNEXURE R/38

GHCL Limited

Date: 05/01/2023

To,
Director and Member Secretary (Industry III),
Ministry of Environment, Forest & Climate Change,
3rd Floor, Vayu Wing, Indira Paryavaran Bhavan,
Jor Bagh Road, Ali Ganj,
New Delhi- 110003.

Subject: Submission of EDS reply for obtaining Environmental Clearance for proposed Greenfield project of M/s. GHCL Limited
Ref.: EDS sought by MoEF & CC dated on 07/12/2022 (attached as Annexure – 1)
Proposal no.: IA/GJ/IND3/408164/2022

Respected Sir,
It is requested to note that point wise reply of EDS sought by MoEF&CC dated on 07/12/2022 is given as follows:

Sr. no.	EDS sought by MoEF&CC	EDS reply
1.	Please submit all the requisite documents as per CRZ Notification, 2011 and the recommendations of SCZMA.	It is requested to note that CRZ application is under scrutinization at GCZMA. We have submitted replies of the additional information sought by GCZMA in the Technical Committee presentation dated 17-01-2022 and reply of the same has been submitted to GCZMA on 29th November, 2022 along with Final EIA report. Reference of the same is attached here as **Annexure-2** for your ready reference. We will furnish GCZMA recommendations once the same is obtained.
2	Please submit the Stage-I FC for the forest land.	Online application for Forest clearance was made on 21-09-2021 under Forest (Conservation) act, 1980 to MOEFCC for diversion of 0.9689 ha Unclassified Forest land for laying seawater intake and outfall pipeline vide proposal no. FP/GJ/Others/147527/2021. The online status of the aforesaid application is "Proposal is pending at DFO due to EDS raised by State Government". Once the Stage I forest Clearance is obtained, we will submit the same. The online status be referred as **Annexure-3**. Query received from DFO seeking geotagged drawing requirement through DILR study. Proof of the same is attached as **Annexure-4.** It is under process.
3	Please upload Copy of duly signed Proceedings of Public Hearing in English in the relevant section.	We have noted your suggestion, However Proceeding size greater than 5 MB is not accepted by online portal. So, we have submitted 93 parts of proceeding into the portal. In addition to that, we have attached here Google drive link to see the sequential public hearing proceeding for your ready reference. It is attached as **Annexure-5.** Signed copy of proceeding is attached as **Annexure-6.**
4	Under Part-A, please revise Whether QCI/NABET Accredited EIA Consultant engaged?	During online proposal submission CSIR NEERI name was not appearing in drop down list so NO was selected. The proposed project "Greenfield Chemical Complex" was envisaged and conceptualized during Vibrant Gujarat Summit 2017, Govt. of Gujarat. During MOU GHCL Ltd. has committed to set up Greenfield Soda Ash facility in District Kutch, Gujarat. At the time of planning of execution of project, there was no NABET accredited Consultant for soda ash sector available. List of ACO is attached as **Annexure-7** for your reference. M/s. GHCL limited has appointed institutes of National repute like CSIR NEERI, Nagpur based on their past experience of EIA for similar nature of Greenfield Soda Ash project at Gujarat coast. The proof of the work order is attached as **Annexure-8.**

GHCL Limited

		M/s. GHCL Limited has informed to MoEF&CC regarding the appointment of EIA consultants (CSIR NEERI) Vide Letter no. GHCL/AHD/ENV/MOEF/VND/17-18/07 dated 23-11-2017. The same is attached as **Annexure-9.** It is also requested to note that all the EIA study of Soda ash industry was earlier carried out by only Chlor Alkali Approved consultant and Environmental Clearance was granted by MoEF&CC. The list of Projects is given below for reference. **Name of Company** / **Chlor Alkali accredited consultant engaged** / **EC granted by MoEF&CC - Date** RSPL / NEERI / 12th Nov-2015 TATA chemical / J. M. EnviroNet Pvt Ltd / 5th July-2019 Nirma Limited / San Envirotech Pvt Limited & Kadam Environmental Consultant / 6th Aug-2021 After that CSIR-NEERI and GHCL Limited has also started site alternatives for the proposed Greenfield chemical complex, we have examined 5 site alternatives for proposed Greenfield chemical complex and this activity has taken significant time to finalize the proposed site and after that we have started collection of Baseline monitoring. We intended to commission plant activities at earliest but due to COVID 19 the project activities got seriously impacted and delay has been affected. GHCL Ltd. had made an online proposal during July 2021 to MOEFCC for obtaining TOR proposal for the aforesaid project, in Covering letter of the proposal mentioned status about appointment of CSIR NEERI (**Annexure-10**). At the time of submission of TOR proposal, the baseline data was near completion. Hon'ble MOEFCC has raised EDS for TOR proposal. During reply of EDS we have again indicated the name of hired EIA consultant (CSIR NEERI). TOR was granted for the project on August 2021 after reply of EDS. Based on previous preceding, we request you to consider our case and proceed for Environmental Clearance.
`5	Please upload all the QCI-NABET accreditation certificates of the Consultant for sector 4 (e) for the entire period of engagement for this EIA & EMP.	It is requested to note that CSIR NEERI consultant has been engaged during entire course of time for preparation of EIA/EMP report for category 4(e). Looking into condition NEERI was the only organisation to carry out the study in 2017 as they were accredited for Chlor Alkali, so we have appointed them as they have carried out studies previously for similar Soda Ash plant. List of agencies engaged is mentioned below: **Scope of work** / **Agencies** / **Accreditation/ Institution/ Professional expertise** **EIA/EMP Study** / CSIR-NEERI / Attached as **Annexure-A** **Marine EIA** / CSIR-NIO Mumbai / Attached as **Annexure-B** **CRZ Mapping** / IRS, Chennai / Attached as **Annexure-C**
6	Please upload the NABL accreditation certificates of the laboratory for the entire study period.	Accreditation is attached as **Annexure-11.**
7	Please also crosscheck and ensure that all the	Undertaking is attached as **Annexure-12.**

GHCL Limited

	information and documents in the CAF & Proposal are filled/uploaded and are factually correct.	

If any confusion, feel free to contact us.

Thanking You.
Yours faithfully,
For GHCL ltd.

[N N Radia - Chief Operating officer]

Enclosure:
Annexure-1 EDS
Annexure-2 Submission proof of GCZMA requirements
Annexure-3 Online status of the proposal of Forest Clearance as on date
Annexure-4 Query Generated by DFO regarding DILR study.
Annexure-5 Google link for Public Hearing minutes
Annexure-6 Signed copy of Proceeding
Annexure-7 List of Accredited consultant organisation
Annexure-8 Work order given to CSIR NEERI
Annexure-9 Letter by GHCL Limited to MoEF&CC regarding appointment of CSIR NEERI as EIA consultant
Annexure-10 Covering letter of proposal stating CSIR NEERI as EIA consultant for the project
Annexure-11 NABL Accreditation certificate
Annexure-12 Undertaking by GHCL stating data are factually correct.

Annexure-A NABET accreditation certificate of CSIR NEERI
Annexure-B Letter from NABET to NIO
Annexure-C Notification of accredited CRZ mapping agencies

10

Search

S. No	Proposal No.	Project	SW No.	Date	Remarks	Document	Action
1	IA/GJ/IND3/408164/2022	"Greenfield Chemical Complex" of GHCL Ltd.	SW/107658/2022	Dec 7, 2022	{"last_remarks":"1. Please submit all the requisite documents as per CRZ Notification, 2011 and the recommendations of SCZMA. 2. Please submit the Stage-I FC for the forest land 3. Please upload ?Copy of duly signed Proceedings of Public Hearing in English? in the relevant section. 4. Under Part-A, please revise ?Whether QCI/NABET Accredited EIA Consultant engaged?? 5. Please upload all the QCI-NABET accreditation certificates of the Consultant for sector 4 (e) for the entire period of engagement for this EIA & EMP 6. Please upload the NABL accreditation certificates of the laboratory for the entire study period 7. Please also crosscheck and ensure that all the information and documents in the CAF & Proposal are filled/uploaded and are factually correct. ","additional_document":"http://environmentclearance.nic.in/writereaddata/Online/EDS/"}	Download	Update

Showing 1 to 1 of 1 entries

« ‹ 1 › »

GHCL Limited

Date: 29/11/2022

To,
Director(Environment) & Member Secretory,
Gujarat Coastal Zone Management Authority (GCZMA)
Forest & Environment Department,
Gandhinagar, Gujarat

Subject: Reply of Additional details required for CRZ Clearance for Greenfield Chemical Complex Seawater Intake and Effluent disposal facilities at Village- Bada, ta- Mandavi
Ref.: Email from GCZMA dated on 01/02/2022 (Annexure-1)

Respected Sir,

	Suggestion	Answer
1.	Submit final EIA report.	It is requested to note that Final Environment Impact Assessment Report with Public hearing minutes and Action plan has been submitted to Ministry of Environment, Forest and Climate Change. Acknowledgment Slip, Final EIA Report and Report of Part-C which is generated after Final EIA submission is attached as **Annexure-2.**
2.	Submit Public Hearing details.	It is requested to note that the public hearing was completed on 17-10-2022 at 11.00 Hrs. Venue: Project Site, Survey no . 432, Village: Bada, Taluka: Mandvi, District: Kutch, Gujarat. Public hearing minutes is attached as **Annexure-3** and the same have been forwarded to MOEFCC.
3.	Forest land involve in the proposed project, submit status of Forest Clearance.	It is requested to note that there is no forest land within the boundary of proposed project site. However, some part of the unclassed forest area located south of the project site outside boundary. Sea water intake and outfall pipeline will pass through underground micro tunnel in specific corridor to cross forest area. M/s GHCL has applied to MoEF & CC for Forest Diversion of 0.9689 Ha. of un-class forest land vide' proposal no. FP/GJ/Others/147527/2021. The Current status of Forest Clearance application is pending at State level. Proof of status and Forest clearance application is attached as **Annexure-4.**
4.	Submit Olive Ridley Turtle conservation plan approved from Forest Department.	GHCL Ltd have submitted Conservation Plan for Olive Ridley Turtle to CWLW department of Gujarat. Conservation plan prepared by Zoological Survey of India and Dr Bharat Jethava – QCI NABET approved expert as well as Submission proof are attached as

M.V 6/12/2022

Forests & Environment Dept.
Govt. of Gujarat Sachivalaya
New Sachivalaya, Gandhinagar

GHCL Limited

		Annexure-5.
5.	Submit sand dunes conservation plan	Conservation plan of Sand Dunes is prepared by CSIR- National Institute of Oceanography, Mumbai which is attached as **Annexure-6.**
6.	Based on submission of above details team of official will visit the site.	Noted.

We kindly request you to consider the same and do the needful for CRZ Clearance to our above stated project proposal

Thanking You.
Yours truly,

For, **M/s. GHCL Ltd**

Enclosure:

Annexure-1 Email dated 01/02/2022
Annexure-2 Part-C, Final EIA Report and Acknowledgement Slip of Final EIA submission
Annexure-3 Public Hearing Minutes
Annexure-4 Forest Clearnce application and its status
Annexure-5 Conservation plan of Olive Ridley Turtle and its submission proof
Annexure-6 Conservation plan of Sand dunes

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Annexure-3

TimeLine Details

Proposal received date at each stage of flow.

A. General Details

(i). Proposal No. : FP/GJ/Others/147527/2021

(ii). Name of Project for which Forest Land is required : Greenfield Chemical Complex - Seawater intake & effluent disposal pipelines and passage for equipment movement.

(iii). Short narrative of the proposal and Project/scheme for which the forest land is required : Diversion of 0.9689 hectare of Forest Land for Seawater intake & effluent disposal pipelines and passage for equipment movement for Greenfield Chemical complex at Village : Bada of Taluka Mandavi, District Kutch.

(iv). State : Gujarat

(v). Category of the Project : Others

(vi). Shape of forest land proposed to be diverted : Linear

(vii). Area of forest land proposed for diversion(in ha.): 0.9689

B. Time Line

Proposal No.	Submitted by User Agency	Query for Shortcoming(if any) by Nodal Officer	Resubmission of Proposal by User Agency	Query by Nodal Officer for submitting Hard Copies	Uploading(by U.A.) of copies of receipt received from DFO & DC	Division	Circle	Nodal Office	State Government	Regional Office	Stage-I Approval on	Stage-II Approval on
FP/GJ/Others/147527/2021	21/09/2021	aa		24/09/2021	06/10/2021	**Kutch-West** :06/10/2021	**Kutch Circle** : 07/01/2022 (**Kutch-West**)	**Gujarat** : 28/01/2022	**Gujarat**: 04/02/2022			

C. Essential Details Sought History

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Communication between Regional Office & State Government	Communication between State Government & Nodal Officer	Communication between Nodal Officer & Circle	Communication between Circle & Division	Communication between Division & User Agency
	Query raised by State Government (Gujarat) on:**08/12/2022**	Query raised by Nodal Officer (Gujarat) on:**15/12/2022**	Query raised by Circle (Kutch Circle) on:**11/01/2022** Replied by DFO (Kutch-West) on:**24/01/2022** Query raised by Circle (Kutch Circle) on:**19/12/2022** Replied by DFO () on:	Query raised by DFO (Kutch-West) on:**11/10/2021** Replied by UA on :**26/10/2021** Query raised by DFO (Kutch-West) on:**26/10/2021** Replied by UA on :**18/11/2021** Query raised by DFO (Kutch-West) on:**25/11/2021** Replied by UA on :**15/12/2021** Query raised by DFO (Kutch-West) on:**02/01/2023** Replied by UA on :

NOTE:- Proposal is pending at **User Agency** due to EDS raised by **State Government** .

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ક્રમાંક:અ/જમન/૨.૧૧/3૬૬૮/૨૦૨૨-૨૩
નાયબ વન સંરક્ષકશ્રીની કચેરી,
કચ્છ પશ્ચિમ વન વિભાગ,
અરિહંતનગર રોડ, ભુજ.
ફોન નં.-૦૨૮૩૨ ૨૩૧૫૨૭
e-mail: dcfwest@gmail.com
તા.૦૨/૧૧/૨૦૨૨.

પ્રતિ,
ચીફ ઓપરેટીંગ ઓફીસરશ્રી,
જી.એચ.સી.એલ.લીમીટેડ,
જી.એચ.સી.એલ હાઉસ,સ્વસ્તિક સોસાયટી,
પંજાબી હોલ સામે,નવરંગપુરા,અમદાવાદ
ગુજરાત-૩૮૦ ૦૦૯

વિષય:- Diversion of 0.9689 hectare of Forest land for laying part of Seawater intake and effluent disposal pipelines and passage for related construction equipment movement in kachchh District in favour of Chief operating Officer,GHCL,Ahmedabad.

સંદર્ભ:- અધિક અગ્ર મુખ્ય વન સંરક્ષકશ્રી,જમીન,ગુ.રા.,ગાંધીનગરના પત્રાંક:જમન/૨૯-બી/બ/૫૬૬૩-૬૪ તા.૧૧/૧૦/૨૦૨૨ (નકલ સામેલ)

જય ભારત સાથે ઉપરોક્ત વિષયે જણાવવાનું કે,અધિક અગ્ર મુખ્ય વન સંરક્ષકશ્રી,જમીન, ગુ.રા., ગાંધીનગરના સંદર્ભ દર્શિત પત્રથી મળેલ સુચના મુજબ તેઓના માંગણીવાળા વિસ્તારનો અક્ષાંક્ષ-રેખાંશ સાથેનો ડી.આઇ.એલ.આર.શ્રી દવારા અધિકૃત કરેલ માપણીશીટ તેમજ કે.એમ.એલ.ફાઇલ સાથેનો વિગતવાર અહેવાલ અત્રે સાદર કરવા જણાવવામાં આવે છે.

બિડાણ:- ઉપર મુજબ

(વાય.એસ.ઝાલા)
નાયબ વન સંરક્ષક
કચ્છ પશ્ચિમ વન વિભાગ,ભુજ

નકલ રવાના: રેન્જ ફોરેસ્ટ ઓફીસરશ્રી,માંડવી તરફ જાણ તથા ઉપરોક્ત બાબતે જરૂરી કાર્યવાહી સારૂ.

OnePlus
Triple Camera
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GUJARAT POLLUTION CONTROL BOARD

Regional Office : Kutch - West

Katira Complex-1, Manglam Char Rasta, Sanskar Nagar, Bhuj-Kutch : 370 001.
Ph. No. 02832-250620. email : ro-gpcb-kutw@gujarat.gov.in xgn site:gpcbxgn.gujarat.gov.in

NO: GPCB/RO-KUTCH (WEST)/PH/T-27(110)/765 Date: 24 NOV 2022

To,
The Member Secretary,
Gujarat Pollution Control Board,
"Paryavaran Bhavan", Sector 10-A,
Gandhinagar -382010. **(Kind Attn: Smt.D.P.Shah, Senior Environment Engineer)**

Sub: Proceeding of Public Hearing for "**M/s GHCL Limited for 11,00,000 TPA Light Soda Ash, 5,00,000 TPA Dense Soda Ash, 2,00,000 TPA Sodium Bicarbonate, 120 Captive Co-Generation Power Plant, at Village. Bada, Ta. Mandvi, Dist. Kutch**" covered under project **Category "A"** as mentioned in their request application.

Ref: GPCB HO letter No. GPCB/PH/2022-23/Kutch (West)-184/681152, dated. 23/08/2022.

Respected Sir,

In context to the above mentioned subject and reference, the Public Consultation of M/s GHCL Limited for 11,00,000 TPA Light Soda Ash, 5,00,000 TPA Dense Soda Ash, 2,00,000 TPA Sodium Bicarbonate, 120 Captive Co-Generation Power Plant, at Village. Bada, Ta. Mandvi, Dist. Kutch, project category 'A' was scheduled to be held on 06/04/2022 at 11:00 Hrs, Venue: GHCL Project Site, Survey No. 432, Village: Bada, Taluka: Mandvi, Dist. Kutch. Public hearing is time being postponed due to unavoidable circumstances and now the Public Hearing was held on 17/10/2022 at 11.00 hrs, Venue: GHCL Project Site, Survey No. 432, Village: Bada, Taluka: Mandvi, Dist. Kutch. Please find enclosed herewith the proceeding of Public Consultation. This is for your information and necessary action please.

Thanking you.

Yours Sincerely,

T.C. Barmeda

(T.C. Barmeda)
Regional officer

Encl:

Two sets of proceeding along with,
(1) Annexure-A, B & B1, C-1 to C-1154 (English & Gujarati), D-1 to D-1154 (English & Gujarati).
(2) Video CD of Public Consultation.
(3) CD of all Documents.

GUJARAT POLLUTION CONTROL BOARD
Regional Office –Kutch (West)
Katira Complex-1, Magalam Char Rasta, Sanskar Nagar,
Bhuj- 370001, Phone: (02832) 250620
E- mail: ro-gpcb-kutw@gujarat.gov.in

PUBLIC HEARING PROCEEDING

As per the provision of Notification No. S.O.1533 (E) dated 14/09/2006 and its subsequent amendment thereof, Ministry of Environment, Forest & Climate Change, Government of India, New Delhi, Public Hearing has been conducted for M/s. GHCL Limited for Proposed the Soda Ash Plant (1) Light Soda Ash Plant – 11,00,000 TPA, (2) Dense Soda Ash Plant @ 5,00,000 TPA, (3) Sodium Bicarbonate @ 2,00,000 TPA with solid fuel based Captive Cogeneration Power Plant @ 120 MW capacity at Village: Bada, Taluka: Mandvi, District: Kutch, covered under Project category "A" as mentioned in their request application.

The Public Hearing was scheduled to be held on 06/04/2022 at 11:00 Hrs, Venue: Project Site, Survey No. 432, Village: Bada, Taluka: Mandvi, Dist. Kutch. Public hearing was time being postponed due to unavoidable circumstances and now the Public hearing is scheduled to be held on 17/10/2022 at 11:00 Hrs, Venue: Project Site, Survey No. 432, Village: Bada, Taluka: Mandvi, Dist. Kutch.

A copy of the Draft Environment Impact Assessment report and Executive Summary of Draft Environment Impact Assessment report both in English and Gujarati were sent to the following authorities or offices to make available the draft EIA report for inspection to the public during normal office hours, till the Public Hearing is over.

1. The District Collector Office, Bhuj, Dist. Kutch
2. District Development Office, Bhuj, Dist.: Kutch
3. District Industry Centre, Bhuj, Dist.: Kutch
4. The Taluka Development Office, Ta. Mandvi, Dist. Kutch
5. Regional Officer, Integrated Regional Office, Ministry of Environment, Forests and Climate Change (MoEF & CC), Room No. 407, Aranya Bhavan, Near CH-3 Circle, Sector – 10A, Gandhinagar, Gujarat – 382010.
6. Regional Office, Gujarat Pollution Control Board (Kutch-West), Katira Complex – 1, Near Mangalam Char Rasta, Sanskarnagar, Bhuj, Kutch – 370001.

Also, Executive Summary in Gujarati language was send to Talaticum Mantri of 12 villages for widespread publicity of Public Hearing. Other concerned person having plausible stake in environmental aspects were requested to send their responses in writing to the concern regulatory authorities.

Announcement of Public Hearing was also made through loudspeaker and banners on auto rickshaws and the rickshaw was also rotated in the villages of the study area before the Public Hearing on dated 15/10/2022 & 16/10/2022.

The advertisement was published in earlier Gujarati Newspapers **"Divya Bhaskar"** on dated 03/03/2022 and in English Newspaper **"The Times of India"** on dated 04/03/2022. Re advertisement was published on Gujarati Newspapers **"Divya Bhaskar"** on dated 30/09/2022 and in English Newspaper **"The Times of India"** on dated 01/10/2022.

GUJARAT POLLUTION CONTROL BOARD
Regional Office –Kutch (West)
Katira Complex-1, Magalam Char Rasta, Sanskar Nagar,
Bhuj- 370001, Phone: (02832) 250620
E- mail: ro-gpcb-kutw@gujarat.gov.in

Shri. Chetan Misan (G.A.S), Sub Divisional Magistrate and Deputy Collector, Mundra, Kutch supervised and presided over the entire Public Hearing process.

A statement showing list of participants present during the Public Hearing is enclosed as **Annexure A.**

A statement showing salient points highlighting issues raised by the participants and responded by the representative of the applicant during the Public Hearing in English language is enclosed as **Annexure B** and in Gujarati language is enclosed as **Annexure B1.**

Statement showing responses and comments received in written, with respect to aforesaid public notice before and during the Public Hearing are enclosed as **Annexure C (C-Q-1 to C-Q-1154)** and replies given by project proponent with respect to these response and comments received in writing are enclosed as **Annexure D (D-A-1 to D-A-1154).**

Annexure E (E1 to E4) contains the advertisement published in Gujarati Newspapers **"Divya Bhaskar"** and in English Newspaper **"The Times of India"**. It also contains acknowledgement copies of EIA Report and Executive Summary submitted to authorities and Executive Summary submitted to village panchayat offices and photographs of announcement on microphone in the affected villages falling within 10 km radius of the proposed project area.

Place:
Project site,
Survey No. 432,
Village: Bada,
Taluka: Mandvi,
District: Kutch

Date: 17.10.2022

T. C. Barmeda
Regional Officer
GPCB Kutch (West) as
Representative of the Member
Secretary, GPCB

Chetan Misan (G.A.S)
Sub Divisional Magistrate &
Deputy Collector,
Mundra-Kutch

Encl.:

1. Annexure A, B, B1, C, D & E as above.
2. Video DVD containing videography of Public Hearing.
3. CD containing PDF file of Minutes of Meeting (MOM) of the PH proceeding and Annexures.

List 'A' – Accredited EIA Consultant Organizations complying with Version 3 of the Scheme - as on August 08, 2017 (#)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
1	**Aadhi Boomi Mining and Enviro Tech Private Limited** (formerly known as Suriya Mining Services) **Address:**3/216, K.S.V.Nagar, Narasothipatti, Salem-636004 **Email:**suriyakumarsemban@gmail.com **Tel.:**09842729655, 09443290855 *Conditions apply*	1	Mining of minerals – opencast only	A	1 (a) (i)
			Mining of minerals – underground only	B	
		38	Building and construction projects	B	8(a)
2	**Aakhivi Consultants** **Address:**57 C, Block E5, Shatabdi Vihar, Sector 52, Noida, UP - 201 308 **Email:**aakhivi.2016@gmail.com	4	Thermal power plants	A**	1 (d)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Tel.:08409580043; 07210434847 *** Though the EIA Coordinator for this sector was found suitable for Cat. A, the organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment. They can take up projects in this sector only for Cat. B as an organization.* *Conditions apply*				
3	**Aarvee Associates Architects Engineers & Consultants Pvt. Ltd.** **Address:** 8-2-5, Ravula Residency Srinagar Colony, Hyderabad **E.mail:** aarvee@aarvee.net, kprasad@aarvee.net, water@aarvee.net **Tel.:** 040-23737633	1	Mining of minerals including opencast/ underground mining	A	1 (a) (i)
		3	River Valley projects	A	1 (c)
		4	Thermal power plants	A	1 (d)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2 & 3 of	B	6 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Conditions apply		MSIHC Rules 1989 amended 2000)		
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes	B	7 (c)
		34	Highway	A	7 (f)
4	**ABC Techno Labs India Private Limited** (formerly known as ABC Environ Solutions Pvt. Ltd.) **Address:** # 400, 13th Street, SIDCO Industrial Estate (North Phase), Ambattur, Chennai - 600098 **E-mail:**abc@abctechnolab.com, info@abctechnolab.com **Tel.:** 044-26161123/24/25/26 91 95660 55555 and 91 95660 67777 *Conditions apply*	1	Mining of minerals - Opencast only	A	1 (a) (i)
			Mining of minerals – Underground only	B	
		2	Offshore and onshore oil and gas exploration, development & productions	A	1 (b)
		3	River Valley projects - Irrigation projects only	A	1 (c)
		4	Thermal power plant	A	1 (d)
		7	Mineral beneficiation	B	2 (b)
		8	Metallurgical industries (secondary ferrous only)	B	3 (a)
		10	Petroleum refining industry	A	4 (a)
		15	Leather/skin/hide processing industry	A	4 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		16	Chemical Fertilizers	A	5 (a)
		18	Petro-chemical complexes (industries based on processing of petroleum fractions & natural gas and /or reforming to aromatics)	A	5 (c)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		22	Distilleries	A	5 (g)
		25	Sugar Industry	B	5 (j)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/sanctuaries/ coral reefs/ecologically sensitive areas including LNG terminal	A	6 (a)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		29	Air ports	A	7 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes	B	7 (c)
		33	Ports, harbours, jetties, marine terminals, break waters and dredging	A	7(e)
		34	Highways	A	7 (f)
		36	Common effluent treatment plants (CETPs)	B	7 (h)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
5	**Aditya Environmental Services Pvt. Ltd.** **Address:** 107, Hiren Light Industrial Estate, Mogul Lane, Mahim, Mumbai – 400016 **Email:**rajiv@aespl.co.in **Tel:** 022- 24456473/ 42127500, 09821513367	1	Mining of minerals including opencast/ underground mining	A	1 (a) (i)
		4	Thermal power plants	A	1 (d)
		9	Cement Plants	A	3(b)
		17	Pesticides industry and pesticide specific intermediates (excluding formulations)	A	5 (b)
		20	Petrochemical based processing (processes other than cracking &	A	5 (e)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Conditions apply		reformation and not covered under the complexes)		
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		31	Industrial estates/ parks/ complexes/ Areas, export processing Zones (EPZs), Special economic zones (SEZs), Biotech Parks, Leather Complexes	A	7 (c)
		32	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	A	7 (d)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		34	Highways	A	7 (f)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
6	**AECOM India Pvt. Ltd.**	1	Mining of minerals including Open	A	1 (a) (i)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Address: 9/F, Infinity Tower – 'C', DLF Cyber City, DLF Phase – II, Gurgaon – 122002 **E-mail:** Somnath.Mukherjee@aecom.com **Tel.:** 0124-2816000/36, 09810502990 *Conditions apply*		cast/ Underground mining		
		2	Offshore and onshore oil and gas exploration, development & productions	A	1 (b)
		3	River Valley projects	A	1 (c)
		4	Thermal power plants	A	1 (d)
		9	Cement plants	A	3 (b)
		16	Chemical Fertilizers	A	5 (a)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		29	Air ports	A	7 (a)
		31	Industrial estates/ parks/ complexes/ Areas, export processing Zones (EPZs), Special economic zones (SEZs), Biotech Parks, Leather Complexes	A	7 (c)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		34	Highways	A	7 (f)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
7	**Allied Engineering and Consultancy Services** **Address:** 95/S, Kankulia Road, Kolkata-700029 **E-mail:** spsengupta13@gmail.com **Tel.:** 94333-48858	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		6	Coal Washeries	A	2 (a)
		7	Mineral beneficiation including pelletisation	A	2 (b)
8	**Amaltas Enviro Industrial Consultants Ltd.** **Address:** B-1/1244, Vasant Kunj, New Delhi-110 070 **E-mail:** amaltascon@gmail.com , dev.env81@gmail.com	1	Mining of minerals including Open cast/ Underground mining	B	1 (a) (i)
		4	Thermal power plants	B	1 (d)
		9	Cement plants	B	3 (b)
		34	Highways	A	7 (f)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Tel.: 011-41848475/4188476/+919873991919 *Conditions apply*				
9	**Anacon Laboratories Pvt. Ltd.** **Address:** 60, Bajiprabhu Nagar, Nagpur – 440033 **E-mail:** anaconngp@gmail.com **Tel.:** 0712 – 2242077, 09373104416 *Conditions apply*	1	Mining of minerals - Open cast only	A	1 (a) (i)
		3	River Valley projects	B	1 (c)
		4	Thermal power plants	A	1 (d)
		6	Coal Washeries	A	2 (a)
		8	Metallurgical industries (ferrous only)- both primary & secondary	A	3 (a)
		9	Cement plants	A	3 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		22	Distilleries	B	5 (g)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		29	Air ports	A	7 (a)
		34	Highways	A	7 (f)
		36	Common effluent treatment plants (CETPs)	B	7 (h)
		38	Building and construction projects	B	8 (a)
10	**Anand Consultants** **Address:** 16, Everest Tower, B/h Jain Temple, Nr. Ankur Society, Ahmedabad – 380013 **E-mail:** environment@dataone.in pollutioncontrol@dataone.in	4	Thermal power plants	A	1 (d)
		9	Cement Plant	A	3(b)
		17	Pesticides industry and pesticide specific intermediates (excluding formulations)	A	5 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding	A	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Tel.: 09825011748 *Conditions apply*		drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)		
		38	Building and construction projects	B	8 (a)
11	**Apex Mintech Consultants** **Address:** 21, Ravindra Nagar Opp. Working Women Old Hostel, 'C' – Class, Pratapnagar, Udaipur **E-mail:** rkminerals_udr@yahoo.com **Tel.:** 0294- 2490760/ 2490803 09829161803, 09352995558 *Conditions apply*	1	Mining of minerals (Open cast only)	A	1 (a) (i)
12	**Aplinka Solutions & Technologies Private Limited** **Address** -A-48, Ground Floor, Sector-64, Noida -201301	1	Mining of minerals (opencast only)	A	1 (a) (i)
		31	Industrial estates/ parks/ complexes/areas, export processing Zones (EPZs), Special Economic Zones	B	7 (c)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	E-mail: director@aplinka.in info.aplinkasolutions@gmail.com **Tel.:** 0120-4540584 Mobile: +91-8375955991 *Conditions apply*		(SEZs), Biotech Parks, Leather Complexes		
		34	Highways	A	7 (f)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
13	**Aracadis India Pvt limited** (Formerly known as Senes Consultants India Pvt. Ltd.) **Address:** 1st Floor Tower B, Logix Techno Park, Plot No. 5, Sector 127, Noida **e. mail:** mhazra@senesindia.com **Tel.:** 0120 – 4368400 09810881710	2	Offshore and onshore oil and gas exploration, development & production	A	1 (b)
		3	River Valley Projects	A	1 (c)
		4	Thermal power plants	A	1 (d)
		9	Cement plants	A	3 (b)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/ coral reefs/ ecologically sensitive Areas including LNG terminal	A	6 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Conditions apply	31	Industrial estates/ parks/ complexes/Areas, export processing Zones(EPZs), Special economic zones(SEZs), Biotech Parks, Leather Complexes	A	7 (c)
		33	Ports, harbors, break waters and dredging	A	7(e)
		34	Highways	A	7 (f)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
14	**Ascenso Enviro Private Limited** (Earlier known as Ascenso Management & Consulting Services Pvt. Ltd.) **Address:**D-79, 2nd Floor, Sector - 6, Noida - 201 301 **E-mail:** purushottam@amcgroup.co.in	1	Mining of minerals - Open cast only	A	1 (a) (i)
		6	Coal washeries	B	2 (a)
		7	Mineral beneficiation including pelletisation	B	2 (b)
		9	Cement Plants	A	3 (b)
		22	Distilleries	A	5 (g)
		34	Highways	A	7 (f)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Tel.: 99581 49985 *Conditions apply*	38	Building and construction projects	B	8 (a)
		39	Townships and Area Development projects	B	8 (b)
15	**Asian Consulting Engineers (Pvt.) Ltd.** **Address:** 66, Hemkunt Colony, 2nd Floor, New Delhi – 110048 **e. mail:** amahajan@asianconsulting.org **Tel.:** 011- 41634926 09312693905 *Conditions apply*	2	Offshore and onshore oil and gas exploration, development & production	A	1 (b)
		3	River valley projects	A	1 (c)
		7	Mineral beneficiation including pelletisation	A	2 (b)
		8	Metallurgical industries - (ferrous & nonferrous) - both primary & secondary	A	3 (a)
		16	Chemical Fertilizers	A	5 (a)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		34	Highways	A	7 (f)
		38	Building and construction projects	B	8 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
16	**Aqura Enviro Projects Pvt. Ltd** (formerly Known as Aqura Labs Pvt. Ltd.) **Address:** Suit 414, 4th Floor, North Block Tower-1,World Trade Park, J.L.N. Marg, Malviya Nagar, Jaipur-302017 Tel::0141-2728123, 2728051 **E. mail**:prashant.wagh@aquralabs.com *Conditions apply*	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		3	Irrigation projects only	B	1 (c)
		4	Thermal Power Plant	B	1 (d)
		8	Metallurgical industries (ferrous & nonferrous)- both primary & secondary	B	3 (a)
		9	Cement Plants	A	3 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	B	5 (f)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		33	Ports, harbours, break waters and dredging	A	7(e)
		34	Highways	A	7 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
17	**B. S. Envi – Tech (P) Ltd.** **Address:**12-13-1270/71/73, 'Amity Ville', 4th Floor, St. Ann's Road, Tarnaka, Secunderabad – 500017 **e. mail:** bsenvitech@gmail.com **website:**www.bsenvitech.com **Tel.:** 040-49783062/27016806 **Fax :**040-49783063 *Conditions apply*	1	Mining of minerals including Open cast & Underground mining	A	1 (a) (i)
		4	Thermal power plants	A	1 (d)
		7	Mineral Beneficiation including pelletisation	A	2 (b)
		8	Metallurgical industries (ferrous & non-ferrous) - both primary and secondary	A	3 (a)
		9	Cement plants	A	3 (b)
		11	Coke oven plants	B	4 (b)
		12	Asbestos milling and asbestos based products	A	4 (c)
		22	Distilleries	A	5 (g)
		25	Sugar Industry	B	5 (j)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
18	**Bhagavathi Ana Labs Pvt. Limited**	1	Mining of minerals including Open cast/ Underground mining	A	1 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Address: Plot No. 7-2-C14, Industrial Estate, Sanath Nagar, Hyderabad-500018, Telangana **e.mail:** shyam.sundar@in.bureauveritas.com bhavna.polimera@in.bureauveritas.com **Tel.:** 91-40-23803800, +91-40-23803808, +91-40-23803813; 09391116139 *Conditions apply*	2	Offshore and Onshore oil and gas exploration, development & production	A	1 (b)
		4	Thermal power plants	A	1 (d)
		6	Coal washeries	B	2 (a)
		7	Mineral beneficiation including pelletisation	A	2 (b)
		8	Metallurgical industries (ferrous & non ferrous) - both primary and secondary	A	3 (a)
		9	Cement plants	A	3 (b)
		10	Petroleum refining industry	A	4 (a)
		11	Coke oven plants	B	4 (b)
		16	Chemical fertilizers	A	-
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including	A	6 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			LNG terminal		
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes	A	7 (c)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
19	**Bhagwati Enviro Care Pvt. Ltd.** **Address:** 28, 29, 30, Parmeshwar Estate – II, Phase I, GIDC Estate, Vatva, Ahmedabad – 382445 **E-mail:** bhagwatienvirotech5@gmail.com bhagwatienviro@yahoo.com **Tel.:** 079- 40083051/ 25834567 09824051541 *Conditions apply*	1	Mining of Minerals- Open Cast only	B	1 (a) (i)
		8	Metallurgical industries (ferrous & non-ferrous)	B	3 (a)
		17	Pesticides industry and pesticide specific intermediates (excluding formulations)	A	5 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		38	Building and construction projects	B	8 (a)
20	**Building Environment (India) Pvt. Ltd.** **Address:** Office no. 401, 4th Floor, Dakshana Building, Near Raigad Bhavan, Sector 15, CBD Belapur, Navi Mumbai 400 614. **E-mail:** hkolatkar@buildingenvironmentindia.com **Tel.:** 022-27578554 09820522779 *Conditions apply*	2	Offshore and Onshore oil and gas exploration, development & production	A	1 (b)
		4	Thermal power plants	A	1 (d)
		9	Cement plants	B	3 (b)
		10	Petroleum refining industry	A	4 (a)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	B	5 (f)
		24	Pulp & paper industry excluding manufacturing	A	5(i)
		25	Sugar Industry	B	5(j)
		31	Industrial estates/ parks/ complexes/ Areas, export processing Zones (EPZs), Special economic zones (SEZs), Biotech Parks, leather Complexes	A	7 (c)
		33	Ports, harbours, break waters and dredging	A	7(e)
		34	Highways	A	7 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
21	**Center for Environment, Health and Safety** **Address:** Department of Civil Engineering Faculty of Engineering and Technology Annamalai University, Annamalai Nagar – 608002 **E-mail:** centreforehs@gmail.com nehrukumar.v.158@annamalaiuniversity.ac.in **Tel:** 04144-238731, 09443223091 *Conditions apply*	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		3	River Valley Projects	A	1 (c)
		9	Cement plants	A	3 (b)
		22	Distilleries	A	5 (g)
		31	Industrial Estates/ parks/ complexes/ Areas, export processing Zones (EPZs), Special economic zones (SEZs), Biotech Parks, Leather Complexes	A	7 (c)
		32	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	A	7 (d)
		33	Ports, harbours, break waters and dredging	B	7 (e)
		36	Common effluent treatment plants (CETPs)	B	7 (h)
22	**Central Institute of Mining and Fuel Research**	1	Mining of minerals including Open	A	1 (a) (i)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			cast/ Underground mining		
	Address: Barwa Road, Dhanbad, Jharkhand- 826015 **E.mail:** kbsingh.cimfr@gmail.com **Tel.:** 0326-2296023, 2296021 09431910845 *Conditions apply*	6	Coal Washeries	A	2 (a)
23	**Central Mine Planning & Design Institute Limited** **Address:** Gondwana Place, Kanke Road, Ranchi, Jharkhand – 834031 **E-mail:** gmenv.cmpdi@yahoo.co.in **Tel.:** 0651- 2230055/ 2792339 09934010057 *Conditions apply*	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		4	Thermal Power Plants	A	1(d)
		6	Coal Washeries	A	2 (a)
24	**Centre for Envotech and Management Consultancy Private Limited**	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
			Mining of minerals- open cast only	A	1 (a) (i)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Address: Plot No-N5/305, IRC Village, Nayapalli, Bhubaneswar – 751015 **E-mail:** cemc_consultancy@yahoo.co.in **Tel.:** 0674-2556444 09861032826 *Conditions apply*	3	Irrigation projects only	A	1 (c)
		4	Thermal power plants	A	1 (d)
		6	Coal Washeries	A	2 (a)
		7	Mineral beneficiation including pelletisation	A	2 (b)
		8	Metallurgical industries (ferrous & nonferrous) – both primary and secondary	A	3 (a)
		9	Cement plants	A	3 (b)
		33	Ports, harbours, break waters and dredging	B	7 (e)
		34	Highways	A	7 (f)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
25	**Chandigarh Pollution Testing Laboratory –EIA Division** **Address:** E-126, Phase VII, Industrial Area, Mohali (Punjab), Pin- 160055 **E-mail:** cptleia@gmail.com cptle126@gmail.com	8	Metallurgical industries (ferrous only)	B	3 (a)
		9	Cement plants	B	3 (b)
		16	Chemical fertilizers	A**	5 (a)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates **excluding** drug formulations; synthetic rubbers; basic organic chemicals, other	B	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Tel.: (+91) 0172 – 4669295, 5090312; Mobile: 99885-77295/99881-27295 *Conditions apply* *** Though the EIA Coordinator for these sectors were found suitable for Cat. A, the organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment. They can take up projects in these sectors only for Cat. B as an organization.*		synthetic organic chemicals and chemical intermediates)		
		22	Distilleries	A**	5 (g)
		24	Pulp & paper industry excluding manufacturing of paper from wastepaper and manufacture of paper from ready pulp without bleaching	A**	5 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8(b)
26	**Cholamandalam MS Risk Services** **Address:** Dare House, IInd Floor, 2-NSC Bose Road, Chennai- 600001 **e.mail:**subbaraoNV@cholams.murugappa.com **Tel.:** 044-30445620 09840018455	1	Mining of minerals Open cast mining only	B	1 (a) (i)
		4	Thermal power plants	A	1 (d)
		9	Cement plants	A	3 (b)
		10	Petroleum refining industry	A	4 (a)
		16	Chemical Fertilizers	A	5 (a)
		18*	Petro-chemical complexes (industries based on processing of petroleum fractions & natural gas and/or reforming to aromatics)	A	5 (c)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Conditions apply	21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		24	Pulp & paper industry excluding manufacturing of paper from waste paper and manufacture of paper from ready pulp without bleaching	A	5 (i)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		38	Building and construction projects	B	8 (a)
27	**Cognizance Research India Pvt. Ltd.** **Address:** GT – 20, Sector-117, Noida **E-mail**: criplindia@gmail.com **Tel.:** 9958486431,9953843815 *Conditions apply* *** Though the EIA Coordinator for these sectors*	1**	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		6**	Coal washeries	A	2 (a)
		7**	Mineral Beneficiation	A	2 (b)
		34	Highways	B	7 (f)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	were found suitable for Cat. A, the organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment. They can take up projects in these sectors only for Cat. B as an organization.				
28	**Consulting Engineers Group Ltd.** **Address:** B-11(G), Malviya Industrial Area, Jaipur-302 017 **E-mail**: ceg@cegindia.com **Tel.:** 0141-2751801, 2751802 *Conditions apply*	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		3	River Valley, Hydel, Drainage and Irrigation projects	A	1 (c)
		8	Metallurgical industries (non-ferrous) – both primary and secondary	B	3 (a)
		34	Highways	A	7 (f)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
29	**Creative Engineers & Consultants** **Address:** 9 B/4, Bharathwajar Street, East Tambaram, Chennai – 600059 **E-mail:** cecgiri@yahoo.com	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		4	Thermal power plants	A	1 (d)
		7	Mineral beneficiation including pelletisation	A	2 (b)
		9	Cement plants	A	3 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Tel.: 044- 22395170 09444133619 *Conditions apply*				
30	**Creative Enviro Services** **Address:** SR – 4, Shri Ram Kunj, E – 8 Bharat Nagar, Shahpura, Bhopal (MP) – 462039 **E-mail:** creative5@rediffmail.com creative.bpl@gmail.com umeshmishra70@rediffmail.com **Tel.:** 0755 – 4299319, 4243510 09425009319 *Conditions apply*	1	Mining of minerals Underground mining	A	1 (a) (i)
		4	Thermal power plants	B	1 (d)
		7	Mineral Beneficiation	B	2 (b)
		8	Metallurgical industries (ferrous & nonferrous) – both primary and secondary	A	3 (a)
		9	Cement plants	A	3 (b)
		16	Chemical Fertilizers	B	5 (a)
		22	Distilleries	A	5 (g)
		38	Building and construction projects	B	8 (a)
31	**Crystal Consultants** **Address:** Kshitij, Kashyap Vihar, Opp. Ashok Nagar, Road No. 3, Ranchi-834002 **E-mail:**shishirkumar18@gmail.com;	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		34	Highways	A	7 (f)
		36	Common Effluent Treatment Plants (CETPs)	B	7 (h)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	crystalconsultants2006@gmail.com Tel.: 09661806121 *Conditions apply*	37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
32	**Desein Private Limited** **Address:** Consulting Engineers, Desein House, Greater Kailash – II, New Delhi - 110048 **E-mail:** pjha@deseinindure.com **Tel.:** 011 – 41891456 09810218464 *Conditions apply*	4	Thermal power plants	A	1 (d)
33	**Detox Corporation Pvt. Ltd.** **Address:** 3rd Floor, K. G. Chamber, Opp. Gujarat Samachar Press, Udhana Darwaja, Ring Road, Surat – 395002	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		2	Offshore & Onshore Oil and gas exploration, development & production	A	1 (b)
		4	Thermal power plants	A	(d)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	e. mail: info@detoxcorp.com **Tel.:** 0261 – 2351248 09824102866 *Conditions apply*	8	Metallurgical industries (Ferrous only) – both primary & secondary	A	3 (a)
		18	Petro-chemical complexes (industries based on processing of petroleum fractions & natural gas and/or reforming to aromatics)	A	5 (c)
		19	Manmade fibers manufacturing	A	5 (d)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	B	5 (f)
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes	A	7 (c)
		32	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	A	7 (d)
		33	Jetties and dredging	A	7 (e)
		36	Common effluent treatment plants (CETPs)	B	7 (h)
		38	Building and construction projects	B	8 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		39	Townships and Area development projects	B	8 (b)
34	**Development Consultants Private limited** **Address:** 24 Park Street, Kolkata – 700016 **E-mail:**swapanc@in.dclgroup.com; arindas@in.dclgroup.com **Tel.:** 033-4012-5448, 09830558701 *Conditions apply*	1	Mining of minerals - Open cast only	A	1 (a) (i)
		4	Thermal power plants	A	1 (d)
		8	Metallurgical industries (ferrous and non-ferrous) - both primary & secondary	B	3 (a)
		9	Cement plants	B	3 (b)
		18	Petro-chemical complexes (industries based on processing of petroleum fractions & natural gas and/or reforming to aromatics)	A	5 (c)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		38	Building and construction projects	B	8 (a)
35	**Dr. Subbarao's Environment Centre** (formerly Known as Water and waste water research Centre) **Address:** "Arundhati", MSEB Rd, Opp., Sahyognagar, Vishrambag, Sangli- 416415	21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other	A	5 (f)

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		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	E-mail: bssubbarao@yahoo.com **Tel.:** 02332301857,09372109522 *Conditions apply*		synthetic organic chemicals and chemical intermediates)		
		22	Distilleries	A	5 (g)
		24	Pulp & paper industry excluding manufacturing of paper from wastepaper and manufacture of paper from ready pulp without bleaching	A	5 (i)
		25	Sugar Industry	B	5 (j)
36	**Earthcare Labs Private Limited** **Address:** "Nisarg", First Floor, Plot No. 16, Prashant Nagar, Near Ajni Square, Wardha Road, Nagpur – 440015 **E-mail:**earthcarelabs@rediffmail.com **Tel.:** 0712- 2251470 09822203750 *Conditions apply*	1	Mining of minerals	B	1 (a) (i)
		3	River Valley projects	B	1 (c)
		4	Thermal power plants	B	1 (d)
		8	Metallurgical industry (Ferrous only)	B	3 (a)
		9	Cement plants	B	3 (b)
		36	Common Effluent Treatment Plants (CETPs)	B	7 (h)
		39	Townships and Area development projects	B	8 (b)

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		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
37	**Earth Protection Group Environmental Consultants Pvt Ltd.** **Address:** 4-D/620 B, Sector 4, Gomti Nagar Extension, Lucknow- 226010 **E-mail:** epgec@yahoo.co.in; epgec1@gmail.com **Tel.:** 09415011152 *Conditions apply*	15	Leather/ skin/ hide processing industry	A	4 (f)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		38	Building and construction projects	B	8 (a)
		40 (i)	Automobile and Auto Components	-	-
38	**Eco Chem Sales & Services** **Address:** Office Floor, Ashoka Pavillion-A, Opp. Kapadia Health Club, New Civil Road, Surat – 395001 **E-mail**: eco@ecoshripad.com **Tel.:** 0261 – 2231630, 2236223 09227934111	1	Mining of minerals (Open Cast only)	A	1 (a) (i)
		2	Offshore and onshore oil and gas exploration, development & production	A	1 (b)
		4	Thermal power plants	A	1 (d)
		8	Metallurgical industries (ferrous & nonferrous)	A	3 (a)
		9	Cement plants	B	3 (b)
		13	Chlor-alkali industry	A	4 (d)
		16	Chemical Fertilizers	A	5 (a)

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		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Conditions apply	17	Pesticides industry and pesticide specific intermediates (excluding formulations)	A	5 (b)
		19	Manmade fibers manufacturing	A	5 (d)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		22	Distilleries	A	5 (g)
		23	Integrated paint industry	A	5 (h)
		24	Pulp & paper industry excluding manufacturing of paper from wastepaper and manufacture of paper from ready pulp without bleaching	A	5 (i)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/ coral reefs/ ecologically sensitive Areas including LNG terminal	A	6 (a)
		28	Isolated storage & handling of hazardous chemicals (As per	B	6 (b)

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		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			threshold planning quantity indicated in column 3 of Schedule 2 & 3 of MSIHC Rules 1989 amended 2000)		
		32	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	A	7 (d)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		34	Highways	A	7 (f)
		36	Common Effluent Treatment Plants (CETPs)	B	7 (h)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
39	**Eco Foot Forward Environmental Consultancy & Engineers Pvt. Ltd**	1	Mining of minerals including opencast/ underground mining	B	1 (a) (i)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk	A	5 (f)

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		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Address: D/318, Neelkanth Business Park, Ramdev Nagar, Vidyavihar (W), Mumbai – 400086 **E-mail:** amey@ecofootforward.com **Tel.:** 022-25144129; +91-9892814129 *Conditions apply*		drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)		
		33	Ports, harbours, break waters and dredging	B	7 (e)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
40	**Eco Services India Private Limited** **Address:** 1/134, Dhanakotiraja Street, Sundar Nagar, Ekkaduthangal, Guindy, Chennai – 600032 **E-mail:**	21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	B	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	kalaiselvan@ecoservices.in **Tel.:** 044- 30683067/ 43102232 09383999109 *Conditions apply*	31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes	B	7 (c)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development Projects	B	8 (b)
41	**Eco Tech Labs Pvt. Ltd.** **Address:** No.4, Manjolai 1st Main Road, Ekkaduthangal, Guindy, Chennai-600032 **E-mail:** dhamo@ecotechlabs.in **Tel**.: 044 – 22251228/43534036 09789906200/9600661191	4	Thermal power plants	B	1 (d)
		9	Cement plants	B	3 (b)
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes	B	7 (c)
		38	Building and construction projects	B	8 (a)

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		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	*** The organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment.* *Conditions apply*	39	Townships and Area development Projects	B	8 (b)
42	**Ecomen Laboratories Pvt. Ltd.** **Address:** Flat No. 8, 2nd Floor, Arif Chamber – V,Sector –H, Aliganj, Lucknow – 226024 **E-mail:** ravi.bhargava@gmail.com **Tel**.: 0522 – 2761885 09335205453 *Conditions apply*	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		4	Thermal power plants	B	1 (d)
		6	Coal washeries	A	2 (a)
		7	Mineral beneficiation including pelletisation	A	2 (b)
		9	Cement plants	B	3 (b)
		12	Asbestos milling and asbestos based products	A	4 (c)
		38	Building and construction projects	B	8 (a)
43	**EIA Project, Gauhati University** **Address:** C/o Department of Chemistry Gauhati University, Guwahati -781014	10	Petroleum refining industry	A	4 (a)

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		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	E-mail:bijoysgoswami@gmail.com **Tel.:** 0361-2570599/535, +919435368473 *Conditions apply*				
44	**Engineers India Limited** **Address:** Research & Development Complex, Sector – 16, Gurgaon - 122001 **e. mail:** rb.bhutda@eil.co.in **Tel.:** 0124 – 2391416 *Conditions apply*	1	Mining of minerals – Opencast only	A	1 (a) (i)
		2	Offshore and onshore oil and gas exploration, development & production	A	1 (b)
		4	Thermal power plants	A	1 (d)
		8	Metallurgical industries (non - ferrous only) - both primary & secondary	A	3 (a)
		10	Petroleum refining industry	A	4 (a)
		16	Chemical Fertilizers	A	5 (a)
		18	Petro-chemical complexes (industries based on processing of petroleum fractions & natural gas and/or reforming to aromatics)	A	5 (c)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		28	Isolated storage & handling of	B	6 (b)

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		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2& 3 of MSIHC Rules 1989 amended 2000)		
		29	Air ports	A	7 (a)
		32	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	A	7 (d)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		39	Townships and Area development projects	B	8 (b)
45	**Enkay Enviro Services Pvt. Ltd.** (formerly known as Enkay Enviro Services) **Address:** # 24-B, Dadu Marg, Gopal Bari, Jaipur – 302001 **e.mail:** info@enkayenviro.com **Tel.:** 0141 – 4023996 09314363996	1	Mining of minerals - Open cast only	A	1 (a) (i)
			Mining of minerals - Underground mining	B	
		3	Irrigation and drainage projects only	A	1 (c)
		4	Thermal power plants	B	1 (d)
		7	Mineral beneficiation	A	2 (b)
		8	Metallurgical industries (ferrous & nonferrous) – both primary and secondary	A	3 (a)
		9	Cement Plants	A	3 (b)
		12	Asbestos milling and asbestos based products	A	4 (c)

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		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Conditions apply	16	Chemical Fertilizers	A	5 (a)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2 & 3 of MSIHC Rules 1989 amended 2000) storage & handling of hazardous chemicals	B	6 (b)
46	**Enpro Envirotech & Engineers Pvt. Ltd.** **Address:** 306, Royal Park, Near Deepa Complex, Adajan Road, Surat-395009 **E-mail:** pareshmevawala@enpro.co.in **Tel.:** 0261-3295244 *Conditions apply*	8	Metallurgical Industries (ferrous & nonferrous)	A	3(a)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)

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		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		32	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	A	7(d)
		36	Common Effluent Treatment Plants (CETPs)	A	7 (h)
		37	Common Municipal Solid Waste Management Facility (CMSWMF)	B	7 (i)
47	**ENV Developmental Assistance Systems (India) Pvt. Ltd.** **Address:** D-2247 Indira Nagar, Lucknow-226006 **E-mail:** admin@dasindia.org business@dasindia.org **Tel.:**0522 4007470/4107624 *Conditions apply*	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		3	Irrigation Projects only	A	1 (c)
		9	Cement plants (Grinding units only)	B	3 (b)
		22	Distilleries	A	5 (g)
		24	Pulp & paper industry excluding manufacturing of paper from wastepaper and manufacture of paper from ready pulp without bleaching	A	5 (i)
		34	Highways	A	7 (f)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)

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		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
48	**Enviro Infra Solutions Pvt. Ltd.** **Address:** 301-302 & 305 – SRBC Complex, Plot No. INS-12, Sector – 9, Vasundhra, Ghaziabad - 201012 **E-mail:** eis.enviroinfra@gmail.com **Tel.:** 0120-4151183; 09654793036 *Conditions apply*	1	Mining of minerals - Open cast only	B	1 (a) (i)
		2	Onshore oil and gas exploration, development & production	A	1 (b)
		3	River Valley projects	A	1 (c)
		4	Thermal power plants	A	1 (d)
		8	Metallurgical industries (ferrous only)	B	3 (a)
			Metallurgical industries (Non-ferrous only)	A	3 (a)
		9	Cement Plants	A	3 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		22	Distilleries	A	5 (g)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)

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		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		33	Ports, harbours, break waters and dredging	B	7 (e)
		34	Highways	A	7 (f)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
49	**Enviro Techno Consult Pvt. Ltd.** **Address:** 68, Mahakali Nagar – 2, Near Manewada Square, Nagpur – 440024 **E.mail**: etcpl@envirotechnoconsult.in **Tel.:** 09595220277, 09326466633 *Conditions apply*	4	Thermal Power Plants	A	1 (d)
		9	Cement Plants	A	3 (b)
		19	Textile- cotton and manmade fibres	B	5 (d)
50	**Enviro Analysts & Engineers Pvt. Ltd.** **Address:**B-1003, Enviro House	21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding	B	5 (f)

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		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Western Edge II, Behind Metro Mall Western Express Highway Borivali (E),Mumbai – 400066 **E-mail:** info@eaepl.com, consent@eaepl.com, hkdesai5@gmail.com **Tel. No.:** 022- 28541647-49/67/68, 09820280155, 9324430071 *Conditions apply*		drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)		
		24	Pulp & paper industry excluding manufacturing of paper from wastepaper and manufacture of paper from ready pulp without bleaching	A	5 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development Projects	B	8 (b)
51	**Envirocare Technocrats Pvt. Ltd.** (formerly known as Enviro Care Engineers & Consultant) **Address:**201, New Opera house, Nr. Gurdev Petrol Pump & Harish Digg., Khatodara, Surat – 395002 **E.mail:** env_consultant@yahoo.co.in, info@envirocare.net.in **Tel.:** 0261-2630781/82, 09825125122 *Conditions apply*	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		2	Offshore & Onshore Oil and gas exploration, development & production	A	1 (b)
		7	Mineral beneficiation	A	2 (b)
		19	Manmade fibers manufacturing	A	5 (d)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and	A	5 (f)

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		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			chemical intermediates)		
		38	Building and construction projects	B	8 (a)
52	**Enviro Care India Private Limited** **Address:**43, 2nd street, First floor Harvey nagar, Madurai 625016 **E.mail:** eci@envirocareindia.com **Tel.:** 9843052103 *Conditions apply*	4	Thermal power plants	B	1 (d)
		8	Metallurgical industries (ferrous & nonferrous) – both primary and secondary	B	3 (a)
		22	Distilleries	B	5 (g)
		38	Building and construction projects	B	8 (a)
53	**Envirotech East Pvt. Ltd.** **Address:** Bengal Ambuja Coml. Complex, UN-F-13, 1050/1, Survey Park, Kolkata -700075 e. mail: eeplkol@gmail.com eeplkol2@gmail.com **Tel. :** 033-24188127/ 24188128 09331026867	7	Mineral beneficiation including pelletisation	A	2 (b)
		4	Thermal power plants	A	1 (d)
		8	Metallurgical industries (ferrous & nonferrous) - both primary & secondary	A	3(a)
		9	Cement plants	A	3 (b)
		10	Petroleum refining industry	A	4 (a)
		11	Coke oven plants	A	4 (b)
		20	Petrochemical based processing (processes other than cracking &	A	5 (e)

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		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Conditions apply		reformation and not covered under the complexes)		
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	B	5 (f)
		22	Distilleries	A	5 (g)
		24	Pulp & paper industry excluding manufacturing of paper from waste paper and manufacture of paper from ready pulp without bleaching	A	5 (i)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		38	Building and Construction Projects	B	8 (a)
		39	Townships and Area development Projects	B	8 (b)
54	**Environment Protection & Training Research Institute** **Address:** Sy. No. 91/4, Gachibowli, Hyderabad - 500032	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		3	River Valley projects	A	1 (c)
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones	A	7 (c)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	E-mail: sudhakargifs@yahoo.com **Tel.:** 040 – 23005628 09701420086 *Conditions apply*		(SEZs), Biotech parks, Leather complexes		
		38	Building and construction projects	B	8 (a)
55	**Environmental Health and Safety Consultants Private Limited** **Address:** # 13/2, 1st Main Road, Near Fire Station, Industrial Town, Rajajinagar, Bangalore – 560010 **E.mail:** ehscblr@yahoo.com ehscblr1974@gmail.com **Tel.:** 080-23012100/01, 09448094164 *Conditions apply*	3	River Valley, Hydel, Drainage and Irrigation projects	A	1 (c)
		8	Metallurgical industries - Secondary ferrous only	B	3 (a)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		22	Distilleries	A	5 (g)
		25	Sugar Industry	B	5 (j)
		34	Highways	A	7 (f)
		38	Building and construction projects	B	8 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		39	Townships and Area development projects	B	8 (b)
56	**Environmental Engineers & Consultants Pvt. Ltd.** **Address:** A1-198, Janak Puri, New Delhi – 110058 Branch Office Address: - M/s Environmental Engineers & Consultants Pvt. Ltd. Apartment No. 306, Kanchanjunga Apartments, Palarivattom, Kochi, Ernakulam, Kerala-682025. **E-mail:** eecnewdelhi@yahoo.in eecnewdelhi@gmail.com **Tel.:** 011 - 25507190 09350873385 09811080469 *Conditions apply*	1	Mining of minerals – Opencast only	B	1 (a) (i)
		4	Thermal Power Plants	B	1 (d)
		17	Pesticides industry and pesticide specific intermediates (excluding formulations)	B	5 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	B	5 (f)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		38	Building and construction projects	B	8 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		39	Townships and Area development Projects	B	8 (b)
57	**Environmental Research & Analysis** **Address:** 315, First Floor, Sahara Shopping Center, Near Lekhraj Crossing, Faizabad Road, Lucknow – 226016 **E-mail:**eraenvcle@gmail.com; info@eraconsultancy.in **Tel.:** 0522-4078000, 8423500351 **The organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment.* *Conditions apply*	1	Mining of minerals – opencast only	B	1 (a) (i)
58	**Environmental System Consultants & Ambiente Lab Solutions Pvt. Ltd.** **Address:** New No 14/Old No 7, Shanmuga Naicker Street, K.K.Nagar West, Chennai – 600 078	1	Mining of minerals (Open cast only)	A	1 (a) (i)
			Mining of minerals including Open cast/ Underground mining	B	1 (a) (i)
		4	Thermal power plants	A	1 (d)
		9	Cement plants	A	3 (b)
		31	Industrial Estates/ parks/ complexes/	A	7 (c)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	E-mail: ensyscon@gmail.com ambientelab@gmail.com **Tel.:** 044-23643663, 09444990516 *Conditions apply*		Areas, export processing Zones (EPZs), Special economic zones (SEZs), Biotech Parks, Leather Complexes		
		33	Ports, harbours, break waters and dredging	A	7 (e)
		38	Building and construction projects	B	8 (a)
59	**Envirogreen Consultants (India) Pvt. Ltd** **Address:** 1-B, Macchla Marg, New Patel Circle, Hiren Magri, Udaipur- 313002 **Email:** egcipl@yahoo.co.in, **Tel.:**9352239829 *** Though the EIA Coordinator for this sector was found suitable for Cat. A, however, the organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment. They can take up projects in this sector only for Cat. B as an organization.*	1**	Mining of minerals - Open cast only	B	1 (a) (i)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
60	**Envisafe Environmental Consultants** **Address:**3rd floor, Akash Ganga Complex, Near Parimal Railway Underpass, Beside Suvidha Shopping Center, Paldi, Ahmedabad-380007. **Email:**envisafe@gmail.com , pushpinshah@gmail.com **Tel.:** 9825125278,9328961241 *Conditions apply*	1	Mining of minerals including Open cast/ Underground mining	B	1 (a) (i)
		4	Thermal power plants	B	1 (d)
		8	Metallurgical industries (ferrous & non-ferrous)	B	3 (a)
		9	Cement plants	A	3 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		34	Highways	B	7 (f)
		38	Building and construction projects	B	8 (a)
61	**En-vision Environmental Service** **Address:** 201 & 301, Union Trade Center (UTC), Nr. Apple Hospital, Udhana Darwaja Surat 395 002	19	Manmade fibers manufacturing	B	5 (d)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other	A	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Tel .: 0261-2344773, 2344774,9428001862 **Email:** shah.kunal@gmail.com , info@en-vision.co.in *Conditions apply*		synthetic organic chemicals and chemical intermediates)		
		32	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	A	7 (d)
		36	Common effluent treatment plants (CETPs)	B	7 (h)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development Projects	B	8 (b)
62	**Envision Enviro Technologies Pvt. Ltd.** **Address:** 2nd Floor, Shree Ram Complex, Above Bank of India, Near Kargil Chowk, Surat Dumas Road, Piplod, Surat- 395007 **Tel. No.:** +91 2612223003,2224004 **Email:** envision.surat@gmail.com *Conditions apply*	2	Offshore and onshore oil and gas exploration, development & productions	A	1 (b)
		8	Metallurgical industries (ferrous only)- both primary & secondary	A	3(a)
		9	Cement Plants	B	3 (b)
		17	Pesticides industry and pesticide specific intermediates (excluding formulations)	A	5 (b)
		18	Petro-chemical complexes (industries based on processing of petroleum fractions & natural gas and/or reforming to aromatics)	A	5 (c)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		20	Petrochemical based processing (processes other than cracking & reformation and not covered under the complexes)	A	5 (e)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		22	Distilleries	A	5 (g)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		32	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	A	7 (d)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		36	Common effluent treatment plants (CETPs)	B	7 (h)
		38	Building and construction projects	B	8 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		39	Townships and Area development Projects	B	8 (b)
63	**EQMS India Pvt. Ltd.** **Address:** 304-305, III Floor, Rishabh Towers, Plot No. 16, Community Centre, Karkardooma, Delhi – 110092 **e. mail:** eqms@eqmsindia.org skjain@eqmsindia.org **Tel.:** 011- 30003200/ 30003219 09810297612 *Conditions apply*	1	Mining of minerals – Open cast only	A	1 (a) (i)
		3	River Valley projects	A	1 (c)
		4	Thermal power plants	A	1 (d)
		8	Metallurgical industries(ferrous & nonferrous) - both primary & secondary	B	3 (a)
		9	Cement plants	A	3 (b)
		16	Chemical Fertilizers	A	5 (a)
		17	Pesticides industry and pesticide specific intermediates (excluding formulations)	A	5 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates **excluding** drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2 & 3 of	B	6 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			MSIHC Rules 1989 amended 2000)		
		31	Industrial estates/ parks/ complexes/Areas, export processing Zones(EPZs), Special economic zones(SEZs), Biotech Parks, Leather Complexes	A	7 (c)
		33	Ports, harbours, break waters and dredging	B	7 (e)
		34	Highways	A	7 (f)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
64	**Equinox Environments (India) Private Limited** **Address:** F-11, Namdev Nest, 1160- B, "E" Ward, Skyes Extension, Opp. Kamala College, Kolhapur-416001 **e.mail:**projects@equinoxenvi.com, eia@equinoxenvi.com, eeipltd@equinoxenvi.com, **Tel.:** 0231-2531231/ 2526337 09822045083, 09881121522	1	Mining of minerals including opencast / underground mining	A	1 (a) (i)
		4	Thermal power plants	B	1 (d)
		8	Metallurgical industries(ferrous only) - both primary & secondary	B	3 (a)
		12	Asbestos milling and asbestos based products	B	4 (c)
		13	Chlor-alkali industry	A	4 (d)
		20	Petrochemical based processing (processes other than cracking &reformation and not covered under the complexes)	A	5 (e)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Conditions apply	21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates **excluding** drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		22	Distilleries	A	5 (g)
		25	Sugar Industry	B	5 (j)
		32	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	B	7 (d)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
65	**ERM India Private Limited** **Address:** Building No. 10,Tower A, Fourth Floor, DLF Cyber City, Gurgaon - 122002 **e. mail:** subir.gupta@erm.com **Tel.:** 0124-4170300	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		2	Off shore and on-shore oil and gas exploration, development & production	A	1 (b)
		3	River valley Projects	A	1 (c)
		4	Thermal power plants	A	1 (d)
		8	Secondary Steel only	B	3 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	09810068161 *Conditions apply*	9	Cement plants	A	3 (b)
		13	Chlor-alkali industry	A	4 (d)
		16	Chemical Fertilizers	A	5 (a)
		17	Pesticides industry and pesticide specific intermediates (excluding formulations)	A	5 (b)
		18	Petro-chemical complexes (industries based on processing of petroleum fractions & natural gas and/or reforming to aromatics)	A	5 (c)
		20	Petrochemical based processing (processes other than cracking &reformation and not covered under the complexes)	A	5 (e)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates	A	5 (f)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including	A	6 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			LNG terminal		
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		29	Air ports	A	7 (a)
		31	Industrial estates/ parks/ complexes/Areas, export processing Zones(EPZs), Special economic zones(SEZs), Biotech Parks, Leather Complexes	A	7 (c)
		32	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	A	7 (d)
		34	Highways	A	7 (f)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
		40 (i)	Automobile and Auto Components	-	-
66	**Excel Enviro Tech**	1	Mining of minerals- Open Cast only	B	1 (a) (i)
		4	Thermal Power Plant	B	1 (d)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Address: TF-2, Sun House, Nr. Old High Court, Off. Ashram Road, Ahmedabad -380009 **Email:** excelenviro@yahoo.co.in **Tel.:**9825588910/9428592837 *Conditions apply*	6	Coal Washeries	B	2 (a)
		8	Metallurgical industries (ferrous)-secondary only	B	3 (a)
		9	Cement plants	B	3 (b)
		11	Coke oven plants	B	4 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates	B	5 (f)
		38	Building and construction projects including	B	8 (a)
67	**Feedback Infra Pvt. Ltd.** **(Formerly known as Feedback Infrastructure Services Private Limited)** **Address:** 15th Floor, Tower 9B, DLF Cyber City, Phase-III, Gurgaon 122 002 **Email:** rajeev.bhatnagar@feedbackinfra.com	4	Thermal Power Plants	B	1 (d)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Tel. 0124- 4316100, 0124- 4316693 *Conditions apply*	28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		34	Highways	A	7 (f)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
68	**Fulgro Environmental & Engineering Services India Pvt. Ltd.** **Address-** 27,Ashok Vatika, Khatipura Road, Jhotwara, Jaipur, 302012, Rajasthan	1	Mining of minerals including Open cast/ Underground mining	A**	1 (a) (i)
		4	Thermal Power Plants	B	1 (d)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Email: fulgro.manish@gmail.com, ceo@fulgro.in **Mob.-** 094144 06025 *Conditions apply* ***Though the EIA Coordinator for this sector was approved for Cat. A. The organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment. They can take up projects in this sector only for Cat. B as an organization.*	9	Cement Plants	B	3 (b)
		34	Highways	A**	7(f)
		38	Building and construction projects	B	8(a)
69	**Gaurang Environmental Solutions** **Address-** 501, Soni's Paris Point, Collectorate Circle, Bani Park, Jaipur, Pin- 302016 E-mail: gaurangenviro@gmail.com; vipul.environ@gmail.com **Tel.:** 0141-4029115; 09782074776	1	Mining of minerals including Open cast/ underground mining	A	1 (a) (i)
		4	Thermal power plants	B	1 (d)
		8	Metallurgical industries(ferrous & nonferrous) - both primary & secondary	B	3 (a)
		9	Cement plants	B	3 (b)
		22	Distilleries	B	5 (g)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated	B	6 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Conditions apply		in column 3 of Schedule 2 & 3 of MSIHC Rules 1989 amended 2000)		
		29	Air ports	A	7 (a)
		32	Common hazardous waste treatment, storage and disposal facilities	B	7 (d)
		34	Highways	B	7(f)
		36	Common Effluent Treatment Plants (CETPs)	B	7 (h)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8(a)
		39	Townships and Area development projects	B	8 (b)
70	**Geological Exploration & Mining Solutions** **Address:** 95/1, Brindavan Road, 4th Cross East, Fairlands, Salem – 636 016. Tamilnadu. **E. mail:** ifthiahmed@gmail.com	1	Mining of minerals - Open cast only	A**	1 (a) (i)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Tel.: +91 – 427 - 2431989 Mobile: +91 94422 78601 *Conditions apply* ***Though the EIA Coordinator for this sector was approved for Cat. A. The organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment. They can take up projects in this sector only for Cat. B as an organization.*				
71	**Geogreen Enviro House Pvt. Ltd.** **Address:** 403, Aiman Apartments 29 Chandralok Colony, Aliganj, Lucknow, U.P.226024 **e. mail:** vkm.geo@gmail.com **Tel.:** 05222 339000; 09415215163 *Conditions apply*	1	Mining of minerals - Open cast only	A	1 (a) (i)
		38	Building and construction projects	B	8(a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
72	**Ghosh, Bose & Associates (P) Ltd.** **Address:** 8, Harrington Mansion, 8, Ho Chi Minh Sarani, Kolkata – 700071 **e. mail:** ghoshbos@cal.vsnl.net.in **Tel.:** 033- 22827152/ 22827036 09831072110 *Conditions apply* ***Though the EIA Coordinators for these sectors were approved for Cat. A. The organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment. They can take up projects in this sector only for Cat. B as an organization.*	1**	Mining of minerals including Open cast/ underground mining	B	1 (a) (i)
		4**	Thermal power plants	B	1 (d)
		8**	Metallurgical industries(ferrous & nonferrous) - both primary & secondary	B	3 (a)
		31**	Industrial estates/ parks/ complexes/Areas, export processing Zones(EPZs), Special economic zones(SEZs), Biotech Parks, Leather Complexes	B	7 (c)
		33**	Ports, harbours, break waters and dredging	B	7 (e)
		34**	Highways	B	7 (f)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
73	**GreenCIndia Consulting Private Limited** (formerly known as GIS Enabled Environment & Neo-graphic Centre)	1	Mining of minerals including opencast/ underground mining	A	1 (a) (i)
		3	River valley, Hydel, Drainage and Irrigation Projects	A	1 (c)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Address: 905, 908, Devika Appartment, Sector – 4, Vaishali, NCR, Ghaziabad – 201012 **e. mail:** greenc.india@gmail.com nandini@greencindia.com **Tel.:** 0120 – 4568731 09891906015 *Conditions apply*	4	Thermal power plants	A	1 (d)
		6	Coal Washeries	A	2 (a)
		8	Metallurgical industries (ferrous & non-ferrous)	A	3 (a)
		9	Cement plants	A	3 (b)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		29	Air ports	A	7 (a)
		31	Industrial estates/ parks/ complexes/areas, export processing Zones(EPZs), Special Economic Zones(SEZs), Biotech Parks, Leather Complexes	A	7 (c)
		34	Highways	A	7 (f)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
74	**Green circle Inc.**	1	Mining of minerals – opencast only	B	1 (a) (i)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Address: Green Empire (Anupushpam), Above Axis bank, Near Yash Complex, Gotri Main Road, Vadodara, Gujarat – 390021 **E.mail:** pradeep.joshi@gccipl.net; info@greencircleinc.com **Tel.:** 0265- 2371269	4	Thermal power plants	B	1 (d)
		8	Metallurgical industries (ferrous & non-ferrous)	B	3 (a)
		9	Cement plants	B	3 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		22	Distilleries	B	5 (g)
		25	Sugar Industry	B	5 (j)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development	A	8 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			projects		
75	**GLOBAL Environment & Mining Services** **Address:** "Devakinandan", Opp. PLD Bank, Venkateshwara Talkies Road, Patel Nagar, Hospet Bellary **Email:**gems_hpt@yahoo.com **Tel.:** 09448479433,08394223755 *Conditions apply*	1	Mining of minerals- Open Cast only	A	1 (a) (i)
		7	Mineral beneficiation including pelletisation	A	2 (b)
76	**Global Enviro Labs** **Address:** 2-2-1075/ 14/ A/ 1, Thilaknagar "X" Roads, Baghamberpet, Hyderabad – 500013 **E-mail:**globalelabs@rediffmail.com **Tel.:** 040- 65582886/ 27407969 09849039741 *Conditions apply*	1	Mining of minerals including Open cast/ underground mining	A	1 (a) (i)
		4	Thermal power plants	B	1 (d)
		7	Mineral beneficiation including pelletisation	B	2 (b)
		8	Metallurgical Industry (Ferrous only)	A	3 (a)
		9	Cement plants (Grinding units only)	B	3 (b)
		16	Chemical Fertilizers (SSP only)	B	5 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
77	**Global Management and Engineering Consultants International** **Address:** Saharan Tower, 308, Officers Campus Extension, Sirsi Road, Khatipura (Near Sanskar School), Jaipur – 302012 (Rajasthan) **Email:** info@gmecinternational.com / saharan@gmecinternational.com **Tel.:** 0141-2353241 Mobile: 9928599571 / 9928793002 / 9414071334 *Conditions apply*	1	Mining of minerals including opencast/underground mining	A	1(a) (i)
		2	Offshore and onshore oil and gas exploration, development & production	A	1 (b)
		4	Thermal power plants	B	1 (d)
		8	Metallurgical Industry (ferrous & non- ferrous)	B	3 (a)
		9	Cement plants	A	3 (b)
		12	Asbestos milling and asbestos based products	A	4 (c)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		33	Ports, harbours, break waters and dredging	A	7(e)
		34	Highways	A	7(f)
		36	Common Effluent Treatment Plants (CETPs)	B	7 (h)
		38	Building and construction projects	B	8 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		39	Townships and Area development projects	B	8 (b)
78	**GLOBALTECH Enviro Experts Pvt. Ltd.** **Address:** C- 23, BJB Nagar, Bhubaneshwar – 751014 **E-mail:** manojnayak333@yahoo.com globalexperts@rediffmail.com **Tel.:** 0674 – 2436853 09437033487 09937133487	1	Mining of minerals- Open cast only	A	1 (a) (i)
		4	Thermal power plants	B	1 (d)
		7	Mineral beneficiation including pelletisation	B	2 (b)
		8	Metallurgical industries(ferrous only) - both primary & secondary	A	3 (a)
		9	Cement plants	B	3 (b)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
79	**Goldfinch Engineering Systems Private Limited** (Formerly known as - Waste Encare (India) Pvt. Ltd.) **Address:** Plot no. A- 288, Road No. 16-Z, Thane Industrial Area, MIDC (Wagle Estate), Thane (West)-400604	1	Mining of minerals – open cast only	B	1 (a) (i)
		3	Irrigation projects only	B	1 (c)
		4	Thermal power plants	B	1 (d)
		8	Metallurgical industries (ferrous and non-ferrous)	B	3 (a)
		17	Pesticides industry and pesticide	A	5 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	E-mail: anand.apte@goldfinchengg.com; info@goldfinchengg.com **Tel.:** 022-25801529, 9821812132 *Conditions apply*		specific intermediates (excluding formulations)		
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		22	Distilleries	A	5 (g)
		36	Common effluent treatment plants (CETPs)	B	7 (h)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
80	**Grass Roots Research and Creation India (P) Ltd.** **Address:** F- 375, Sec – 63, Noida – 201301 **e. mail:** md@grc-india.com, info@grc-india.com **Tel.:** 0120 – 4044630, 4044660 09811554031, 09818184005 *Conditions apply*	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		2	Offshore and onshore oil and gas exploration, development & production	A	1 (b)
		3	River Valley projects	A	1 (c)
		4	Thermal power plants	A	1 (d)
		6	Coal Washeries	A	2 (a)
		7	Mineral beneficiation including pelletisation	A	2 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		8	Metallurgical industries(ferrous and non-ferrous) - both primary & secondary	A	3 (a)
		9	Cement plants	A	3 (b)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes	A	7 (c)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
81	**Gujarat Environment Management Institute** **Address:** 3rd floor, Block No. 13 Dr. Jivraj Mehta Bhavan, Old Sachivalaya, Sector 10B, Gandhinagar,	21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other	A	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Gujarat 382010 **E-mail:** paresh.gemi@gmail.com, info@gemi-india.org **Tel.:** 079-23240964 *Conditions apply*		synthetic organic chemicals and chemical intermediates)		
		30	All ship breaking yards including ship breaking units	A	7 (b)
		32	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	A	7(d)
		33	Ports, harbours, break waters and dredging	A	7(e)
		36	Common Effluent Treatment Plants (CETPs)	A	7(h)
82	**Hubert Enviro Care Systems** **Address:** No. 18, 92nd Street, 18th Avenue, Ashok Nagar, Chennai – 600083 **e. mail:** moses@hecs.in ceo.hecs@gmail.com **Tel.:**044 – 42985511, 09884390811 *Conditions apply*	1	Mining of minerals including Opencast/ Underground mining	A	1 (a) (i)
		2	Offshore and onshore oil and gas exploration, development & production	A	1 (b)
		4	Thermal power plants	A	1 (d)
		8	Metallurgical industries (ferrous & non-ferrous)	B	3 (a)
		9	Cement plants	B	3 (b)
		10	Petroleum refining industry	A	4 (a)
		18	Petro-chemical complexes (industries based on processing of petroleum fractions & natural gas and/or	A	5 (c)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			reforming to aromatics)		
		20	Petrochemical based processing	A	5 (e)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes	B	7 (c)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
83	**Idma Laboratories Limited** **Address:** 391, Industrial Phase 1 , Panchkula-	1	Mining of minerals including Open cast/ Underground mining	B	1 (a) (i)
		22	Distilleries	B	5 (g)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	134113, Haryana **E-mail:** testing@idmagroup.co.in **Tel.:** 0172- 5064827 09888002605 **Though the EIA Coordinator for this sector was approved for Cat. A. The organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment. They can take up projects in this sector only for Cat. B as an organization.* *Conditions apply*	27*	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		36	Common effluent treatment plants (CETPs)	B	7 (h)
		38	Building and construction projects	B	8 (a)
84	**Indomer Coastal Hydraulics (P) Ltd** **Address:** 63, Gandhi Road Alwar Thirunagar, Chennai 600 087 **Tel**:+91-44-2486 2482 to 84	27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal.	A	6 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	099401 41650 **E mail:** indomercoastalhydraulics@gmail.com *Conditions apply*	33	Ports, harbours, break waters and dredging	A	7 (e)
85	**In Situ Enviro Care** **Address:** 20-B, Zone-II, M.P. Nagar, Bhopal (M.P.) **E-mail:** admin@insituenvirocare.com ajay.mohan@insituenvirocare.com **Tel.:** 07555- 2577143/ 3914807 09425012465, 08878698002 *Conditions apply*	1	Mining of minerals - opencast only	B	1 (a) (i)
		4	Thermal power plants	B	1 (d)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (B)
86	**Ind Tech House Consult** **Address:**G-8/6, Ground Floor, Sector 11, Rohini, Delhi – 110 085 **E-mail:** suman.ithc@gmail.com, ithconsult@hotmail.com **Tel.:** 011-64607252,	1	Mining of minerals including Open cast/ Underground mining	B	1 (a) (i)
		2	Offshore and onshore oil and gas exploration, development & production	A	1 (b)
		3	River valley, hydel, Drainage and Irrigation projects	A	1 (c)
		27	Oil & gas transportation pipeline	A	6 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	09958499554 *Conditions apply*		(crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal		
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes	A	7 (c)
		33	Ports, harbours, break waters and dredging	A	
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (B)
87	**IRG Systems South Asia Pvt. Ltd.** **Address:** E-16, 3rd Floor, Main Market, Hauz Khas, New Delhi – 110 016	3**	River valley projects	B	1 (c)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	E-mail: amit@irgindia.com, ssanjeev@irgssa.com **Tel.:** 011-45974597, 9990418899, 9818518899 *** Though the EIA Coordinator for this sector was found suitable for Cat. A. The organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment. He can take up projects in this sector only for Cat. B as an organization.* *Conditions apply*				
88	**Intercontinental Consultants & Technocrats Pvt. Ltd.** **Address:** A- 8, Green Park, New Delhi **E-mail:** pkapila@ictonline.com **Tel.:** 011 – 40863010 *Conditions apply*	29	Air ports	A	7 (a)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		34	Highways	A	7 (f)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
89	**J. M. Environet Pvt. Ltd.** **Address:** 1st& 2nd Floor, SCO 16, Sector 10-A, Pace City, Gurgaon-122001 **e. mail:** jmenviron@hotmail.com, jmpkdeepa@hotmail.com **Tel.:**0124-4141926/ 3206559 09910494521 *Conditions apply*	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		4	Thermal power plants	A	1 (d)
		6	Coal Washeries	A	2 (a)
		7	Mineral beneficiation including pelletisation	A	2 (b)
		8	Metallurgical Industries (Ferrous & non ferrous)	A	3 (a)
		9	Cement plants	A	3 (b)
		11	Coke oven plants	A	4 (b)
		19	Manmade fibers manufacturing	A	5 (d)
		22	Distilleries	A	5 (g)
		24	Pulp & paper industry excluding manufacturing of paper from wastepaper and manufacture of paper from ready pulp without bleaching	A	5 (i)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones	B	7 (c)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes		
		33	Ports, harbours, break waters and dredging	A	7 (e)
		37	Common Municipal Solid Waste Management Facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development	B	8 (b)
90	**JV Analytical Services** **Address:** Samay Building, Bhau Patil Road, Bopadi, Pune – 20 **E.mail**: jvlabpune@gmail.com; **sales@jvanalyticalservices.com** **Tel.:** 91- 7350658988,9921107215 *** Though the EIA Coordinator for these sectors was found suitable for Cat. A, the organization as a*	1**	Mining of minerals - Open cast only	A	1 (a) (i)
		3**	Irrigation Projects only	A	1 (c)
		4**	Thermal power plants	A	1 (d)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	B	5 (f)
		22**	Distilleries	A	5 (g)
		33**	Ports, harbours, break waters and dredging	A	7 (e)
		38	Building and construction projects	B	8 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment. They can take up projects in these sectors only for Cat. B as an organization. *Conditions apply*	39	Townships and Area development	B	8 (b)
91	**Kadam Environmental Consultants** **Address**: 871/B/3, GIDC Makarpura, Vadodara-390010,Gujarat **e. mail:** sangram@kadamenviro.com kadam@kadamenviro.com **Tel.:** 0265-6131000 09714861611 *Conditions apply*	1	Mining of minerals- Open cast only	A	1 (a) (i)
			Mining of minerals including Open cast/ Underground mining	B	
		2	Offshore and onshore oil and gas exploration, development & production	A	1 (b)
		4	Thermal power plants	A	1 (d)
		8	Metallurgical industries (ferrous only-Secondary metallurgy)	A	3 (a)
		10	Petroleum refining industry	A	4 (a)
		13	Chlor-alkali industry	A	4 (d)
		16	Chemical Fertilizers	A	5 (a)
		17	Pesticides industry and pesticide specific intermediates (excluding formulations)	A	5 (b)
		18	Petro-chemical complexes (industries	A	5 (c)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			based on processing of petroleum fractions & natural gas and/or reforming to aromatics)		
		19	Manmade fibers manufacturing	A	5 (d)
		20	Petrochemical based processing (processes other than cracking & reformation and not covered under the complexes)	A	5 (e)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		22	Distilleries	A	5 (g)
		23	Integrated paint industry	B	5 (h)
		24	Pulp & paper industry excluding manufacturing of paper from wastepaper and manufacture of paper from ready pulp without bleaching	A	5 (i)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs	A	6 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			/ecologically sensitive Areas including LNG terminal		
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		30	All ship breaking yards including ship breaking units	A	7 (b)
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes	B	7 (c)
		32	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	B	7 (d)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		36	Common effluent treatment plants (CETPs)	B	7 (h)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area Development projects	B	8 (b)
92	**Kalyani Laboratories Private Limited**	1	Mining of minerals including Open	B	1 (a) (i)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			cast/ Underground mining		
	Address: Plot no. 1867, Bomikhal, Bhubaneswar **E-mail:** kalyanilab@yahoo.co.in, klaboratories@rediffmail.com **Tel.:** 0674-2585026/0674-2581992,09437306091 *The organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment. They can take up projects in these sectors only for Cat. B as an organization.* *Conditions apply*	4	Thermal power plants	B	1 (d)
		6	Coal Washeries	B	2 (a)
		7	Mineral beneficiation including pelletisation	B	2 (b)
		8	Metallurgical industries (ferrous & non ferrous)	A	3 (a)
		11	Coke oven plants	A	4 (b)
		38	Building and construction projects	B	8 (a)
93	**KITCO Ltd.** **Address:** Femith's PB No. 4407,Puthiya Road, NH Bypass, Vennala, Kochi- 682028 **E-mail:** mail@kitco.in, sindhunt@kitco.in **Tel.:** 0484-4129000/ 2805033	29	Air ports	A	7 (a)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		34	Highways	A	7 (f)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Conditions apply				
94	**KKB Envirocare Consultants Pvt. Ltd.** **Address:** Tarun Plaza, First Floor, 3-5-244, NFC Main Road, Krishna Nagar Colony, Moula Ali, Hyderabad- 500040 **E-mail:** kkbenviro@gmail.com **Tel.:** 040-65547107/ 39127107, 09391013686 *Conditions apply*	1	Mining of minerals- Open cast only	B	1 (a) (i)
		4	Thermal Power Plants	B	1 (d)
		8	Metallurgical industries (non-ferrous only)	B	3 (a)
		17	Pesticides industry and pesticide specific intermediates (excluding formulations)	A	5 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes	A	7 (c)
		37	Common Municipal Solid Waste Management Facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area Development projects	B	8 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		40 (v)	Food Processing	-	-
95	**Kratin Solutions Pvt. Ltd.** **Address:** 47,B 2-1st Floor, Lambent IT Park, Harinagar, Besa Nagpur-440037 **E-mail:** snkatiyar@kratinsolutions.com, infor@kratinsolutions.com **Tel.:** 07103-281291 , Mob. No. 9881727702 *Conditions apply*	1	Mining of minerals including opencast/underground mining	A	1 (a) (i)
		6	Coal washeries	A	2 (a)
		7	Mineral beneficiation including pelletisation	A	2 (b)
96	**L & T Infrastructure Engineering Ltd.** **Address:** House No. 6-3-1192/1/1, 5th Floor, Block No. 3, White House, Kundan Bagh, Begumpet, Hyderabad – 500016 **E-mail:** Intielhyd@lntiel.com; cvs@intiel.com **Tel.:** 040 – 40354444, 040 - 40354431 09491035051	1	Mining of minerals- Open cast only	A	1 (a) (i)
		2	Offshore and onshore oil and gas exploration, development & production	A	1 (b)
		3	River valley, hydel, Drainage and Irrigation projects	A	1 (c)
		4	Thermal power plants	A	1 (d)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding	A	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Conditions apply		drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)		
		29	Air ports	A	7 (a)
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes	A	7 (c)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		34	Highways	A	7 (f)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
97	**Louis Berger Consulting Pvt. Ltd.** **Address:** Plot No. 3, 5th Floor, Tower B, Surinder Jakhar Bhavan (IFFCO), Sector 32, Gurgaon – 122001 **E-mail:** mdave@louisberger.com	29	Air ports	A	7 (a)
		34	Highways	A	7 (f)
		38	Building and construction projects	B	8 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Tel.: 0124-4044755/ 4578200 09717699584 *Conditions apply*				
98	**LEA Associates South Asia Pvt. Ltd.** **Address:** B-1/ E-27, Mohan Cooperative Industrial Estate **E-mail:** Chandra@lasaindia.com **Tel.:** 011 – 41678150 09910060789 *Conditions apply*	1	Mining of minerals - opencast only	A	1 (a) (i)
		3	River Valley projects	A	1 (c)
		34	Highways	A	7 (f)
		38	Building and construction projects	B	8 (a)
		39	Townships and area development projects	B	8(b)
99	**M. N. Dastur and Company (Pvt.) Ltd.** **Address:** P – 17, Mission Row Extension, Kolkata – 700013 **E-mail:** sandip.m@dasturco.in	1	Mining of minerals- Open cast only	A	1 (a) (i)
		4	Thermal power plants	A	1 (d)
		6	Coal Washeries	B	2 (a)
		8	Metallurgical industries (ferrous & non-ferrous)	A	3 (a)
		11	Coke Oven Plants	A	4 (b)
		33	Ports, harbours, break waters and	A	7 (e)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Tel. : 033 – 22250500, 09433341156 *Conditions apply*		dredging		
100	**Mahabal Enviro Engineers Pvt. Ltd.** **Address:** Plot No. F-7, Road No. 21, Wagle Estate Thane-400604, Maharashtra **E-mail:** mahabal_thane@yahoo.in, thane@mahabal.com **Tel.:** 022- 25823154/ 0658/ 1663 09323058368 *Conditions apply*	1	Mining of minerals including opencast/underground mining	A	1(a) (i)
		2	Offshore and onshore oil and gas exploration, development & production	A	1 (b)
		4	Thermal power plants	A	1 (d)
		8	Metallurgical industries (ferrous & non-ferrous)	B	3(a)
		9	Cement plants	B	3(b)
		22	Distilleries	A	5(g)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		31	Industrial estates/ parks/ complexes/areas, export processing Zones(EPZs), Special Economic	A	7 (c)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			Zones(SEZs), Biotech Parks, Leather Complexes		
		32	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	A	7 (d)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		38	Building and construction projects	B	8 (a)
		39	Townships and area development projects	B	8(b)
101	**Mantras Green Resources Ltd.(**formerly known as Mantras Resources) **Address:** Hall No. 1, 1st Floor, NICE Sankul, Plot No. A -9, Opp. Nashik Merchant Co- op Bank Ltd., ITI Signal, MIDC Satpur, Nasik-422007 **E-mail:** info@mantrasresources.com, uksharma@mantrasresources.com **Tel.:** 0253 2355665 / 2355086 *Conditions apply*	1	Mining of minerals including opencast/underground mining	A	1(a) (i)
		3	Irrigation projects only	A	1 (c)
		4	Thermal power plants	B	1 (d)
		6	Coal washeries	A	2(a)
		7	Mineral beneficiation including pelletisation	A	2 (b)
		8	Metallurgical industries(non ferrous only) - both primary & secondary	A	3 (a)
		9	Cement plants	A	3 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers;	B	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			basic organic chemicals, other synthetic organic chemicals and chemical intermediates)		
		22	Distilleries	A	5 (g)
		25	Sugar Industry	B	5 (j)
		37	Common Municipal Solid Waste Management Facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
102	**Mantec Consultants Pvt. Ltd.** **Address:** D- 36, Sector – 6, Noida – 201301 **E-mail:** envmantec@yahoo.co.in, mantec@vsnl.com; **Tel.:** 0120- 4215000, 4215804 09312284682; 07409574441 *Conditions apply*	1	Mining of minerals (Open cast only)	A	1 (a) (i)
		2	Offshore and onshore oil and gas exploration, development & production	A	1 (b)
		3	River valley projects	A	1 (c)
		4	Thermal power plants	A	1 (d)
		13	Chlor-alkali industry	A	4 (d)
		16	Chemical Fertilizers	A	5 (a)
		20	Petrochemical based processing (processes other than cracking & reformation and not covered under the complexes)	A	5 (e)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk	A	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)		
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		34	Highways	B	7 (f)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
103	**Mecon Limited**	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Address: Vivekanand Path, P.O. Ranchi – 834002 **E. mail:** envenggranchi@meconlimited.co.in **Tel.:** 0651- 2481314, 2483382 09470193680 *Conditions apply*	2	Offshore and onshore oil and gas exploration, development & production	A	1 (b)
		3	River valley, hydel, Drainage and Irrigation projects	A	1 (c)
		4	Thermal power plants	A	1 (d)
		5	Nuclear power projects and processing of nuclear fuel	A	1(e)
		6	Coal washeries	A	2 (a)
		7	Mineral beneficiation including pelletisation	A	2 (b)
		8	Metallurgical industries(ferrous and non-ferrous)	A	3 (a)
		11	Coke oven plants	A	4 (b)
		8[#]	Induction/ arc furnaces/ cupola furnaces/ submerged arc furnace/ crucible furnace/ re-heating furnace of capacity more than 5Tonne per heat *[#]Sector 26 has been merged with sector 8 (for projects of induction furnace etc. > 30,000 t/y) vide AC MoM dated December 07, 2011*	B	5 (k)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical	A	6 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal		
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		30	All ship breaking yards including ship breaking units	A	7 (b)
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes	A	7 (c)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		34	Highways	A	7 (f)
		39	Township and Area development projects	B	8 (b)
104	**Metamorphosis[SM] Project Consultants Pvt. Ltd.** (formerly known as Metamorphosis) **Address:** Prakruti Bhavan, # 200, 1st & 2nd Floor, 1st Cross, 40th Main, Behind	1	Mining of minerals (open cast only)	A	1 (a) (i)
		3	River Valley, Hydel, Drainage and Irrigation projects	A	1 (c)
		7	Mineral beneficiation including pelletisation	A	2 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Silk Board, BTM, Layout II Stage, Bengaluru- 560068 **E.mail:** mail@metamorphosis-india.com Dr.shanth@metamorphosis-india.com **Tel.:** 080-26783006 09845027475 *Conditions apply*	8	Metallurgical industries (ferrous only)- both primary and secondary	A	3 (a)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
105	**Mineral Engineering Services** **Address:** 25/ XXV, Club Road, Bellary – 583103 **E-mail:** sachinraju2000@yahoo.com **Tel.:** 080 – 25432968, 25432969 09448024304 *Conditions apply*	1	Mining of minerals including Opencast / Underground mining	A	1 (a) (i)
106	**MITCON Consultancy Services Ltd.** **Address:** Agriculture College Campus, Next to DIC Office, Shivajinagar, Pune – 411005 **E-mail:** eme@mitconindia.com mitconenviro@gmail.com **Tel.:** 020-66289400/ 66289406 09822451150, 09850724177 *Conditions apply*	1	Mining of Minerals including Open cast/ Underground mining	B	1 (a) (i)
		3	River linking & Irrigation projects only	A	1 (c)
		4	Thermal power plants	A	1 (d)
		7	Mineral beneficiation including pelletisation	B	2 (b)
		8	Metallurgical industries (ferrous only)	B	3 (a)
		9	Cement plants	B	3 (b)
		21	Synthetic organic chemicals industry	A	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			(dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)		
		22	Distilleries	A	5 (g)
		24	Pulp & paper industry excluding manufacturing of paper from wastepaper and manufacture of paper from ready pulp without bleaching	A	5 (i)
		25	Sugar Industry	B	5 (j)
		31	Industrial estates/ parks/ complexes/areas, export processing Zones(EPZs), Special Economic Zones(SEZs), Biotech Parks, Leather Complexes	B	7 (c)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		34	Highways	A	7 (f)
		36	Common Effluent Treatment Plants (CETPs)	B	7 (h)
		37	Common Municipal Solid Waste Management Facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		39	Townships and Area development projects	B	8 (b)
107	**National Environmental Engineering Research Institute** **Address:** Nehru Marg, Nagpur – 440020 **E-mail:** director@neeri.res.in; rj_krupadam@neeri.res.in **Tel.:** 0712-2249885, 07758079540 *Conditions apply*	1	Mining of minerals (Open cast only)	A	1 (a) (i)
		2	Offshore & Onshore Oil and gas exploration, development & production	A	1 (b)
		3	River valley, hydel, Drainage and Irrigation projects	A	1 (c)
		4	Thermal power plants	A	1 (d)
		10	Petroleum refining industry	A	4 (a)
		13	Chlor-alkali industry	B	4 (d)
		16	Chemical fertilizers	B	5 (a)
		18	Petro-chemical complexes (industries based on processing of petroleum fractions & natural gas and/or reforming to aromatics)	A	5 (c)
		19	Textile – cotton and manmade fibers	B	5 (d)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		31	Industrial estates/ parks/	A	7 (c)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			complexes/areas, export processing Zones (EPZs), Special Economic Zones(SEZs), Biotech Parks, Leather Complexes.		
		32	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	A	7 (d)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		36	Common Effluent Treatment Plants (CETPs)	B	7(h)
		37	Common Municipal Solid Waste Management Facility (CMSWMF)	B	7 (i)
108	**National Institute for Interdisciplinary Science and Technology** **Address:** Council of Scientific & Industrial Research, Industrial Estate (PO), Pappanamcode, Thiruvanthapuram- 695019 **E-mail:** director@niist.res.in **Tel.:** 0471-2515226, 0471-2490324, 09447706202	1	Mining of minerals (Open cast only)	A	1 (a) (i)
		33	Ports, harbours, break waters and dredging	B	7 (e)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Conditions apply				
109	**N.S. envirotech Laboratories & Consultants** **Address:** A-8, Neha Medical Building, Opp. ESI Hospital, Hasanpura Road, Sodala, Jaipur – 302006, Rajasthan **E-mail:** nsenvirotech@gmail.com **Tel.:** 0141-2451959 *** The organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment.* *Conditions apply*	1	Mining of minerals including Open cast/ Underground mining	B	1 (a) (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
110	**Oasis Environmental Foundation** **Address:**6, Kartik Apartments, Plot no. 75 + 76B, Shanti Sheela Society, Off Law College Road, Erandwane, Pune- 411004	8	Metallurgical industries (ferrous & nonferrous) - both primary & secondary	A	3 (a)
		21	Synthetic organic chemicals industry (dyes and dye intermediates; bulk drugs and intermediates excluding	A	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	E-mail: oasisenv@vsnl.com **Tel.:** 020-25435691, 9822009923 *Conditions apply*		drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)		
		37	Common Municipal Solid Waste Management Facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
111	**Oil and Natural Gas Corporation** **Address:**8th Floor, Core- 4, Scope minar, laxmi Nagar, Delhi -92 **E-mail:** sharmajswarup@hotmail.com **Tel.:** 011-22406031, 9868282044, 9868282230 *Conditions apply*	2	Offshore and onshore oil and gas exploration, development & production	A	1 (b)
112	**Overseas Min-Tech Consultants Pvt. Ltd.**	1	Mining of minerals - Open cast only	A	1 (a) (i)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Address: 5th Floor, Apex Tower, Tonk Road, P.O. Jaipur, Rajasthan – 302015 **E-mail**:arun.omtc@gmail.com **Tel.:** 09460221084 Conditions apply	3	Irrigation projects only	B	1 (c)
		4	Thermal power plants	B	1 (d)
		7	Mineral beneficiation	A	2 (b)
		34	Highways	A	7 (f)
		38	Building and construction projects	B	8 (a)
113	**Paramarsh (Servicing Environment and Development** **Address:** 4/97, Viram Khand, Gomti Nagar, Lucknow – 226010, Uttar Pradesh **Email:** paramarsh.env@hotmail.com **Tel. No.** (0522) 4114250 Mobile: 09336348520 *** Though the EIA Coordinator for these sectors*	9	Cement plants (grinding units only)	B	3 (b)
		22**	Distilleries	B	5 (g)
		24**	Pulp & paper industry excluding manufacturing of paper from wastepaper and manufacture of paper from ready pulp without bleaching	B	5 (i)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	was found suitable for Cat. A, the organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment. They can take up projects in these sectors only for Cat. B as an organization. *Conditions apply*	38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
114	**Perfact Enviro Solutions Pvt. Ltd.** **Address:** 5th Floor, NN Mall, Sector – 3, Rohini, New Delhi - 110085 **E-mail:** info@perfactgroup.in; **Tel.:** 011 – 49281360 09871591330 *Conditions apply*	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		7	Mineral beneficiation including pelletisation	A	2 (b)
		15	Leather/skin/hide processing industry	A	4 (f)
		21	Synthetic organic chemicals industry (dyes and dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		22	Distilleries	A	5 (g)
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather	A	7 (c)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			complexes		
		32 A	Bio-Medical waste treatment Facilities	B	7(da)
		35	Aerial ropeways	A	7 (g)
		37	Common Municipal Solid Waste Management Facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
115	**Pioneer Enviro Laboratories & Consultants Pvt. Ltd.** **Address:** 6-3-652, Flat # 7-3, Dhruvatara Apartments, Amrutha Estates, Erramanjil, Somajiguda, Hyderabad- 500082 **E-mail:**pelcpl@yahoo.co.in, pelcpl@gmail.com **Tel.:**040-23314270, 9440677333	1	Mining of minerals- Open Cast only	A	1 (a) (i)
		3	River Valley projects	A	1 (c)
		4	Thermal power plants	A	1 (d)
		6	Coal Washeries	A	2 (a)
		7	Mineral beneficiation including pelletisation	B	2 (b)
		8	Metallurgical industries (ferrous & non-ferrous)	A	3 (b)
		9	Cements plants	A	3 (b)
		12	Asbestos milling and asbestos based products	A	4 (c)
		13	Chlor-alkali industry	A	4 (d)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Conditions apply	16	Chemical Fertilizers- SSP only	B	5 (a)
		21	Synthetic organic chemicals industry (dyes and dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		22	Distilleries	A	5 (g)
		25	Sugar Industry	B	5 (j)
		31	Industrial estates/ parks/ complexes/areas, export processing Zones(EPZs), Special Economic Zones(SEZs), Biotech Parks, Leather Complexes	A	7 (c)
		37	Common Municipal Solid Waste Management Facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
116	**Pollution Control Research Institute** **Address:** Bharat Heavy Electricals Limited (BHEL)Ranipur, Haridwar – 249403, Uttarakhand	4	Thermal power plants	A	1 (d)
		16	Chemical Fertilizers	A	5 (a)
		24	Pulp & paper industry excluding manufacturing of paper from waste paper and manufacture of paper	A	5 (i)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	E-mail: ambrish@bhelhwr.co.in **Tel.:** 01334- 281872 09410395764 *Conditions apply*		from ready pulp without bleaching		
		40 (v)	Food processing	-	-
117	**Pollution and Ecology Control Services** **Address:** Near Dhantoli Police Station, Dhantoli, Nagpur – 440012 **E-mail:** pecs_nagpur@rediffmail.com **Tel.:** 0712-6504146, 09423683728, 09373128182 *Conditions apply*	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		3	River Valley projects	A	1 (c)
		4	Thermal power plants	A	1 (d)
		6	Coal Washeries	A	2 (a)
		7	Mineral beneficiation	A	2 (b)
		8	Metallurgical industries (Ferrous & nonferrous)- both primary and secondary (including Induction &other furnaces > 30000 TPA)	A	3 (a)
		9	Cement plants	B	3 (b)
		11	Coke oven plants	A	4 (b)
		36	Common effluent treatment plants (CETPs)	B	7 (h)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
118	**Pragathi Labs & Consultants Pvt. Ltd.** **Address:** Plot No. 8, Temple Rock Enclave, Lane Opp. Linkwell Building, Tarbund 'X' roads, Secunderabad – 500009 **E-mail:**madala_r@yahoo.com **Tel.:** 040- 27897213; 09515121956 09849872272 *Conditions apply*	1	Mining of minerals including opencast/underground mining	A	1(a) (i)
		3	River Valley projects(Irrigation only)	A	1 (c)
		4	Thermal power plants	A	1 (d)
		8	Metallurgical industries(Ferrous only)	A	3 (a)
		21	Synthetic organic chemicals industry	A	5 (f)
		27	Oil & Gas transportation pipeline	A	6 (a)
		32	Common hazardous waste treatment, storage and disposal facilities(TSDFs)	B	7 (d)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		34	Highways	A	7 (f)
		37	Common Municipal Solid Waste Management Facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
		40(v)	Food Processing	A	-
119	**Precitech Laboratories Private Limited** (formerly known as Precitech Laboratories)	4	Thermal power plants	B	1 (d)
		9	Cement plants	B	3 (b)
		17	Pesticides industry and pesticide specific intermediates (excluding	A	5 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			formulations)		
	Address: 1st Floor Bhanujyot Complex, Plot No. C5/27, Opp Oriental Ins. Co. Ltd., Nr. GIDC Char Rasta Vapi - 396195 **E-mail:**vapi@precitechlab.com, dr.hmbhatt@precitechlab.com, rujul.h.bhatt@gmail.com **Tel.:** 0260-2425542, 2420995, 2424901, 3298985 09825121185, 9925008673 *Conditions apply*	19	Manmade fibers manufacturing	A	5 (d)
		20	Petrochemical based processing (processes other than cracking & reformation and not covered under the complexes)	A	5 (e)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		33	Ports, harbours, break waters and dredging	B	7 (e)
		38	Building and construction projects	B	8 (a)
120	**Pridhvi Envirotech (P) Ltd.** **Address:** 184/c,Lawn House, 4th floor, Vengalraonagar, Hyderabad - 500 038 **E-mail:** pvr@pridhvienviro.com **Tel.:** 040-40179770, 9849023662	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		4	Thermal power plants	B	1 (d)
		8	Metallurgical industries (ferrous & non-ferrous)	B	3 (a)
		9	Cement plants	B	3 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding	A	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Conditions apply		drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)		
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes	A	7 (c)
		37	Common Municipal Solid Waste Management Facility (CMSWMF)	B	7(i)
		38	Building and construction projects	B	8(a)
		39	Townships and Area development projects	B	8(b)
121	**Project & Development India Limited** **Address:** CIFT Building, PDIL, Sindri, Dhanbad, Jharkhand-828122 **E-mail:** Dhn_envpdil@bsnl.in , ajay15b@gmail.com **Tel.:** 03262350801, 09431777483 *Conditions apply*	10	Petroleum refining industry	A	4 (a)
		16	Chemical Fertilizers	A	5 (a)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quality indicated	B	6 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			in column 3 of schedule 2 & 3 of MSIHC Rules 1989 amended 2000)		
		29	Air ports	A	7 (a)
122	**R. K. Consultants** **Address:**17-E/ 403, C. H.B, Jodhpur- 342008 **E.mail:**rpurohit2226@gmail.com, rkconsultants@sify.com **Tel.:**0291- 2706098, 09829021098 *Conditions apply*	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		38	Building and construction projects	B	8 (a)
123	**R. S. Envirolinks Technologies Pvt. Ltd.** **Address:** 402, Radisson Suites Commercial Plaza, B Block, Sushant Lok 1, Gurgaon – 122009 **e. mail:** ravi@rstechnologies.co.in **Tel.:** 0124 – 4295383 09810136853	27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		33	Jetties only	B	7 (e)
		34	Highways	A	7 (f)
		40 (i)	Automobile and Auto Components	-	-

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Conditions apply				
124	**Ramans Enviro Services Pvt. Ltd.** **Address:** SF 23 & 24, Camps Corner, Nr. AUDA Garden, Prahladnagar, Ahmedabad – 380015 **e. mail:** ramans_consultancy@rediffmail.com samirchoksi88@yahoo.com **Tel.:** 079 – 26937472, 26937411 09824034495 *Conditions apply*	4	Thermal power plants	B	1 (d)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quality indicated in column 3 of schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		32	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	B	7 (d)
		36	Common effluent treatment plants (CETPs)	B	7 (h)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area Development projects	B	8 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
125	**Ramky Enviro Services Private Limited** **Address:** 2nd Floor, Ramky Grandiose, Ramky Towers Complex, Gachibowli, Hyderabd- 500032, Telangana **e. mail:** drchakradhar@ramky.com consultancy@ramky.com vvijaykumar@ramky.com **Tel.:** 0*40 2331 0091,* 09849597458 *Conditions apply*	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		2	Offshore and onshore oil and gas exploration, development & productions	A	1 (b)
		3	River Valley projects	A	1 (c)
		4	Thermal power plants	A	1 (d)
		20	Petrochemical based processing (processes other than cracking & reformation and not covered under the complexes)	A	5 (e)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes	A	7 (c)
		32	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	A	7 (d)
		33	Ports, harbours, break waters and	B	7 (e)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			dredging		
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area Development projects	B	8 (b)
126	**Ramji Mine Envirotech** **Address:** Plot No.-21,I Floor, Aarna 2 Tower, Kartarpura, Industrial Area, 22 Godam Jaipur-302006 **E-mail:** rme.envirotech@gmail.com, mkguptarqp@gmail.com, **Tel.:** 0140-4036199, 9799744347 *Conditions apply* *** Though the EIA Coordinator for this sector was found suitable for Cat. A, the organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment. They can take up projects in these sectors only for Cat. B as an organization.*	1**	Mining of minerals including Open cast	A	1 (a) (i)
			Mining of minerals - Underground mining	B	
		6	Coal washeries	B	2 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
127	**Right Source Industrial Solutions Pvt. Ltd.** **Address:** Plot No.203, H.No.5-36/203, Prashanthi Nagar, Kukatpally, Hyderabad- 500072 **E.mail:** prasad@rightsource.co.in info@rightsource.co.in **Tel.:**04023070602/23075699/40126589/65873137, 09885560011 *Conditions apply*	1	Mining of minerals including opencast/underground mining	B	1(a) (i)
		17	Pesticides industry and pesticide specific intermediates(excluding formulation)	A	5 (b)
		21	Synthetic organic chemicals industry(dyes & dye intermediates bulk drug, and intermediates excluding drug formulation, synthetic rubbers, basic organic chemicals, other synthetic organic chemicals and chemical intermediates.	A	5 (f)
		38	Building and construction project	B	8 (a)
128	**Rites Limited** **Address:** RITES Bhawan, Plot no. 1, Sector 29,Gurgaon- 122001	3	River Valley projects	B	1 (c)
		29	Air ports	A	7 (a)
		34	Highways	A	7 (f)
		35	Aerial ropeways	A	7 (g)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	E-mail: ue.rites@gmail.com, **Tel.:** 9810404276 *Conditions apply*	37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
129	**SBA Enviro Systems Pvt Ltd.** **Address**: 201, DDA Local Shopping Centre, E Block, Vikaspuri, New Delhi 110018 **E.mail:** sbaenvirosystems@ymail.com **Tel.:** 91 11 45118929 *** Though the EIA Coordinators for these sectors were found suitable for Cat. A, the organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment. They can take up projects in these sectors only for Cat. B as an organization.* *Conditions apply*	8	Metallurgical industries - (ferrous & nonferrous)	B	3 (a)
		15	Leather/ skin/ hide processing industry	A**	4 (f)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	B	5 (f)
		34	Highways	A**	7 (f)
		38	Building and Construction projects	B	8(a)
		39	Townships and Area development projects	B	8(b)
130	**SD Engineering Services Pvt. Ltd.**	3	River Valley, Hydel, Drainage and	A	1 (c)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Address: 14, Age Arcade, New Osmanpura, Near Sant Eknath Rang Mandir, Aurangabad - 431 005 **E-mail:**sdesplinida@gmail.com, deepak.sanghai@gmail.com **Tel.:** 0240-2333622, 2333064 *Conditions apply*		Irrigation projects		
		4	Thermal power plants	A	1 (d)
		8	Metallurgical industries - (ferrous & nonferrous)	A	3 (a)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		22	Distilleries	A	5 (g)
		25	Sugar Industry	B	5 (j)
		36	Common effluent treatment plants (CETPs)	B	7 (h)
		38	Building and Construction projects	B	8(a)
		39	Townships and Area development projects	B	8(b)
131	**Sadekar Enviro Engineers Pvt. Ltd.** **Address:** 310, Dempo Towers, EDC Patto, Panaji-403001	1	Mining of minerals (Open cast only)	A	1 (a) (i)
		2	Offshore and onshore oil and gas exploration, development & production	A	1 (b)
		17	Pesticide industry and pesticide	A	5(b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	E.mail: sadekarenviro@rediffmail.com psadekar@yahoo.com prs@sadekarenviro.com **Tel.:** 02437048, 09423055718, 09423318140 09820144125/09423055718 *Conditions apply*		specific intermediates (excluding formulations)		
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates	A	5 (f)
		25	Sugar industry	B	5(j)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/ coral reefs/ ecologically sensitive Areas including LNG terminal	A	6 (a)
		3	Industrial estates/ parks/ complexes/Areas, export processing Zones(EPZs), Special economic zones(SEZs), Biotech Parks, Leather Complexes	A	7 (c)
		33	Ports, Harbours, break waters and dredging	A	7 (e)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		39	Township and area development projects	B	8 (b)
132	**San Envirotech Pvt. Ltd.** **Address:**401/402/423/424/324, Medicine Market, Opposite Shefali Centre, Paldi, Cross road, Ahmedabad, Gujarat- 380007 **Email:**Mahendra.sepl@gmail.com **Tel.:** 07926583077, 09825007201, 09327637201 *Conditions apply*	1	Mining of minerals (Open cast only)	B	1 (a) (i)
		4	Thermal power plants	A	1 (d)
		8	Metallurgical industries (ferrous only) -both primary & secondary	B	3 (a)
		9	Cement plants	B	3 (b)
		13	Chlor-alkali industry	B	4 (d)
		16	Chemical Fertilizers	A	5 (a)
		17	Pesticides industry and pesticide specific intermediates (excluding formulations)	A	5 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates	A	5 (f)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quality indicated in column 3 of schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		38	Building and construction projects	B	8 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
133	**SGM Corporate Consultants Pvt. Ltd.** **Address**: Sahil Apartment, 1102/A/4B, Lakaki Road,Opp. Kirloskar Banglow, Model Colony, Shivaji Nagar , Pune -411016 **E-mail:** sgm_pune@yahoo.com, sgmcorporate@gmail.com **Tel.:** 020- 25822900 09822180803 *Conditions apply*	1	Mining of minerals - Open cast only	B	1 (a) (i)
		4	Thermal Power Plants	B	1 (d)
		9	Cement plants	A	3 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	B	5 (f)
		22	Distilleries	A	5 (g)
		25	Sugar Industry	B	5 (j)
		38	Building and construction projects	B	8 (a)
134	**SAWEN Consultancy Services Pvt. Ltd.** **Address:** 409-A, 426-B, 417-A & B, Sahara Shopping Centre, Faizabad Road, Lucknow – 226016	7	Mineral Beneficiation	B	2(b)
		25	Sugar Industry	B	5 (j)
		38	Building and construction projects	B	8 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	E-mail: consultancy_sawens@yahoo.co.in, **Tel.:** 0522- 7379444471-74 09450738044 *Conditions apply*	39	Townships and Area development projects	B	8 (b)
135	**SGS India Pvt. Ltd.** **Address:** 250, Udyog Vihar, Phase IV, Gurgaon - 122015 **E-mail:** sanjeev.kumar@sgs.com **Tel.:** 0124 – 2399990, 2399998 09871794706 *Conditions apply*	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		2	Offshore and onshore oil and gas exploration, development & production	A	1 (b)
		3	River Valley	B	1 (c)
		4	Thermal power plants	A	1 (d)
		9	Cement plants	A	3 (b)
		10	Petroleum refining industry	A	4 (a)
		12	Asbestos milling and asbestos based products	A	4 (c)
		18	Petro-chemical complexes (industries based on processing of petroleum fractions & natural gas and/or reforming to aromatics)	A	5 (c)
		20	Petrochemical based processing (processes other than cracking & reformation and not covered under the complexes)	A	5 (e)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		22	Distilleries	A	5 (g)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quality indicated in column 3 of schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		29	Air ports	A	7 (a)
		33	Ports, Harbours, Jetties, marine terminals, break waters and dredging	A	7 (e)
		34	Highways	A	7 (f)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development	B	8 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			projects		
136	**Shivalik Solid Waste Management Limited** **Address:** (UPL Enviro Infrastructure Group Co.), 2nd Floor, SCO 20-21, near Hotel Dolphin,Zirakpur,Punjab-140604 **E-mail:** s.brahma@tatvaglobal.com **Tel.:** 08872028131, 08288079363, 09316028131 *Conditions apply*	1	Mining of minerals- Open cast only	A	1 (a) (i)
		3	River Valley projects	A	1 (c)
		4	Thermal power plants	B	1 (d)
		8	Metallurgical industries(ferrous & nonferrous) - both primary & secondary	A	3 (a)
		17	Pesticides industry and pesticide specific intermediates (excluding formulations)	A	5 (b)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	B	6 (a)
		32	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	A	7 (d)
		32 A	Bio-medical waste treatment facilities	B	7 (da)
		36	Common effluent treatment plants (CETPs)	B	7 (h)
		38	Building and construction projects	B	8 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
137	**Shriram Institute for Industrial Research** **Address:** 19, University Road Delhi- 110007 **E-mail:** sridlhi@shriraminstitute.org **Tel.:** 011- 27667267 *Conditions apply*	27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quality indicated in column 3 of schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		31	Industrial estates/ parks/ complexes/Areas, export processing Zones(EPZs), Special economic zones(SEZs), Biotech Parks, Leather Complexes	A	7 (c)
138	**Siddhi Green Excellence Private Limited** **(Earlier known as Siddhi Consultants)** **Address:** "Kamal Arcade", Shop No. 3, Comm. Plot No. C-3/3, Near State Bank of India, G.I.D.C, Ankleshwar – 393002	17	Pesticides industry and pesticide specific intermediates (excluding formulations)	A	5 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other	A	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	E-mail: siddhi_ank@rediffmail.com **Tel.:** 02646- 224805 09824345895 *Conditions apply*		synthetic organic chemicals and chemical intermediates)		
139	**Singareni Collieries Company Limited** **Address:** Kothagudem Collieries Bhadrachalam Road Rly. Station, Khammam District – 507101 **E-mail:**dpp@scclmines.com **Tel.:** 08744242328 09491144455 *Conditions apply*	1	Mining of minerals including Open cast and Underground mining	A	1 (a) (i)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
140	**S.M. Consultants** **Address:** S.M.Tower, Plot No.- 130,Mancheswar Industrial Estate, Rasulgarh, Bhubaneswar-751010, Odisha **E-mail:** qualitycontrol@smcindia.com Tel.: 08908215859 *** Though the EIA Coordinator for this sector was found suitable for Cat. A, the organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment. They can take up projects in these sectors only for Cat. B as an organization.* *Conditions apply*	34**	Highways	B	7 (f)
		38	Building and construction projects	B	8 (a)
141	**SMS Envocare Ltd.** **Address:** 301, Pentagaon, P3, Magarpatta City, Hadapsar, Pune - 411028	3	River Valley projects	B	1 (c)
		4	Thermal power plant	B	1(d)
		19	Man made fibre manufacturing	A	5(d)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk	A	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	E-mail: nilesh.deshmukh@smsl.co.in **Tel.:** 020- 66801111 09922901511 *Conditions apply*		drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)		
		22	Distilleries	A	5 (g)
		25	Sugar Industry	B	5 (j)
		32	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	A	7 (d)
		36	Common Effluent Treatment Plants (CETPs)	B	7 (h)
		37	Common Municipal Solid Waste Management Facility (CMSWMF)	A	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
142	**Sneha Hi-Tech Products** **Address:** No.8 & 28, 4 th Cross, Maruthinagar	1	Mining of minerals - Open cast only	A	1 (a) (i)
		36	Common Effluent Treatment Plants (CETPs)	B	7 (h)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Chandra Layout, 80 feet road, Nagarabhavi, Bangalore-560072 **E-mail:** snehahitechproducts@gmail.com **Tel.:** 080-23180113/23390341 **The organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment.* *Conditions apply*	38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
143	**Srujan Research and Planning foundation** **Address:** Sharada Center, 11/1 Erandawane, Off Karve Road, Pune - 411004 **E-mail:** rahul.nawle@srujanfoundation.com, planning@srujanfoundation.com **Tel.:** 020-65333394/ 09970181813 *Conditions apply*	38	Building and construction projects	B	8 (a)
		39	Townships and Area Development projects	B	8 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
144	**State Forest Research Institute** **Address:** State Forest Research Institute, Polipathar, Narmada Road, Jabalpur - 482008 (M.P) **E-mail:** pandeyrk1@yahoo.com **Tel.:** ***The organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment. They can take up projects in these sectors only for Cat. B as an organization.* *Conditions apply*	1	Mining of minerals including Open cast and Underground mining	B	1 (a) (i)
		3	River valley projects	B	1 (c)
145	**Sri Sai Manasa Nature Tech Pvt. Ltd.** **Address**: Plot No. 74/A, Flat No. 102, Central Bank Building, Kalyan Nagar, Hyderabad – 500038 **E-mail:**ssmntpl@gmail.com	1	Mining of minerals – Open cast only	A	1 (a) (i)
		4	Thermal power plants	A	1 (d)
		6	Coal washeries	A	2 (a)
		8	Metallurgical industries (ferrous & non ferrous)	B	3 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Tel.: 040- 23816333 09010548548 *Conditions apply*	9	Cement plants	A	3 (b)
		22	Distilleries	B	5 (g)
		31	Industrial estates/ parks/ complexes/Areas, export processing Zones(EPZs), Special economic zones(SEZs), Biotech Parks, Leather Complexes	B	7 (c)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
146	**Srushti Sewa** **Address:** Harihar Niwas, Agrasen Marg, Near Adivasi Bhavan, Giri Peth, Nagpur – 440010 (M.S.) **E-mail:** srushtisewa@sancharnet.in srushtisewa@yahoo.com **Tel.:** 0712- 6888545 09422108095, 08237002633 *** Though the EIA Coordinators for these sectors were found suitable for Cat. A, the organization as a*	1	Mining of minerals including underground mining	A**	1 (a) (i)
		3	River Valley Projects	A**	1 (c)
		4	Thermal power plants	A**	1 (d)
		6	Coal washeries	A**	2 (a)
		8	Metallurgical industries (ferrous & non-ferrous)	B	3 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment. They can take up projects in these sectors only for Cat. B as an organization. *Conditions apply*				
147	**SV Enviro Labs & Consultants** **Address:** B1-Block –B, IDA Auto Nagar, Visakhapatnam- 530012 **E-mail:** svenviro_labs@yahoo.co.in **Tel.:** 0891- 2797377 09440338628 *Conditions apply*	1	Mining of minerals (Open cast only)	A	1 (a) (i)
		3	River Valley Projects	A	1 (c)
		16	Chemical Fertilizers (SSP & DAP plants only)	A	5 (a)
		22	Distilleries	A	5 (g)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		33	Ports, Harbours, break waters and dredging	A	7 (e)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		39	Townships and Area development projects	B	8 (b)
148	**TATA Consulting Engineers Limited** **Address:** Matulya Center, A-249, Senapati Bapat Marg, Lower Parel (west), Mumbai – 400013 **E-mail:** vsbapat@tce.co.in; alokk@tce.co.in **Tel.:** 022- 66624743, 66624724 *Conditions apply*	1	Mining of minerals (Open cast only)	B	1 (a) (i)
		4	Thermal power plants	A	1 (d)
		8	Metallurgical industries (ferrous only) – both primary and secondary	A	3 (a)
		11	Coke oven plants	A	4 (b)
		16	Chemical Fertilizers	A	5 (a)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		37	Common municipal solid waste management facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
149	**TEAM Institute of Science & Technology Pvt Ltd.** **Address:** E-65, Chittaranjan Marg, C-Scheme, Jaipur,Rajasthan-3020022 **e. mail:** eia@teamtesthouse.com	1**	Mining of minerals - Open cast only	A	1 (a) (i)
		36	Common effluent treatment plants (CETPs)	B	7(h)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Tel.: 0141-2369980 ***Though the EIA Coordinator for this sector was found suitable for Cat. A, the organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment. They can take up projects in this sector only for Cat. B as an organization.* *Conditions apply*	38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
150	**TEAM Labs and Consultants** **Address:** B- 115 & 509, Annapurna Block, Aditya Enclave, Ameerpet, Hyderabad – 500038 **e. mail:**teamlabs@gmail.com **Tel.:** 040 – 23748666/ 23748616 09866415966 *Conditions apply*	1	Mining of minerals including Open cast / Underground mining	A	1 (a) (i)
		4	Thermal power plants	A	1 (d)
		8	Metallurgical industries (ferrous only) – both primary and secondary	A	3 (a)
		9	Cement plants	A	3 (b)
		13	Chlor-alkali industry	A	4 (d)
		17	Pesticides industry and pesticide specific intermediates (excluding formulations)	A	5 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding	A	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)		
		31	Industrial estates/ parks/ complexes/Areas, export processing Zones(EPZs), Special economic zones(SEZs), Biotech Parks, Leather Complexes	A	7 (c)
		34	Highways	A	7 (f)
		38	Building and construction projects	B	8(a)
		39	Townships and Area development projects	B	8 (b)
151	**Terracon Ecotech Pvt. Ltd.** **Address:** 202, Kingston, Tejpal Road, Vile Parle (E), Mumbai 400057, India **e. mail:** info@terraconindia.com **Tel.:**022-2613939/40/41, 9820828087 *Conditions apply*	1	Mining of minerals- Open cast only	B	1 (a) (i)
		2	Off shore and on shore oil and gas exploration, development and production	A	1(b)
		3	River valley, hydel, drainage and irrigation projects	B	1 (c)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		33	Ports, harbours, break waters and dredging	A	7 (e)
		34	Highways	A	7 (f)
		37	Common municipal solid waste management facility (CMSWMF)	B	7(i)
		38	Building and Construction projects	B	8(a)
152	**T. R. Associates** Address: Ganesh Meridian, Block No - C, Office No - 605a, Opp. Kargil Petrol Pump,Nr. Sola Over Bridge, B/S. Shapath Hexa, S.G. Highway, Ahmedabad 380060 **E-mail:** trassociates@hotmail.com **Tel.:** 98253 71099	4	Thermal power plants	B	1 (d)
		9	Cement plants	B	3 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		38	Building and construction projects	B	8 (a)
153	**Udaipur Min-Tech Pvt. Ltd.** **Address:** 206, "Apeksha Complex", Sector 11, Hiran Magri, Udaipur- 313002 **E-mail:** ssbist@udrmintech.com	1	Mining of minerals - Open cast mining only	A	1 (a) (i)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Tel.: 0294- 2489672 09414167672, 09950998672 *Conditions apply*				
154	**ULTRA-TECH** **Address:** 206, 224-225, Jai Commercial Complex, Eastern Express Highway, Opp. Cadbury, Khopat, Thane West - 400 601 **E-mail:** sawantkishor@ultratech.in **Tel.:** 020-25281338 09322917772 *Conditions apply*	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		2	Offshore & Onshore Oil and gas exploration, development & production	A	1 (b)
		3	River Valley projects	A	1 (c)
		4	Thermal Power Plants	A	1 (d)
		7	Mineral beneficiation	A	2 (b)
		8	Metallurgical industries- (ferrous & nonferrous) - both primary and secondary	A	3 (a)
		9	Cement Plants	A	3 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		22	Distilleries	A	5 (g)
		25	Sugar Industry	B	5 (j)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		34	Highways	A	7 (f)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
155	**Unistar Environment & Research Labs Pvt. Ltd.** **Address:** 215, Royal Arcade, Near GIDC Office, Vapi – 396195 **E-mail:** unistar@uerl.in	8	Metallurgical industries (ferrous only)	B	3 (a)
		19	Manmade fibers manufacturing	A	5 (d)
		20	Petrochemical based processing (processes other than cracking & reformation and not covered under the complexes)	B	5 (e)
		21	Synthetic organic chemicals industry	A	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Tel.: 0260 – 2435610, 2433966 09909946373 *Conditions apply*		(dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)		
		23	Integrated paint industry	B	5 (h)
		38	Building and construction projects	B	8 (a)
156	**Vardan Environet** **Address:** D-142, Sushant-Lok III, Golf Course Extension Road, Sector- 57, Gurgaon, Haryana **E-mail:** vardanenviro165@gmail.com **Tel.:**09953147268, 09971684812 *Conditions apply*	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		7	Mineral beneficiation	A	2 (b)
		8	Metallurgical industries (ferrous & nonferrous)- both primary & secondary	A	3 (a)
		9	Cement Plants	B	3 (b)
		11	Coke oven plants	B	4 (b)
		20	Petrochemical based processing (processes other than cracking & reformation and not covered under the complexes)	B	5 (e)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other	A	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			synthetic organic chemicals and chemical intermediates)		
		22	Distilleries	A	5 (g)
		25	Sugar Industry	B	5 (j)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		28	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B	6 (b)
		34	Highways	A	7 (f)
		36	Common effluent treatment plants (CETPs)	B	7(h)
		37	Common municipal solid waste management facility (CMSWMF)	B	7(i)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
157	**Vasantdada Sugar Institute** **Address:** Manjari (BK), Taluka, Haveli, Pune-412307 **E-mail:** ds.nimbalkar@vsisugar.org.in **Tel.:** 020- 26902343 *Conditions apply*	4	Thermal Power Plants – Biomass based projects only	A	1 (d)
		22	Distilleries	A	5 (g)
		25	Sugar Industry	B	5 (j)
		39	Townships and Area development projects	B	8 (b)
158	**Vimta Labs Limited** **Address:** 142, IDA, Phase – II, Cherlapally, Hyderabad – 500051 **E-mail:** janardhan@vimta.com **Tel.:** 040- 27264141 09000711309, *Conditions apply*	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		2	Offshore & Onshore Oil and gas exploration, development & production	A	1 (b)
		4	Thermal power plants	A	1 (d)
		6	Coal Washeries	A	2 (a)
		8	Metallurgical industries- (ferrous & nonferrous) - both primary and secondary	A	3 (a)
		9	Cement plants	A	3 (b)
		12	Asbestos milling and asbestos based products	A	4 (c)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	B	5 (f)
		27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs /ecologically sensitive Areas including LNG terminal	A	6 (a)
		29	Air ports	A	7 (a)
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes	A	7 (c)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
159	**Vison Labs** **Address:** H.No. 16-11-23/37/A, Plot No. 205, Opp. RTA Office, Sagar Hotel Building, Malakpet, Hyderabad – 500036 **E-mail:** vison_labs@yahoo.co.in vison.labs@gmail.com **Tel.:** 040- 24544320 09849110019 *Conditions apply*	1	Mining of minerals - Opencast mining only	B	1 (a) (i)
		4	Thermal power plants	B	1 (d)
		8	Metallurgical Industries	B	3 (a)
		9	Cement plants	B	3 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A	5 (f)
		38	Building and construction projects	B	8 (a)
160	**Visiontek Consultancy Services Pvt. Ltd.** **Address:** Plot No.-108, District Center, Chandrasekharpur, Bhubaneswar, Khurda -751016 **e-mail:** p_kumar_ranjan@vcspl.org **Tel.:** 0674-2744594	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		3	River valley projects	A	1 (c)
		4	Thermal power plants	A	1 (d)
		6	Coal washeries	A	2 (a)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	09437179882, 9338770319 *Conditions apply*	7	Mineral beneficiation	A	2 (b)
		8	Metallurgical industries- (ferrous & nonferrous) - both primary and secondary	A	3 (a)
		9	Cement plants	A	3 (b)
		11	Coke oven plants	A	4 (b)
		15	Leather/ skin/ hide processing industry	A	4 (f)
		32	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	A	7 (d)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		34	Highways	B	7(f)
		37	Common Municipal Solid Waste Management Facility (CMSWMF)	B	7 (i)
		38	Building and construction projects	B	8 (a)
161	**VITYA Consultants Pvt. Ltd.**	31	Industrial estates/ parks/ complexes/ Areas, export processing	A	7 (c)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
	Address: 4th Floor, Laxmi Plaza, Adj. Shenoy Nursing Home, East Marredpally , Secunderabad - 500 026 (India) **E-mail:**kk@vitya.in ed.vitya@gmail.com **Tel.:** 040 – 66233979 09989211387, 09000611387 *Conditions apply*		zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes		
		34	Highways	A	7 (f)
		36	Common effluent treatment plants (CETPs)	B	7 (h)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
162	**VK:e Environmental** **Address:** 73/2, Bhakti Marg, Off Law college Road, Erand wane Pune-411004 **E-mail:**aparanjape@vke-environmental.com, anaghap@gmail.com **Tel.:** 0120-66268888 Mob. No.9822013405 *Conditions apply*	38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
163	**Voyants Solutions Private Limited** **Address:** 403, 4th Floor, Park Centra Sector -30, NH-8 Gurgoan-122001 **E-mail:** info@voyants.in **Tel.:** 0124-4598200 /9599757300 *Conditions apply*	1	Mining of minerals (Open cast only)	A	1 (a) (i)
		3	River valley projects	A	1 (c)
		4	Thermal power plants	B	1 (d)
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes	B	7 (c)
		33	Ports, harbours break waters and dredging	A	7 (e)
		34	Highways	A	7 (f)
		37	Common Municipal Solid Waste Management Facility (CMSWMF)	B	7(h)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
164	**Wapcos Limited** **Address:** 76 – C, Institutional Area, Sector – 18, Gurgaon - 122015 **E-mail:**wapcos.cfe@gmail.com **Tel.:** 0124 – 2397396, 09811487830 *Conditions apply*	1	Mining of minerals (Open cast only)	A	1 (a) (i)
		3	River valley projects	A	1 (c)
		4	Thermal power plants	A	1 (d)
		33	Ports, harbours, break waters and dredging	A	7 (e)
		38	Building and construction projects	B	8 (a)
165	**Wolkem India Limited** **Address:** Consultancy Division, Post Box No. 21 E – 102 Mewar Industrial Area (Madri), Udaipur – 313003 Email: mahip@wolkem.com **Tel.:** 0294- 6452067 08890836012 *Conditions apply*	1	Mining of minerals including Opencast / Underground mining	A	1 (a) (i)
		7	Mineral beneficiation	A	2 (b)
		8	Metallurgical Industries (Secondary Ferrous)	B	3 (a)
		9	Cement plants	A	3 (b)
		16	Chemical Fertilizers	A	5 (a)
		17	Pesticides industry and pesticide specific intermediates (excluding formulations)	A	5 (b)
		21	Synthetic organic chemicals industry (dyes & dye intermediates; bulk	A	5 (f)

S. No.	Consultant Organization	Scope of Accreditation			
		As per NABET Scheme			Project or Activity as per Schedule of MoEFCC Notification dated September 14, 2006 and subsequent Amendments
		Sector Number	Name of Sector	Category	
			drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)		
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)
166	**Yes Enviro Solutions** **Address:** G-256, Second Floor, Sec-63, Noida, 201301 **Email:** info@yesenviro.co.in **Tel:** 07838007393 ***Though the EIA Coordinator for this sector was found suitable for Cat. A, the organization as a whole was accredited for Cat. B, in view of their having scored less than 60% marks in Office Assessment. They can take up projects in this sector only for Cat. B as an organization.* *Condition Apply*	1	Mining of Minerals	B	1 (a) (i)
		3	River valley projects	B	1 (c)
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes	B	7 (c)
		34**	Highways	A	7 (f)
		38	Building and construction projects	B	8 (a)
		39	Townships and Area development projects	B	8 (b)

Note*:* Revision 56 (August 08, 2017): List of EIA Consultant Organizations

1. ***(#) includes Accredited EIA Consultant Organizations who have submitted requisite details which are under process***
2. **New Accredited EIA Consultant Organizations:** None
3. **Deletion from the list:** Envirochem Laboratories (P) Ltd. and Naik Environment Research Institute Limited
4. **The ACOs who have not taken requisite actions to comply with the requirements of Version 3 are mentioned in List 'B'**
5. **ACOs shifted to List 'B':** None
6. **While preparing this list, due care has been taken. However, any inadvertent error cannot be ruled out. In case any error is noticed, kindly intimate the same to QCI-NABET.**

Annexure-8

GHCL Limited

Ref: GHCL/New Proj/03

Date: 5th June, 2018

National Environmental Engineering Research Institute.
Nehru Marg,
NAGPUR- 440 020

Kind Attn: Dr. M Sureshkumar/Dr.R J Krupadam

Sub: Letter of Intent to carry out Environment Impact Assessment for Greenfield Soda Ash project at Taluka Mandavi of district Kutch, Gujarat.

Ref: Mail offer Dated 3rd April, 2018 & telecon had with you today.

Dear Sir,

With reference to your above mentioned offer & our subsequent discussions, we are pleased to release letter of intent for subject requirement on study as per terms and conditions mentioned below. Our formal Purchase order / Work order will be issued in due course.

Scope of Supply / work:

a) Initial Environmental Examination (IEE)

- Selection of site: Based on visit to the 4 sites considered by the GHCL; and Appropriate site will be selected for the Chemical Complex.
- The environmental and economic merits and demerits of the different Sodaash manufacturing technologies and selection of suitable process technology.
- Reconnaissance survey in the study/impact area.

b) Environmental Impact Assessment (EIA)

Study area

- Geographical location of the proposed project site with coordinates of all corners & related to toposheet(s) to be provided by the GHCL Limited's Project near Taluka- Mandavi of District Kutch, Gujarat for delineation of the study area for collection of primary baseline data and secondary data in the area falling 10 km radius from the proposed project site. Environmental samples will be collected from sampling location in the study area as a part of environmental monitoring with proper reasoning.

c) Environmental Quality

- **AIR QUALITY :**
  Baseline data of ambient air parameters namely RSPM, nitrogen dioxide, sulphur dioxide, carbon monoxide, heavy metals and other air pollutants will be collected in an area extending 10 km from the project boundary by observation at a number of locations for one season other than monsoon as per CPCB

norms-specific importance to areas in close proximity of project i.e.,1 km. One station should be in the up-wind/non-impact/non-polluting area as a control station.

- Meteorological data covering the following will be incorporated in the EIA report.
  - i. Wind speed and direction
  - ii. Rainfall
  - iii. Relative humidity
  - iv. Temperature
  - v. Barometric pressures
  - vi. History of cyclones

- The data for at least a 10-year period will be presented from the nearest meteorological station, except for the history of cyclones and tidal surges for which 100-year data.
- Impact of project construction/operation on the ambient air quality on account of emissions of dust during construction as well as emission of gases from equipment deployed for construction and vessels handling will be assessed.
- Prediction due to emissions from the project activity and increased traffic; emission inventory for critical pollutants with and without mitigation measures, and prediction of the impact due to the existing activity on the proposed project on the ambient environment will be reported.
- Mitigation measures proposed during the construction stage will include dust Suppression measures by suitable techniques. Mitigation measures to prevent impact and manage the impact of the project will be delineated. Water Harvesting and greenbelt development in the project site will be planned.

(d) Noise

- Baseline data on noise pollution at the project area and the neighbourhood up to 1 km or nearest residential areas will be monitored as per the CPCB norms.
- Impact of project construction/operation on the noise on account of construction equipment, project plant and utilities equipment and road traffic.
- Mitigation measures to reduce adverse effects will be provided.

(e) Water environment

- Groundwater- Baseline data of groundwater including data of pH, dissolved solids, suspended solids, BOD, DO, coli-form bacteria, oil, heavy metals for one-season.
- Surface water- Baseline data on location of surface water like lagoons, lakes, tidal inlets, streams, rivers, their details, present quality for one season – Details of water bodies in the project area and the utility.
- Identification of anticipated impacts due to discharge of effluent and sewage - Impact of project construction/operation on the groundwater and surface water bodies.
- Propose appropriate mitigation measures to reduce adverse effects such as routing surface drainage to settlement tanks/pits - Treatment of effluent to meet the discharge standards of CPCB for marine disposal.
- Mitigation measures for protection of surface water resources in terms of quality and quantity will be proposed for both construction and operational stages of the project activity. Water requirement for project and the source of water for processing, Water harvesting and conservation plans will be prepared. Proposals to treat effluents confirming to standards notified under EP Act1996 will be submitted.

(f) Land environment

- Land availability - Justification for the proposed quantum of the area.
- Anticipated Impacts during project construction/operation on the land requirement/land use pattern will be assessed - Effect of future growth of the project and/or of the ancillaries will be assessed - Impact on the public utilities and natural drainage system arising out of proposed project activities.

- Mitigation measures will be proposed to reduce adverse effects like adopting soil improvement techniques and adopting suitable design methods to reduce land requirement.
- Baseline data describing of existing situation of the land at the proposed project area including description of terrain hill slopes coastal and inland topography, coastal features (low-land, beaches, littoral areas, shoal areas), terrain features, Slope and elevation.
- LU/LC: Study of land use pattern, habitation, cropping pattern, forest cover, environmentally sensitive places using remote sensing and GIS.
- Geology- Baseline data on rock types, regional tectonic setting (reported fractures/faulting, folding, warping), and history of any volcanic activity, seismic it and associated hazards, mainly in the coastal area.
- Soil data including type, classification, characteristics, and soil properties which is useful in engineering considerations for design of structures, and greenbelt development. Changes in parameters of soil also may affect plantation and vegetative growth, which in turn may endanger the health of local habitat. Baseline data of the soil quality as per CPCB guidelines in the study area.
- Anticipated impacts of proposed project on the topography due to activities like depletion of hills due to large scale quarrying, filling of low-lying area with dredged spoil and borrowed material, damage to existing vegetation/ greenbelt and plantation, changes in land use patterns, disturbance to existing protected areas like mangroves, forests and environmentally sensitive areas/zones will be assessed.
- Mitigation measures will be suggested to reduce adverse effects include improving greenbelt, usage of alternative construction materials like fly-ash, where possible; and storm water management.

(g) Solid and Hazardous wastes

- Details of authorized municipal solid waste facilities and hazardous waste disposal facilities in the study area will be inventoried in case if these facilities proposed to utilize the proposed project.
- Impacts due to non-hazardous and hazardous solid waste generated during the construction and operational stages will be assessed.
- Mitigation measures to comply the norms will be proposed for solid and hazardous wastes management. Options for minimization of solid waste and environmentally compatible disposal/recycling of waste to conserve natural resources will be planned.

(h) Ecology and Biodiversity

- Terrestrial Ecology – Baseline data of terrestrial flora and fauna at the project area by proper surveys - History of any endangered species – Flora and fauna in the neighborhood – Details on secondary data on the existing flora and fauna in the study area as well as 10 km from its boundary, carried-out by an university/institution under the relevant discipline (such as BSI, ZSI, and WII) in the list of flora and fauna along with classification as per Schedule given in the Wild Life Protection Act,1972 (for fauna) and in the Red Book Data (flora)- statement clearly specifying whether the study area forms a part of an ecologically sensitive area or migratory corridor of any endangered fauna.
- Impacts of the project construction/operation on terrestrial ecology on account of project construction will be assessed by suitable empirical/model studies.
- Fisheries resources - Impacts on the fishing activity due to the project – Specific study on effects of construction activity and pile driving on marine life.
- Mitigation measures to reduce adverse effects on ecology and biodiversity will be provided.

(I) Socio-economic and Occupational Health

- Baseline data at the project area will include the demography, particularly on human settlements, health status of the communities, existing infrastructure facilities in the proposed area and area of impact due to the proposed activity - Present employment and livelihood of these populations, awareness of the population about the proposed activity shall be included.

9:56

LOI-NEERI_202301041...

- Baseline data of existing public utility infrastructure shall be ascertained and reported to assess the impacts of the project on these public utilities in order to incorporate desired methods in the EMP and monitor the same during the construction as well as operational phases of the port.
- Details of public and private land in the proposed and immediate surroundings socio-economic status of the affected owners of the private land will be reported. Present status of health, housing, public utilities, commercial structures and transportation should be collected. Impact of the project on socio cultural aspects will be assessed.

(j) Environmental Monitoring Program

- The technical aspects of the monitoring of environmental parameters as per the requirements of SPCB/CPCB for the effectiveness of mitigation measures (including measurement methodologies, data analysis, reporting schedules, emergency procedures,detailed budget & procurement schedules) will be included in the EIA report.
- Some important considerations for formulation of the environmental monitoring program are:
    1. Requirement of monitoring facilities
    2. Frequency, location, parameters of monitoring
    3. Compilation and analysis of data, comparison with base line data and compliance to accepted norms and reporting system
    4. Plantation monitoring program

(k) Environmental Management Plan (EMP)

Summary of potential impacts & recommended mitigation measures.

- Allocation of resources and responsibilities for plan implementation
- Administrative and technical setup for management of environment
- Institutional arrangements proposed with other organizations/Govt. Authorities for effective implementation o environmental measures proposed in the EIA
- Safeguards/mechanism to continue the assumptions/ field conditions made in the EIA
- Environmental specifications for contractors will be prescribed and ensured required safeguards during the design and construction stage

<u>Deliverables:</u>

- Assist in preparing application for obtaining ToR from MoEF & CC
- Assist to make necessary presentation to MoEF and obtain ToR
- Carryout Environment Impact Assessment Study and coordinate with other studies related to EIA
- Submission of draft EIA Report (2 copies + soft-copy) for review by the proponent
- Submission of Final EIA Report along with executive summary after incorporation of suggestions from GHCL Limited (25 copies along with 2 CDs) for Environmental Appraisal at MoEF & CC
- Make presentation to MoEF for Environmental clearance(EC)

Note: Any change in the above proposal as per TOR conditions/clauses spelled out in MoEF letter of TOR to be Incorporated in the study & reported.

PROJECT COST:

GHCL Limited

PROJECT DURATION: 8-15 months

Payment terms: 40% of order value as advance against submission of Proforma Invoice before start of work.
50% payment against submission of draft report & balance 10% against submission of final report.

Kindly acknowledge this LOI and send copy duly signed as a token of acceptance. **Kindly coordinate your work/Emails/correspondence with our Shri V N Desai (E-mail: vndesai@ghcl.co.in)**

Thanking you,

Truly yours,

For, GHCL Limited.

Authorized Signatory

Regd. Office : "GHCL House", Opp. Punjabi Hall, Nr. Navrangpura Bus-Stand, Navrangpura, Ahmedabad-380 009. India
Phone : +91-79-39324100, 26427818, Fax : +91-79-26423623, Website : www.ghclindia.com

Head Office : "GHCL House", B-38, Institutional Area, Sector - 1, Noida - 201 301 (U.P.) India Phone : +91 120 2535335, Fax : +91 120 2535209
CIN: L24100GJ1983PLC006513

A Dalmia Brothers Enterprise

Annexure-9

GHCL Limited

GHCL/AHD/ENV/MOEF/VND/17-18/07 23rd November 2017

Member Secretary Industries 2
Ministry of Environment, Forest and Climate Change.
Indira Paryavaran Bhavan. Jorbagh Road
Aliganj, Lodhi Colony
New Delhi - 110 003
Ph: 011 24365199
E-mail: aksmree@yahoo.com/ sk.smree66@nic.in

Kind Attn: **Mr S K Srivastava.**
Sub: **Approved consultant for EIA/EMP Studies for Green Field Soda Ash Project.**

Dear Sir,

M/s GHCL Ltd is a reputed Soda Ash Manufacturing Heavy Chemical Unit incorporated in 1983 is located at Sutrapada, Gujarat. This is India's first integrated soda Ash Plant based on Akzo's Dry Liming Technology. Plant was commissioned in the year 1988 with 4,20,000 TPA capacity. Over the time capacity expanded to 11,00,000 TPA. This plant is the most energy efficient soda ash plant of the country.

GHCL is now planning for setting up a Green Field Chemical Complex in the Taluka of Mandvi, District of Kutch, State of Gujarat. For this project, M.O.U with Govt. Of Gujarat was signed during Vibrant Gujarat 2017 event. We have ambitious plans for Soda Ash Plant, Caustic Soda Plant, and Edible Salt etc. However to start with planning to set up a Green Field 5.00 Lac TPA Soda Ash Plant along with 60 MW C.P.P i.e solid fuel based Captive Power Plant. In future capacity expansion to take pace. The Captive Power Plant is a necessary as uninterrupted power and process steam at various operating pressures is the requirement. The Plant process being exothermic large quantity of sea water needs to be drawn from the sea. The entire plant treated effluent confirming to the laid down standards will be discharged in the sea at a recommended point. Further to meet process water requirement R.O./D.M will be installed. To draw water sea water, intake facilities will be set up.

Soda Ash integrated project being a mega project classified as category 4 (E) and 1 (D) by Project sector NABET/CIA, environment clearance for such project from M.O.E.F is mandatory .As per our understanding there is not a single environmental consultant of India registered/approved by quality council of India for soda Ash sector. For undertaking terrestrial / on shore environmental studies i.e EIA/EMP studies, we propose to engage the India's most reputed non controversial organizations like M/s NEERI/ M/s NIO / M/S I.R.S (if they agree to undertake the studies). We hope this will have your approval. In case if you have on approved list any other reputed consultant kindly share with us.

Thanking you,

Yours faithfully
For GHCL Ltd

V N Desai
Authorized Signatory

CC : Mr K C Mistry, Principal Secretary
G.P.C.B, Gandhinagar, Gujarat

GHCL Limited

Ref: GHCL/AHD/ENVMOEF&CC/VND/21-22/01 **28th July 2021**

Director and Member Secretary,
(IA Division- Industry Committee-3)
Ministry of Environment, Forest & Climate Change,
3rd Floor, Vayu Wing, Indira Paryavaran Bhavan,
Jor Bagh Road, Ali Ganj,
New Delhi – 110 003

SUBJECT: **Submission of Application for Terms of Reference (TOR) for proposed Green field Chemical complex – Soda Ash Manufacturing and associated utilities.**

REF: **Our letter No. GHCL/AHD/ENV/MOEF/VND/17-18/07 dtd. 23.11.2017**

Dear Sir,

M/s GHCL is a leading company in the manufacturing of chemicals, textiles, edible salt and other consumer products. In chemical sector, the company manufactures Soda Ash (Anhydrous Sodium Carbonate), a major raw material for detergents, glass & ceramics industries and the other product Sodium Bicarbonate (baking soda). The company caters to about 25% of domestic Soda Ash demand in the country.

GHCL has signed an MoU during Vibrant Gujarat, 2017 to set up a Greenfield Chemical Complex in district Kutch, Gujarat. GHCL proposes to set up 11,00,000 TPA Light Soda Ash, 5,00,000 TPA Dense Soda Ash, 2,00,000 TPA Sodium Bicarbonate manufacturing plants, solid fuel based 120 MW Captive Co-generation Power plant, RO-DM plant, other utilities, Seawater intake and effluent disposal facilities near village Bada, Taluka Mandvi, District Kutch, State Gujarat.

The proposed project falls under project activity item no 4 (e) Category 'A' as stated in EIA notification, 2006 and hence the project needs to obtain Environment Clearance from MOEFCC, New Delhi. Keeping this in consideration we had informed MOEFCC regarding appointment of EIA consultants vide letter NO. GHCL/AHD/ENV/MOEF/VND/17-18/07 dtd. 23.11.2017 as at that time no consultant specifically accredited for Soda Ash sector.

We have appointed M/s CSIR- NEERI, Nagpur and M/s CSIR-NIO, Mumbai for carrying out terrestrial and marine environment impact assessment studies. The terrestrial EIA and marine EIA studies have been almost completed and data collected is valid till 2022-2023. We have kept in mind the provisions of Standard TOR prescribed for Soda Ash Industry by MOEFCC. We will also conduct any additional study if suggested by MOEFCC for inclusion in EIA. We had aimed to start site activities by 2020 however due to COVID19 business activities and acquisition process got impacted.

GHCL Limited AHMEDABAD

GHCL Limited

:2:

CSIR-NIO, Goa has carried out sand dunes mapping and morphological changes, Zoological Survey of India (ZSI) had conducted Status survey and Conservation plan for Sea turtle, M/s STUP consultants had carried out Pre-feasibility study for seawater intake and effluent disposal, Ecological and wild life Assessment study was conducted by NABET accredited Functional Area Expert.

The area identified for setting up the proposed project is about 1481.48 acres (599.54 Ha.). The proposed site was selected after examining 5 alternative sites along Gujarat coast. We have already applied to District Collector for allotment of Govt. Land and Industries Commissioner for allotment of Private and Govt. Land.

Industries Commissioner, Govt. of Gujarat has grant the approval for Bonafied Industrial Purpose to GHCL Ltd. vide letter UF/Infra/Land/Tr-131/IC Office dtd. 27.07.2021.
We are enclosing herewith Form-I along with Pre-feasibility Report for the proposed project, seeking grant of ToR under EIA Notification, 2006.

We request you to kindly process the application for grant of TOR at the earliest.

Thanking You,

Yours faithfully,
FOR GHCL Ltd.

NISHIT NARBHERAM RADIA
Digitally signed by NISHIT NARBHERAM RADIA
Date: 2021.07.28 12:14:19 +05'30'

N N Radia
Chief Operating Officer

Encl: Form – I, Pre-feasibility Report

GHCL Limited AHMEDABAD

GHCL House, Swastik Society, Opp. Punjabi Hall, Navrangpura, Ahmedabad, Gujarat-380009, India Ph. : +91-079-26434100
CIN : L24100GJ1983PLC006513, E-mail : ghclinfo@ghcl.co.in, Website : www.ghcl.co.in

Head Office : GHCL House, B - 38, Institutional Area, Sector - 1, Noida, Uttar Pradesh - 201301, India. Ph. : +91-120-2535335, 3358000, Fax : +91-120-2535209

Annexure-11

National Accreditation Board for Testing and Calibration Laboratories

CERTIFICATE OF ACCREDITATION

CSIR-NATIONAL ENVIRONMENTAL ENGINEERING RESEARCH INSTITUTE

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2005

"General Requirements for the Competence of Testing & Calibration Laboratories"

for its facilities at

NEHRU MARG, NAGPUR, MAHARASHTRA, INDIA

in the field of

TESTING

Certificate Number: TC-7452

Issue Date: 22/06/2018 **Valid Until:** 21/06/2020

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the relevant requirements of NABL.
(To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Name of Legal Identity : CSIR-National Environmental Engineering Research Institute

Signed for and on behalf of NABL

N. Venkateswaran
Chief Executive Officer

GHCL Limited

Date: 31-12-2022

TO WHOMSOEVER IT MAY CONCERN

I, **Shri N N Radia** Chief Operation Officer (COO) of **M/s. GHCL Limited**, located at **Village: Bada, Taluka: Mandvi, District: Kutch, Gujarat**. We have applied for Environmental Clearance for Manufacturing of Soda Ash and captive Co-generation power plant etc.

I, **Shri N N Radia** hereby gives undertaking that all the information and documents in the CAF & Proposal are filled/uploaded and are factually correct.

N N Radia

COO

Works : Sutrapada, Dist. Gir-Somnath, Gujarat - 362275, India. Tel. +91-02876-263401-03, 263551-56 Fax : +91-02876-263480-83
CIN : L24100GJ1983PLC006513, E-mail : ghclinfo@ghcl.co.in , Website : www.ghcl.co.in

Regd. Office : GHCL House, Swastik Society, Opp. Punjabi Hall, Navrangpura, Ahmedabad, Gujarat-380009, India Tel. +91-079-26427519-818 Fax : +91-079-26423623
Head Office : GHCL House, B- 38, Institutional Area, Sector - 1, Noida, Uttar Pradesh - 201301, India. Ph. : +91-120-2535335, 3358000, Fax : +91-120-2535209

Quality Council of India

National Accreditation Board for Education & Training

Certificate of Accreditation

CSIR- National Environmental Engineering Research Institute

Nehru Marg, Wardha Road, Nagpur- 440020, Maharashtra

*The organization is accredited as **Category-A** under the QCI-NABET Scheme for Accreditation of EIA Consultant Organization, Version 3 : for preparing EIA-EMP reports in the following Sectors –*

Sl.No	Sector Description	Sector (as per)		Cat.
		NABET	MoEFCC	
1	Thermal power plants	4	1 (d)	A
2	Petroleum refining industry	10	4 (a)	A
3	Chlor-alkali industry	13	4 (d)	B
4	Petro-chemical complexes (industries based on processing of petroleum fractions & natural gas and/or reforming to aromatics)	18	5 (c)	A
5	Manmade fibers manufacturing	19	5 (d)	A
6	Petrochemical based processing (processes other than cracking & reformation and not covered under the complexes)	20	5 (e)	A
7	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs / ecologically sensitive areas including LNG terminal	27	6 (a)	A
8	Industrial estates/ parks/ complexes/areas, export processing Zones(EPZs), Special Economic Zones(SEZs), Biotech Parks, Leather Complexes	31	7 (c)	A
9	Common Effluent Treatment Plants (CETPs)	36	7 (h)	B
10	Common Municipal Solid Waste Management Facility (CMSWMF)	37	7 (i)	B

Note: Names of approved EIA Coordinators and Functional Area Experts are mentioned in SA AC minutes dated Sep. 04, 2020 posted on QCI-NABET website.

The Accreditation shall remain in force subject to continued compliance to the terms and conditions mentioned in QCI-NABET's letter of accreditation bearing no. QCI/NABET/ENV/ACO/20/1489 dated October 10, 2020.The accreditation needs to be renewed before the expiry date by CSIR- National Environmental Engineering Research Institute, Nagpur following due process of assessment.

Sr. Director, NABET
Dated: Oct. 10, 2020

Certificate No.
NABET/EIA/1821/SA 0119

Valid up to
01-07-2021

For the updated List of Accredited EIA Consultant Organizations with approved Sectors please refer to QCI-NABET website.

2226

1648

QUALITY COUNCIL OF INDIA
Creating an Ecosystem for Quality

National Accreditation Board for Education and Training

Certificate of Accreditation

CSIR- National Environmental Engineering Research Institute

Nehru Marg, Wardha Road Nagpur- 440020

*The organization is accredited as **Category-A** under the QCI-NABET Scheme for Accreditation of EIA Consultant Organization, Version 3: for preparing EIA-EMP reports in the following Sectors –*

S. No	Sector Description	Sector (as per)		Cat.
		NABET	MoEFCC	
1	Mining of minerals including opencast / underground mining	1	1 (a) (i)	A
2	Offshore and onshore oil and gas exploration, development & production	2	1 (b)	A
3	River Valley projects	3	1 (c)	A
4	Thermal power plants	4	1 (d)	A
5	Metallurgical industries (ferrous & non-ferrous)	8	3 (a)	A
6	Petroleum refining industry	10	4 (a)	A
7	Chlor-alkali industry	13	4 (d)	A
8	Chemical fertilizers	16	5 (a)	A
9	Pesticides industry and pesticide specific intermediates	17	5 (b)	A
10	Petro-chemical complexes	18	5 (c)	A
11	Manmade fibers manufacturing	19	5 (d)	A
12	Petrochemical based processing	20	5 (e)	A
13	Synthetic organic chemicals industry	21	5(f)	A
14	Oil & gas transportation, passing through national parks/ sanctuaries/coral reefs / ecologically sensitive areas including LNG terminal	27	6 (a)	A
15	Industrial estates/ parks/ complexes/areas, export processing Zones (EPZs), Special Economic Zones (SEZs), Biotech Parks, Leather Complexes	31	7 (c)	A
16	Ports, harbours, break waters and dredging	33	7 (e)	A
17	Common Effluent Treatment Plants (CETPs)	36	7 (h)	B
18	Common Municipal Solid Waste Management Facility (CMSWMF)	37	7 (i)	B

Note: Names of approved EIA Coordinators and Functional Area Experts are mentioned in RAAC minutes dated Dec 14, 2021 posted on QCI-NABET website.

The Accreditation shall remain in force subject to continued compliance to the terms and conditions mentioned in QCI-NABET's letter of accreditation bearing no. QCI/NABET/ENV/ACO/21/2191 dated Dec 29, 2021. The accreditation needs to be renewed before the expiry date by CSIR- National Environmental Engineering Research Institute following due process of assessment.

Sr. Director, NABET
Dated: Dec 29, 2021

Certificate No.
NABET/EIA/2124/RA 0227

Valid up to
July 01, 2024

For the updated List of Accredited EIA Consultant Organizations with approved Sectors please refer to QCI-NABET website.

NABET

National Accreditation Board for Education and Training

2227

May 21, 2012

The Scientist – Ocean Engineering
National Institute of Oceanography
Dona Paula, Goa-403004
(Kind Attention: **Dr. V. Sanil Kumar**)

Dear Sir,

QCI-NABET Scheme for Accreditation of EIA Consultant Organizations

This is with reference to your application for QCI-NABET Accreditation as EIA Consultant Organizations.

Kindly refer to the minutes of Accreditation Committee meeting dated March 20, 2012 posted on QCI website. Your application for accreditation under the Scheme could not be accepted as **National Institute of Oceanography (NiO)** could not fulfil the Scheme's requirements in respect of availability of eligible experts for core functional areas.

However, as mentioned in the AC MoM dated March 20, 2012, NABET will identify specialised functional areas (such as marine ecology) which are relevant for specific EIAs and would notify on QCI website.

In the interim, NIO being involved in providing marine ecology related inputs to EIAs may allow its scientists/ professionals/EIA units to take up marine component of EIAs in association with any accredited EIA consultant organization.

Thanks and best regards,

Yours sincerely,

(Vipin Sahni)
Director

Director : For information.

25/5/12

SRShetye 30/5

DIRECTOR'S SECRETARIAT
N.I.O., GOA
28 MAY 2012
Time 9.10am

Institution of Engineers Building, 2nd Floor, Bahadur Shah Zafar Marg, New Delhi – 110 002, India
Tel : +91-11-2337 9321, 2337 8057 Fax : +91-11-2337 9621 email: nabet@qcin.org Website: www.qcin.org

1221 TC4
29/8/2019

3741

F.No. J-17011/8/92- IA-III
Government of India
Ministry of Environment, Forest and Climate Change
(IA. III Division)

Indira Paryavaran Bhawan,
Jorbagh Road, New Delhi - 3

Dated: 8th August, 2019

OFFICE MEMORANDAM

Sub: Institutes/Agencies for preparation/updation of Coastal Zone Management Plans (CZMPs)/ Island Coastal Regulation Zone (ICRZ) plans/ Integrated Island Management Plans (IIMPs) in line with CRZ/ICRZ Notifications, 2019 - reg.

In supersession of this Ministry's OM of even number., dated 14th March, 2014, the institutes/agencies given here under are hereby authorized for preparation/updation of Coastal Zone Management Plan (CZMPs)/ Island Coastal Regulation Zone (ICRZ) plans/ Integrated Island Management Plans (IIMPs) in consonance with the provisions of the CRZ Notification, 2019 issued vide G.S.R. 37(E), dated 18.01.2019 and Island Protection Zone Notification issued vide S.O. 1242(E) dated 08.03.2019.

S.No.	Name of the Institutes/ Agency
1	Space Application Centre, Ahmedabad
2	Centre for Earth Sciences Studies, Thiruvananthapuram
3	Institute for Remote Sensing, Anna University, Chennai
4	National Centre for Sustainable Coastal Management (NCSCM), Chennai
5	Institute of Environmental Studies And Wetland Management, Kolkata
6	National Institute of Oceanography (NIO), Panjim, Goa
7	National Institute of Ocean Technology (NIOT), Chennai

2. The preparation/updation of the aforesaid plans mentioned above, shall be carried out as per the general guidelines issued by this Ministry vide OM No. 12-1/2019-IA.III dated 26.06.2019.

This issues with approval of the Secretary (EF&CC).

(W. Bharat Singh)
Director (CRZ)

To

1. The Secretary (Environment & Forests) of Coastal States (Gujarat, Maharashtra, Goa, Karnataka, Kerala, Tamil Nadu, Andhra Pradesh, West Bengal, Odisha) & Administrators of Andaman and Nicobar Islands, Puducherry, Lakshadweep, Daman & Diu.

2. The Member Secretaries, Coastal Zone Management Authorities of Gujarat, Maharashtra, Goa, Karnataka, Kerala, Tamil Nadu, Andhra Pradesh, West Bengal, Odisha and UT of Andaman and Nicobar Islands, Puducherry, Lakshadweep and Daman & Diu.
3. All the above authorized agencies

Copy for information to:

1. PS to Minister for Environment, Forest and Climate Change
2. PS to MoS (EF&CC)
3. PPS to Secretary (EF&CC)
4. PPS to AS(RSP)/AS(AKJ)
5. PPS to JS(RKS)/JS(AKN)/JS(GM)/JS(RS)
6. Website of MoEF&CC
7. Guard File

ANNEXURE R/39

Item No. 05 (Court No. 1)

BEFORE THE NATIONAL GREEN TRIBUNAL
SPECIAL BENCH

(By Video Conferencing)

Original Application No. 37/2013(WZ)

(for further consideration of Execution Application No. 8/2019(WZ) and other pending issues)

Vanashakti Applicant

Versus

MPCB Respondent

Date of hearing: 18.04.2022

CORAM: HON'BLE MR. JUSTICE ADARSH KUMAR GOEL, CHAIRPERSON
HON'BLE MR. JUSTICE SUDHIR AGARWAL, JUDICIAL MEMBER
HON'BLE MR. JUSTICE DINESH KUMAR SINGH, JUDICIAL MEMBER
HON'BLE PROF. A. SENTHIL VEL, EXPERT MEMBER
HON'BLE DR. VIJAY KULKARNI, EXPERT MEMBER

Applicant: Mr. Zaman Ali, Advocate

Respondent: Mr.Rahul Garg, Advocate for MoEF & CC
Mr. Aniruddha S. Kulkarni, Advocate for CPCB
Mr. Saket Mone for DBESA
Mr. Saurabh Kulkarni, Advocate for DCETP
Ms. Supriya Dangre, Advocate

ORDER

Introductory – scope of EA

1. This EA seeks enforcement of order of the Tribunal dated 02.07.2015 in Original Application No. 37/2013(WZ) for preventing and mitigating pollution of 'Ulhas' and 'Walduni' rivers in Mumbai Metropolitan Region. The Tribunal found that sources of water pollution included discharge of untreated sewage from Urban Municipal bodies of Kalyan-Dombivili, Ulhasnagar, Ambernath, Badlapur and other effluents from industries including chemical and textile industries, Common Effluent Treatment

Plants (CETPs) in the major MIDC areas like Ambernath, Dombivali, Badlapur etc., which were neither adequate nor operative efficiently.

2. The Tribunal considered response of the statutory regulators about status of functioning of six CETPs as well as of STPs concerned. After giving due opportunity to all concerned parties, the Tribunal framed following issues for adjudication:

> *"1. Whether discharge of untreated sewage and industrial effluent has caused pollution and environmental degradation of river Ulhas?*
>
> *2. If yes, which are the pollution sources that can be held accountable for contributing to such pollution and environmental degradation in qualitative and quantitative manner?*
>
> *3. Whether CETPs are being operated and managed efficiently to achieve prescribed standards and whether they can be held accountable for pollution and environmental degradation of river Ulhas, if so in what manner?*
>
> *4. Whether urban local bodies have taken necessary steps for control of water pollution either by taking adequate and proper preventive drifting of untreated sewage in the Rivers or unscientific disposal of MSW?*
>
> *5. Whether any immediate remedial and effective measures are required to be taken to restore entire ecology of Ulhas River, including marine life?*
>
> *6. Whether any costs for restoration and restitution of river can be assessed and attributed to one or many of such identified water pollution sources?*
>
> *7. Whether the regulatory authorities of MPCB and MIDC have taken adequate efforts to control and mitigate water pollution in this area and whether any specific directions are required to be issued to these authorities for effective implementation of environmental regulations?*
>
> *8. Whether any specific directions are required to be given in this regard?"*

3. Findings recorded on the said issues are:

> ***"Issue Nos. 1 and 2***
>
> *31.* ***It is an admitted fact that the Waldhuni River quality is highly polluted one and therefore, the District Collector had***

prepared an action plan for control of pollution in year 2011 which was submitted to the Urban Development Department, Government of Maharashtra. Another area of agreement is the discharge of untreated sewage from Ulhasnagar in the sweet water zone of River Ulhas through Khemani nullah. During the pendency of this Application, Ulhasnagar Corporation has taken initiative for interception and diversion of such effluent in order to protect the sweet water zone. It is also brought on record that the river has been abused by various agencies like industries, developers etc. who have dumped large quantity of solid waste and sludge in the river bed, causing environmental damages to river banks and also river water quality.

32. ***MPCB has brought on record that total 351 MLD of sewage is generated from Kalyan-Dombivili Municipal Corporation (KDMC), Kulgaon-Badlapur Municipal Council (KBMC), Ulhasnagar Municipal Corporation (UMC) and Ambarnath Municipal Council (AMC). Similarly, about 34.05 MLD of industrial effluent is released from various industrial areas into the Waldhuni River/Ulhas creek. Undisputedly, about 300 MLD sewage is discharged without any treatment in the water environment, besides the CETP discharges which are also exceeding the standard. It was, therefore, necessary to examine the allegations of the Applicants whether the Water Quality of River Ulhas has been degraded by such pollution thereby affecting the ecology and marine line of the river. Though MPCB has submitted some Analysis Report of Ulhas creek water quality, but it failed to describe whether such allegations are correct or wrong by scientific and statistical interpretation of their own data. The Tribunal will have to, therefore, to rely on the reports of National Institute of Oceanography (NIO) which is one of the pioneer research institutes and engaged by MIDC to carry out marine EIA studies. The interim EIA report of NIO concludes that the prevailing water quality of the estuary indicate that the BOD released in the estuary exceeds its natural assimilation capacity. Inefficient oxidation of organic matter leads to high tide dependent BOD in the upper estuarine zone though its levels are near about to the expected baseline at the estuarine mouth/ingress due to its consumption as it is transported seawards and due to dilution by voluminous tidal ingress during flood tide. The high organic loading leads to hypoxic condition particularly around low tide in the middle and the upper estuarine segments. The high effluent loading-mainly sewage and effluent has resulted in built up of nutrients like phosphates, nitrate, nitrite and ammonia that in combination with DO (dissolved oxygen) have modified the ecology of Ulhas estuary with eutrophic conditions in the middle and upper zones. The accumulation of toxic heavy metal such as Al, Cr, Mn, Fe, Co, Ni, Cu, Zn, Hg, Pb, Cd as well as organic carbon, PHc, though has occurred particularly in upper segment is not alarming. The report finally concludes that based on the monitoring of May 2014 and earlier results, it is concluded that the upper and middle zones of the Ulhas estuary have been degraded due to release of domestic and industrial***

effluent from different sources and conditions are not conducive for diverse aquatic fauna.

33. In other words, the above scientific report of NIO has put an alarming picture of the present state of environment of Ulhas estuary besides emphasising the need of urgent interventions. In absence of any contradictory material available on record, the Tribunal is inclined to accept the findings of the NIO and thereby in our considered opinion, the discharge of untreated sewage and industrial effluent have caused pollution and environmental degradation of River Ulhas. Issue No.1 is, therefore, answered in the AFFIRMATIVE.

34. In view of this finding, the next logical step is to identify the causes for such pollution and environmental degradation. MPCB has already submitted on record an abstract of quantities of domestic sewage released by different municipal bodies as well as CETPs which have been already referred above. At present, considering the environmental sensitivity of the Ulhas River and estuary, we are not inclined to a proposition of deciding the exact contribution of individual sources of pollution, but considering the long period, over which all these polluting sources are merrily discharging the untreated effluents into the river Basin, we are inclined to deal all the pollution sources, with equal importance and equal seriousness. Obviously, it is also an admitted fact that the industrial pollution is generally given a precedence over the domestic sewage pollution in view of its obnoxious nature, presence of toxic and non-biodegradable matter and the fact that there are reports of many incidences of environmentally unfriendly practices of disposing untreated industrial effluents and sludges for profit making, the industrial sector needs to be enforced severely on priority for pollution control and environmental protection. The Issue No.2 is accordingly answered.

<u>Issue No. 3</u>

38. Considering the simple arithmetic based on volumetric flow and also, the average CETP outlet characteristic for the CETP at Dombivili, the following facts would emerge:

1. The CETP hydraulic capacity -- 16500 M^3/day.
2. Average COD as reported by MPCB: in mg/lt. Year 2013: 475 Year 2014: 457 Jan-May 2015: 672
3. Standard for COD – 250 mg. ltr.
4. Average Excessive COD load released in the water environment on yearly basis @ 1550T.

The cost of scientific disposal of this COD load, through hazardous waste incineration, would come around Rs.7.75 crores/annum by even considering modest cost of Rs.25,000/- tone and equal amount of penalty for such discharges. Similar calculation can be done for other CETP's like Ambernath CETP, which is exceeding the standards regularly.

39. ***It is obvious from the above that the CETPs at Dombivili as well as the other places, like Ambernath, released the effluents which are not meeting the prescribed norms in the environment, in spite of directions of the Hon'ble High Court, Bombay, and also the CPCB. The MPCB seems to have taken some cosmetic action against some of the industries by issuing closure notices or other directions. However, the final effluent which is being released into the water environment is still polluting the Rivers. In spite of such knowledge, we fail to understand and appreciate the affidavits submitted by MPCB which would indicate the compliances. The above illustration, just for one CETP shows severity of the problem. It is also pertinent to note that this excessive COD which is observed after the treatment at CETP, is most likely to comprise of recalcitrant COD or represented by low biodegradable complex organic matter, which can comprise both organic or inorganic compounds, causing water pollution. It is also relevant to note here that certain computational errors are noticed in MPCB website data which shows incorrect average values. We, therefore, direct that the MS, MPCB shall ensure that the factual data is hosted on its website, as the averages indicated in the data as submitted do not arithmetically match the data presented.***

40. ***Another interesting aspect of the litigation is that the Dombivili area was declared as critically polluted and certain action plan was submitted by MPCB to the CPCB which facilitated the lifting of moratorium on the industrial development in MIDC, Dombivili. We also noticed that the CPCB had issued specific direction in 2008 to MPCB in view of the non-compliance by the CETP. In spite of such action plan and directions, the CPCB which had issued such directions did not ensure that the directions were complied with. It seems that such action plan and directions are only the paper work, without any implementation and enforcement. Therefore, the issue No.3 is answered in the AFFIRMATIVE as the CPCB failed to achieve the prescribed standards and such untreated effluent is released into the water bodies/environment causing pollution.***

Issue No. 4

41. ***Ulhas River has experienced large scale urbanisation and there are two (2) Municipal Corporations i.e. Kalyan-Dombivili Municipal Council (KDMC) and Ulhasnagar Municipal Corporation (UMC) discharging 200 MLD and 90 MLD sewage on daily basis in the area. Further, Kalyan- Badlapur Municipal Council and Ambarnath Municipal Council generate 18 and 43 MLD sewage respectively. As per the information submitted by MPCB, out of this 357 MLD sewage, nearly 304 MLD sewage is released in the water environment without treatment. Needless to say, these Municipal bodies are required to treat sewage to the prescribed standards, as specified by MPCB. MPCB is on record that besides this sewage, leachate from solid waste dumping grounds is also found to be polluting the water bodies. MPCB is on record***

stating that it has issued several notices/directions to these urban bodies; however, there is no improvement in the sewage treatment carried out by these urban bodies. The Kalyan Dombivili Municipal Council is on record with time bound programme for sewage treatment which indicates that by December 2015 about 80 MLD effluents out of 200 MLD effluents would be treated through its STP. We are not satisfied any of the time frame and program given by either of these four (4) Corporations for the simple reason that neither there is any fix time frame for provision of STP nor there is any commitment to reserve the required funds for such provision of STP. It is true that urban local bodies would find it difficult to spare or generate the funds for the provision of such STPs and also, operations of the same. But the sewage treatment and solid waste management are statutory functions of these local bodies and they cannot abduct such responsibility under the disguise of financial constraints. It is high time that the Urban Development Department of the State Government should intervene in such matters to provide technical and financial support to these local bodies to develop low cost, cost effective and sustainable sewage management program. We would deal with these aspects in the final directions. Accordingly, the issue No.4 is answered in the NEGATIVE as none of these urban local bodies have submitted a complete time bound program for prevention of water pollution.

Issue No. 5

42. ***Admittedly, the untreated/treated industrial effluent from CETP or industrial areas along with untreated sewage from the urban local bodies is released in the Ulhas river basin in large quantity. In order to assess the status of ecology and pollution of Ulhas River, we would like to refer to the comprehensive marine EIA study conducted by National Institute of Oceanography (NIO) and the findings presented in their report of September 2014. The NIO has conducted detail field investigations in the Ulhas estuary and the summary of the study would indicate the following important points :***

> ***1. The BOD release in the estuary exceeds its natural assimilation capacity. The high organic loading leads to hypoxic conditions, particularly around low tide in the middle upper estuarine segments.***
>
> ***2. The high effluent loading mainly sewage has resulted in buildup of nutrients like, phosphate, nitrate, nitrite and ammonia that in- combination with frequent low DO have modified the ecology of Ulhas estuary with eutropic conditions in the middle and upper zones.***
>
> ***3. The pathogens population is high in the water and sediments.***

4. There is a decrease in diversity of phytoplankton, zooplankton and microbentic biomass, suggesting that environment is not conducive for sensitive species.

The report finally concludes that the upper and middle zones on Ulhas estuary have been degraded due to release of domestic and industrial effluent from different sources and conditions are not conducive for diverse aquatic fauna.

43. The another important water body of River Waldhuni is found to be severely polluted, may be irreversible, due to heavy discharge of effluents and sewage over the years. The MPCB analysis reports indicate the very high BOD/COD values (max. 1800 and 3200 respectively) as observed in May 2011. This River has a typical topography which originates in Matheran hill and as a major dam constructed on its upstream of Badlapur. The River has been encroached upon and is being abused by indiscriminate discharge of toxic, coloured effluent including sewage. It was also noticed that lot of sludge is accumulated in the river bed. This fact/situation is fairly admitted by all the counsel. This River could be one of the most polluted River in the country which is quite evident from Analysis Report available on record. It is to be noted that the natural water flow is limited to the monsoon period and thereafter, the river flows only with the indiscriminate discharge of effluents. The Waldhuni River cannot speak about its own suffering and the regulatory agencies like CPCB and MPCB besides all the local bodies located along River are not only silent spectators but may be contributors to the deterioration of the River Waldhuni.

44. We also noted that besides issuance of notices, MPCB has not taken any stringent action including prosecution or enforcement of provisions of sections 30, 31 and 32 of the Water (Prevention and Control of Pollution) Act, which allows MPCB to take emergency measures and also seek injunctions from the Courts. Neither, we could see any prosecutions against habitual defaulting industries, and regime of directions and BG is only followed. We are not satisfied with such actions taken by MPCB in this regard as they have not yielded the desired results and improvement in water quality.

45. Though significant quantity of the sewage and industrial effluent is either discharged in River Waldhuni or saline area of River Ulhas, a small part of the sewage from Ulhasnagar i.e. about 10 MLD is discharged in the sweet water zone of River Ulhas. During the proceedings of the matter, the Tribunal had directed the Ulhasnagar Municipal Corporation to take urgent measures and after some coercive actions, the Commissioner, Ulhasnagar Municipal Corporation has personally assured the Tribunal on affidavit that the work of preparation of the scheme is finalized and sufficient funds have been reserved for execution of interception and diversion of sewage from Khenani Nullah to the treatment plant. We are hopeful that such assurance will be honoured in the interest of environment.

xxx .....xxx.....xxx

49. The facts of the present case would show that legal position considered and made applicable in case of "Tirupur Dying Factory Owners Association" (supra) is squarely applicable herein. There is no escape from conclusion that the Industries are liable to pay damages caused due to the water pollution, restore the environment and ensure that there shall be no further pollution in the river "Ulhas" due to discharging of industrial effluent of the units run by the Industries. Needless to say that all the aspects discussed above indicate that there is an immediate need for taking control and remedial measures to restore the ecology of Ulhas River basin and accordingly, the issue No.5 is answered in the AFFIRMATIVE.

Issue Nos. 6, 7 & 8

53. ***In the instant case, though the Dombivili area was declared as critically polluted area way back in 2009-10 and remains so even today, and both, MPCB and CPCB are aware that the CETPs are not functioning properly, we do not find any effective intervention by MPCB or even by CPCB to regulate such polluting discharges. This is more serious, in case of CPCB as, it had identified the area as 'critically' polluted and also issued certain directions to MPCB. However, we could not locate any efforts by CPCB to ensure the implementation of its own directions and also, the action plan of MPCB. The actions taken by MPCB are related to closure and opening directions to some industries which have not resulted into any substantial improvements in the CETP performance. Further, MPCB has also failed to ensure that the MIDC provides the necessary effluent disposal system in a time bound manner. We could not locate any action plan for either Ulhas or Waldhuni river pollution control, prepared by MPCB, as mandated under Section 17 of the Water (Prevention and Control of Pollution) Act, 1974. We are, therefore, at pains to note the action or rather inaction of CPCB as well as MPCB to prevent and control the water pollution in the industrial area, in spite of being notified as critically polluted area.***

xxx .....xxx.....xxx

56. In the present case, it may not be possible to assess exact environmental damage and the cost of restoration thereof in view of the long period of effluent discharges as well untreated waste water discharges involved in the present case and the fact that the statutory Boards empowered to prevent and control pollution have not performed their statutory duties in accordance with the spirit and object of the environmental Acts and jurisprudence. Still, however, industrial units are responsible for causing great environmental pollution of different water bodies including Ulhas river, the estuary and Waldhuni river, even the groundwater in and around the area of these industrial

areas. The data produced by MPCB, NIO and Applicants besides the photographs, show the magnitude of such pollution. Considering such magnitude of the pollution caused by the industrial units, its capacity and prosperity, responsibility of the units to pay compensation cannot be disputed on any plausible cause or ground.

57. Though, it may not be possible to determine with exactitude the exact amount of compensation payable on account of damage to environment because of the long period involved and also for the reason that even scientifically the extent of damage and amounts required for restoration and restitution thereof cannot be determined at this stage now. Cleaning and removal of sludge from Waldhuni River, abatement of other pollutants flowing in the said drains, preventing any discharge into the Ulhas river sweet water zone, and controlling pollution of Ulhas river basin free are the basic urgent steps which require attention of the Regulatory bodies particularly, in the facts and circumstances of this case. It is true that such measures require close co-ordination of various Government agencies and also, require substantial financial support. The Tribunal is, therefore, of the opinion that such a task need to be undertaken by Divisional Commissioner, who heads the entire revenue division, with the aid and assistance of all concerned agencies.

58. Considering the above, the Application is partly allowed with directions which are being issued under the powers conferred under the provisions of Section 19 and 20 of NGT Act, 2010, based on principles of Polluter Pays and Precautionary Principle:

> ***1) The directions issued by CPCB vide letter dated 02-09-2008 shall be strictly enforced by MPCB in case of the CETPs at Dombivili and Ambarnath till the time these CETPs are effectively operational complying the standards and such report is submitted to the Tribunal by MPCB along with substantial time series data and observations. The directions issued by CPCB are reproduced for clarity :***
>
> > ***a) Initiate monitoring program for all CETPs at least every quarter and take follow up action against industries/CETPs not complying with the prescribed standards.***
> >
> > ***b) Not to permit expansion/establishment of the industrial units in the areas where the associated CETPs are not complying with the required standards and where such CETPs do not have adequate hydraulic load capacities.***
> >
> > ***c) Submit action report every quarter on (1) and (2) above within one month of every quarter to CPCB.***

2) The CPCB shall ensure the effective implementation of its directions referred to above, and also ensure that the action plan submitted by MPCB is enforced in next six (6) months without fail. CPCB shall verify the compliance of CETPs and also, conduct random inspection of major industries for ensuring compliance on monthly basis till its above directions are complied with. CPCB shall independently submit the compliance report on monthly basis to Registry of Tribunal till the CETP performance is as per consent conditions for a period of 3 months and the action plan is implemented, which will result into reduction of CEPI index.

3) The Dombivili CETP (total 16.5 MLD capacity) is directed to pay the restitution and restoration amount of Rs.30 crores (Rs. Thirty crores) based on the excessive COD load released into the water environment. The Ambernath CETP (total capacity of 7 MLD, and operated at 3 MLD) is directed to pay Rs.15 Crores (Rs. fifteen crores) as restoration and restitution costs. This amount shall be deposited with Divisional Commissioner, Kokan Revenue Division, CBD Belapur, within period of four (4) weeks, failing which the Divisional Commissioner shall submit the report to the Registry for further penal action against the CETP office bearers as permissible under the Law.

4) MPCB shall deposit the funds received from forfeiture of BG in the above industrial areas in last five (5) years with Divisional Commissioner, Konkan Region within four (4) weeks for the above restitution and restoration works.

5) MIDC shall commission both the effluent disposal systems in 24 (twenty four) months, and submit BG of Rs.10 crore (Rs. Ten crores) to MPCB to ensure compliance.

6) The Ulhasnagar Municipal Corporation and Kalyan-Dombivali Corporation shall deposit Rs.15 Crore (Rs. Fifteen Crores) each with Divisional Commissioner for above restoration and restitution measures. The KulgaonBadlapur Municipal Council and Ambernath Municipal Council shall pay Rs.5 crore (Rs. Five crore) each as restitution and restoration cost with Divisional Commissioner, Konkan Region. These amounts shall be paid within six (six) weeks.

7) The Divisional Commissioner shall deposit these funds in special escrow account and use this amount for implementation of scientific programme for cleaning of the River (Ulhas and Waldhuni) as per the plan submitted earlier and to ensure that no further Riverine pollution would occur hereafter and other kind of restoration and remedial measures like removal of sludge accumulated in the river/nullah, beautification

of river banks in order to protect the river from any the unauthorized dumping of wastes and effluents in River Waldhuni and Ulhas estuary. Such works shall be completed in next 18 (eighteen) months. CPCB/MPCB shall provide necessary assistance for this purpose.

8) A committee under Chairmanship of Divisional Commissioner shall be constituted for this purpose comprising of Collector, Thane; Member Secretary MPCB; Municipal Commissioners of Kalyan-Dombivali Municipal Corporation; Chief Engineer Irrigation department, Chief Officer of Kulgaon Badlapur and Ambernath Municipal Council; Deputy Commissioner of Police, and Deputy Chief Executive Officer Envt, MIDC. The Committee may adopt suitable experts or other government agencies for effective planning and implementation of such restitution and restoration works.

9) The above committees shall submit the action plan to complete above directions in next six (6) weeks including preventive, remedial and restoration measures.

10) Chief Secretary of Maharashtra shall ensure that all four (4) urban local bodies i.e. KalyanDombivili Municipal Corporation, KulgaonBadlapur Municipal Council, Ulhasnagar Municipal Corporation, Ambarnath Municipal Council provide required STP capacity in phased manner within next twenty four (24) months and they shall submit a comprehensive action plan along with provision of funds for sewage treatment and disposal system to the Divisional Commissioner and Member Secretary MPCB in four (4) weeks. In case of non-submission of such plan in satisfactory manner, Member Secretary MPCB shall initiate urgent steps to provide such STPs as per provisions of Section 30 of Water (Prevention and Control of Pollution) Act, 1974 and initiate credible legal action against the municipal bodies, besides reporting the matter to MCZMA for suitable action at their end. The Divisional Commissioner may take suitable action against these Corporations and Councils under the provisions of Municipal Acts, including taking over the Corporation and/or disqualification of Members, etc. as deemed necessary.

10) The Respondent No.1, 4, 5 and 6 shall pay litigation costs of Rs.25000/- (Rs. Twenty five thousand) each to the Applicants.

The Application is accordingly disposed of alongwith all Misc. applications."

Orders of Hon'ble Supreme Court in pending appeal

4. Against the above judgment, Civil Appeal No. 10582/2017, *Ulhasnagar Municipal Corporation vs. Vanashakti Public Trust & Ors.* has been filed before the Hon'ble Supreme Court by the Ulhas Nagar Municipal Corporation which is still pending. It first came up for hearing on 14.08.2017 when following order was passed:

> *"Delay condoned.*
>
> *Issue notice to the respondents returnable on 18.09.2017.*
>
> *We would like the Principal Secretary of the Environment Department of the Government of Maharashtra as well as Member Secretary of the Maharashtra Pollution Control Board to be present in Court on the next date of hearing.*
>
> ***We require their personal appearance because on a reading of the impugned judgment and order passed by the National Green Tribunal, it appears to us that there is absolutely no coordination or coordinated efforts between the various authorities to protect Ulhas river as well as Walduni river. From a reading of the judgment and order passed by the Tribunal, it is clear that these rivers are more or less dead due to pollution.***
>
> *The aforesaid two officers shall before appearing in this Court have necessary discussions with the Director, IIT Powai, the concerned authorities from the National Environmental Engineering Research Institute (NEERI) at Nagpur and the National Institute of Oceanography.*
>
> *At this stage, the amounts ordered by the National Green Tribunal may not be deposited."*

5. Our attention has been drawn to further orders of the Hon'ble Supreme Court dated 31.07.2019, 07.09.2020 and 05.11.2020. Order dated 07.09.2020 is reproduced below:

> ***"IA No 53816 of 2020***
>
> *1. The interlocutory application has been instituted by the first respondent, Vanashakti Public Trust, which has complained of the pollution which has been caused in the Ulhas and Waldhuni rivers during the period of the lock down as a result of the discharge of untreated effluents by polluting industries.*

2. ***In 2019, the above rivers were severely polluted with industrial effluents discharged by industrial units engaged in the activity of washing jeans – fabric. To remedy the situation, orders were passed by this Court on 14 November 2017 and 14 December 2017. On 5 February 2020, a comprehensive order was passed by this Court laying down time-lines for the completion of work regarding construction of Sewage Treatment Plants and for restoration of the area.***

3. *The first respondent has submitted that immediately on noticing the pollution in the Ulhas and Waldhuni rivers caused in particular by industries located in Ulhasnagar and Ambernath, a representation was submitted by an email dated 23 March 2020 to the Maharashtra Pollution Control Board (MPCB), Principal Secretary, Environment and Collector, Thane, together with photographs. The Central Pollution Control Board (CPCB) took cognizance of the complaint and communicated with the first respondent on 22 April 2020. CPCB issued a direction to MPCB to take into account the evidence produced by the first respondent and to take action on the ground. The first respondent thereafter submitted another representation on 17 May 2020. Finding that no action had been taken, CPCB sent an email on 20 May 2020. The grievance is that no action has been taken despite the first respondent having submitted another representation on 6 June 2020 highlighting the grievance.*

4. ***Mr Colin Gonsalves, learned senior counsel appearing on behalf of the first respondent submits that a serious situation has arisen from the discharge of untreated effluents in Ulhas and Waldhuni rivers. By the interlocutory application, a request has been made to this Court, to direct CPCB and National Environmental Engineering Research Institute (NEERI) to inspect the above rivers, identify the units causing pollution and to affix responsibility and to direct the State of Maharashtra and the municipal corporations concerned to eliminate the causes of pollution.***

5. *Mr Kavin Gulati, learned senior counsel appearing on behalf of MPCB states that on receipt of the complaint, the Board initiated remedial steps. On 25 May 2020, action was directed to be taken against the defaulting units and on 15 June 2020 action was directed to be taken against the operator of the common effluent treatment plant.*

6. ***The material which has been produced on record demonstrates that the situation warrants urgent and immediate remedial steps. There has been a failure of statutory bodies to discharge their responsibilities under the law. We direct CPCB and the NEERI to (i) inspect the Ulhas and Waldhuni rivers; (ii) identify the units causing pollution; and (iii) formulate recommendations in regard to the steps required to be taken by the concerned municipal corporations, regulatory bodies and units to***

remedy the situation. MPCB, the Department of Environment of the State of Maharashtra and all the concerned municipal corporations including the Municipal Corporations, or Councils as the case may be, of Ulhasnagar, Kalyan Dombivali, Kulgaon – Badlapur and Ambernath shall cooperate with the team of Commissioners appointed by this Court. The report shall be submitted within a period of three weeks from today. MPCB and the Department of Environment of the State of Maharashtra shall depute a team of officials to assist the Commissioners appointed by the court in the above terms. MPCB and the Department of Environment shall also immediately take remedial steps, including action against the defaulting units without waiting for the report of the Commissioners or for further directions of this Court. Logistical arrangements for the site visits, transportation and other incidental requirements of the team appointed by this court shall be made by MPCB and the Department of Environment. Costs, charges and expenses shall presently be borne by MPCB.

7. The Chief Engineer MIDC shall file a report in compliance with the previous order within a period of two weeks from today. The compliance report of MIDC and the report filed by MPCB shall be taken up on the next date. The court will also review whether compliance has been made of the time-lines set out in the previous order for the completion and commissioning of projects.

8. List on 7 October 2020."

6. Order dated 05.11.2020 is also reproduced below:

"1. A report has been submitted to this Court by the Central Pollution Control Board (CPCB) and National Environmental Engineering Research Institute (NEERI) in pursuance of the order dated 7 September 2020. The report contains an exhaustive analysis of the situation on the ground and the causes of water pollution. ***The report suggests concrete steps required for remedial measures. Though several projects have been set up and steps have been taken by diverse authorities and local bodies, incidents such as the one which led to this Court constituting the above Committee reflect a regulatory failure. The report is indicative of the fact that the collective deficit of regulatory authorities has allowed a sorry state of affairs to come to pass, where the right to a clean environment which is an integral feature of the right to life under Article 21 of the Constitution, is imperilled. The Ulhas and Waldhuni rivers continue to be polluted. Rather than this court dealing with a multitude of local bodies and statutory authorities, including MIDC, individually, the state government must be required to do so. Previous orders of this court have called upon the Chief Secretary and the Secretary in the Department of Environment to monitor compliance with environmental norms, fulfilment of targets and completion of projects. Insofar as this Court is***

concerned, the collective responsibility towards the environment is that of the State of Maharashtra which must ensure due monitoring and compliance of all its authorities including local bodies and statutory authorities.

2. We accordingly direct that the Chief Secretary and the Secretary in the Department of Environment shall convene a meeting of all the local bodies and statutory authorities within the jurisdiction of the area comprising the CPCB-NEERI report. The representatives of CPCB - NEERI shall also be invited to participate in the meeting and to make a presentation based on the report. A concrete plan of action shall be presented before this Court for compliance with the recommendations which have been made by CPCB-NEERI. A joint affidavit be filed by the Chief Secretary and the Secretary in the Department of Environment. The Court will hear submissions on the next date of listing after this exercise has been completed at the threshold.

3. List the matter on 25 November at 2 pm."

Today's consideration and orders

7. From the above it remains undisputed that pollution had been and is being caused by discharge of sewage and industrial effluents which needs to be remedied. Since the matter is being dealt with by the Hon'ble Supreme Court, on suggestion of the parties, we agree that this Tribunal may not proceed further except for procedural issues with liberty to aggrieved parties to move the Tribunal in the light of further orders of Hon'ble Supreme Court.

Pending issue of hearing affected parties and finality of order dated 2.7.2015

8. We find from the record that Execution Application No. 8/2019(WZ) for execution of order of this Tribunal dated 02.07.2015 remains pending. Review Application No. 4/2017(WZ) sought review of direction in Para No. 58(3) of order dated 02.07.2015 fixing restoration cost payable by Dombivili CETP at Rs. 30 crores, apart from liability for compensation by Ambarnath CETP. The review was allowed vide order dated 19.11.2019 on the ground that the review applicant has to be heard before the said

direction becomes final. OA No. 148/2017(WZ) was filed by Dombivili Common Better Effluent Treatment Plant (DCBETP) for similar relief as in review which was taken up on 15.03.2020 and in view of order dated 19.11.2019 in the review application, the said order was made applicable to DCBETP also. Dombivili Better Environment System Association (DBESA) and DCBETP were impleaded as parties to enable them to place their viewpoint with regard to the compensation issue. OA No. 148/2017(WZ) was accordingly disposed of vide order dated 24.06.2020.

9. In view of categorical material of causing pollution by discharge of sewage and other effluents, compensation liability cannot be avoided by DBESA and DCBETP. Inspite of the said authorities being impleaded and given opportunity, no case is made out for not requiring compensation to be deposited in terms of order dated 2.7.2015 passed by the Tribunal, subject to further orders of Hon'ble Supreme Court. Thus, even after opportunity being given in terms of orders of this Tribunal dated 19.11.2019, 05.03.2020 and 24.06.2020, recall of order of this Tribunal dated 02.07.2015 fixing monetary liability on 'Polluter Pays' principle is not justified. The said direction will thus stand reiterated, subject to further orders of the Hon'ble Supreme Court.

Further order in EA

10. A copy of affidavit filed before the Hon'ble Supreme Court on 23.11.2020 in Civil Appeal No. 10582 of 2017, in pursuance of order of the Hon'ble Supreme Court dated 05.11.2020 has been placed on record in response to notice issued in EA. The said affidavit acknowledges continuing violations. It is mentioned that State PCB has issued notice to 117 industries for closure. Monthly review meeting is being held by the Secretary, Environment Department, Maharashtra and being reviewed by

the Chief Secretary on quarterly basis. The State of Maharashtra will make efforts to prevent and abate the pollution of rivers in coordinated manner in the light of report of the CPCB - NEERI which has been quoted in the affidavit showing continuing violations. As already observed, to avoid conflicting orders, we do not make any comment as the matter may first be dealt with by the Hon'ble Supreme Court in pending appeal, as suggested by learned Counsel for the parties. Any aggrieved party will be free to move this Tribunal again, after disposal of the matter pending before the Hon'ble Supreme Court, if necessary.

The EA and pending proceedings before the Tribunal are disposed of with liberty as aforesaid.

Adarsh Kumar Goel, CP

Sudhir Agarwal, JM

Dinesh Kumar Singh, JM

Prof. A. Senthil Vel, EM

Dr. Vijay Kulkarni, EM

April 18, 2022
Original Application No. 37/2013(WZ)
DV

Item No.11 Court No. 1

BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI

(BY HYBRID MODE)

Original Application No. 249/2023

In re : News item published in Newspaper The Hindu dated 19.03.2023 titled "India's Sinking Island"

Date of hearing: 11.07.2023

CORAM: HON'BLE MR. JUSTICE SHEO KUMAR SINGH, CHAIRPERSON
HON'BLE MR. JUSTICE ARUN KUMAR TYAGI, JUDICIAL MEMBER
HON'BLE DR. A. SENTHIL VEL, EXPERT MEMBER

Applicant: None appeared

ORDER

1. The News item titled "Several of the country's 1.382 islands are under siege from unseasonal cyclonic storms, sea erosion and new development projects and one island has entirely disappeared from the map" appeared in The Hindu 19.03.2023 was taken up Suo Moto. As per the news item several islands along the Indian Coast as well as some of the Islands in the rivers are vulnerable for erosion and submergence. One of the main causes of submergence of island is because of Sea Level rise and global warming. There is influx of saline water in agricultural and drinking water in these islands due to sea level rise.

2. Based on the news item and the environmental concerns notices were issued to Ministry of Earth Sciences and Ministry of Environment, Forest & Climate Change (MoEF & CC) to file their response.

3. The matter was taken up today and the response from Earth Sciences, Director of Metrology was examined. No response was filed by MoEF & CC. As per the response of Ministry of Earth Sciences, India's

average temperature has risen by around 0.63 ^{0}c during 1901 to 2021. This rise in temperature is largely on account of Green House Gases induced warming, partially offset by anthropogenic aerosols. The rise in temperature has resulted in melting of glaciers, rise in sea levels, changing precipitation pattern and increasing tendency of weather and climate extremes on a global scale. The Report from Ministry of Earth Science also states that:

> *"The global average sea level has risen by 19 cm from 1901 to 2010 the average rate of rise measured by satellite has been 3.2 (2.9 – 3.5) mm/year since 1990s up from 1.7 (1.5-1.9) mm/year during twentieth century, obtained from historical tide gauge records. Thermal expansion and glacier melt because of anthropogenic global warming have been the major drivers of rise in global sea levels over the past century. Sea-level rise in the North Indian Ocean (NIO) occurred at a rate of 1.06–1.75 mm per year during 1874–2004 and has accelerated to 3.3 mm per year in the last two and a half decades (1993–2017), which is comparable to the current rate of global mean sea level rise. At the end of the twenty-first century, steric sea level in the NIO is projected to rise by approximately 300 mm relative to the average over 1986–2005 under the RCP4.5 scenario, with the corresponding projection for the global mean rise being approximately 180 mm."*

4. In view of the above, dangers of sea level rise and submergence of low lying lands such as islands it is imperative that these islands should be protected as people are living. In view of the above we may constitute a Committee comprising of (1) Director, National Institute of Oceanography, Goa (NIO, Goa), (2) Director National Centre for Sustainable Coastal Management, Chennai (A body under MoEF & CC), (3) Director National Institute of Ocean Technology, Chennai and Director, (4) Director, Survey of India, Dehradun.

5. The above Institutions shall study the impact of Sea Level rise on the islands and frame policy & measures to protect these islands from submergence, erosion, saline ingression, flooding and other adverse environmental aspects. The above Committee shall be free to include any other experts and Institutions that they feel appropriate. The Committee

may also hold discussion with stakeholders if required. NIO, Goa shall be the nodal agency for the Committee. The report of the committee be submitted within three months by e-mail at judicial-ngt@gov.in preferably in the form of searchable PDF/OCR support PDF and not in the form of Image PDF and first meeting of the committee shall be held within 15 days in NIO, Goa.

6. A copy of this order be forwarded to Director, National Institute of Oceanography, Goa, Director National Centre for Sustainable Coastal Management, Chennai (A body under MoEF & CC) Director National Institute of Ocean Technology, Chennai and Director, Survey of India, Dehradun.

7. List this matter on 13th October, 2023.

Sheo Kumar Singh, CP

Arun Kumar Tyagi, JM

Dr. A. Senthil Vel, EM

July 11, 2023
Original Application No. 249/2023
HB

2250
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2023 SCC OnLine NGT 5957

In the National Green Tribunal[†]

(Before Dinesh Kumar Singh, Member (Judicial) and Dr Vijay Kulkarni, Expert Member)

Through Physical Hearing (With Hybrid Option)

Conservation Action Trust Represented by its Executive Trustee Mr. Debi Goenka and Another ... Appellant(s);

Versus

Union of India Represented by its Secretary Ministry of Environment, Forests & Climate Change Indira Paryavaran Bhawan and Others ... Respondent (s).

Appeal No. 74/2016(WZ)

Decided on November 23, 2023, [Reserved on : 08.08.2023]

Advocates who appeared in this case:

Counsel for Appellant(s) : Ms. Rishika Harish, Advocate along-with Ms. Meenaz Kakalia, Advocate

Counsel for Respondent(s):

Mr. Rahul Garg, Advocate for R-1/MoEF&CC

Mr. Maulik Nanavati, Advocate for R-2/Envt. Deptt, R-3/GCZMA, R-4/GPCB & R-5/PCCF

Shri Vikram Nankani, Senior Advocate along-with Mr. Kehkasha Sehagal, Advocate and Mr. Shailesh Poria, Advocate and Ms. Shubhangi Khandelwal, Advocate for R-6/PP

JUDGMENT

1. This appeal has been preferred seeking quashing of Environmental Clearance (EC) and CRZ Clearance dated 14.10.2016 granted to respondent No. 6-M/s. Adani Petronet (Dahej) Port Pvt Ltd. by the respondent No. 1/MoEF??? and further, it is prayed that direction be issued to respondent No. 6/Project Proponent to remedy the damage caused by its activities.

2. In brief, the facts of this case are that the impugned EC has been granted for "Expansion of Adani Petronet (Dahej) Port Pvt. Ltd. at Bharuch District, Gujarat, where-in the proposal of respondent No. 6's Company to expand the Dahej Port, in respect of which the respondent No. 1/MoEF&CC has issued the impugned EC constitutes Phase-III of

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the Adani Petronet Dahej Port. This project involves reclamation of an area of 23 hectares for coal stockpiles, back up equipment, coal storage silo at railway siding and other supporting infrastructure as well as the expansion of the cargo handling facility from 11.7 MMTPA (Million Metric Tonnes per Annum) to 23 MMTPA. The important details of Phase-III are as follows:—"

i). Reclamation of 23 hectares of contiguous lands to the existing back-up area to store and handle multipurpose cargo.

ii). Creation of additional coal stock pile to be developed for storage of 1.1 Million Tonnes of coal.

iii). Widening of existing 15 m wide rubble bund to 60 m wide to handle over dimension cargo.

iv). Existing Ramp being used for port craft and tugs will be strengthened to handle project cargo.

v). Mechanization of south jetty to handle coal cargo.

vi). Rail loading silo and other supporting infrastructure facilities."

3. Further, it is mentioned in this appeal that the Terms of Reference (ToR) for Phase-III were finalized by the respondent No. 1/MoEF&CC on 02.12.2013. A draft EIA Report was prepared in November 2014. Public hearing was held on 18.03.2015. Final EIA Report was prepared in March 2015 and thereafter respondent No. 3/GCZMA recommended the proposal to the respondent No. 1/MoEF&CC on 15.09.2015. The Government of Gujarat/respondent No. 2 recommended the project to the respondent No. 1 on 14.03.2016. On or about 14.03.2016, the respondent No. 6/PP submitted an online proposal to the respondent No. 1/MoEF&CC for grant of Environmental and CRZ Clearance, in terms of the provisions of the Environment Impact Assessment Notification-2006 and the Coastal Regulation Zone(CRZ) Notification-2011, which was considered by the EAC in its meeting held on 28th & 29th March, 2016 and thereafter on 14.10.2016, the EC as well as the CRZ Clearances both were granted.

4. It is further mentioned in this appeal that the respondent No. 6/PP did not disclose correct and complete facts and information in the prescribed Form-1 and in the EIA report and has in fact furnished incorrect and misleading information to the respondent No. 1/MoEF&CC and other concerned Authorities. Further, it is submitted that Phase-III of the project involves reclamation of mudflats, which are classified as CRZ-IA under the CRZ Notification-2011, while the respondent No. 6/Project Proponent has stated otherwise in the Form-I and in its EIA Report. The impugned EC has been issued on the basis of incorrect and misleading information provided by the respondent No. 6 *inter alia* that though mudflats were present at the project site in question, reported to be "biologically insensitive". In fact, they are biologically active. The

Google Earth image dated 10.01.2004 shows that a substantial part of the project area was at that time a mudflat area. However, part of the proposed project area has already been partially reclaimed, which is evident from the Google Earth image dated 10.01.2004, which is annexed as Annexure A-2.

5. It is further mentioned in this appeal that this project will also cause damage to approximately 60,000 square meters of mangroves that exist abutting the existing 15 meters wide rubble bund in the North, which is proposed to be widened to 60 meters, though the CRZ map in the Appendix 1 to the EIA report does not show mangroves that exist abutting the rock bund in the North. But these mangroves are clearly visible in the Google Earth Image dated 24.04.2016 at Annexure A2. In fact, there is also a huge area of mangroves spreading in the area of approximately 700 meters to the North of the project site admeasuring approximately 75,47,500 square meters and stretching over 14 kilometers, which is apparent from the Map annexed as Annexure-A3 and Annexure A4 which is the Google Earth Image dated 24.04.2016 showing the vast extent of mangroves in the vicinity. Despite these facts being there, the respondent No. 6/Project Proponent in its proposal for obtaining an EC and CRZ clearance has submitted to the effect that there were dwarf mangrove patches, which were 600 meters away from the rubble bund on the seaward side and that the coastal areas rich in mangroves are located at Ban Khadi (7 km from the project site), Ghugar Khadi (10.5 km away) and Narmada Estuary (12 km away). The respondent No. 6/Project Proponent has deliberately not disclosed the existence of 60,000 square meters of mangroves that abutted the rock bund nor has it disclosed the 14 kms. stretch of dense mangroves, which starts at a distance of approximately 700 meters North of the project, admeasuring approximately 75,47,500 square meters.

6. It is further mentioned in this appeal that in the meeting of GCZMA held on 15.09.2015, the respondent No. 6/Project Proponent has incorrectly categorized the area proposed to be reclaimed as CRZ-I B and CRZ-III, whereas in reality, the said area should correctly be classified at CRZ-IA, a copy of Minutes is annexed as Annexure-A5. It is further submitted that even as per the Coastal Zone Management Plan prepared by the respondent No. 2/Gujarat Government, this area is classified as CRZ-I, a copy of CZMP is annexed as Annexures A6 and a copy of draft Gujarat State Coastal Zone Management Plan dated 27.09.1996 is annexed as Annexure-A7, which has been sanctioned by the respondent No. 1/MoEF&CC. Further, it is submitted that the appellants have superimposed the co-ordinates of the project site on the approved CZMP of the area and further plotted the area proposed to be reclaimed by the respondent No. 6 thereon, the same clearly shows

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the area proposed to be reclaimed as CRZ-1A.

7. It is further mentioned in this appeal that Clause-7 of CRZ Notification-2011 classifies the CRZ-IA area, which is reproduced herein below:—

"*7. Classification of the CRZ — For the purpose of conserving and protecting the coastal areas and marine waters, the CRZ area shall be classified as follows, namely*:—

(i) CRZ-1,- A. The areas that are ecologically sensitive and the geomorphoiogical features which play a role in the maintaining the integrity of the coast,—

(a) Mangroves, in case mangrove area is more than 1000 sq mts, a buffer of 50meters along the mangroves shall be provided; (b) Corals and coral reefs and associated biodiversity; (c) Sand Dunes; (d) Mudflats which are biologically active; (e) National parks, marine parks, sanctuaries, reserve forests, wildlife habitats and other protected areas under the provisions of Wild Life (Protection) Act, 1972 (53 of 1972), the Forest (Conservation) Act, 1980 (69 of 1980) or Environment (Protection) Act, 1986 (29 of 1986); including Biosphere Reserves; (f) Salt Marshes; (g) Turtle nesting grounds; (h) Horse shoe crabs habitats; (i) Sea grass beds; (j) Nesting grounds of birds; (k) Areas or structures of archaeological importance and heritage sites.

B. The area between Low Tide Line and High Tide Line;"

8. It is further mentioned in this appeal that as per the CRZ Notification- 1991 and also the CRZ Notification-2011, no new constructions are permitted in CRZ 1(i)/CRZ IA areas, which are held to be ecologically sensitive and the geomorphological features, which play a role in maintaining the integrity of the coast, such as mangroves, corals, coral reefs, mudflats, which are biologically active, reserve forests, turtle nesting grounds etc. Storage of coal is not a permissible activity in CRZ-I.

9. It is further mentioned in this appeal that three creeks, which exist in the project area, have already been partially blocked, which is contrary to the condition mentioned in the impugned EC, which says that the Project proponent shall ensure that no creeks or rivers are blocked due to any activities at the project site and that free flow of water would be maintained. It is submitted that the activities of respondent No. 6/Project Proponent have already partially blocked the creeks, which is evident from Annexure A2, which could be partially seen.

10. It is further mentioned in this appeal that the project area is an ecologically sensitive area with a high density of mangroves and

biologically active mudflats. Looking to the ecological importance and sensitive nature of the Gulf of Khambat, the Government of India in CRZ Notification-2011 has declared the Gulf of Khambat as a "Critically Vulnerable Coastal Areas (CVCA)". Further, it is mentioned that the high density of mangroves in this area and the marine biodiversity clearly establishes the fact that the mudflats in this area are not biologically inactive/insensitive. The Final EIA report submitted by the respondent No. 6/Project Proponent shows that the mudflats/intertidal areas are biologically active because at page no. 90 of the said report, it is stated that "The phytoplankton community in study area exhibited moderate diversity and abundance during January 2014. Overall 6 phytoplankton genera were observed from entire study region". Further, the Final EIA report also states that "Earlier studies were conducted by NIO (2008) exhibited that, the region is diverse in zooplankton fauna with groups ranging from 9 to 15 with dominance of copepods". It is also mentioned in the Final EIA Report that "...pagadiya type fishing is operational in intertidal zones..." Further, it is mentioned in the said Report that "Reclamation would impact nearly 23 ha. of benthic habitats. However, density of benthos was observed to be very low in intertidal zone. No recovery of benthic organisms is possible as habitats will be permanently lost due to reclamation". These facts would clearly demonstrate that the area in question harbours good marine biodiversity and that the mudflats/intertidal areas are biologically active as well, and that the marine biodiversity of this area will be reduced due to pollution in the area. Nevertheless, the area still supports good biodiversity. Besides this, dense mangroves also indicate biologically active mudflats/intertidal areas.

11. It is further mentioned in this appeal that earlier respondent No. 6/Project Proponent had obtained only a CRZ Clearance from the Ministry of Environment and Forests on 06.07.2007 for the "Development of solid cargo port terminal Phase-I". The MoEF had proceeded on the assumption that the same did not require an Environmental Clearance, which is specifically mentioned in the CRZ clearance itself, annexed as Annexure-A10. The details of Phase-I and Phase-II have been given in para nos. 15 & 16 in the memo of this appeal. Therefore, it is made clear that the MoEF had granted a combined Environmental and CRZ Clearance to Phase-II on 11.11.2008, which was done without issuing To Rs and without a Public Hearing, since the entire process was completed in 35 days.

12. It is further mentioned in this appeal that the impugned EC for Phase-III has been accorded giving clearance for additional area of 23 hectares for coal stockpiles, back up equipment, coal storage silo at railway siding and other supporting infrastructure and to expand its cargo handling facility from 11.7 MMTPA to 23 MMTPA. It does not make

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it clear, as to why this additional land of 23 hectares was required at this stage, since the original Phase-I and Phase-II proposals allowed the respondent No. 6/Project Proponent to carry out its activities on 575 hectares plus 38 hectares, totally aggregating to 613 hectares. According to the appellants, respondent No. 6/Project Proponent has utilized a total land of 68 hectares in Phase I, II and III of its project, which includes the 23 hectares of land proposed to be reclaimed by the respondent No. 6/Project Proponent as per the sanction accorded via impugned EC. It is further mentioned that respondent No. 6 is seeking clearances for expansion phase-wise and that the other respondents have been granted the same in piecemeal clearances without considering the total impact of the project upon the total land requirements. Further, it is mentioned that activities such as reclamation, destruction of mangroves and mudflats are specifically prohibited under the CRZ notification 2011, which are being permitted in the impugned EC within CRZ-IA areas.

13. It is further mentioned in this appeal that as per the monitoring report of 2014 uploaded on the website of respondent No. 1/MoEF&CC, all conditions, which were earlier imposed, while granting the CRZ Clearances, have not been fully complied with. Therefore, it is apparent that respondent No. 1/MoEF&CC has granted the impugned EC without ensuring that all the earlier conditions have been fully complied with. It is submitted that the respondent No. 6/Project Proponent was required to carry out mangrove plantation over 200 hectares of land as per the CRZ clearance given for Phase-I and another 200 hectares of land as per the EC and CRZ Clearances given for Phase-II. The information provided regarding mangrove plantation by the respondent No. 6/Project Proponent to the appellants in response to appellants' query at the Public Hearing, is erroneous based on the coordinates of five locations, where the Respondent's Company states that they have carried out mangrove plantation. The appellants have checked the Google Earth imageries at each of these five locations and have found that no plantation was done.

14. It is further mentioned in this appeal that the reclamation would result in a change in geomorphology, which would, in turn, affect the tidal flow and result in change of HTL and LTL and would also impact the fisheries. All these impacts have not been dealt with in the EIA Report. There is also no Cumulative Impact Assessment Study conducted, despite the fact that there are number of industries within the study area of 10 kms., details of which are given in para no. 23 of the memo of appeal.

15. It is further mentioned in this appeal that in addition to above industries, another Thermal Power Plant of 3200 MW is proposed to be set up near Village Suva, Vagra Taluka by the respondent No. 6/Adani

Power Dahej Ltd. Surprisingly, the same has not been mentioned in the EIA Report, though it has received an EC in 2011 and the respondent No. 6/Project Proponent had applied for revised To Rs in July 2015. Further, it is mentioned that as per the Director, Industrial Safety and Health of the Government of Gujarat, there are about 92 "Major Accident Hazard Factories" in Bharuch District. Further, it is mentioned that the respondent No. 6 has also failed to ensure that a proper Disaster Management Plan is put in place before granting the impugned EC.

16. It is further mentioned in this appeal that the respondent No. 1/MoEF&CC and respondent No. 2/Government of Gujarat have questioned in regard to the incorrect classification of CRZ-1A Zones, despite the fact that there were mangroves and mudflats in the area in question as it should be CRZ-1B and CRZ-III. It is further mentioned that no study has been conducted to examine the movements of ships/barges on the marine ecology and environment and more particularly on the hilsa and the turtles. The mitigation measures suggested in the EIA report in the Environment Management Plan are also inadequate. The To Rs formulated by the respondent No. 1/MoEF&CC are based on the inaccurate and incomplete information provided by the respondent No. 6 in Form-I, a copy of which is annexed as Annexure A-14. Clause 1.2 to 1.4 of respondent No. 1 as set out in the prescribed format under the heading "Activity" which pertains to details of CRZ classification, the information regarding whether the area is located in CRZ-I area, distance from CRZ-I area etc. has been deliberately omitted. The respondent No. 6 has also not disclosed the mudflats, mangroves, creeks, numerous industries in this area. Under Item Nos. 1, 2 & 11 pertaining to heading "Environmental sensitivity" the respondent No. 6 has not disclosed the fact that mangroves were present at the project site and that the area is already subject to excessive pollution or environmental damage.

17. It is further mentioned in this appeal that the Google Earth Image dated 24.04.2016, annexed as Annexure A2 to this Appeal, reveals that the project site has already been partially reclaimed and was being used to store coal. There are creeks also in the area to be reclaimed, which would alter the HTL-LTL, which would change the shoreline. Further, it is mentioned that in clause 5.6.2.4.2. of the EIA Report, it is stated that sparse Mangroves were observed near intertidal regions of proposed reclaimed area. Northern boundary of study area showed healthy growth of mangroves on the banks of Ban Khadi and Ghugar Khadi (which are found to be about 12 kms. and 7 kms. respectively from the said area in question). Density of mangrove was found to be 40-80 per 100 sq. mtrs. and height was observed to be 1-1.5 m. near creek barks. Tall mangroves were present near open

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mudflats in seaward direction. However, the particular area was not accessible due to heavy siltation. Dense growth of mangroves were observed to be at least 8 kms. away from the proposed development. Further, it is mentioned that clause 6.4.1.3 of the EIA report deals with the "Impacts on Ecologically Sensitive Areas". It is stated that "Ecologically sensitive areas like corals, sea grass beds, breeding grounds are absent at proposed reclamation site. Hence, no impacts on these ecologically sensitive marine habitats are envisaged due to proposed development. Sparse and dwarf mangroves are present on northern side of existing bund and these are located away from footprint of proposed reclamation area and thus remains un-affected. However, few dwarf plants (12 nos.) falls under footprint of northern corner of land reclamation and impact on these dwarf plants is considered to be insignificant while taking into account overall mangrove cover of study area. Thick and dense mangroves are present in Ban and Ghugar creeks which are located 5 km north of APPPL jetty. Hydrodynamics of these creeks will remain unaltered due to proposed reclamation. Hence, impacts on dense mangroves are not envisaged."

18. Based on above information, it is mentioned that the project in question would involve reclamation of mudflats that are classified as CRZ-IA under the CRZ Notification, 2011. This project will also destroy about 60,000 square meters of mangroves, which abuts towards North side of the existing 15m. wide rubble bund, which is to be widened to 60 mtrs. Further, it is mentioned that due to movement of ships and barges as well as additional transport by road and rail, a detrimental impact would take place in Marine Ecology and water quality but the same has not been considered. It is further submitted that it is not made clear in the EIA Report, as to whether the 10 kilometer study area has been considered from the periphery of the entire 636 hectares of land belonging to the respondent No. 6.

19. It is further mentioned in this appeal that the Google Earth images dated 15.04.2013, annexed as Annexure-A 7, would show that there is a huge impact of coal storage being done by the respondent No. 6 as the entire intertidal area seems to have been covered with coal dust. As per the complaints made through public hearing and the documents obtained under the Right to Information Act, 2005 by the appellants from the respondent No. 4/GPCB, there are found to be serious problems caused due to open storage and transportation of the coal. Pursuant to the various complains received by the respondent No. 4/GPCB, an ambient Air Monitoring Analysis exercise and site inspections were carried out by the respondent No. 4/GPCB on 10.11.2014 and found that the PM10 values were higher than the National Ambient Air Quality Standards - 2009. Values of PM10 were recorded to be 201 µg/m3 and 226 µg/m3 on the terrace of

Chhaganbhai Ahir, Near Adani belt, Village Lakhigam and on the terrace of Anganwadi, Village Lakhigam, respectively. The PM2.5 values at these two locations were 56 µg/m3 and 78 µg/m3 respectively. The National Ambient Air Quality Standards-2009 state the maximum value 60 µg/m3 for PM2.5 and 100 µg/m3 for PM10. It is clear that the values exceed the permissible limit.

20. It is further mentioned in this appeal that a Show Cause Notice dated 19.09.2014 was issued to respondent No. 6/Project Proponent indicating therein the weak house-keeping and noise pollution by the respondent No. 6's Company and in this regard, earlier direction was issued by the GPCB vide letter dated 11.12.2014 under Section 31 of the Air (Prevention and Control of Pollution) Act, 1981 for non-compliance of consent conditions and the respondent No. 6 was directed to carry out a detailed comprehensive study through agencies like NEERI, IIT, NPC, etc. But no such report has been submitted by the respondent No. 6. Further, it is mentioned that due to this kind of pollution referred above, various ailments are being suffered by the people in local area such as death from lung cancer, cardiac and respiratory diseases.

21. It is further mentioned in this appeal that Public hearing was conducted on 18.03.2015, where-in the representative of the appellants had submitted the comments and suggestions regarding various issues. One of the major issues raised at the Public hearing by the stakeholders was with respect to coal dust pollution leading to health problems. A perusal of the replies would show lack of willingness on part of the respondent No. 6 to implement the suggestions given during the Public Hearing in its right spirit. During public hearing, it was replied by the respondent No. 6 that the nearest mangrove patch was 600 meters away from the site in question, which actually was abutting the rubble/rock bund itself and the same was patch of 60,000 sq. mtrs. Besides that a continuous patch of about 14 kilometers is existing in north of the rubble/rock bund, which stretch admeasures about 75,47,500 square meters. The claim of respondent No. 6 in the EIA report that the mudflats in this area are biologically insensitive, is completely false and misleading. On the basis of above-mentioned facts, above prayers have been made by the appellants.

22. This matter was first considered by the Tribunal on 16.12.2016 and notices were directed to be issued to the respondents.

23. Service affidavit has been filed, as per which service of notice upon all the respondents is found to be sufficient.

24. From the side of respondent No. 6-M/s. Adani Petronet (Dahej) Port Pvt Ltd., reply affidavit dated 11.05.2017 has been filed, in which rebutting the claims made by the appellants, it is submitted that the appellants were residing and carrying out their business approximately

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300 kms. away from the port side for which no *locus standi* is there likely to be affected by the said project. The project in question is of national importance, which is being sought to be obstructed by the appellants for extraneous considerations. The Gujarat Maritime Board identified Dahej for the development of a minor port complex under the Port Policy of 1995. The Petronet LNG Limited is a Concessionaire of Dahej Port and has established LNG Port, the same is operating since long. The answering respondent is a joint venture company and Adani Ports & Special Economic Zones Limited and Petronet LNG Limited are its shareholders. The answering respondent is a Sub-Concessionaire for the development of a port at Dahej, along the Eastern Coast of the Gulf of Khambhat to handle multi cargo. In the year 2005, the answering respondent proposed to set up a multipurpose jetty at the minor port at Dahej to facilitate handling of dry cargo like coal, de-oiled cakes, fertilizers, steel and steel products, iron ore, cement, etc. including backup facilities. The port backup facilities, inter alia, included erection of conveyor belts from the jetty for transportation of coal along-side the GIDC road up-to the railway siding for loading the rakes. The proposal put forth by the answering respondent was accepted by the Gujarat Maritime Board. The details of initial Phase-I of the said project are given in para no. 5.1 of this reply and the details of the Phase-II of the said project are also given in para no. 5.5 in this reply.

25. We are concerned only with the Phase-III of the said project, which deals with expansion of the project due to growth of cargo at Dahej Port and details of the same are given in para no. 5.6 of this reply affidavit. The answering respondent had submitted a proposed Terms of Reference along-with the EIA Form 1, clearly specifying therein the existence of mangroves at a distance of 12 km to the South of the said project and at a distance of 7 kms. to the North of the said Project. In the proposed Terms of Reference, the answering respondent also undertook to conduct a primary ecological survey within a 10 km. marine and terrestrial radius of the project in question and to conduct marine environment studies by collecting marine water samples from 5 identified locations within the port area, a copy of the said application is annexed as Annexure R 4. On 02.12.2013, the respondent No. 1/MoEF&CC addressed a letter to the answering respondent approving the ToR proposed by the answering respondent with respect to the clearance required for Phase-III of the said project. The answering respondent thereafter engaged M/s. Cholamandalam MS Risk Services Ltd. to conduct the environment impact assessment studies in terms of the approved ToR. The answering respondent also approached the National Centre for Earth Science Studies (NCESS), in terms of the Coastal Regulation Zone Notification, 2011. The said agency submitted a draft EIA report on 05.11.2014. Thereafter, a public hearing was

conducted on 18.03.2015, pursuant to which the answering respondent amended the draft EIA Report to include the concerns raised during the public hearing. In July 2014, NCESS provided answering respondent with a map which identified the reclamation area for expansion of the project in question, as falling under CRZ IB and IV. Accordingly on 30.03.2015, the answering respondent submitted an application to the respondent No. 3/GCZMA for its recommendation for grant of the CRZ clearance where-with the prescribed Form 1 was also submitted with the CRZ map prepared by NCESS. The CRZ Form 1 submitted by the answering respondent to respondent No. 3/GCZMA specified that the reclamation area fell within CRZ-I B and IV.

26. It is further submitted in this reply affidavit by the respondent No. 6- M/s. Adani Petronet (Dahej) Port Pvt Ltd. that on 14.03.2016, the respondent No. 2/Government of Gujarat forwarded the recommendation of respondent No. 1/MoEF&CC for grant of clearance for Phase-III at Dahej Port, which was considered by the Expert Appraisal Committee of the respondent No. 1/MoEF&CC in its meetings held during 28th-29th March, 2016 and subsequent thereto, the said clearance was accorded to the answering respondent on 14.10.2016. This process clearly demonstrates that there was no error in procedure. The Phase-I of the said project was to be set up when the CRZ Notification of 1991 was in force, which classified the coastal stretches of seas, rivers, bays, estuaries, creeks and backwaters, which were influenced by the Tidal Action up-to 500 meters from the High Tide Line and the area between the High Tide Line and the Low Tide Line was considered to be Coastal Regulation Zones. In terms of the CRZ Notification of 1991, the Coastal Regulation Zones were divided into 4 main categories viz. CRZ 1(1) (i.e. ecologically sensitive zones such as national parks/marine parks, reserve forests, sanctuaries, wildlife habitats, mangroves, corals/coral reefs etc. where industrial activity was largely prohibited) CRZ 1(ii) (i.e., the area between the high tide line and the low tide line) CRZ II (i.e. areas developed close to the shoreline), CRZ III (i.e. areas that were relatively undisturbed) and CRZ IV (coastal stretches in the Andaman and Nicobar, Lakshadweep and small islands except those categorized as CRZ-I, II & III).

27. It is further submitted in this reply affidavit by the respondent No. 6-M/s. Adani Petronet (Dahej) Port Pvt Ltd. that Phase-1 of the said project was proposed to be set up on the land and in the area between the High Tide Line and the Low Tide Line, which included the construction of a rubble bund, which would extend from the said project into the Gulf of Khambat. The CRZ area within which Phase-I of the said project was to be developed, has been categorized as CRZ-I(ii) and CRZ-III, which is evident from the Coastal Regulation Zone Management Plan prepared by Space Application Centre (SAC) and

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Gujarat Engineering Research Institute. The said plan further indicates that no part of the area, which pertained to the said project, was ecologically sensitive or categorized as CRZ I(i), in terms of the CRZ Notification of 1991, a copy of the Coastal Zone Management Plan is annexed as Annexure-R6, which indicates that Phase-I of the project fell within CRZ-I (ii) and CRZ III. Thereafter, when Phase II of the said project was to be set up, the same was to be carried out in 38 Ha. of forest land in respect of which permission had been granted. When the answering respondent proposed to set up Phase-III of the said project, the answering respondent required 23 Ha. of additional land, which was contiguous to the Dahej port, which also entailed expanding the rubble bund from 15 m. to 60 m. Accordingly, in terms of the CRZ Notification of 2011, it approached NCESS to prepare a map of the area within which the expansion was to be carried out, which categorized CRZ IA (i.e. areas that are ecologically sensitive including mangroves, corals and coral reefs, sand dunes, national parks, mudflats that are biologically active etc.), CRZ IB (i.e. the area between the High Tide Line and the Low Tide Line, CRZ II (i.e. areas which have been developed upto or close to the shoreline) CRZ III (i.e. areas that are relatively undisturbed and do not fall within CRZ I or II) CRZ IV A (the water area from the low tide line to twelve nautical miles on the seaward side), CRZ IV B i.e. the water area of the tidal influenced water body from the mouth of the water body at sea up to the influence of tide, which is measured at five parts per thousand during the driest season of the year etc.

28. It is further submitted in this reply affidavit by the respondent No. 6-M/s. Adani Petronet (Dahej) Port Pvt Ltd. that the map prepared by NCESS categorized the area pertaining to Phase-III of the Dahej port as CRZ IB and IV. When M/s Cholamandalam Risk Services MS conducted a study of the area, it was discovered that the intertidal mudflats in the proposed reclamation area did not have any sensitive habitation, such as dense mangroves, corals, nesting/breeding grounds or any mudflat habitations such as hermit crabs, mudskipper and other mulloscans due to the turbid conditions of sand silt formation of sediment texture in the mudflat region. The mudflats were, therefore, considered as biologically insensitive. A Google Earth Image of 15.04.2013 and of December 2014 would clearly indicate that there were no mangroves in the area proposed for reclamation except 12 dwarf mangroves, which fall under the footprint of northern corner of land reclamation and the impact on these dwarf plants is considered and disclosed in the EIA document. All these shows that the answering respondent did not furnish any wrong information to the respondent No. 1/MoEF&CC but also proves that the mangroves, which abut the rubble bund, grew subsequently. The copies of Google Earth Image

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dated 15.04.2013 and of December 2014 are annexed as Annexure R 7colly.

29. It is further submitted in this reply affidavit by the respondent No. 6-M/s. Adani Petronet (Dahej) Port Pvt Ltd. that mudflats are predominantly clayey and salty substrates with high organic content. Generally, mudflats play ecological and physical functions like dissipating wave energy, reducing the risk of erosion of salt marshes and providing a habitat for aquatic birds. Some mudflats are biologically productive which, together with other intertidal habitats, are of importance to large numbers of water birds and fishes. But the mudflats, which are not fulfilling the above activities, particularly, water birds foraging and congregation are considered to be inactive or insensitive.

30. It is further submitted in this reply affidavit by the respondent No. 6-M/s. Adani Petronet (Dahej) Port Pvt Ltd. that the appellants' case is based entirely on the Google Earth Image dated 24.04.2016, where-as the EAC meeting was held on 28th and 29th March, 2016. No objection was raised by the appellants nor have they disclosed as to when and how they came to know about the patch of mangroves through Google Earth Image dated 24.04.2016 nor have they alleged EIA report to be false. It is further submitted that the relief claimed in the present appeal relates to Phase-III of the project but the appellants have mentioned unwarranted, unjustified allegations with respect to Phase-I & II as well, which were covered by two separate Environmental Clearances dated 06.07.2007 and 11.11.2008.

31. From the side of respondent No. 4/GPCB, reply affidavit dated 09.05.2017 has been filed, stating therein that public hearing in the present matter had taken place on 18.03.2015. Besides that answering respondent is regularly inspecting the premises and is immediately reporting about the non-compliances, if any. Since the respondent No. 6/Project Proponent has been complying with the directions issued by the answering respondent from time to time, no coercive steps were required to be taken against it.

32. Rejoinder affidavit dated 20.06.2017 has been filed against the reply affidavit of respondent No. 6/Project Proponent dated 11.05.2017, where-in it is submitted that the person aggrieved may be a person, who has no direct or personal interest in invoking the provisions of National Green Tribunal Act, 2010, as has been held by this Tribunal in M.A. No. 49/2023 in Original Application No. 26/2012 (*Goa Foundation and Peaceful Society* v. *Union of India*). Therefore, the appellants are fully competent to file the present appeal before the Tribunal.

33. It is further submitted in this rejoinder affidavit by the

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appellants that Respondent No. 6 is only a Sub-Concessionaire for the development of the port at Dahej hence is not entitled to apply for clearances under the EIA Notification, 2006 and under the CRZ Notification, 2011. Therefore, it is clear that respondent No. 1 has erred in entertaining their applications for EC and CRZ clearances. Several pleadings are made with respect to earlier Phases i.e. Phase-I & II, which we are not concerned with in the present appeal. According to the appellants, Form No. 1 of EIA does not even refer to the dwarf plants (12 nos.) and that a number of concerns raised at the public hearing have not been dealt with in the final EIA Report. It is also denied that the reclamation area falls within CRZ-1B(IV) as the same falls in CRZ-1A area. Further, it is submitted that the map, which has been attached, is titled 'Coastal Landuse Map', which is not approved by the Coastal Zone Management Authority, hence the same cannot be considered to be the final nor the same can be treated to be approved Coastal Zone Management Plan. Respondent No. 6 has failed to mark their project area on the said map and therefore, on the basis of that, they cannot be allowed to claim that no part of the area, which pertained to the said port in question (in Phase I), was in ecologically sensitive CRZ-1(i) area. Moreover, the Coastal Landuse Map indicates the presence of mudflats and forests at the site of the said Port.

34. It is further submitted in this rejoinder affidavit by the appellants that the entire reply of respondent No. 6 in respect of the presence of mangroves and the biological activity of mudflats depends upon the CRZ study and map prepared by the NCESS and Google Earth images taken on dated 15.04.2013 and December 2014. In fact, imagery for December 2014, as sought to be relied upon by respondent No. 6, is not available and does not exist. Images reveal the presence of a large number of mangroves occupying an area of approximately 10,000 *m2* adjacent to the project site, which is annexed as Annexure A2. Further, it is submitted that the presence of mangroves itself would indicate that the mudflats are biologically sensitive. It is also pertinent to note that the conditions of the GCZMA, Government of Gujarat specifically note the presence of existing mangrove patches near the site of the said project, which establishes that these mudflats are biologically active.

35. It is further submitted in this rejoinder affidavit by the appellants that the CRZ Notification-2011 does not distinguish between 'sparse' and 'dense' mangroves. Thus, the reference to 'biologically insensitive' mudflats in Form-1 to both the CRZ and EC clearances, 'sparse' mangroves, and to 12 dwarf mangroves in the EIA Report and the absence of any mention of the mangroves abutting the rock/rubble bund, including even a mention of the 12 dwarf mangroves, in Form-1 to both the CRZ and EC clearances, is a deliberate attempt on part of

the respondent No. 6 to mislead the respondent No. 1/MoEF&CC. Above circumstances unequivocally show that a large number of mangroves could be found abutting the rock/rubble bund even at the time of preparation of CRZ map and EIA study and that the mudflats could not be considered to be 'biologically inactive'. Further, it is submitted that the challenge is made to the EC for Phase-III of the said port, which has been granted based on the EIA Report, hence it would be self-evident that the appeal would be treated to have challenged the EIA report as well in the present appeal.

36. It is further submitted in this rejoinder affidavit by the appellants that the existence of mangroves and the mudflats would automatically mean that the site in question should be classified as CRZ 1(A). The Minutes of meeting of GCZMA reflect the existence of mangroves and also recommend that no activities be carried out, that would adversely impact the mangroves, itself indicates non-application of mind on part of the GCZMA in accepting the incorrect classification prepared by NCESS. Further, it is submitted that the scale of the map attached by the respondent No. 6, annexed as Annexure R 10, is not good enough to establish that there were no creeks in the area of project in question. Further, it is submitted that no-where has it been stated by the respondent No. 6 that only 98.54 hectares was allotted to respondent No. 6/Project Proponent. The EC (Phase I) dated 06.07.2007 clearly shows that 575 hectares of land was allotted to the respondent No. 6. Therefore, 98.54 hectares as the existing capacity/area in Form-1 is yet another attempt to mislead the respondent No. 1/MoEF&CC while applying for grant of the impugned clearance. It is also not made clear as to why this additional 23 hectares of land was required at this stage, when the respondent No. 6 had already 613 hectares of land at its disposal.

37. It is further submitted in this rejoinder affidavit by the appellants that the respondent No. 6 has not provided correct coordinates regarding the sites of mangrove plantation. Therefore, the respondent No. 6 cannot assert that the appellants have proceeded with the present appeal based on alleged inaccurate and incomplete information. Further, it is mentioned that a perusal of the reports annexed as Annexures R 12 to R 15 would show that dense mangroves already existed at some sites where replantation is alleged to have taken place and that the mangrove re-plantation is not seen at all at other sites. Respondent No. 1/MoEF&CC has failed to consider the cumulative impact of large number of industries already existing within the study area of 10 kms. of Respondent No. 6. It is further submitted that the GCZMA, Government of Gujarat as well as the EAC specifically noted the presence of mudflats and mangroves and yet have not found it fit to question the classification of the site as CRZ-1(B) and CRZ-III

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by the respondent No. 6. The recommendations made by the GCZMA and State of Gujarat include that the construction and operational activities, should be carried out in such a way that no negative impact would be there on mangroves, if any, and other important coastal/marine habitats and activities would be carried out only under the guidance/supervision of the reputed institute/organization. Besides that, there are several other conditions also, which were imposed.

38. Apart from above, the other averments made in the affidavit of respondent No. 6 have also been rebutted by the appellants in this rejoinder affidavit.

39. From the side of respondent No. 1/MoEF&CC, reply affidavit dated 30.06.2017 has been filed, where-in it is submitted that the answering respondent has granted EC in question in accordance with the prevailing laws under item no. 7(e) in Schedule of the EIA Notification-2006, subject to certain conditions, which are enumerated in para no. 9 of this affidavit from sub-clause (a) to (e). It is also reiterated in this affidavit that the proposal of the project was run in accordance with the procedure.

40. Additional Sur-Rejoinder of respondent No. 6 dated 12.09.2017 has been filed to the affidavit-in-rejoinder dated 20.06.2017 filed by the appellants, where-in it is submitted that the appellants have raised this allegation for the first time in the said rejoinder against the answering respondent for being a Sub-Concessionaires for the Dahej Port, hence they were eligible to apply for the EC and CRZ Clearances. The said allegation is absolutely false because the answering respondent is a joint venture company, which was established for the purpose of development of the said port and its primary functions are the development and the operations of the said port. The answering respondent is the project proponent and hence it required to obtain EC in accordance with law. The development of Infrastructure Projects in India is undertaken by the respective Concessionaires, assisted by Sub-Concessionaires in many cases and this concept is well understood and recognized by all the concerned authorities operating in the field. Therefore, raising this allegation shows poor knowledge on the part of appellants.

41. It is further submitted in this Additional Sur-Rejoinder of respondent No. 6 that with respect to 2nd allegation of concealment of certain facts, the issue of their being mangroves in existence in the area where the project is to be expanded, has been dealt with the facts mentioned by the answering respondent in its earlier affidavit. But additionally, it is submitted that with respect to the issue of mangroves abutting the rubble bund, it is submitted that rubble bund was constructed during Phase-1 of the development of the said port and at that time, there were no mangroves existing in the adjoining area. The

position was more or less the same at the time when the answering respondent applied for the EC and the CRZ clearances for Phase-III of the said project with the exception of presence of only 12 dwarf mangroves, which was duly considered by the authorities in the EIA Report. Hence, there is no merit in the allegation of its concealment. As regards the respondent No. 6 having been allotted 575 hectares of land for the Phase-I project, it is submitted that the said information is wrong as the answering respondent had been allotted only 98.54 hectares of land for Phase-I. In rest part of this additional Sur-Rejoinder affidavit, nothing is stated except the denial of the contentions of the appellants and the reiteration of their own earlier information.

42. From the side of respondent No. 3/GCZMA, reply affidavit dated 13.09.2017 has been filed, where-in it is submitted that as per the allegations of the appellants, Phase-I & II of the project of respondent No. 6 are to be carried out in CRZ-1A area, due to there being in existence ecologically sensitive mudflats and mangroves. However, it is mentioned that the area where the Phase-III, which is the expansion of earlier phases of the project of respondent No. 6, is to be located in CRZ-1A area, hence the same needs to be quashed and set aside because such activities are not permissible in the said area. In this regard, the contention of the answering respondent is that the respondent No. 6 had approached the answering respondent on 30.03.2015, by submitting Form 1 and various documents as prescribed under the Coastal Zone Management Regulation, 2011 and *inter-alia* submitted a map, prepared by the National Center for Earth Science Studies (NCESS), which identified the Phase-III of the project to fall in CRZ 1B and IV areas. A copy of the said application of Form 1 is annexed as Annexure R-I Colly.

43. It is further submitted in this affidavit by the respondent No. 3/GCZMA that the NCESS is an agency approved by Central Government for the purpose of mapping and the maps prepared by this agency are accepted and relied on by the Central Government because of the fact that the answering respondent has also identified the said area to be CRZ 1B and IV Category. Further, it is submitted that the project in question was evaluated by the answering respondent on 04.04.2015, where-after certain aspects were required to be verified on site and therefore, the technical committee of answering respondent visited the project site on 15.09.2015. Thereafter, the said project was again evaluated in the meeting of the answering respondent held on 15.09.2015 and after careful consideration, it was found that the expansion area fell within the category CRZ 1B and CRZ III and therefore, the same was recommended for clearance on 14.03.2016, subject to certain conditions which are mentioned therein.

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44. It is further submitted in this affidavit by the respondent No. 3/GCZMA that no corals or coral reefs and associated biodiversity were found in the project area; no sand dunes existed in the said area; the mud flats were biologically inactive; and there were no national parks, marine parks, sanctuaries, reserve forest or other protected areas under the provisions of Wild Life (Protection) Act, 1972, Forest (Conservation) Act, 1980 or Environment (Protection) Act, 1983 or any other categories specified the said Notification of 2011. Therefore, it was found that the project area was correctly categorized as CRZ 1B and CRZ-III. As per the EIA prepared by M/S. Cholamandalam MS Risk Service Limited, existence of twelve dwarf mangroves was found to be there in the entire area. Therefore, the answering respondent imposed the condition of plantation of mangroves in an area admeasuring 50 hectares, to be planted in the next two years and report thereof was to be submitted to the answering respondent periodically. The condition was also imposed on respondent No. 6 to ensure that none of the creeks, if existing, should be blocked by the respondent No. 6/Project Proponent.

45. We have heard the arguments learned counsel for the parties and perused the documents on record.

46. In view of above, we are framing following issues to be decided for just disposal of this case.

(i). Whether the respondent No. 6/Project Proponent made concealment of information, which was required to be furnished in Form 1 specifically with respect to there being mangroves and mud flats in the area in question?

(ii). Whether the project in question lies in CRZ-1A and accordingly, whether EC and CRZ Clearances could have been given in that area?

(iii). Whether there is found to be any air pollution on account of storage and handling of coal in the area in question?

(iv). Relief, if any.

47. Before giving our findings issue-wise, we would like to deal with the arguments, which have been made by the respective parties.

48. The learned counsel for appellants has drawn our attention to page no. 269 of the paper book, where-at Form No. I is annexed, which was filled up by the respondent No. 6 and our attention is drawn therein to serial no. 17, which deals with Item “Interlinked Projects” and in front of that, in the next column, it is recorded “Not Applicable”. It was argued by the learned counsel for appellants that this information is false because it was incumbent upon the Project Proponent to furnish the information pertaining to the fact that this was Phase-III of the project, while the other two phases should have been

mentioned in this column. This non-furnishing of information would amount to concealment of the facts.

49. Thereafter, the learned counsel for appellants has drawn our attention to page no. 273 of the paper book, where-in at serial no. 1.2 in column no. 2, information was required to be furnished relating to clearance of existing land, vegetation and building, regarding which in Column-3 'No' is mentioned and in Column-4, it is recorded that 'area proposed for reclamation is devoid of vegetation or civil structures', which is a clear concealment of facts because in that area, there were mudflats and mangroves. With respect to above concealment, our attention is drawn to para no. 6.4 of the affidavit of respondent No. 6 where there is an admission on the part of respondent No. 6 that there existed 12 dwarf mangroves.

50. Thereafter, the learned counsel for appellants has drawn our attention to the Judgment of Hon'ble Bombay High Court in *PIL No. 87/2006* (*Bombay Environmental Action Group* v. *The State of Maharashtra*) and other connected Writ Petitions delivered on 17.09.2018, where-in, in para no. 42, it is recorded "Under the 2011 notification, all mangrove area fall in CRZ-I irrespective of its area and in case the said area is 1000 sq. mtrs. or more, even a buffer zone of 50 mtrs. along the side area shall be a part of CRZ-I. Thus, the buffer zone of 50 meters abutting mangroves having an area of 1000 sq. mtrs. or more was also included in CRZ-I from 27th September, 1996". Thereafter, our attention is drawn to para no. 85 of the said Judgment, where-in, in Clause nos. (III) & (IV), following is recorded:—

> "*III. Regardless of ownership of the land having mangroves and the area of the land, all constructions taking place within 50 metres on all sides of all mangroves areas shall be forthwith stopped. The area of 50 meters shall be kept free of construction except construction of a compound wall/fencing for its protection*;
>
> *IV. No development permission whatsoever shall be issued by any authority in the State of Maharashtra in respect of any area under mangroves. All authorities including the Planning Authorities shall note that all mangroves lands irrespective of its area will fall in CRZ-I as per both the CRZ notifications of 1991 and 2011. In case of all mangrove areas of 1000 sq. meter or more, a buffer zone of 50 meters along the mangroves will also be a part of CRZ-I area. Though buffer zone of 50 meters in case of mangroves area of less than 1000 meters will not be a part of CRZ-I, it will be subject to above restrictions specified in clause III above*;"

51. Based on above position of law, it has been argued by the learned counsel for appellants that there is an admission on the part of respondent No. 6 that there were 12 dwarf mangroves in the area where the project for expansion has been granted EC, therefore, the

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same should be treated to fall in CRZ-IA, where-in there is strict prohibition of any kind of construction to be raised as per the direction of Hon'ble Bombay High Court cited above. In view of above, the impugned EC, which has been granted, needs to be set aside because under that EC, permission has been granted to expand the width of bund, which would amount to nothing but a kind of construction.

52. Thereafter, the learned counsel for appellants has also drawn our attention to Annexures 2 & 3 of the memo of appeal, annexed at page nos. 46-47 of the paper book, which are maps respectively. Annexure-2 is a Google Earth Image dated 24.04.2016 and Annexure-3 is a CRZ Map prepared by the National Centre for Earth Science Studies (NCESS), Thiruvananthapuram. In Annexure-2, mangroves, which are shown by the Green colour, are spread in an area of 60,000 sq. mtrs., and according to the appellants, this is said to have not been considered by the EIA in its report. As regards the mangroves in Annexure —A3, we find that in that map, mangroves are shown by dotted green colour, which is shown in the map quite far away from the rubble bund, therefore, how the appellant is saying that the same should have been considered by the EIA in its report, appears to be non -comprehendible. Because from the Map annexed at Annexure A2, it appears that there are some other Companies/Projects located side by side and that the area where the mangroves with dotted green mark is shown, appears to be falling in the area, which is covered by Gujarat Chemical Port Ltd. Further, it is argued by the learned counsel for appellants that by these photographs, it is also clear that in the area in question, there are mudflats, existence of which would require the said area to be covered under CRZ-IA. It is also argued that since these mudflats are existing there, they cannot be said to be biologically inactive because of the presence of mangroves. These mudflats ought to have been considered to be active mudflats. It is vehemently argued that a proper study has not been shown to have been done in the EIA report regarding these facts.

53. Thereafter, the learned counsel for appellants has also drawn our attention to the Office Memorandum (OM) dated 24.12.2010, which deals with consideration of integrated and inter-linked projects, particularly, with respect to the fact that, as to how the environmental clearance under EIA Notification 2006 would be considered in respect of the integrated and interlinked projects having multi-sectoral components. Having drawn our attention to it, it is argued that in the present case, Phase-III of the project in question was falling in the Category of interlinked projects and that the information with regard to earlier projects i.e. Phase-I & Phase-II were required to be disclosed, while obtaining the EC for the Phase-III of the project, the appraisal of Phase-III should have been made in consonance with the procedure

laid down under OM dated 24.12.2010.

54. We have doubts with respect to applicability of this OM in the case in hand because interlinked projects appear to be those where one project appears to be dependent upon the other project such as limestone mining and cement plant. If a cement plant is to be set up then that would require lime stone mining; thermal power plant would also require coal mining; distillery will require sugar factory etc. In the case in hand, we find that it is only an expansion of the earlier phases, therefore, it should not fall in our assessment in the category of interlinked projects and hence on that count, we do not find any concealment to be there in Form —I

55. Thereafter, the learned counsel for appellants has also drawn our attention to the Final Environmental Impact Assessment (EIA) Report for Phase-III Expansion of Adani Petronet (Dahej) Port Pvt. Ltd. from 11.7 MMTPA to 23 MMTPA Multi-Cargo Port dated March 2015, in which our attention is drawn to page no. 19 of the same, where-in it is recorded that the study area also included the area, which consisted of mudflats. It is also recorded simultaneously in this report that as the port expansion is proposed towards seaward direction, no land acquisition is proposed hence resettlement and rehabilitation are not envisaged. Similarly, no Ecologically Sensitive Zones and Geo-morphological features as mentioned in CRZ Notification 2011 for CRZ-I area were found present at the proposed expansion area. We do not find any contradiction in the above observation in the EIA Report because as per this report referred above, mudflat was found there and accordingly, the said area is found to be in CRZ-I also.

56. Thereafter, our attention is also drawn to internal page nos. 64-65 of the above-mentioned EIA report, where-in our attention is drawn to the fact that there is mention that within 0 to 10 kms. of the project, the study area, 56.35% area is covered with water bodies, 8.83% consists of rivers and creeks. Out of the 18.87% of wetland, 14.58% of area is covered by mudflat, 2.44% of the area by dense mangroves and remaining 1.84% of the area is sparse or dwarf mangroves. At internal page no. 65 of the same report at serial no. 4 of the table relating to wetland, in column 2, the area of mudflat/tidal flat, Dense Mangrove and Sparse/Dwarf Mangrove are also indicated. Based on this, it is argued that the EIA study report did contain existence of mangroves and mudflats in the study area within 0 to 10 kms. and yet MoEF&CC have permitted the expansion of rubble bund in that area, which is illegal.

57. Thereafter, our attention is drawn to internal page no. 110 of the above-mentioned EIA report, in which it is recorded that Sparse Mangroves were observed near intertidal regions of proposed reclaimed area. Northern boundary of study area showed healthy growth of

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mangroves on the banks of Ban Khadi and Ghugar Khadi. Mangrove community was dominated by *Avicennia marina*. Desnity of mangrove was observed to be 40-80 per 100 m^2 and height was observed to be 1 -1.5 m near creek banks. Tall mangroves were present near open mudflats in seaward direction. However, the particular area was not accessible due to heavy siltation. Dense growth of mangroves was observed to be at 8 kms. away from proposed development. The details of the said mangroves are also annexed at page no. 111 of the said report. Based on this, it is argued by the learned counsel for appellants that the EIA study did contain the fact that the area was having large number of mangroves.

58. Thereafter, our attention is drawn to internal page no. 146 of the above-mentioned EIA report, in which para no. 6.4.2.1 deals with impact on marine water quality and sediment quality during operational phase and it is recorded therein that as no liquid handling is envisaged in proposed expansion, impacts on marine ecology due to accidental spillage of chemicals are remote possibility The said opinion is being assailed by the appellants.

59. Thereafter, the learned counsel for appellants has also drawn our attention to page no. 50 of the paper book of the main appeal, which is the Minutes of the 27th Meeting of the Goa Coastal Zone Management Authority(GCZMA) dated 15.09.2015, in which para no. 27.4 deals with the CRZ Clearance for proposed Phase-III expansion of the project in question and in this, our attention is drawn to page no. 56, where-in it is recorded that ".....Ecologically Sensitive Areas like corals, sea grass beds, breeding ground are absent at proposed reclamation site, hence no impacts are envisaged". It is also recorded that the representative of respondent No. 6 submitted that the construction activities will be within the intertidal region, hence no major impact on water quality is envisaged.

60. Thereafter, the learned counsel for appellants has also drawn our attention to page no. 79 of the paper book of the main appeal in which the CRZ Clearance has been given. Having drawn our attention to this document, it is stated by the learned counsel for appellants that these authorities have not gone for appraisal of the problem of mudflats, which is evident from their approach.

61. Thereafter, the learned counsel for appellants has also drawn our attention to page no. 93 of the paper book of the main appeal, which is recommendation made by the Expert Appraisal Committee (EAC) and at page no. 95 of the same, it is recorded "the proposal includes other cargoes like Steel, Gypsum, Silica sand etc. It is reported that no national park, marine parks, sanctuaries, reserve forests, wildlife habitats, biosphere reserves are located at the project site. Mudflats are

present at project site, however they are biologically insensitive. ..... Additionally, the PP informed the Committee that ambient air quality monitoring was carried out at 6 locations during December, 2013 - February, 2014 and submitted baseline data....."

62. Having shown above parts of the Minutes, it is argued by the learned counsel for appellants that enough measures were not taken for air pollution and that mudflats were also present, has been specifically recorded there.

63. Thereafter, the learned counsel for appellants has also drawn our attention to page no. 38 of the paper book of the main appeal, in which the Environmental Clearance (EC) and the CRZ Clearances dated 14.10.2016 are found and at page 41 of which is contained condition no.(vii) that all the conditions stipulated in the earlier Clearance including the recommendations of Environmental Management Plan and Disaster Management Plant shall be strictly complied with. It was also that, this was not ensured that the conditions stipulated in the earlier clearances were met or satisfied and yet the EC and the CRZ Clearance has been given for the expansion of the project.

64. Thereafter, the learned counsel for appellants has also drawn our attention to page nos. 10 & 11 of the paper book, which is a part of the main appeal, in which the report titled "Ecological Profile of Coastal Talukas Around Gulf of Khambhat" prepared by the Gujarat Ecology Commission in 2011 has been dealt with, where-in it is mentioned "A total of 19 sample plots were surveyed in coastal mudflat areas" and in para no. 13 of this appeal memo, it is recorded "mudflats were not biologically inactive/insensitive in this study".

65. Thereafter, the learned counsel for appellants has also drawn our attention to page no. 127 of the paper book, which is Annexure-A17, which pertains to Google Earth Image dated 15.04.2013, it shows therein that there is storage of the coal and it is argued that from this storage, emanates huge pollution in the local areas leading to various kind of ailments. No mitigation measures for meeting this malady have been considered while granting EC.

66. Thereafter, the learned counsel for appellants has also pointed out para no. 4 of the affidavit of respondent No. 4/GPCB, where-in it is recorded that notices were issued by the GPCB to the respondent No. 6/Project Proponent in regard to this pollution.

67. Thereafter, the learned counsel for appellants has relied upon the Judgment passed by the Hon'ble Supreme Court in the matter of *Hanuman Laxman Aroskar* v. *Union of India (Civil Appeal No. 12251 of 2018 along-with other Civil Appeal)*, where-in reliance is placed on following paragraphs:—

"*67. We cannot gloss over the patent and abject failure of the State of Goa as the project proponent in failing to disclose wet lands,*

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water sources, water bodies, biospheres, mountains and forests within an aerial distance of 15 kilometres as required by Form 1. The disclosure in Form 1 constitutes the very foundation of the process which is initiated on the basis of the information supplied by the project proponent. Following the disclosure in Form 1, ToR are formulated, and this leads to the preparation of the EIA report. A duty is cast upon the project proponent to make a full, complete and candid disclosure of all aspects bearing upon the environment in the area of study. The project proponent cannot profess an ignorance about the environment in the study area. The project proponent is bound by the highest duty of transparency and rectitude in making the disclosures in Form 1.

68. There can be no manner of doubt that Form 1 is an important ingredient in the entire process envisaged under the 2006 notification. Hence, clause (vi) of para 8 of the 2006 notification provides that deliberate concealment or submission of false or misleading information or data which is material to screening or scoping or appraisal or decision on the application shall make the application liable for rejection and lead to the cancellation of a prior EC granted on that basis. The declaration which is required of the project proponent is to a similar effect.

75. Though the EIA report adverts to the presence of forests within the study area in Goa and Maharashtra, we have to consider whether this by itself warrants the grant of an EC in-spite of the fact that there has been a patent failure on part of the project proponent to make a transparent and candid disclosure of material facts in Form 1. Information furnished in Form 1 is crucial to the preparation of the ToR by the EAC. The EAC comprises of experts. It is constituted, among other reasons, for the specific purpose of assessing the information furnished in Form 1 and preparing comprehensive ToR. There is an intrinsic link between the disclosures in Form 1 which constitute the basis for formulating the ToR and between the ambit of the EIA report required by the ToR and the final EIA report. The ToR guide the preparation of the EIA report. A failure to disclose information in Form 1 impairs the functioning of the EAC in the preparation of the ToR and in consequence, leads to preparation of a deficient EIA report.

76. The submission that the EIA report deals with the prevalence of forested areas and warrants the grant of an EC cannot be accepted for yet another reason. EACs and SEACs are conferred with the authority to reject applications for the grant of an EC at the stage of scoping itself, prior to the preparation of the ToR. The application may be rejected on the basis of the information furnished by the project proponent in Form 1. Claiming an EC as a matter of right

merely because the EIA report has assessed parameters that were omitted in Form 1, bypasses the authority of the EAC and SEAC to reject an application at the preliminary stage and cannot be countenanced. The regulatory authority is required to assess the final documents submitted to it "strictly with reference to the ToR" and communicate to the EAC and SEAC any discrepancies between the EIA report and the ToR. A deficient ToR on the basis of the non-disclosure of material information in Form 1 impedes this process."

68. Having relied upon the said Judgment, it is urged by the learned counsel for appellants that since in the present case, there are information not furnished with respect to mudflats and mangroves by the respondent No. 6, an appropriate ToR cannot be said to have been drawn and consequently, appropriate EIA report would also not treated to have been submitted in this. Entire process should be treated to have been adversely impacted, hence on that count, EC deserves to be set aside.

69. Thereafter, reliance is placed by the learned counsel for appellants upon the Judgment of Hon'ble Supreme Court in the matter of *Utkarsh Mandal* v. *Union of India* [2009 SCC OnLine Del 3836], in following paras:—

"*36. The next issue concerns the failure on the part of the EAC (Mines) to deal with the objections raised at the public hearing and the effect of such failure on the grant of environmental clearance. In the first place it needs to be noted that the MoEF has constituted the EAC (Mines) as a twelve member body for evaluating the Project proposal as well as the EIA Report and advise the government on whether environmental clearance should be granted. It is in essence a delegate of the MoEF performing an "outsourced" task of evaluation. The decision of the EAC may not necessarily be binding on the MoEF but is certainly an input into the decision making process. Considering that it constitutes the view of the expert body, its advice would be a valuable input. In terms of the procedure evolved by the MoEF to deal with applications for EIA clearance, the objections at the public hearing and the response thereto of the project proponent are placed before the EAC (Mines) for evaluation and for taking a decision which will constitute the advice to the MoEF on such project proposal. The EAC is therefore performing a public law function and is expected to adhere to those very standards which law requires the MoEF to adhere to.*

37. The requirement of an administrative decision making body to give reasons has been viewed as an essential concomitant of acting fairly. Given that such a decision is in any event amenable to judicial review, the failure to make known the reasons for the decision makes it difficult for the judicial body entrusted with the power of reviewing

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such decision as to its reasonableness and fairness. The decision must reflect the consideration of the materials available before the decision maker and the opinion formed on such material."

70. Reliance is placed on above ruling only to emphasize that in the case in hand also, the issues raised in public hearing have not been properly addressed by the EAC. We do not understand, as to why this para has been referred to as it does not appear to be of any relevance in the matter in hand.

71. Thereafter, reliance is placed by the learned counsel for appellants upon the Judgment passed by the National Green Tribunal, Principal Bench, New Delhi in the matter of *The Sarpanch* v. *The Ministry of Environment* and *Forest through its Principal Secretary (Appeal No. 03 of 2011)* delivered on 12.09.2011 in para no. 18, where-of it is held that a combined reading of the preamble as well as Section 20 of the National Green Tribunal Act, 2010 would reveal that this Tribunal has got vast jurisdiction to decide the environmental dispute including conservation of all the natural resources, in a given case, if it is brought before this Tribunal.

72. Thereafter, the learned counsel for appellants has drawn our attention to page nos. 59 and 64 of the paper book, where-at a Map is annexed, which is said to have been prepared under CRZ Notification 1991, which according to the appellants shows that the area in question is showing the area to be in CRZ-I.

73. Thereafter, the learned counsel Mr. Maulik Nanavati representing respondent No. 3/GCZMA has urged that the Judgment delivered by the Hon'ble High Court of Bombay in PIL No. 87/2006 connected with other Writ Petitions, decided on 17.09.2018, shall be read prospectively and that the same would not be applicable to the State of Gujarat. The decisions taken by the GCZMA were taken prior to the Judgment of Hon'ble High Court. Further, he has submitted that the Project Proponent has submitted a Map of the year 2004 (annexed as Annexure A-1 to the appeal) and that the State Government had prepared a CZMP Map in the year 2017, a copy of the same is not found on record. Thereafter, he has argued that the decision in the present matter regarding recommending the CRZ Clearance is taken in the year 2016. Therefore, it is apparent that the Maps, which have been relied upon by the Project Proponent, in them discrepancy lies. It is also highlighted by him that the State Government's Map has been prepared by the Authorized Agency and that the Map prepared by the State Government through NCSCM, extract of which has been filed by the appellants (handed over during the argument) shows the area in question to be CRZ-1A.

74. Thereafter, the learned counsel for respondent No. 3/GCZMA has also drawn our attention to para no. 3 of the CRZ Notification-2011,

where-in, in para no. 3 Sub-Clause (i), it is recorded "Setting up of new industries and expansion of existing industries except, - (a) those directly related to waterfront or directly needing foreshore facilities (*Explanation* : The expression "foreshore facilities" means those activities permissible under this notification and they require waterfront for their operations such as ports and harbours, jetties, quays, wharves, erosion control measures, breakwaters, pipelines, lighthouses, navigational safety facilities, coastal police stations and the like.)……". Based on above provision, it is argued by him that Port in question is a permissible activity in CRZ area as per above para no. 3 of the CRZ Notification. Thereafter, he drew our attention to para no. 4 of the CRZ Notification, 2011, where-in following is mentioned:—

"*4. Regulation of permissible activities in CRZ area.- The following activities shall be regulated except those prohibited in para 3 above*, —

(i)(a)

(b) for those projects which are listed under this notification and also attract EIA notification, 2006, for such (S.O.1533 (E), dated the 14th September, 2006), for such projects clearance under EIA notification only shall be required subject to being recommended by the concerned State or Union territory Coastal Zone Management Authority (hereinafter referred to as the CZMA)……"

75. Based on above provision, it is urged by the learned counsel for respondent No. 3/GCZMA that in the EIA Notification in Schedule 1 Clause 7(e) deals with Ports, harbours, breakwaters, dredging and it is mandated that for establishing such facilities, which have ??? 5 Million TPA cargo handling capacity, the same would be requiring prior EC. In the case in hand, the project was till Stage-2 dealing with 11.7 Million TPA, which capacity is being enhanced to 23 Million TPA, therefore, it would be covered under Schedule I 7(e) in Category 'A', which required to be appraised by the MoEF&CC.

76. Thereafter, the learned counsel for respondent No. 3/GCZMA has also drawn our attention to para no. 8 of the CRZ Notification, 2011. The said provision reads as under:—

"*8. Norms for regulation of activities permissible under this notification*,—

(i) The development or construction activities in different categories of CRZ shall be regulated by the concerned CZMA in accordance with the following norms, namely:—

I. CRZ-I,—

(i) no new construction shall be permitted in CRZ-I except,—

(a)……

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(b).....

(c) facilities that are essential for activities permissible under CRZ -I;

....."

77. Based on above provision of law, it is urged by the learned counsel for respondent No. 3/GCZMA that in the case in hand, the facility, for which Environmental Clearance (EC) and CRZ Clearance have been granted to the Project Proponent, are permissible under above rule but they need to be regulated. In the case in hand, the CRZ Authority has placed conditions. If the said conditions are breached, that will provide a separate cause of action. Further, it is mentioned that regarding protection of mangroves, conditions are stipulated in the permission granted. With regard to mudflats, it is urged by him that even during public hearing, it was not raised that the report of EIA regarding mudflats was incorrect. Any actions, which are recommended in EAC, the same have to be taken care of or responded by the respondent No. 1/MoEF&CC. It is further urged by him that the Project Proponent has been proceeding with the work since 2016 onwards up to 2023 as there was no stay on the said activity from any Court and by now work of almost 16 hectare area has been completed out of 23 hectares.

78. Further, it is urged by the learned counsel for respondent No. 3/GCZMA that no activity has been done by the Project Proponent on the Northern side of the berth while on the Southern side, conveyor belt needs to be constructed. He also proposes that strict conditions may be imposed upon the Project Proponent and that validity of the Environment/CRZ clearance would be over after 10 years.

79. During argument, we had pointed out to the learned counsel for respondent No. 3/GCZMA the Minutes of Meeting of the GCZMA dated 15.09.2015, at page no. 52 of the paper book, in which at para no. 3 there is reference to the effect that the site was visited by the members of Technical Committee on 20.05.2015, therefore, we made a query as to whether the said Technical Committee Report would be brought on record or not? In pursuance of that query, at the time of argument, the learned counsel has sent us that report through e-mail dated 08.08.2023, wherein it is recorded that "Dwarf mangrove patches are 600 mtrs. away from rubble bund on seaward side. Hence, no obstruction in tidal water flow in mangrove is envisaged".

80. Thereafter, our attention is drawn by the learned counsel for respondent No. 6/Project Proponent to the Minutes of 4th Meeting of Expert Appraisal Committee held on 28th-29th March, 2016, where-in at page no. 94 of the paper book, following was pointed out by him:—

"*The Committee deliberated on the certified compliance report*

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dated 2.7.2014 issued by the Regional Office of MoEF&CC, Bhopal. It is reported that most of the environmental conditions have been complied. Few conditions are reported to be partly complied, which are related with environmental monitoring data. The Committee suggested them to upload the complete information on their website. PP committed to do the same. The Committee was satisfied with the response.

"*The Committee deliberated upon the issues raised during the Public Hearing/Public Consultation meeting conducted by the Gujarat Pollution Control Board on 18th March 2015. The issues were raised regarding noise pollution, tyre washing, permission from Village panchayat, transportation of coal; prediction of pollution level; public hearing venue; fugitive emission from road, local employment; etc. The Committee noted that issues have satisfactorily been responded by the project proponent and incorporated in the final EIA-EMP report.*

Gujarat Coastal Zone Management Authority vide letter no. ENV-10-2015-171-E dated 14th March, 2016 has recommended the proposal to MoEF&CC to grant CRZ cearance for proposed Phase-III expansion project at Dahej by M/s Adani Petronet (Dahej) Port Ltd. It is also reported that as per CRZ map duly demarcation of HTL CRZ Boundary etc. prepare by tie National Centre for Earth Science Studies, Thiruvananthpuram, the proposed activities falls within CTZ -1 (B), CRZ — III Categories, which are permissible as per CRZ Notification, 2011.

After detailed deliberations, the Committee found additional information adequate and recommended the project for environmental and CRZ clearance and stipulated the following specific conditions along with other environmental conditions while considering for accord of environmental clearance:

(i). Construction activity shall be carried out strictly according to the provisions of CRZ Notification, 2011. No construction work other than those permitted in Coastal Regulation Zone Notification shall be carried out in Coastal Regulation Zone area.

(ii). The Project proponent shall ensure that there shall be no damage to the existing mangroves patches near site and also ensure the free flow of water to avoid damage to the mangroves.

(iii). The Project proponent shall ensure that no creeks or rivers are blocked due to any activities at the project site and free flow of water is maintained.

(iv)……"

81. Prior to the above, the Director (Environment) & Addl. Secretary, Department of Forest and Environment of Gujarat, who is also Member

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Secretary of the GCZMA, has made recommendation to the MoEF&CC for CRZ Clearance dated 14.03.2016, which is annexed at page nos. 79 to 91 of the paper book. In this regard, the learned counsel for respondent No. 6/Project Proponent submits that the appellants' whole case is based upon the Google Map, which cannot be given importance. He has also questioned the conduct of the appellants regarding delay. He has also urged that the Judgment of Hon'ble High Court in PIL No. 87/2006 *(supra)* will not hold good in the present case because different issue was involved therein. Moreover, the issues in that pertain solely to the State of Maharashtra and hence, the same would not be applicable in the State of Gujarat.

82. Pertaining to air pollution issue raised by the appellants, the learned counsel for respondent No. 6/Project Proponent has drawn our attention to para no. 43 of his reply affidavit, where-in it is submitted that pursuant to the directions issued by the respondent No. 4/GPCB, a comprehensive study was carried out by the National Productivity Council on the adequacy of pollution control equipment and fugitive emission management. The National Productivity Council submitted its report on 09.07.2015, which contained measures to improve the existing air pollution control measures. Thereafter, our attention is drawn to the compliance report of the recommendations of National Productivity Council, annexed at page no. 475 to 481 of the paper book, which gives details of the compliances made by the Project Proponent. This compliance report makes it clear that all the compliances have been done at the end of the Project Proponent and that regarding few recommendations, the same have already been noted and the compliance of the same are in progress.

83. Thereafter, our attention is drawn by the learned counsel for respondent No. 6/Project Proponent to page no. 102 of the paper book, which is an information addressed by the Project Proponent/respondent No. 6 to the Director, Ministry of Environment and Forest for prior Coastal Regulation Zone Clearance and Environmental Clearance (Form-1) for proposed expansion of Adani Petronet (Dahej) Port Pvt. Ltd. from 11.7 MMTPA to 23 MMTPA along-with reclamation of 23 ha. back-up area and widening of existing rock bund area from 15m to 60m width.

84. Thereafter, our attention is drawn by the learned counsel for respondent No. 6/Project Proponent to page no. 117 of the paper book and it is urged by him that it is not interlinked project as it is an expansion of an existing project (port) regarding environmental sensitivity. On the same page, it is recorded that that the Mangrove in the creeks and Estuary are 12 kms. away in South and 7 kms. away in North. Thereafter, he has drawn our attention to page no. 152 of the paper book, which is a part of clarification given by the Project Proponent to the appellants regarding the project in question apprising

them that the Project Proponent has not destroyed any mangroves so far. The proposed expansion will result in loss of only 12 dwarf mangroves. Considering overall mangrove cover in Dahej region, this loss is insignificant.

85. Thereafter, our attention is drawn by the learned counsel for respondent No. 6/Project Proponent to the Final EIA report of March 2015, where-on at page no. 22, the details of the project are given in tabular form and at serial no. 7- in front of Ecologically Sensitive Zones is written "None at the project site". At serial no. 10, it is recorded Coastal Areas rich in corals, mangroves, breeding ground of specific specifies and in front of that "None at project site". Having drawn our attention to this information, it is submitted by him that the appellants have not provided any expert opinion that because of the mangroves being there, the mudflats is found to be biologically active. Then our attention is drawn to Appendix of the said report, which is provided in soft copy at page no. 2, which contains the CRZ Map showing mangroves in light green dots. But it is very difficult to make out these green dots in the background of blue dots, as to in how much area they are spread and what is their number. It is urged by the learned counsel for Project Proponent that this Map was placed before the GCZMA and MoEF and therefore, it cannot be said that there was any concealment made on the part of Project Proponent.

86. Thereafter, our attention is drawn by the learned counsel for respondent No. 6/Project Proponent to page no. 98 of the EIA Report, where-in at para no. 5.6.2.3.1 dealing with project site, it is mentioned that "The proposed project site is situated on east coast of Gulf of Khambhat and could be divided into three zones. The intertidal zone close to shore is characterized by open mudflats. Stray occurrence of mangrove species *Avicennia marina* was observed on northern side of existing jetty. Southern side of existing jetty is devoid of any vegetation and they are shown in Intertidal Zone". Thereafter, he drew our attention to page nos. 110-111 of the same report, which contains "Sparse Mangroves were observed near intertidal regions of proposed reclaimed area. Northern boundary of study area showed healthy growth of mangroves of the banks of Ban Khadi and Ghugar Khadi. Mangrove community was dominated by *Avicennia marina*. Density of mangrove was observed to be 40-80 per 100 sq. mtrs. and height was observed to be 1-1.5m near creek banks. Tall mangroves were present near open mudflats in seaward direction. However, the particular area was not accessible due to heavy siltation. Dense growth of mangroves was observed to be at least 8 km away from proposed development". The details of mangroves are given in Table 5.20 as below:—

"

Location	Species	Density per 100m²	Height	SD per m²	PD per m²
Project Site	*Avicennia marina*	2 – 15	< 0.5 m	0	10 – 15
Ban Khadi		40 – 60	1 – 1.5 m	0 – 20	45 – 60
Ghugar Khadi		50 – 80	1 – 2 m	12 – 25	50 – 70

Legends: SD – Seedling density, PD – Pneumatophore density

"

87. Thereafter, our attention is drawn by the learned counsel for respondent No. 6/Project Proponent to page no. 145 of the EIA Report, where-in para no. 6.4.1.3 deals with Impacts on Ecologically Sensitive Areas, which says "Ecologically Sensitive areas like corals, seagrass beds, breeding grounds are absent at proposed reclamation site. Hence, no impacts on these ecologically sensitive marine habitats are envisaged due to proposed development. Sparse and dwarf mangroves are present on north side of existing bund and these are located away from footprint of proposed reclamation area and thus remains unaffected. However, few dwarf plants (12 nos.) fall under footprint of northern corner of land reclamation and impact on these dwarf plants is considered to be insignificant while taking into account overall mangrove cover of study area. Thick and dense mangroves are present in Ban and Ghugar creeks which are located 5 km north of APPPL jetty. Hydrodynamics of these creeks will remain unaltered due to proposed reclamation. Hence, impacts on dense mangroves are not envisaged".

88. Thereafter, our attention is drawn by the learned counsel for respondent No. 6/Project Proponent to page no. 141 of the paper book of the main appeal, which is comments, questions and suggestions for the public hearing on 18.03.2015 sent by the appellants to Government authorities such as Chairman-GPCB, Gujarat Forest Department and Ministry of Environment and Forest, Gujarat etc., where-in query was made with respect to the area to be disclosed where mangroves have been destroyed so far; and what is the area of mangroves that will be destroyed at the expansion. Its response is given at page no. 152 of the paper book, which we have already cited above saying that no mangroves had been destroyed and that the 12 mangrove, which would be affected, is an insignificant loss. In this reply, the Project Proponent has also given details in para no. 3 that 400 Hectares of mangrove plantation has been complied with in consonance with the EIA report and the details of which are given as follows:—

Phase	Area	Location	Plantation through	Longitude & Latitude
Phase 1	100	Dandi	Plantation by GEC	21° 18′ 53.20, 72°36′ 14.79
Phase 2	50	Jakhau	Plantation by GUIDE	21°18′32.60, 72°36′ 06.50

	50	Bhavnagar	Plantation by Forest department	21°19'17.44, 72°07' 11.01
	100	Jambusar	M/s Saline Area Vitalization Enterprise LTD (SAVE)	22° 31'7.70, 72°31' 32.90
	100	Jambusar	M/s Saline Area Vitalization Enterprise LTD (SAVE)	22°31'9.35, 72°31' 19.67

89. Thereafter, the learned counsel for respondent No. 6/Project Proponent has urged that the Map prepared by the NCSCM, which has been filed by the appellants, shows that the area in question would fall in CRZ-1B as the same has been shown in Legends as CRZ-IB, where-in the activity in question is permissible activity.

90. As regards Issue No. 1 : As per this issue, we have to decide as to whether the respondent No. 6/Project Proponent has made any kind of concealment, which was required to be furnished in Form No. 1 specifically with respect to there being mangroves and mud flats in the area in question, when applied for EC and CRZ Clearances. In this regard, the main argument made by the learned counsel for appellants is that the respondent No. 6/Project Proponent has failed to mention in Form No. 1 that there were mangroves and mudflats in the area where expansion for the project was sought to be approved because of which no proper ToR could be framed by the EAC. Consequently, it was not possible for EAC to express its opinion in this regard, as to whether there would be any adverse impact by the project in question over the mudflats as well as the mangroves and consequently upon the environment.

91. The learned counsel for appellants has also drawn our attention to the Judgment of Hon'ble Supreme Court delivered in the matter of *Hanuman Laxman Aroskar* v. *Union of India (Civil Appeal No. 12251 of 2018 along-with other Civil Appeal)*, where-in, she read out para nos. 67 & 68 of the said Judgment, which we have already quoted in para no. 68 of this Judgment above.

92. After full consideration made by the Hon'ble Supreme Court, following directions are given, which are contained in para no. 147 of above-mentioned Judgment:—

"*(i). The EAC shall revisit the recommendations made by it for the grant of an EC, including the conditions which it has formulated, having regard to the specific concerns which have been*

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highlighted in this judgment;

(ii). The EAC shall carry out the exercise under (i) above within a period of one month of the receipt of a certified copy of this order;

(iii). Until the EAC carries out the fresh exercise as directed above, the EC granted by the MoEFCC on 28 October 2015 shall remain suspended;

(iv). Upon reconsidering the matter in terms of the present directions, the EAC, if it allows the construction to proceed will impose such additional conditions which in its expert view will adequately protect the concerns about the terrestrial eco systems noticed in this judgment. The EAC would be at liberty to lay down appropriate conditions concerning air, water, noise, land, biological and socio-economic environment;

(v). The EAC shall have due regard to the assurance furnished by the concessionaire to this Court that it is willing to adopt and implement necessary safeguards bearing in mind international best practices governing greenfield airports;

(vi). We grant liberty to the State of Goa as the project proponent and the MoEFCC, as the case may be, to file the report of the EAC before this Court in the form of a Miscellaneous Application so as to facilitate the passing of appropriate orders in the proceedings; and

(vii). No other Court or Tribunal shall entertain any challenge to the report that is to be submitted before this Court by the EAC in compliance with the present order."

93. No counter argument has been made from the side of learned counsel for respondent No. 6/Project Proponent in this regard, as to why the above cited Judgment would not be applicable in the present case.

94. If we apply the principle of law laid down above by the Hon'ble Supreme Court in *Hanuman Laxman Aroskar's case*, it is apparent that in Form No. 1, the Project Proponent has not specifically mentioned about there being 12 dwarf mangroves and mudflats in the region where both the clearance were being sought, which is apparent from the information furnished by them in Form No. I, annexed at page nos. 270 to 301 of the paper book.

95. Thereafter, the learned counsel for appellants has also drawn our attention to Page No. 273 of the paper book, in which at serial no. 1.2 information relating to Clearance of existing land, vegetation and building was asked for, reply is given by the Project Proponent "No" and in front of that, details thereof is recorded "Area proposed for reclamation is devoid of vegetation or civil structures". The learned counsel for appellants states that in this Column the information, which

was required to be furnished by the Project Proponent, is that there existed 12 dwarf mangroves and mudflats since the same has not been indicated, it would amount to concealment in Form No. I. We find that at page no. 119 of the paper book are the Proposed Terms of Reference for EIA studies, which were extended from the side of learned counsel for respondent No. 6/Project Proponent, relevant portion of which is quoted herein below:—

"(IV) Proposed Terms of Reference for EIA studies

1	Baseline air quality monitoring program	Air quality at 5 locations will be monitored for a period of three months. At least two stations in the down-wind direction, one station in the upwind direction and two stations in the cross wind direction will be located. Air quality monitoring will be undertaken during Winter 2013. Criteria pollutants such as PM_{10}, $PM_{2.5}$, SO_2, NOx, Ozone, CO and HC will be monitored.
2	Meteorological data	Hourly data of the following parameters will be recorded for a period of 12 weeks – dry bulb temperature, Relative Humidity, cloud cover, rainfall, wind speed and wind direction. IMD Published mixing height atlas will be used for air quality modeling applications
3	Baseline noise levels	Noise levels will be recorded on hourly basis for a period of 24 hours at five locations within the study area.
4	Baseline water quality	Water quality samples at four locations will be collected and analyzed for one season. Samples will be analyzed for all the designated parameters as per ISO 10500 and MoEF requirements.
5	Baseline soil quality	4 samples will be collected from the study area. The collected samples shall be analyzed for physicochemical characteristics. Soil quality monitoring and analysis shall be carried out as per the BIS Standards.
6	Ecology	Primary ecological survey will be undertaken in the 10 Km radius both marine and terrestrial. Secondary data and random sampling in the study area will also be undertaken.
7	Ground water resources	A study on the ground water potential and availability will be undertaken
8	Marine environment studies	One season monitoring will be undertaken for the following parameters Marine water samples at two depths will be collected at each of the identified 5 locations at the port area.

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		These marine water samples will be analyzed for Salinity, temperature, pH, DO, BOD, TSS, Nutrients, Oil & grease, PHC, Chlorophyll a, Phaeophytin, Phytoplankton, Zooplankton, Microbiology and Heavy metals Marine sediment samples at 5 locations will be analyzed for heavy metals and macrobenthos as per MOEF guidelines Details of the primary production and fish catch will be established Mapping of the ecologically sensitive flora and fauna viz. mangroves, corals and seagrasses within 10 km radius of the port area.
9	Land use survey	Remote sensing map data and development of land-use pattern for 15 km from project site boundary
10	Socio-economic conditions	Socioeconomic status of the area will be assessed based on the primary and secondary survey. Study shall be focused on fishing habitations, likely impacts, if any.
11	Prediction of impacts – air, noise, soil, water, ecological and biological, sociological, etc.	• Air quality impacts due to operation of the biomass boiler and standby DG's etc. • Noise propagation modeling to predict the impacts • Ecological and socio-economic impacts will be assessed based on the qualitative methods and tools as per MoEF recommendations
12	Environmental Management Plan	As per MoEF guidelines and standards
13	Risk Assessment Study and Emergency Management Plan	Detailed fire and occupational health risk assessment will be undertaken using SAFETI and other software models. A project site specific risk mitigation plan and disaster management plan will be developed for natural and man-made disaster like floods, cyclone, tsunami and earth quakes etc.
14	Oil Spill Contingency Plan	Site specific Oil spill contingency plan shall be prepared.
15	Hydrodynamic Modeling Study	The required study will be undertaken as per the MoEF recommendations.

96. In the EAC, after consideration of the proposal, it had added following more in those Terms of Reference, which are at page nos. 123 to 125, which are as follows:—

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(i) Submit compliance status of EC/Consent of the existing activities.

(ii) Submit the coal conveyor route along with the land use and Google maps.

(iii) Examine the Impact on the existing infrastructure and suggest necessary provisions including traffic and transportation.

(iv) Coal shall be stored only in the designated stock yard and Use of appropriate trees, scrubs and creepers should be explored in consultation with the Forest Department. It was noted that the safety of usage of metal sheets provided as wind screen may be examined. Proponent shall provide additional plantation all along the stock yard for better dust control

(v) Submit the details of the coordinates of the proposed reclamation.

(vi) Submit the details of court case if any, and status.

(vii) Submit HTL/LTL map prepared by an authorized agency on 1:4000 scale superimposed with project layout. Submit recommendation of SCZMA.

(viii) Details of the shore line studies to study the erosion and accretion.

(ix) Submit the details of Oil Spill Contingent Management Plan. Existing infrastructure and its adequacy and additional infrastructure, if any shall be discussed.

(x) Submit the details of dredging quantity and quality and its disposal. If disposal is proposed in the sea, its location, the justification for selecting such location and its effect on marine environment, effect on marine life.

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(xi) Submit details of Environment Management Plan and Environment Monitoring Plan with parameters and costs. The plan for comprehensive common environment monitoring of all facilities by Port Authority.

(xii) Submit details of Risk Assessment, Disaster Management Plan including emergency evacuation during natural and man-made disaster like floods, cyclone, tsunami and earth quakes etc. Compliance to the MSIHC Rules shall be discussed. Existing infrastructure and its adequacy and additional infrastructure, if any shall be discussed.

(xiii) Submit the details of Hazardous Wastes generated, and precautions planned during handling, as well as compliance of Hazardous Waste Rules.

(xiv) Submit the details of fishing activity and likely impact due to the project.

General Guidelines

(i) The EIA document shall be printed on both sides, as far as possible.

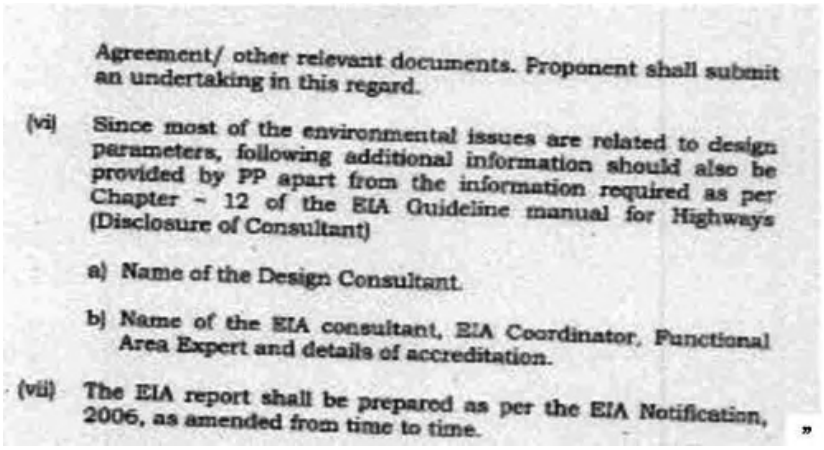
(ii) The status of accreditation of the EIA consultant with NABET/QCI shall be specifically mentioned. The consultant shall certify that his accreditation is for the sector for which this EIA is prepared.

(iii) On the front page of EIA/EMP reports, the name of the consultant/consultancy firm along with their complete details including their accreditation, if any shall be indicated. The consultant while submitting the EIA/EMP report shall give an undertaking to the effect that the model TORs have been complied with and the data submitted is factually correct (Refer MoEF Office Memorandum No. J-11013/41/2006-IA.II(I) dated 4th August, 2009).

(iv) While submitting the EIA/EMP reports, the name of the experts associated with/involved in the preparation of these reports and the laboratories through which the samples have been analysed should be stated in the report. It shall clearly be indicated whether these laboratories are approved under the Environment (Protection) Act, 1986 and the rules made there under (Please refer MoEF Office Memorandum No. J-11013/41/2006-IA.II(I) dated 4th August, 2009). The project leader of the EIA study shall also be mentioned.

(v) Environmental Management Plan presented before the EAC as a part of EIA report, shall be made part of Concessionaire

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Agreement/ other relevant documents. Proponent shall submit an undertaking in this regard.

(vi) Since most of the environmental issues are related to design parameters, following additional information should also be provided by PP apart from the information required as per Chapter – 12 of the EIA Guideline manual for Highways (Disclosure of Consultant)

a) Name of the Design Consultant.

b) Name of the EIA consultant, EIA Coordinator, Functional Area Expert and details of accreditation.

(vii) The EIA report shall be prepared as per the EIA Notification, 2006, as amended from time to time. "

97. From the above To Rs, we find that from the side of Project Proponent at serial no. 6 at page no. 119 of the paper book ToR dealing with Marine environment studies was included. It is the study, which was required to be done relating to the Mapping of Ecologically Sensitive flora and fauna viz. mangroves, corals and sea-grasses within 10 km. radius of the port area. At serial no. 6 of the same page, ToR for study relating to the Primary ecology was required to be done within 10 km. radius both marine and terrestrial, which certainly would cover the study related to the mudflats in our estimation. Therefore, it is evident that even if there was no specific mention made of the mangroves and the mudflats in Form No. I as stated by the learned counsel for appellants, which is found to be true as well by us, we find that in ToR proposed by the respondent No. 6/Project Proponent, the study on these two points i.e. mangroves and mudflats being there, was part of the scope of EIA study by the Consultant, which was engaged by the Project Proponent for preparing the EIA study report.

98. We would like to highlight here that when we go through the EIA report, we find that in the EIA Report, at page no. 98 in Point No. 5.6.2.3.1, it has been clearly mentioned that the project site is situated in intertidal zone close to shore, which is characterized by the open mudflats. Stray occurrence of mangrove species *Avicennia marina* was also observed. Regarding these facts, opinion has also been expressed in the EIA Report at page no. 145 at point no. 6.4.1.3 saying that sparse and dwarf mangroves, which were found present on northern side of existing bund, they were located away from footprint of the proposed reclamation area and thus remains unaffected. However, few dwarf plants (12 nos.) were found to fall under footprint of the northern corner of land reclamation and the impact on these dwarf plants was considered to be insignificant. This would show that the EIA contained a study on these points of mudflats as well as mangroves and it was of the opinion that there was no adverse impact going to be there on

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mudflats or the mangroves, which were found to be there. Therefore, simply because there was non-mentioning of these two mudflats and mangroves in Form No. I, would not be of any great significance.

99. As regards the Judgment of Hon'ble Supreme Court in *Hanuman Laxman Aroskar's case*, we find that even in that case, the information which was not found to have been furnished in Form No. 1, that was not held to be sufficient for quashing the EC, rather the study was ordered to be done in respect of the deficiencies found about furnishing the information from the side of Project Proponent, which was ordered to be done and for the time being, the project was kept on hold by placing the EC under suspension and subsequently, the EC was allowed after the said study had been conducted, proposing whatever was found necessary by them to be done at the end of the Project Proponent. In the case in hand, we find that despite the fact that the information in detail was not mentioned in Form No. I pertaining to mudflats and mangroves being there but EIA does contain the study on the above two subjects and it has expressed opinion that there is no serious impact going to be there of the project in question upon the mudflats and the mangroves. Hence, we do not find any further need of study to be conducted in this regard. Therefore, we decide this issue accordingly.

100. As regards Issue No.(ii) : As per this issue, we have to decide as to whether the project in question lies in CRZ-1A and accordingly, whether EC and CRZ Clearances could have been given in that area. In this regard, it is argued by the learned counsel for appellants that in the CRZ Notification, 2011 in para no. 7(i)-CRZ-I (A) laid down that the areas, where the biologically sensitive mudflats are lying, would be falling in CRZ-IA area, where-in as per the provision under para no. 8 of the EIA Notification-2011, no new construction shall be permitted, except the facilities that are essential for activities permissible under CRZ-I. Based on above, it is argued by the learned counsel for appellants that because there are found to be mudflats and mangroves in the area in question, it would be treated to fall in CRZ-IA area and hence no EC/CRZ Clearance could have been given to the Project Proponent by the MoEF&CC/respondent No. 1 in the case in hand and therefore, the said Environmental Clearance and CRZ Clearances need to be quashed.

101. *Per contra*, from the side of respondent No. 3/GCZMA and respondent No. 6/Project Proponent, it is submitted that in the CRZ Notification, 2011 in para 3 (Prohibited activities within CRZ) read-with para 4(Regulation of permissible activities in CRZ area) and para 8 Sub -Clause I. CRZ-I or (i) (c), this activity being foreshore facility is permissible activity, which needs to be regulated and accordingly, the MoEF&CC has granted EC and CRZ Clearance, subject to several

conditions, which have adequately taken care of the mangroves as well as mudflats not being impaired adversely because several conditions have been placed upon the Project Proponent to be complied with. Further, in case any of the violations made of these conditions, the Project Proponent would be liable to be proceeded against appropriately.

102. We are convinced from the argument made by the learned counsel for respondent No. 6/Project Proponent and the respondent No. 3/GCZMA that the area in question would lie in CRZ-IB, which is the area falling between LTL and HTL, except the patch of mangrove, which is said to contain 12 dwarf mangroves, the said area having patch of 12 dwarf mangroves would be treated to be CRZ-IA area where no construction or any kind of developmental activity is permissible as per CRZ Notification, 2011.

103. From the side of learned counsel for appellants, reliance is placed on the Judgment of Hon'ble Bombay High Court in PIL No.*87/2006* (*Bombay Environmental Action Group* v. *The State of Maharashtra*) and other connected Writ Petitions, relevant paragraphs of which we have already cited above while dealing with the argument of learned counsel for appellants. In rebuttal, from the side of respondent No. 6/Project Proponent, it is said that in para 2 of the said Judgment, it is very clearly stated that the petition seeks a declaration that the areas covered by mangroves in the State of Maharashtra in addition to those covered by mangroves forest, should be declared as mangroves protection area and that the said matter was confined to the issue pertaining to the State of Maharashtra. He also said that the whole Judgment, if read in totality, would indicate that the issue/problem pertained to the State of Maharashtra specifically, which has been dealt with appropriately by the Hon'ble High Court and it is in that context that the Hon'ble High Court has held that all mangroves irrespective of the area would fall in CRZ-I as per both CRZ Notifications 1991 and 2011 and that the buffer zone of 50 mtrs., in case of mangrove area of less than 1000 mtrs. will not be a part of the CRZ-I. This Judgment does not appear to have dealt with the CRZ-IA & CRZ-IB area distinctly. Therefore, in the case in hand, its application in totality does not appear to be reasonable. We have already noted above that the area where the mangroves are found to be there, shall certainly be CRZ-IA area, where construction or any developmental activity cannot be permitted. But in the case in hand, we find that the project was brought into existence long back prior to the present Phase -III. Two phases have already been carried out and it is the third phase, expansion of the same is going to take place in the impugned EC and the CRZ Clearances. It is also not to be forgotten here that the project in question is a project of national importance as well as public

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need.

104. In response to the argument of learned counsel for appellants, from the side of respondent No. 6/Project Proponent, reliance is placed on *National High Speed Rail Corporation Ltd.* v. *State of Maharashtra* [2022 SCC OnLine Bom 6701 : (2023) 2 Bom CR 208], where-in a prayer was sought to quash and set aside the communication dated 20.12.2018, pursuant to which Maharashtra Coastal Zone Management Authority (MCZMA) had refused to grant permission to the petitioner to cut/fell mangroves falling within Coastal Regulation Zone-I deferring the proposal of the petitioner for carrying out work in respect of the Mumbai-Ahmedabad High Speed Railway Project. The MCZMA in its Meeting dated 20.12.2018 held that "it noted the Hon'ble High Court order dated 17th September, 2018 in PIL 87/2006 passed by Hon'ble High Court of Mumbai. Since proposed activities were situated in 50m mangrove buffer zone area, the Authority suggested that the project proponent may approach Hon'ble High Court of Mumbai seeking relief from the above said order dated 17th Sep. 2018. Further, the CZMP under CRZ Notification, 2011 for Thane & Palghar was yet to be finalized and approved by the MoEF&CC, New Delhi. Therefore, the matter was deferred." In this matter, the Hon'ble High Court directed the MCZMA to permit the petitioner to execute Mumbai-Ahmedabad High Speed Rail Project including the area falling in mangrove area and the buffer zone area in view of the public importance of the project, subject to the following conditions:—

(i). The petitioner is directed to comply with all the conditions imposed in the clearances/permissions granted by the Respondent authorities;

ii). LA responsible officer of the petitioner files an undertaking before this Court within a period of 10 days of the uploading of this order binding the petitioner (a) that the petitioner will undertake compensatory plantation of 110000 mangrove saplings, (b) shall strictly comply with the conditions as imposed in the permissions/clearances granted by the various authorities including the MoEF and CC, MCZMA, Chief Conservator of Forests (Mangroves Cell), Forest Department and other authorities that have granted permissions/clearances, and (c) that the petitioner will obtain any further approvals/permissions that may be necessary for executing the Project and to comply with the conditions therein."

105. Similarly, the learned counsel for respondent No. 6/Project Proponent has relied upon the Judgment passed by the Hon'ble High Court of Bombay in the matter of *Tata Power Company Limited* v. *Union of India through the Ministry of Environment, Forest & Climate change*

[2022 SCC OnLine Bom 540 : (2022) 3 Bom CR 421 : AIR 2022 Bom 616], where-in Petitioners have sought a direction to the respondent authorities to allow Petitioners to implement the project for 220 KV transmission line between Kalwa and salsette pursuant to the permissions granted under the provisions of Environmental (Protection) Act, 1986, Forest (Conservation) Act, 1980 and the Notification issued under the provisions of EPA, 1986. The said power line was to pass over an area consisting of mangroves and would also fall within 50 mtrs. Mangroves buffer zone. In this case also, the authorities were directed to convey the petitioners to execute the proposed construction of 220 KV Kalwa Salesette Transmission Line (Upgradation of old 110 KV Transmission Line in Mumbai) in mangrove area and its buffer zone in view of the public importance of the project, subject to petitioners complying with the conditions imposed in the clearances/permissions granted by the respondent authorities and the undertakings mentioned.

106. Based on above citations, the learned counsel for respondent No. 6/Project Proponent has vehemently argued that the project in question is also of great public importance, which is for public good or public interest including the economy of the nation. Therefore, such project should not be curtailed for small infraction of the environmental norms because we have to take into consideration the principle of the Sustainable Development and we have also to ensure that the economy should also grow. This project was initiated long back and that no hurdle was faced at the initial stages while the project was being carried on in the same area where it is being expanded as on date. It is also made clear that almost 90% work has already been completed and the small part of it is left to be performed, therefore, the whole project would result in huge economic loss not only to the Project Proponent but also to the economy of the nation. Therefore, in this background, it is prayed that this appeal should be rejected.

107. We may also have to take into consideration the point, as to whether the existence of mudflats in the area in question would render this area to fall in CRZ-IA and consequently, would lead to the consequence that no developmental work can be permitted in that area. In this regard, our view is that in that area not only the Project Proponent is proceeding with the expansion of its project but other projects are also going on side by side. Even if we get it studied by some expert body that the mudflats, which are argued to be biologically active by the appellants, is the correct position, and consequently, the said area should be placed in the category of CRZ-IA, we should not stop the activity of development/expansion, which has been permitted to the Project Proponent because we have already held that the project is of national importance and that the same should not be interfered with at this advance stage.

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108. The learned counsel for appellants has vehemently argued that no specific study was got conducted in the case in hand, in order to ascertain, as to whether the mudflats in the area were biologically active/inactive and the opinion, which has been expressed in the EIA study is only based on conjuncture there being no scientific proof.

109. In order to address the alleged fear of the appellant and to be doubly sure, as to whether any significant damage is being caused by the project to the ecology of the local area, we deem it appropriate that a study may be undertaken with regard to the adverse impact of the expansion project on the mudflats and mangroves at this belated stage, by an expert body such as National Institute of Oceanography (NIO)/National Institute of Ocean Technology (NIOT)/National Centre for Sustainable Coastal Management (NCSCM) and in case any damage is found probable to be caused to the local environment, whether any remedial measures need to be taken by the Project Proponent, may also be suggested. This study should be conducted at the earliest within a period of six months from the date of uploading of this order and report thereof shall be submitted to this Tribunal with a copy to be served upon the appellants and at that stage, the appellants, if find any lacunae in that report, may approach us asking further relief, if required. This issue is decided accordingly.

110. As regards Issue No.(iii) : As per this issue, we have to decide as to whether there is found to be any air pollution on account of storage and handling of coal in the area in question, in this regard, we are of view that we have already dealt with in this regard above holding that Project Proponent has made compliances of the recommendations made by the National Productivity Council, therefore, nothing further needs to be done in this regard and we find that adequate care has been taken. This issue is decided accordingly.

111. As regards Issue No.(iv) : We reject this appeal with the directions that the Project Proponent shall get study done from NIO/NIOT/NCSCM in regard to the adverse impact of expansion of the project upon the mudflats and the mangroves in the area in question and in case any suggestion/recommendations are made by the expert body, the same shall be implemented within next six months. This study shall be got completed within a period of six months from the date of uploading of this Judgment.

112. All pending applications, if any, also stand disposed of No order as to cost.

———

† Western Zone Bench, Pune

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Table 3.3.2. Water Quality Monitoring Parameters and Analytical Methods

Sr. No.	Parameter	Method of Analysis (APHA 23rd Eds., 2017/ IS Standard)
1	pH	APHA-4500-H+ B
2	Temperature (°C)	APHA - 2550 B
3	Turbidity (NTU)	APHA-2130 B
4	TSS (mg/L)	APHA-2540 D
5	TDS (mg/L)	APHA 2540 C
6	EC (µS/cm)	APHA 2510 B
7	Total Alkalinity as CaCO3 (mg/L)	IS 3025-23 (1986)
8	Total Hardness as CaCO3 (mg/L)	APHA - 2340 C
9	Calcium Hardness as $CaCO_3$ (mg/L)	APHA - 2340 C
10	Chlorides (mg/L)	APHA -4500 B
11	Sulphates (mg/L)	IS 3025-24 (1986)
12	Sodium (mg/L)	APHA - 3500 B
13	Potassium (mg/L)	APHA - 3500 B
14	Nitrates as NO_3 (mg/L)	APHA - 4500 B
15	Total Phosphates (mg/L)	IS 3025-31 (1988)
16	DO (mg/L)	APHA - 4500 C
17	COD (mg/L)	IS 3025-58 (2006)
18	BOD (mg/L)	IS 30256-44 (1993)
19	Oil & Grease (mg/L)	APHA - 5520 B
20	Phenolic Compounds	APHA - 5520 B
21	Fluoride (mg/l)	APHA -4500 C
22	Heavy Metals (mg/L)	APHA - 3030 E
23	Total Coliform (CFU/100 ml)	APHA – 9222 B
24	Feacal Coliform (CFU/100 ml)	APHA – 9222 B

Table 3.3.3. Water Quality - Physical Parameters (February 2020)

Sr. No.	Sample Code	Sampling Locations	pH	Temp. (°C)	Turbidity (NTU)	TSS (mg/l)	TDS (mg/l)	Conductivity (µS/cm)	Total Hardness (mg/l)	Chlorides (mg/l)
Surface Water (pond Water)										
1	SW1	Bada	7.1	29.4	52	92	362	612	120	30
2	SW2	Janakpur	7.6	29.5	17	38	853	1410	236	161
3	SW3	Bhishra	6.9	29.1	238	257	326	554	96	24
4	SW4	Layja-Mota	7.5	30.7	14	44	954	1586	216	206
5	SW5	Bambhdai	7.0	29.5	71	138	486	825	172	55
6	SW6	Mapar	7.9	28.3	19	28	811	1340	176	149
Ground Water										
Dug Well										
1	GW1	Bhada	6.9	26.8	6	19	458	773	158	48
2	GW2	Panchotiya	8.2	28.3	1	7	853	1411	196	66
3	GW3	Bada	7.8	27.9	2	20	569	936	144	36
4	GW4	Bhisra	7.8	29.9	34	44	1015	1670	252	199
5	GW5	Layja-Mota-I	8.9	30.1	<1	14	1812	2986	428	289
6	GW6	Layja-Mota-II	8.9	28.7	1	20	2067	3426	312	470
7	GW7	Bayat	7.9	27.9	<1	4	644	1065	240	42
8	GW8	Bambhdai	7.7	26.9	1	17	570	936	168	34
Bore Well										
9	GW9	Nana-Layja	8.8	29.9	<1	7	1741	2923	236	407
10	GW10	Padmpur	8.5	30.1	5	36	4002	6658	772	1509
11	GW11	Dedhiya	8.3	30.5	<1	12	4246	7062	780	1652

Table 3.3.3 (a) Ground water quality results compared with Drinking water standards IS 10500

pH		Min	Max	Acceptable Limit	Permissible Limit in absence of alternate source
Temp	°C	6.9	8.9	6.5-8.5	No relaxation
Turbidity	NTU	<1	34	1	5
TDS	mg/l	458	4246	500	2000
Fluoride	mgl	0.3	1.5	1.0	1.5
Heavy Metal Fe	mg/l	0.006	1.881	0.3	No relaxation
Total Hardness	mg/l	144	780	200	600
Chloride	mg/l	34	1652	250	1000

Table 3.3.4. Water Quality - Nutrient and Demand Parameters (February 2020)

Sr. No.	Sample Code	Sampling Locations	Nitrate as NO_3	Total Phosphates	DO	COD	BOD	TKN	Fluoride	Oil & Grease	Phenol µg/l
			mg/l								
Surface Water (pond Water)											
1	SW1	Bada	2.35	6.0	5.4	35	<3	36	0.6	0.38	0.10
2	SW2	Janakpur	1.61	1.0	5.2	42	<3	48	0.4	0.16	0.32
3	SW3	Bhishra	2.38	0.5	6.3	38	<3	36	0.5	0.47	0.28
4	SW4	Layja-Mota	1.44	0.6	5.6	29	<3	14	0.6	0.74	0.56
5	SW5	Bambhdai	2.80	0.6	6.1	86	<3	62	0.9	0.87	0.47
6	SW6	Mapar	2.90	1.0	6.9	42	<3	25	1.5	0.67	0.55
Ground Water											
Dug Well											
1	GW1	Bhada	1.88	8.4	-	-	-	39	0.5	0.18	0.28
2	GW2	Panchotiya	4.03	2.5	-	-	-	31	0.6	0.68	ND
3	GW3	Bada	1.62	2.6	-	-	-	22	1.5	0.38	ND
4	GW4	Bhisra	2.72	2.7	-	-	-	62	0.5	0.21	0.26
5	GW5	Layja-Mota-I	1.61	8.8	-	-	-	31	0.4	0.10	ND
6	GW6	Layja-Mota-II	7.81	7.7	-	-	-	76	0.8	0.05	ND
7	GW7	Bayat	2.34	4.3	-	-	-	36	0.3	0.06	ND

8	GW8	Bambhdai	2.77	0.8	-	-	-	50	0.8	0.08	0.63
Bore Well											
9	GW9	Nana-Layja	3.53	5.2	-	-	-	115	1.5	0.10	ND
10	GW10	Padmpur	10.10	1.8	-	-	-	25	0.5	0.08	ND
11	GW11	Dedhiya	1.93	2.5	-	-	-	34	0.6	0.07	0.76

Table 3.3.5 (i). Water Quality-Heavy Metals (February 2020)

Sr. No.	Sample Code	Sampling Locations	As	Cd	Co	Cr	Cu	Fe	Mn	Mo
			mg/l							
Surface Water (pond Water)										
1	SW1	Village Bada	ND	ND	0.001	ND	ND	0.183	0.109	ND
2	SW2	Janakpur	0.001	ND	ND	0.001	0.014	0.345	0.322	ND
3	SW3	Bhishra	ND	0.001	0.003	0.014	0.006	3.559	0.293	0.023
4	SW4	Layja-Mota	ND	ND	0.001	0.022	0.000	0.544	0.116	ND
5	SW5	Bambhdai	ND	ND	0.003	0.017	0.007	4.849	0.224	ND
6	SW6	Mapar	ND	ND	0.001	0.003	0.001	0.858	0.218	ND
Ground Water										
Dug Well										
1	GW1	Bhada	0.012	0.004	ND	0.001	0.015	ND	0.059	0.012
2	GW2	Panchotiya	0.008	0.000	ND	0.002	0.005	0.403	0.067	0.148
3	GW3	Bada	0.001	0.005	ND	0.009	ND	0.996	0.112	0.010
4	GW4	Bhisra	0.000	ND	ND	0.006	0.004	1.199	0.274	ND
5	GW5	Layja-Mota-I	ND	ND	ND	ND	ND	ND	0.048	ND
6	GW6	Layja-Mota-II	ND	ND	ND	0.001	0.018	0.006	ND	0.010
7	GW7	Bayat	ND	ND	ND	0.05	ND	ND	0.024	ND
8	GW8	Bambhdai	ND	ND	ND	0.006	0.014	0.500	0.413	0.003
Bore Well										
9	GW9	Nana-Layja	0.028	0.004	ND	0.026	0.043	1.881	0.088	0.044
10	GW10	Padmpur	ND	0.001	ND	0.007	ND	0.982	0.063	ND
11	GW11	Dedhiya	ND	ND	ND	ND	ND	ND	0.029	ND

ND: Not Detectable

Table 3.3.5 (ii). Water Quality-Heavy Metals (February 2020)

Sr. No.	Sample Code	Sampling Locations (near/in the village)	Ni	Pb	Se	V	Zn	Hg
			mg/l					
Surface Water (pond Water)								
1	SW1	Bada	ND	ND	ND	ND	ND	ND
2	SW2	Janakpur	ND	ND	ND	ND	ND	ND
3	SW3	Bhishra	ND	0.004	ND	ND	ND	ND
4	SW4	Layja-Mota	ND	0.001	ND	ND	ND	ND
5	SW5	Bambhdai	ND	0.004	ND	ND	0.004	ND
6	SW6	Mapar	ND	0.003	ND	ND	ND	ND
Ground Water								
Dug Well								
1	GW1	Bhada	ND	0.087	0.012	0.009	0.106	ND
2	GW2	Panchotiya	ND	0.006	0.010	0.017	0.011	ND
3	GW3	Bada	0.007	0.091	0.001	ND	ND	ND
4	GW4	Bhisra	ND	0.002	ND	ND	0.042	ND
5	GW5	Layja-Mota-I	ND	0.001	ND	0.051	ND	ND
6	GW6	Layja-Mota-II	ND	0.004	0.006	ND	ND	ND
7	GW7	Bayat	ND	0.003	ND	0.080	ND	ND
8	GW8	Village Bambhdai	ND	ND	ND	0.004	ND	ND
Bore Well								
9	GW9	Village Nana-Layja	ND	0.034	0.013	ND	0.169	ND
10	GW10	Village Padmpur	ND	ND	ND	0.204	ND	ND
11	GW11	Village Dedhiya	ND	ND	ND	0.134	ND	ND

ND: Not Detectable

Table 3.3.6. Water Quality – Bacteriological Parameters (February 2020)

Sr. No.	Sample Code	Sampling Locations (near/in the village)	Total Coliform	Feacal Coliform
			CFU/100 ml	
Surface Water (pond Water)				
1	SW1	Bada	100	ND
2	SW2	Janakpur	ND	ND
3	SW3	Bhishra	ND	ND
4	SW4	Layja-Mota	800	ND
5	SW5	Bambhdai	ND	ND
6	SW6	Mapar	200	ND
Ground Water				
Dug Well				
1	GW1	Bhada	ND	ND
2	GW2	Panchotiya	70	ND
3	GW3	Bada	ND	ND
4	GW4	Bhisra	100	ND
5	GW5	Layja-Mota-I	ND	ND
6	GW6	Layja-Mota-II	ND	ND
7	GW7	Bayat	240	ND
8	GW8	Bambhdai	40	ND
Bore Well				
9	GW9	Nana-Layja	ND	ND
10	GW10	Padmpur	ND	ND
11	GW11	Dedhiya	ND	ND

CFU: Colony Forming Unit; ND- Not Detectable

- TRUE COPY-

ANNEXURE R/41

RESTRICTED DOCUMENT Ref No.IRS/AU/IRS/MN/309- 2023 Dated 08-02-2023

Preparation of Local Level Coastal Regulation Zone Map for the Proposed Greenfield Chemical Complex - Soda ash and associated Sea Water Intake & Outfall Pipelines in Bada Village, Mandvi Taluka, Kachchh District, Gujarat State by Superimposing on Approved CZMP as per CRZ Notification 2011

SPONSORED BY

M/s. GHCL Limited
Ahmedabad, Gujarat



INSTITUTE OF REMOTE SENSING
ANNA UNIVERSITY, CHENNAI-25

MARCH 2023

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Executive Summary

Institute of Remote Sensing, Anna University, Chennai has taken up the task of preparing local level Coastal Regulation Zone Map for the Proposed Greenfield Chemical Complex -Soda Ash and associated Seawater Intake and Outfall Pipelines Project in Village Bada, Taluka Mandvi, District Kachchh, Gujarat by superimposing on approved CZMP as per CRZ Notification 2011. The objective of the project is to superimpose the site on approved Coastal Zone Management Plan (CZMP) sheet no. GJ 176,188&189 as per CRZ notification 2011 of MoEF & CC. The satellite imagery of the project area was interpreted for analysis of geomorphic characteristics in the vicinity of proposed project sites. The corner co-ordinates of the project site were identified by the client and were measured on the field using GPS survey.

The client, M/s. GHCL, Gujarat was requested to identify the location and other details of the proposed project location along with drawings. The HTL, LTL, Ecologically sensitive areas indicated in approved CZMP with setback lines as per CRZ Notification 2011 were superimposed on to georeferenced cadastral map to prepare a local level CRZ map at 1:4,000 scale. The co-ordinates of the HTL derived from approved CZMP in WGS84 system are presented. Out of the total 1342.96 acres of the proposed project site, 2.96 acres falls in CRZ III (No Development Zone), 26.07 acres falls in CRZ III (200m to 500m from HTL) and 1313.93 acres falls Outside CRZ as per approved CZMP prepared as per CRZ Notification 2011.

PROJECT DATA SHEET

Title: Preparation of Local Level Coastal Regulation Zone Map for the Proposed Greenfield Chemical Complex - Soda ash and associated Sea Water Intake & Outfall Pipelines in Bada Village, Mandvi Taluka, Kachchh District, Gujarat State by Superimposing on Approved CZMP as per CRZ Notification 2011

Project Ref No.	: AU/IRS/MN/309-2023 DT. 08.02.2023
Principal Consultant	: Mrs. M. Navamuniammal, Asst. Professor
Done for	: M/s. GHCL Limited Ahmedabad, Gujarat
Data Processing	: Dr. C.Pradeep, Project Scientist
Report Preparation	: Mrs. M. Navamuniammal, Asst. Professor Dr. C.Pradeep, Project Scientist
Quality Check	: Dr. K. Srinivasa Raju, Professor Dr. C. Udhayakumar, Professor Dr. S. Jayalakshmi, Asso. Professor

The Quality Assessment Committee for consultancy projects has scrutinized the local level CRZ map and corresponding text report of the above project on 10.02.2023. The principal consultant of the project has presented the approach adopted, findings of the study to the committee. The committee has evaluated the CRZ Map and the report for different parameters against the standards prescribed for the mapping. The positional accuracy, attribute accuracy, completeness, semantic accuracy of the output were assessed and found satisfactory. The committee recommends the approval of the map and associated report.

Mrs. M. Navamuniammal
(Principal Consultant)

Dr. K. Srinivasa Raju
(QA member)

Dr. C. Udhayakumar
(QA member)

Dr. S. Jayalakshmi
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1.0 INTRODUCTION

1.1 Coastal Regulation Zone

The coastal zone is the area of interaction between land and sea. The coastal Zone of Gujarat has a very high concentration of population along with ecologically sensitive areas like mangroves. There is a spurt of developmental activities arising from huge residential colonies, new industries and tourism centres along the coast and in coastal zone. There is a need to protect the coastal environment while ensuring continuing production and development. This zone is extremely vulnerable and has to be managed judiciously striking a balance between ecological and developmental needs.

The Ministry of Environment and Forest in the CRZ Notification, 2011 declared the following areas as CRZ and imposed with effect from the date of the notification the restrictions on the setting up and expansion of industries, operations or processes and the like in the CRZ. The areas that are defined as CRZ as per CRZ Notification, 2011 are

(i) The land area from High Tide Line (HTL) to 500mts on the landward side along the sea front.

(ii) CRZ shall apply to the land area between HTL to 100 meters or width of the creek whichever is less on the landward side along the tidal influenced water bodies that are connected to the sea and the distance upto which development along such tidal influenced water bodies is to be regulated shall be governed by the distance upto which the tidal effects are experienced which shall be determined based on salinity concentration of 5 parts per thousand (ppt) measured during the driest period of the year and distance upto which tidal effects

are experienced shall be clearly identified and demarcated accordingly in the Coastal Zone Management Plans.

(iii) The land area falling between the hazard line and 500mts from HTL on the landward side, in case of seafront and between the hazard line and 100mts line in case of tidal influenced water body the word 'hazard line' denotes the line demarcated by Ministry of Environment and through the Survey of India taking into account tides, waves, sea level rise and shoreline changes.

(iv) Land area between HTL and Low Tide Line (LTL) which will be termed as the intertidal zone.

(v) The water and the bed area between the LTL to the territorial water limit (12 Nm) in case of sea and the water and the bed area between LTL at the bank to the LTL on the opposite side of the bank, of tidal influenced water bodies.

The Classification of the CRZ is also modified for the purpose of conserving and protecting the coastal areas and marine waters as CRZ – I, CRZ – II, CRZ – III and CRZ – IV. The CRZ – I include the areas that are ecologically sensitive and the geomorphological features which play a role in the maintaining the integrity of the coast like (a) Mangroves(b) Corals and coral reefs and associated biodiversity (c) Sand Dunes (d) Mudflats which are biologically active (e) National parks, marine parks, sanctuaries, reserve forests, wildlife habitats and other protected areas (f) Salt Marshes (g) Turtle nesting grounds (h) Horse shoe crabs habitats (i) Sea grass beds (j) Nesting grounds of birds (k) Areas or structures of archaeological importance and heritage sites and the area between Low Tide Line and High Tide Line. The CRZ-II includes areas that have been developed upto or close to the shoreline. The CRZ-III includes areas that are relatively undisturbed and those do not belong to either CRZ-I or II, which include

coastal zone in the rural areas (developed and undeveloped) and also areas within municipal limits or in other legally designated urban areas, which are not substantially built up. The CRZ-IV includes the water area from the Low Tide Line to twelve nautical miles on the seaward side and the water area of the tidal influenced water body from the mouth of the water body at the sea upto the influence of tide which is measured as five parts per thousand during the driest season of the year.

Preparation of Local level CRZ map in 1:4000 scale, can be drawn up by any of the agencies identified by the Ministry of Environment, Forest and Climate Change vide its Office Order number J-17011/8/92-IAIII, dated the 14th March, 2014 using the HTL and LTL demarcated by National Centre for Sustainable Coastal Management (NCSCM) in accordance with the laid down procedures and made available to various coastal States and Union territories.

In order to facilitate classification of Coastal Regulation Zones Government of India has approved few agencies/institutions across the Country vide *Lr. No. J17011/8/92-1A III, dated 08.08.2019* of Ministry of Environment and Forests. Institute of Remote Sensing, Anna University being one of them, has been carrying out HTL and LTL mapping following the guidelines issued by Ministry of Environment, Forests & Climate Change, Government of India.

1.2 Background

M/s. GHCL Ltd., Ahmedabad, Gujarat has requested Institute of Remote Sensing, Anna University to prepare local level CRZ map by superimposing the proposed Greenfield Chemical Complex-Soda Ash and associated seawater intake and outfall pipelines along with HTL, LTL for the Sea/Bay/tidal influenced water bodies and ecologically sensitive areas on 1:4,000 scale cadastral map in village Bada, Taluka Mandvi, District Kachchh, Gujarat. It is in this context, the proposed project site needs to be evaluated to assess whether they fall under regulations of CRZ Notification, 2011. Hence IRS has taken up the work of superimposing project location on approved CZMP as per CRZ Notification 2011.

1.3 Objectives

The objective of the present study is to examine the proposed project locations for construction of Greenfield Chemical Complex-Soda Ash and associated Seawater Intake and Outfall Pipelines in with reference to CRZ Notification, 2011. Keeping in view of the requirements of notification, Institute of Remote Sensing, Anna University under took the project with following agreed scope of work:

- Transfer of HTL, LTL of Gulf of Kachchh as indicated in approved CZMP in the vicinity of the project site by digitization from approved CZMP.
- Digitization of ecologically sensitive entities such as Mangroves, Sand dunes, Turtle breeding grounds as indicated on approved CZMP in the vicinity of project sites
- Superimposition of HTL, LTL, Ecologically Sensitive Areas along with the layout of proposed project site on to the georeferenced cadastral map
- Preparation of Local Level CRZ Map at 1:4000 scale for the proposed construction of Greenfield Chemical Complex-Soda Ash and associated

Seawater Intake and Outfall Pipelines in Village Bada, Taluka Mandvi, District Kachchh, Gujarat

1.4 Data Products

The approved CZMP prepared as per CRZ Notification 2011 and approved by MOEF&CC, New Delhi were collected from the client/authority and used as reference for transfer of HTL, LTL and Ecologically Sensitive Area in the vicinity of project site on to local level CRZ Map.

1.5 Methodology

The cadastral map/FMB pertaining to the project site was provided by the client has been used for preparation of local level CRZ Map. The corners of the project site identified by the client were surveyed using Trimble 5700 receivers. The geomorphic characteristics of the coastal zone has been analysed from the medium resolution satellite data. Coastal geomorphologic features and existence of permanent vegetation identified from the satellite imagery were used to transfer the HTL demarcated on approved CZMP. The approved CZMP is georeferenced using graticules available on the maps.

The GPS surveyed project site location is superimposed on satellite imagery to identify the proposed project location. The HTL, LTL and ecologically sensitive areas in the vicinity of project location is digitized from georeferenced approved CZMP. 100m/width of creek (whichever is less) setback line from HTL tidal influenced inland water bodies is generated using GIS buffering tool. The zones between LTL, HTL and setback lines are delineated to corresponding CRZ as per CRZ Notification 2011.

2.0 STUDY AREA

2.1 Description of Study Area

The proposed project site is located in Village Bada, Taluka Mandvi, District Kuchchh, Gujarat. The location of the project site is shown in Figure 1. The proposed site is well connected with state road infrastructure, sea water in proximity and in proximity to other raw material and fuel required for the plant establishment and operation. Water requirement for the project will be met through the Seawater from Arabian Sea nearby the plant site. The Greenfield Chemical complex will be set up in phased manner with Light Soda Ash (11,00,000 TPA), Dense Soda Ash (5,00,000 TPA) and Sodium bicarbonate (2,00,000 TPA) manufacturing plants supported by utilities like captive power plant(120 MW), sea water intake and effluent outfall system, RO system and associated infrastructure.

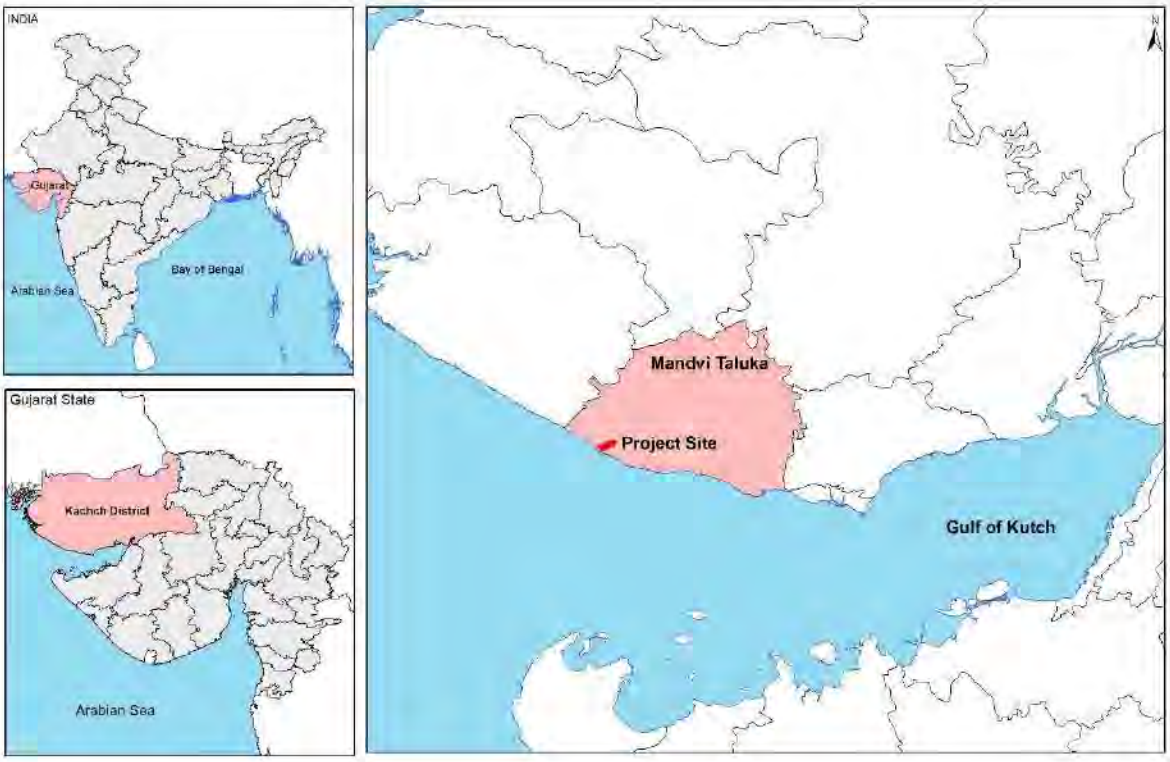


Fig. 1 Location of the project site

- the site coordinates of the project site are given in Table 1

Table 1. Project site coordinates as surveyed by DGPS in WGS 84

Label	Latitude	Longitude
A	22° 53' 53.686" N	69° 9' 28.954" E
B	22° 53' 41.851" N	69° 9' 58.919" E
C	22° 53' 1.573" N	69° 9' 34.094" E
D	22° 52' 43.458" N	69° 8' 51.109" E
E	22° 52' 29.373" N	69° 8' 2.312" E
F	22° 52' 56.725" N	69° 7' 32.697" E
G	22° 53' 3.572" N	69° 7' 35.489" E
H	22° 53' 6.167" N	69° 7' 38.397" E
I	22° 53' 41.900" N	69° 8' 48.030" E

- the coordinates of the intake points and outfall points are given in Table 2

Table 2. Intake & outfall points coordinates as provided by the client

Label	Latitude	Longitude
Intake Point 1	22° 52' 1.070" N	69° 7' 28.900" E
Intake Point 2	22° 51' 57.440" N	69° 7' 32.440" E
Outfall Point 1	22° 52' 15.790" N	69° 6' 14.350" E
Outfall Point 2	22° 52' 6.650" N	69° 5' 59.080" E

2.2 Status as per approved CZMP vide CRZ Notification 2011

The Proposed Greenfield Chemical Complex-Soda Ash plant boundary falls in in CRZ III (No Development Zone), CRZ III (200m to 500m from HTL) and Outside CRZ. The associated Seawater Intake and Outfall pipelines fall in CRZ – IA, CRZ-IB, CRZ III (No Development Zone), CRZ-III (200m to 500m from HTL), CRZ-IVA and Outside CRZ as per approved CZMP map vide CRZ Notification 2011.

3.0 RESULTS AND CONCLUSIONS

3.1 Results

The HTL and LTL as indicated in approved CZMP were superimposed on to georeferenced cadastral map along with ecologically sensitive areas in the vicinity of project site. Setback lines for as indicated in approved CZMP were superimposed on to georeferenced base map to prepare local level CRZ map at 1:4000 scale (Annexure IV). The co-ordinates of selected points on HTL line derived from approved CZMP in WGS 84 system are presented in Annexure I. The satellite imagery of project site is presented for reference (Annexure II). The approved CZMP at 1:25,000 scale superimposed with project activities is presented in Annexure III. The CRZ Map at 1:25,000 scale for 7km buffer from project site is presented in Annexure V.

3.2 Conclusions

- A portion of the Proposed Greenfield Chemical Complex-Soda Ash project site boundary falls in CRZ III (No Development Zone) and CRZ III (200m to 500m from HTL), with remaining area "Outside CRZ" as per approved CZMP prepared as per CRZ Notification 2011. (Refer enclosed CRZ Map).
- The CRZ boundary on approved CZMP differ from 500m setback line generated from HTL.
- The proposed plant and effluent disposal treatment facility falls "Outside CRZ", while the sea water intake facility falls within "CRZ-III (200m to 500m from HTL)" and partially "Outside CRZ"; whereas the sea water intake facility completely falls within the 500m setback line generated from HTL.
- The shortest distance between the project boundary 'G' and Low Tide Line (LTL) is 75.71m and the shortest distance between the project boundary 'H' and High Tide Line (HTL) - CREEK is 13.94m. (Sheet No.02/04).
- The shortest distance between the project boundary 'E' and High Tide Line (HTL) is 263.85m. (Sheet No.03/04).

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- The project site area falling in different zonation details are shown as per approved CZMP in Table 3.

Table.3 Extent of project site in various CRZ

S.No	CRZ - Classification	Area in acres
1	CRZ – III (200m to 500m from HTL)	26.07
2	CRZ III (No Development Zone)	2.96
3	Outside CRZ	1313.93
	Total	**1342.96**

- The Intake pipeline 1&2 falls in CRZ IA, IB, CRZ - III (200m to 500m from HTL) and CRZ IVA.
- The Outfall pipeline 1&2 falls in CRZ IA, IB, CRZ-III (No Development Zone) & CRZ-III (200m to 500m from HTL), CRZ IVA and Outside CRZ
- The length of the intake pipeline (1&2) and outfall pipeline (1&2) falling in different zonation details are shown as per approved CZMP in Table 4.

Table.4 Length of the pipelines in various CRZ

Pipeline	CRZ - Classification	Length in m
Intake Pipeline 1	CRZ IA	267.17
	CRZ IB	60.25
	CRZ - III (200m to 500m from HTL)	105.81
	CRZ IVA	948.76
	Total	**1381.99**
Intake Pipeline 2	CRZ IA	270.37
	CRZ IB	57.44
	CRZ - III (200m to 500m from HTL)	98.57
	CRZ IVA	962.26
	Total	**1388.64**
Outfall Pipeline 1	CRZ IA	380.92
	CRZ IB	81.78
	CRZ III (No Development Zone)	17.88
	CRZ - III (200m to 500m from HTL)	66.4
	CRZ IVA	2101.48
	Outside CRZ	121.71
	Total	**2770.17**
Outfall Pipeline 2	CRZ IA	379.68
	CRZ IB	83.36
	CRZ III (No Development Zone)	17.88
	CRZ - III (200m to 500m from HTL)	67.66
	CRZ IVA	2623.28
	Outside CRZ	110.03
	Total	**3281.88**

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The following disclaimers are followed in the CRZ map and report preparation:

1. Coastal Regulation Zone Map of the site is prepared considering the approved CZMP as per CRZ Notification 2011 of MoEF&CC, GoI

2. Superimposition of the project site on approved CZMP is subject to scale and generalisation error.

3. This report is to be referenced and used along with the map bearing the same reference no: AU/IRS/MN/309-2023 dated 08.02.2023

4. The DGPS survey was carried out specific to the referred project site boundary only. Hence, validation of HTL and CRZ boundary is limited to the clearance of the same. Institute of Remote Sensing do not carry responsibility for CRZ status of other plots or neighbourhood.

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ANNEXURE I

Coordinates of HTL Reference Points (WGS 84)

Point No	Latitude	Longitude
1	22° 53' 4.535" N	69° 7' 13.468" E
2	22° 53' 9.558" N	69° 7' 27.291" E
3	22° 53' 7.510" N	69° 7' 38.683" E
4	22° 52' 56.541" N	69° 7' 15.063" E
5	22° 52' 36.650" N	69° 7' 33.663" E
6	22° 52' 22.360" N	69° 7' 56.769" E
7	22° 52' 11.105" N	69° 8' 23.375" E
8	22° 52' 2.339" N	69° 8' 44.699" E

(Source: Approved CZMP sheet no. GJ 176,188&189)

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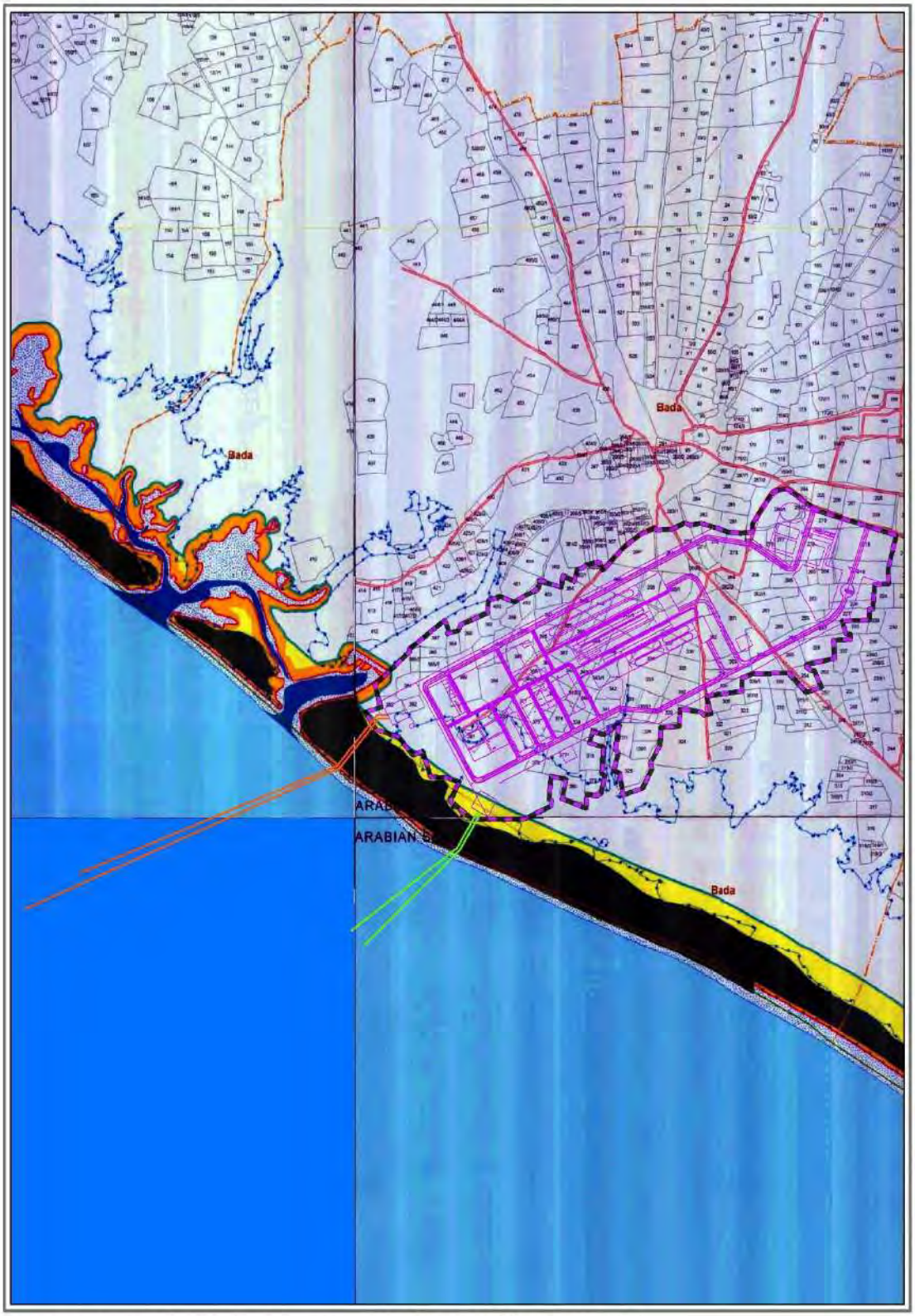
ANNEXURE II

Satellite Imagery of project site *(Source: Google Earth)*



ANNEXURE III

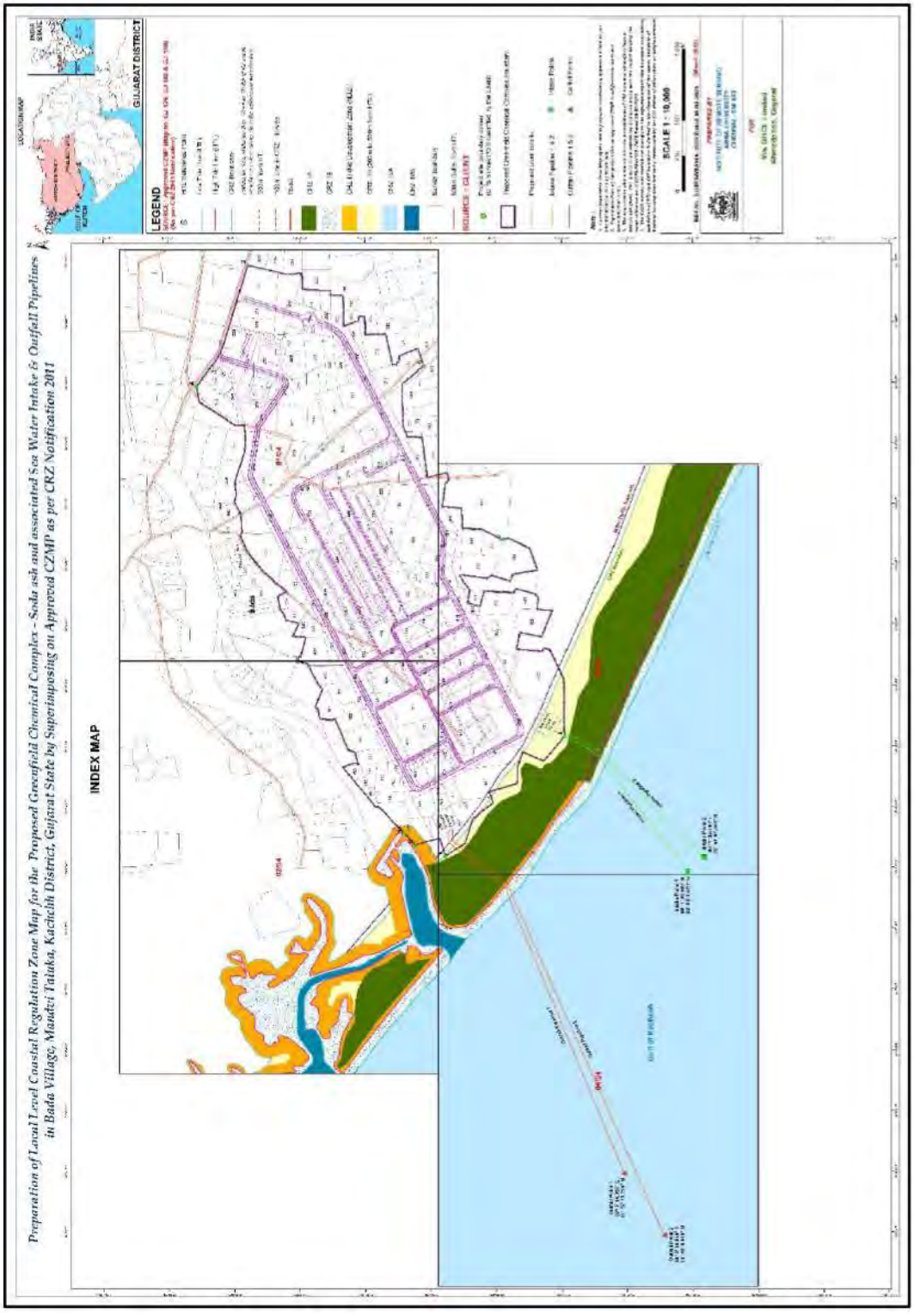
Project activities overlaid on approved CZMP



Source: Approved CZMP (Map no. GJ 176, GJ188 & GJ 189)

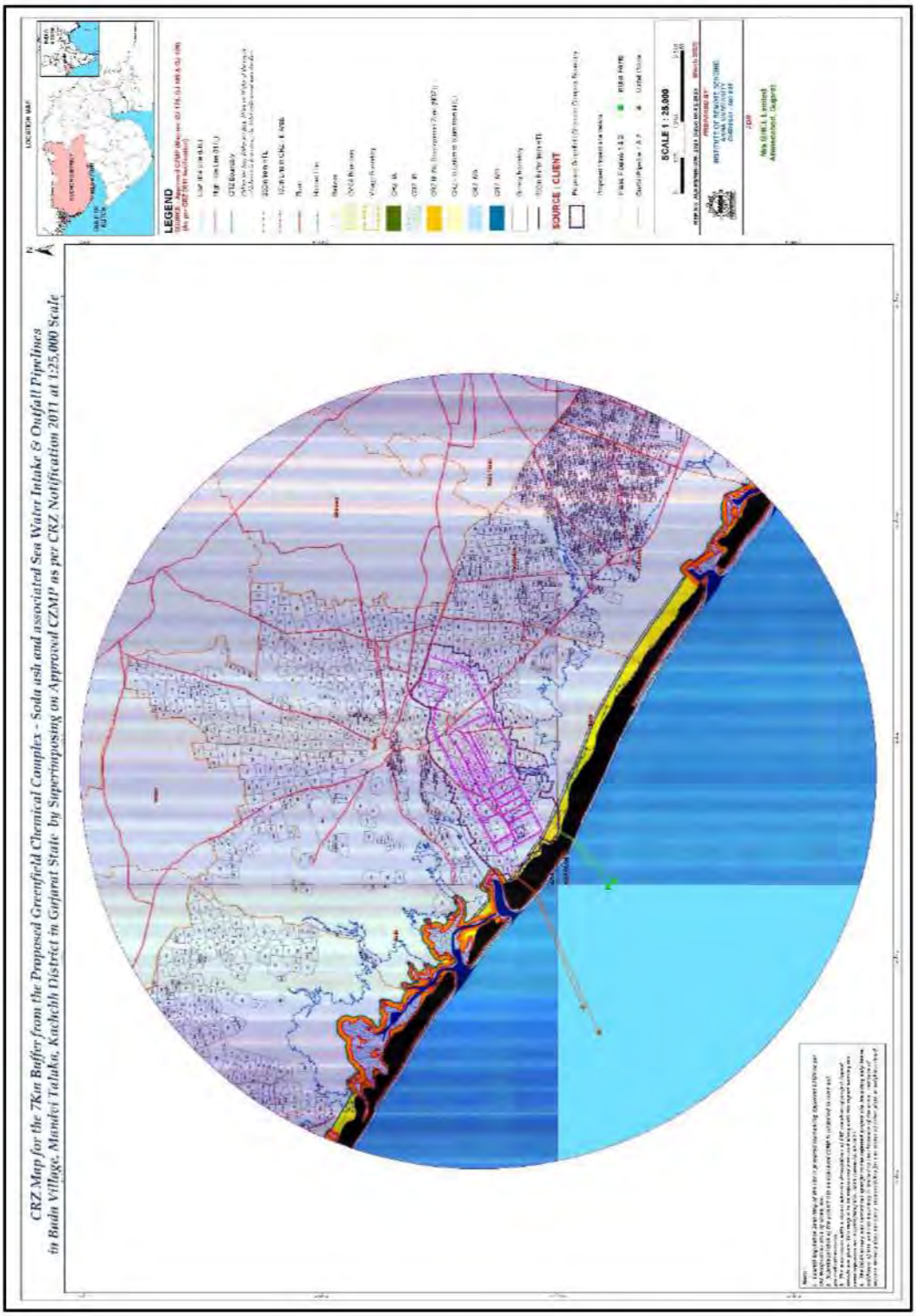
Annexure - IV

Local Level Coastal Regulation Zone Map



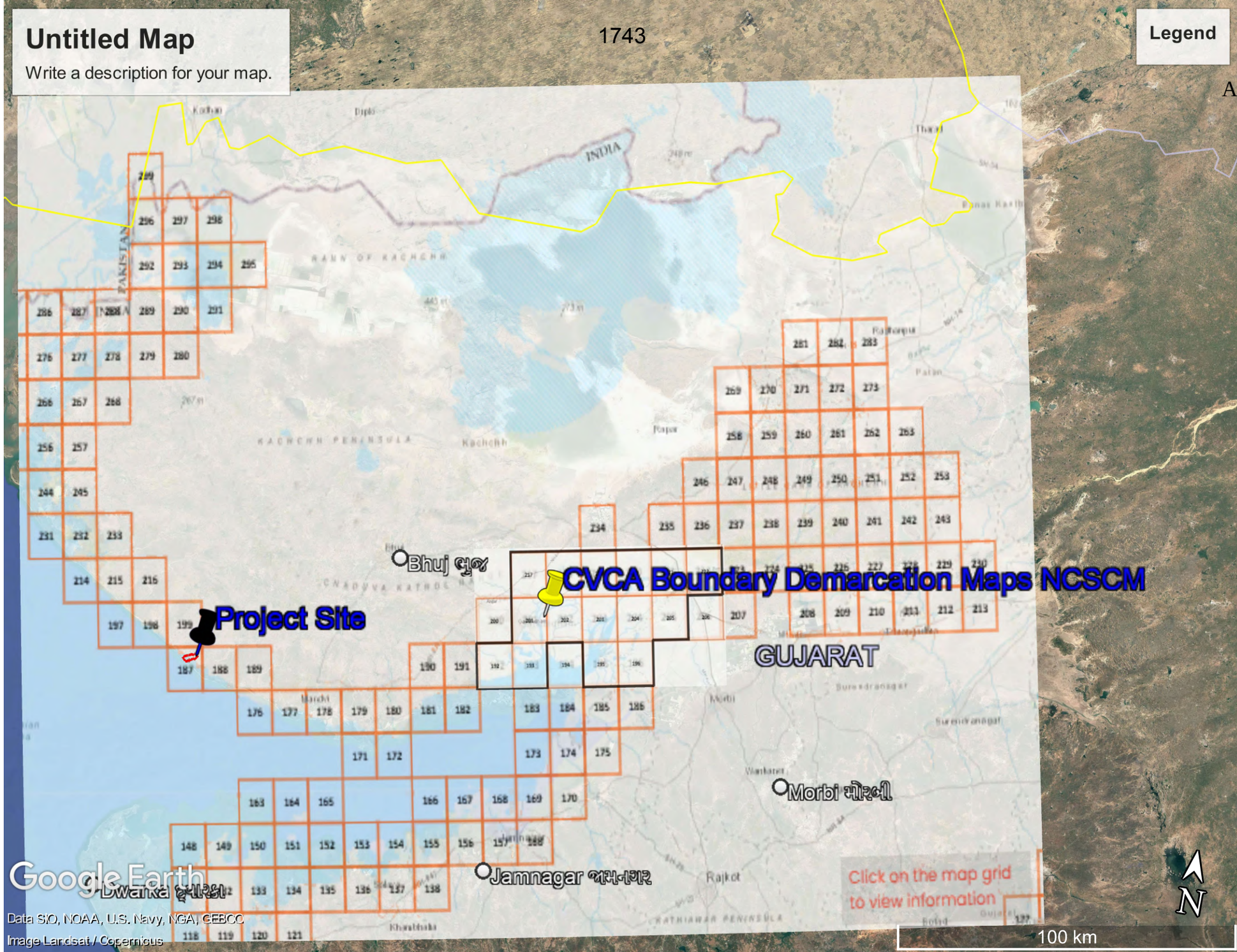
Annexure - V

CRZ Map at 1:25,000 scale for 7km buffer from project site

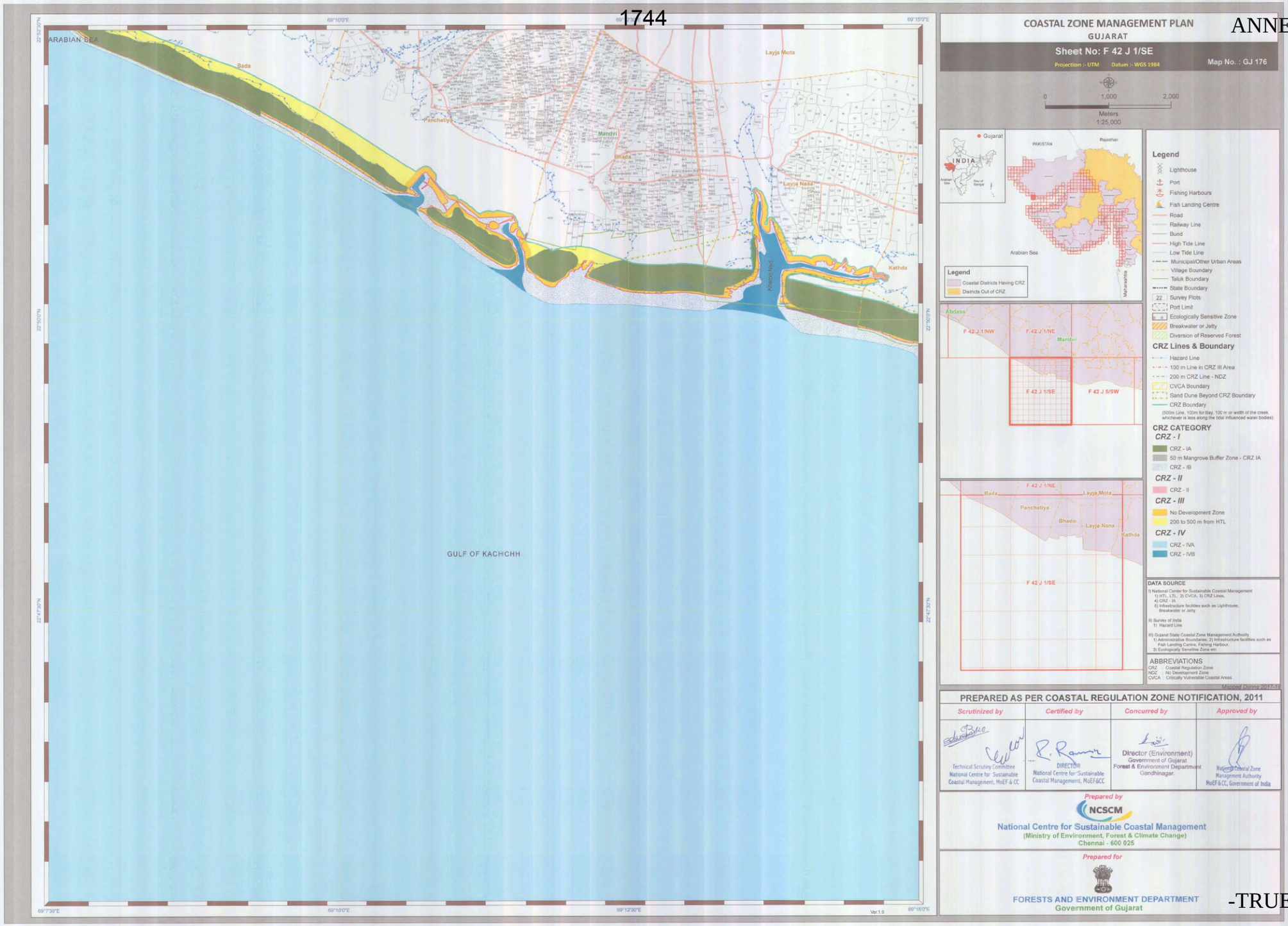


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ANNEXURE R/42



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COASTAL ZONE MANAGEMENT PLAN
GUJARAT

Sheet No: F 42 J 1/SE

Projection :- UTM Datum :- WGS 1984 Map No. : GJ 176

0 1,000 2,000
Meters
1:25,000

Legend

- Lighthouse
- Port
- Fishing Harbours
- Fish Landing Centre
- Road
- Railway Line
- Bund
- High Tide Line
- Low Tide Line
- Municipal/Other Urban Areas
- Village Boundary
- Taluk Boundary
- State Boundary
- Survey Plots
- Port Limit
- Ecologically Sensitive Zone
- Breakwater or Jetty
- Diversion of Reserved Forest

CRZ Lines & Boundary

- Hazard Line
- 100 m Line in CRZ III Area
- 200 m CRZ Line - NDZ
- CVCA Boundary
- Sand Dune Beyond CRZ Boundary
- CRZ Boundary

(500m Line, 100m for Bay, 100 m or width of the creek whichever is less along the tidal influenced water bodies)

CRZ CATEGORY

CRZ - I
- CRZ - IA
- 50 m Mangrove Buffer Zone - CRZ IA
- CRZ - IB

CRZ - II
- CRZ - II

CRZ - III
- No Development Zone
- 200 to 500 m from HTL

CRZ - IV
- CRZ - IVA
- CRZ - IVB

DATA SOURCE

i) National Center for Sustainable Coastal Management
1) HTL, LTL, 2) CVCA, 3) CRZ Lines.
4) CRZ - IA
5) Infrastructure facilities such as Lighthouse, Breakwater or Jetty

ii) Survey of India
1) Hazard Line

iii) Gujarat State Coastal Zone Management Authority
1) Administrative Boundaries, 2) Infrastructure facilities such as Fish Landing Centre, Fishing Harbour,
3) Ecologically Sensitive Zone etc

ABBREVIATIONS

CRZ : Coastal Regulation Zone
NDZ : No Development Zone
CVCA : Critically Vulnerable Coastal Areas

Mapped During 2017-18

PREPARED AS PER COASTAL REGULATION ZONE NOTIFICATION, 2011

Scrutinized by	*Certified by*	*Concurred by*	*Approved by*
Technical Scrutiny Committee National Centre for Sustainable Coastal Management, MoEF & CC	DIRECTOR National Centre for Sustainable Coastal Management, MoEF&CC	Director (Environment) Government of Gujarat Forest & Environment Department Gandhinagar.	National Coastal Zone Management Authority MoEF&CC, Government of India

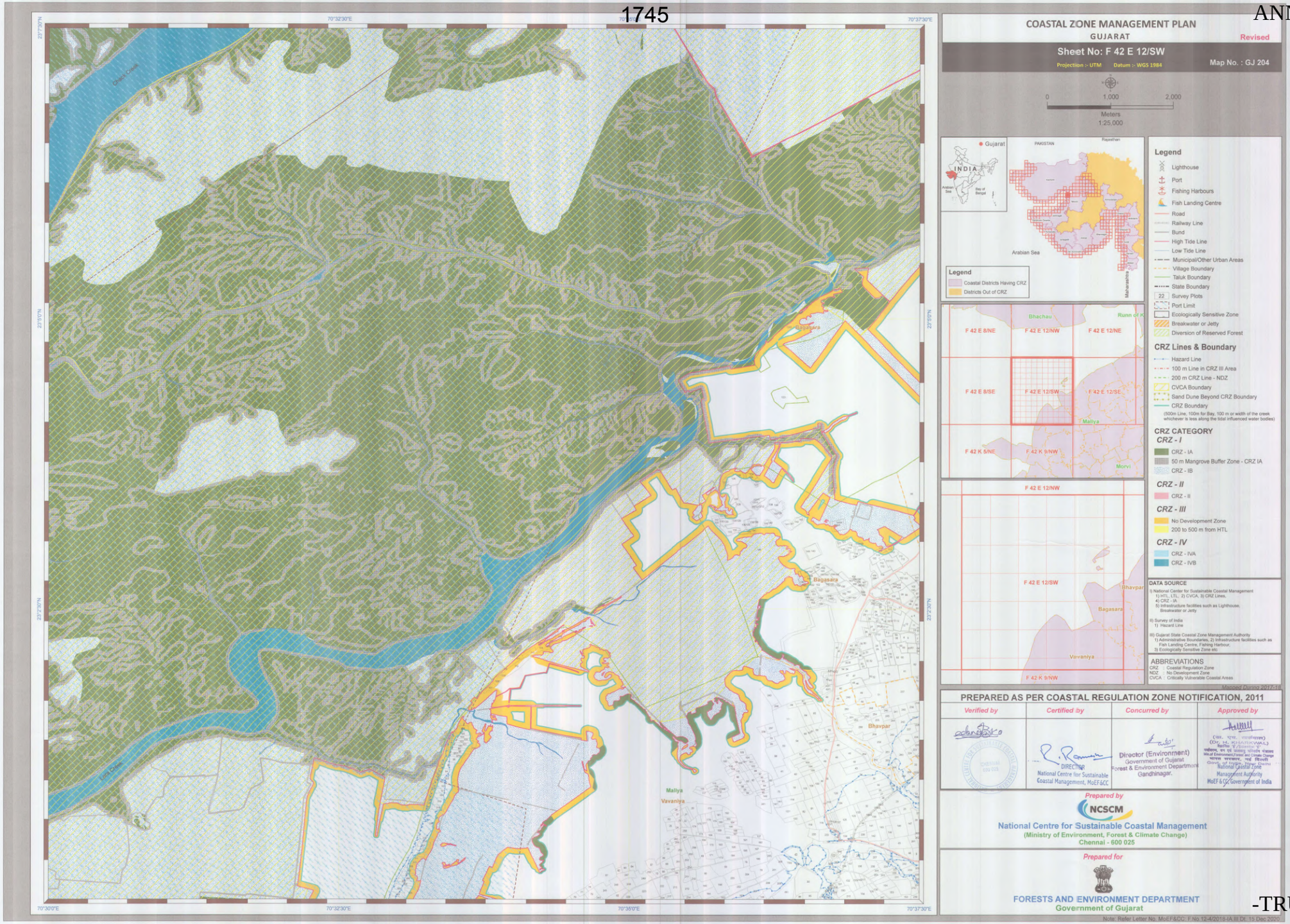
Prepared by

NCSCM

National Centre for Sustainable Coastal Management
(Ministry of Environment, Forest & Climate Change)
Chennai - 600 025

Prepared for

FORESTS AND ENVIRONMENT DEPARTMENT
Government of Gujarat

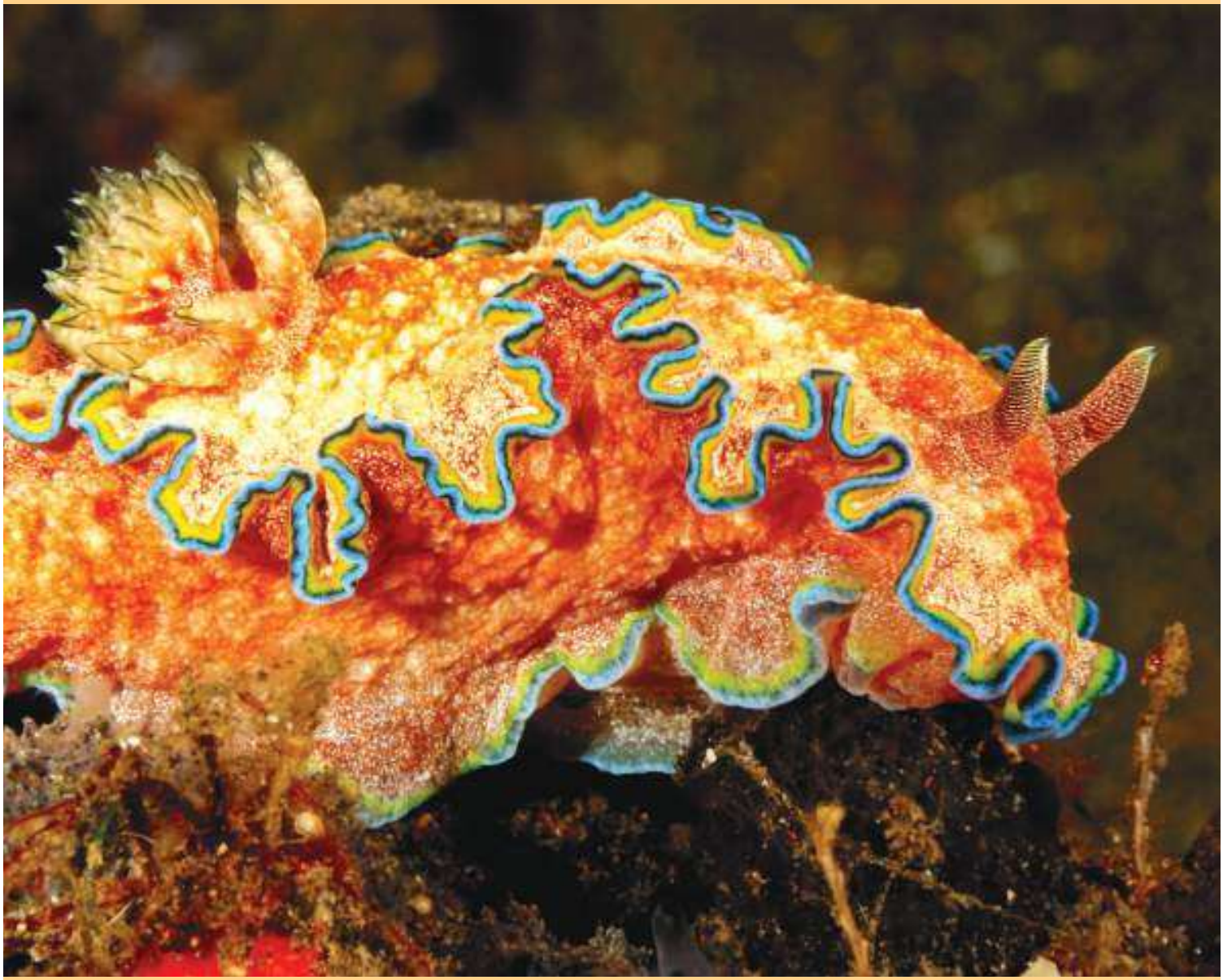

COASTAL ZONE MANAGEMENT PLAN
GUJARAT
Revised
Sheet No: F 42 E 12/SW
Projection :- UTM
Datum :- WGS 1984
Map No. : GJ 204
0
1,000
2,000
Meters
1:25,000
Gujarat
INDIA
PAKISTAN
Rajasthan
Arabian Sea
Maharashtra
Legend
Coastal Districts Having CRZ
Districts Out of CRZ
Bhachau
Rann of K
F 42 E 8/NE
F 42 E 12/NW
F 42 E 12/NE
F 42 E 8/SE
F 42 E 12/SW
F 42 E 12/SE
Maliya
F 42 K 5/NE
F 42 K 9/NW
Morvi
Bhavpar
Bagasara
Vavaniya
Legend
Lighthouse
Port
Fishing Harbours
Fish Landing Centre
Road
Railway Line
Bund
High Tide Line
Low Tide Line
Municipal/Other Urban Areas
Village Boundary
Taluk Boundary
State Boundary
Survey Plots
Port Limit
Ecologically Sensitive Zone
Breakwater or Jetty
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100 m Line in CRZ III Area
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CRZ - II
CRZ - II
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No Development Zone
200 to 500 m from HTL
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Mapped During 2017-18
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Verified by
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DIRECTOR
National Centre for Sustainable Coastal Management, MoEF&CC
Concurred by
Director (Environment)
Government of Gujarat
Forest & Environment Department
Gandhinagar.
Approved by
Member Secretary
National Coastal Zone Management Authority
MoEF & CC, Government of India
Prepared by
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Chennai - 600 025
Prepared for
FORESTS AND ENVIRONMENT DEPARTMENT
Government of Gujarat
Note: Refer Letter No. MoEF&CC: F.No.12-4/2018-IA III Dt. 15 Dec 2020

सत्यमेव जयते
Government of India

Ministry of Environment, Forest and Climate Change

CLIMATE CHANGE AND THE VULNERABLE INDIAN COAST

R Ramesh | J R Bhatt



सत्यमेव जयते
Government of India

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CLIMATE CHANGE AND THE VULNERABLE INDIAN COAST

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Publication Information

CLIMATE CHANGE AND THE VULNERABLE INDIAN COAST

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Government of India, 2018

Citation:
MOEFCC, (2018). *CLIMATE CHANGE AND THE VULNERABLE INDIAN COAST*
Edited by Ramesh. R, Bhatt J.R.
Ministry of Environment, Forest and Climate Change, New Delhi.

ISBN 978-93-5346-195-9

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Design and production:
Majix Design, 5-2B Nat West Vijay, Pallikaranai, Chennai 600100

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In addition, a new category has been listed in the CRZ 2011, namely the CVCA or Critically Vulnerable Coastal Areas. Such areas are to be protected through involvement of the local communities who depend on such ecosystems for their sustenance. The rationale being that ecosystems are better protected by communities who benefit directly from the ecological services and thus have a stake and ownership in safeguarding the environment. Moreover, local communities have a better understanding of the changes in the ecosystems and can draw on their traditional knowledge for adaptation, conservation and governance systems for effective management.

The Coastal Regulation Zone (CRZ) Notification, 2011 has identified 12 sites along the coast of India as Critically Vulnerable Coastal Areas (CVCAs) for promoting conservation and sustainable use of coastal resources and habitats (Figure 4). A scientific assessment of the extent of community dependence on the ESAs and their governance ability has been completed for all the 12 CVCA sites along the country's coast.



Figure 4: Critically Vulnerable Coastal Areas (CVCA) of India

Similar to CRZ 2011 for the mainland coast, an Island Protection Zone (IPZ) Notification 2011 was issued for the islands of Andaman and Nicobar and the Lakshadweep. Through this, the coastal stretches of Middle Andaman, North Andaman, South Andaman and Greater Nicobar and entire area of the other islands of Andaman and Nicobar and the Lakshadweep and their water area up to territorial water limit was declared as Islands Protection Zone regulating activities that could be carried out in these zones except in the manner provided in the Island Coastal Regulation Zone (ICRZ) and Integrated Islands Management Plans (IIMPs).

In April 2018, MOEFCC issued a draft CRZ Notification 2018 seeking comments from all stakeholders. The draft is now under consideration. This draft incorporates some changes in the way the CRZ zones are defined, taking into account population densities and needs of eco-tourism in ecologically sensitive areas. It also includes islands along the mainland coast under areas requiring special consideration in the CRZ. A notable addition with relevance to climate change is the Annex I of the draft notification which provides a 'Conservation, Protection and Management framework for Ecologically Sensitive Areas'. In the section on demarcation of the hazard line, it states that *'with a view to reduce the vulnerability of the coastal communities and ensuring sustainable livelihood, while drawing the CZMPs, the land use planning for the area between the Hazard line and HTL shall take into account such impacts of climate change*

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Untitled Map
Write a description for your map.
1750
Legend
Palanpur પાલનપુર
Bhuj ભુજ
Project Site GHCL
CVCA Demarcated Area NCSCM
GUJARAT
Mehsana મહેસાણા
Himatnagar હિં
High Coral Area Southern Shore
Ahmedabad અમદાવાદ
Nesting Sites
Jamnagar જામનગર
Rajkot રાજકોટ
Turtle Nesting Sites
Porbandar પોરબંદર
Vadodara વડોદ
Turtle Nesting Sites
Bhavnagar ભાવનગર
Bharuch ભરૂચ
Surat સુરત
N
Google Earth
Data SIO, NOAA, U.S. Navy, NGA, GEBCO
Image Landsat / Copernicus
100 km

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ANNEXURE R47

Marine Turtle Newsletter

Issue Number 166 *September 2023*



A fisherman of Kutch with his accidental catch, a loggerhead sea turtle, not recorded for 84 years from Mandavi Beach, Kutch, Gujarat. See pages 20-22.

Articles

Northernmost Known Sea Turtle Nesting
Activity in NW Atlantic: Nantucket Island, Massachusetts, USA.....**KM Dourdeville *et al.***
Green Turtle Tagged in Okinawa Found 19 Years Later Nesting on Guam.....**K Kobayashi & JMB Muñoz**
A Male East-Pacific Green Turtle that Associates with Small Fishing Boats and Eats Fish.....**C Clyde-Brockway *et al.***
A Record of Loggerhead Turtle from Coastal Waters of the Gulf of Kutch, Gujarat, India.....**R Vyas & H Patel**
Green Sea Turtle Predation by Mediterranean Monk Seal Along Turkish Coast.....**CO Kıraç & OTürkozan**
Juvenile Green Turtle Migration from Kalba, UAE, to Masirah, Oman.....**B Whittington-Jones *et al.***
Loggerhead Turtle Tagged in Cuba is Observed in Belize.....**F Moncada *et al.***
Recreational Beach Seining and Sea Turtle Incidental Capture:
The Need for a Proper Assessment Along the State of Rio de Janeiro, Brazil.....**M Burato *et al.***

President's Report For 41st Annual Symposium On Sea Turtle Biology And Conservation
Announcement: 42nd Annual Symposium on Sea Turtle Biology and Conservation
Recent Publications

ISSN 0839-7708

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mangrove plantation in 100 ha. Area in consultation with Forest Department/ GEC.

After detailed deliberation and discussion, it was decided to recommend to the Ministry of Environment, Forest and Climate Change, Government of India to grant CRZ Clearance for proposed construction of third berth (jetty) at Dahej Terminal by M/s. Petronet LNG Terminal, Dahej with following specific conditions:

1. ***The PP shall have to carry out mangrove plantation in 200 ha in consultation with Forest Department/ GEC and necessary amount should be deposited to the Forest Department/ GEC within six months from the date of EC/CRZ .***
2. ***PP shall ensure that all the mitigation measures suggested as part of different studies including NIO study, carried out shall be implemented.***
3. ***PP shall get the Wildlife conservation Plan approved by the PCCF (WL) alongwith action plan and Monitoring plan.***
4. ***PP shall provide classrooms in nearby schools as part of CSR activities.***

Agenda-4.3.2:
CRZ Clearance for Greenfield Chemical Complex seawater intake and effluent disposal facilities at village Bada, ta- Mandvi by GHCL.

M/s. GHCL Limited vide its application dated 11-10-2021 has requested Gujarat Coastal Zone Management Authority for issuance of recommendations for obtaining CRZ Clearance from Ministry of Environment, Forest and Climate Change, Government of India for establishment of Seawater Intake and Outfall facility along with effluent disposal systemand disposal of treated effluent at the point identified by NIO for Proposed Greenfield Chemical Complex at Village Bada, Taluka Mandvi, District Kutch, Gujarat.

M/s. GHCL has submitted Form-1, with required documents as per GCZMA guidelines. PP has paid requisite processing fee.

Following Studies have been conducted by PP:

D. M. Thaker

Sanjeev

- Baseline Marine Environmental assessment, Effluent Dispersion Modeling, Sand dune Morphology by CSIR NIO (Goa, Mumbai)
    - As per the findings, Suitable Corridor for laying seawater intake and outfall identified. Coast near site is Stable based on satellite image analysis and Sand dunes are found to be stable and suitable for tunneling activity.
- Conservation plan of Schedule - 1 Species by Gujarat Institute of Desert Ecology, Gujarat
- CRZ Demarcation as per CZMP by IRS, Anna University, Chennai
- Sea Turtle: Status Survey and Conservation by Zoological Survey of India, Kolkata : Finding of the study stated that during monitoring period any turtle, fresh /old nests or crawl marks were not found. Due to narrow beach width, vegetation cover, slope, presence of pebbles and rubbles and presence of predators at project site which are unfavorable for sea turtle nesting.
- Gujarat Sea Turtle: Status Survey and Conservation by Gujarat Institute of Desert Ecology,
- Seawater Intake & Effluent Disposal Feasibility Consultancy by STUP Consultancy, Ahmedabad.

As the study on Biodiversity and Wild life, No notified protected area within Study area, Presence of critically endangered plan species Commiphora wightii in buffer area, Conservation plan suggested for Schedule I Flora and Fauna & approved by forest department and No important wetland or bird areas are located within project vicinity.

The MS, GCZMA apprised the Authority that GHCL presented their case in GCZMA meeting held on 17.01.2022. Additional detail sought (ADS) by GCZMA via mail on 01.02.22. PP replied on 29.11.22 & 26.12.22 and requested for conducting visit. Sub- committee of GCZMA constituted and visited site on 27.04.23. PP submitted details sought by the committee vide its letter dated 29.04.23.

As per ADS generated by GCZMA on 01.02.22, they submitted final EIA report, public hearing details submitted on 29.11.22,. As forestland involve in

D.M. Thakar.

the proposed project, they got Stage-1, approval on 18.07.23, submitted Olive Riddly Turtle conservation plan approved on 24.04.23 from Forest Department, submitted Sand dunes conservation plan on 29.11.22.

Finally, the case was scrutinized in 18th ToO meeting held on 17.01.2022 It was decided to recommend GCZMA with conditions.

The representative of M/s GHCL Ltd made a detailed presentation before the Authority and submitted that GHCL is a diversified company with footprint in Chemicals, Textiles and Consumer product segment. In Chemical sector, the company is mainly in the business of manufacturing Soda Ash (i.e. Anhydrous Sodium Carbonate) and Sodium Bicarbonate. It is one of the leading producers of Soda Ash in the country since 1988.

The site is in proximity to Sea, which is the only source available for uninterrupted water supply to manufacturing plant. Seawater is required for meeting requirements for RO-DM plant, process cooling, dilution requirements, domestic use etc.

A huge and increasing focus on renewable energy with government and private sector investment in such sources is strongly driving global demand for soda ash. This project will also support the demand of Soda Ash as it is a key raw material in the processing of lithium, a key component of lithium-ion batteries which is used in electric vehicles.

Another key downstream product manufactured from Soda Ash, is emerging as a solution of choice for emission control applications.

GHCL had signed an M.O.U in Jan-2017 during Vibrant Gujarat Summit, 2017 for establishment of Greenfield Chemical complex in district Kutch, Gujarat.

GHCL proposes to set up a Greenfield Chemical complex having

- Light Soda Ash (11,00,000 TPA),
- Dense Soda Ash (5,00,000 TPA) and
- Sodium bicarbonate (2, 00,000 TPA) manufacturing plants
- supported by utilities like solid fuel based captive Co-generation power plant (120 MW),
- seawater intake (16,00,000 m3/day) and
- effluent outfall system (15, 80,000 m3/day),
- RO-DM system and associated infrastructure.

D.M.Malvi

Bajpai

As per the CRZ map prepared by the Institute of Remote Sensing, Anna University, Chennai, Details of total area and areas falling in CRZ along with category is as under:

Extent of Project Site in various CRZ is as under:

	CRZ - Classification	Area in Acres
1	CRZ – III (200 to 500 m from HTL)	26.07
2	CRZ III (No Development Zone)	2.96
3	Outside CRZ	1313.93
	Total	1342.96

Activity wise details of CRZ zone is as under:

Activities	Zone
Construction of process plant and utilities etc.	outside CRZ area
Effluent collection	outside CRZ area
Seawater Intake system i.e. sump and pump house	CRZ III
Intake Pipeline	CRZ IA, CRZ IB and CRZ IV
Outfall Pipeline	CRZ IA, CRZ IB and CRZ IV

It was submitted that as per the numerical flow model run for seawater intake of 1600 MLD and dispersion model for effluent disposal of 1580 MLD, Model run for post monsoon and pre monsoon for various tidal conditions. No significant changes in flow regime are observed due to continuous withdrawal from recommended seawater intake locations. CSIR NIO has recommended effluent disposal points after evaluating 03 alternative options. Ambient conditions for temperature, SS, Ammonical nitrogen will be attained within 300 m distance from the diffuser. CSIR NIO Goa study suggested that sand dunes along the coast are stable and recommended suitable Landfall points and tunneling method for pipelines. From the model results, it is found that the average dilutions of 30 to 40 times would be achieved along with the tidal variation in the case of 1580000 m^3/day discharge. To get this dilution time,

D. M. Thakur

the diffuser system should contain 40 ports having a 0.44 m diameter. The diffusers should be separated at a distance of 6 m. The elevation of ports from the sea bed should be 0.5 m. The velocity of release of effluent should be maintained at 3.01 m/s.

Design and detailed construction methodology

Micro tunneling are done using the pipe jacking method . The pipelines for seawater intake and effluent disposal are required to be laid in a safe manner so that the sand dunes stretch between the plant boundary and respective land fall points (LFP) are protected without any disturbance to their natural appearance and stability. In such sensitive and difficult terrains tunneling offers a reliable technological solution. The treated effluent will be discharged at a suitable location off Bada coast through buried pipeline up to shore and submarine pipeline up to disposal location in sea. Minor change of alignment of pipeline may be required as per required depth for intake well construction & hydraulics requirement without changing landfall point and CRZ corridor. Reputed agency M/s RHDHV is engaged .For sand dune stretch the effluent disposal pipeline will be laid through tunneling.

There will be no disturbance to stable sand dunes along the coast, as pipeline will be laid underground through micro tunneling method. The predicted max. water temperature in a small area around diffuser 33°Which is lower than threshold of 35°C. Incremental increase of SS in a limited area around diffuser is unlikely to negatively influence the biota even in the vicinity of diffuser. Fine SS particles would remain in suspension for longer duration and impart a milky hue around diffuser, as SS in effluent is non toxic this will not impact the water quality. Estimated benthic loss due to seawater intake is about 141.6 kg. and 331 kg. For outfall. Such loss is unlikely to be reflected on overall bio potential of Bada coast. This loss would be temporary and benthos will recolonize in due course after construction phase gets completed. The new structures will provide additional surface area for sub-tidal benthos to colonise.

D.M. Thakur

Sanjay

As the study on Biodiversity and Wild life, No notified protected area within Study area, Presence of critically endangered plan species Commiphorawightii in buffer area, Conservation plan suggested for Schedule I Flora and Fauna & approved by forest department and No important wetland or bird areas are located within project vicinity.

It was further submitted by the representative of GHCL that there is no existence of mangrove in proposed project areas for lying of intake and outfall pipelines and there would not be any impact on mangroves due to proposed activities.

As per the site inspection report of committee, this one is found open land there is no activity or construction observed at the time of visit.

After detailed discussion and deliberation on the presentation made by the representative of M/s.GHCL it is decided by the Authority to recommend to the Ministry of Environment, Forests and Climate Change GoI to grant CRZ Clearance for proposed project for establishment of Seawater Intake and Outfall facilities along with effluent disposal system and disposal of treated effluent at a point suggested by NIO for Proposed Greenfield Chemical Complex at Village Bada, Taluka Mandvi, District Kutch, Gujarat by M/S GHCL with following conditions:

1. ***The effluent not meeting with the GPCB norms shall not be discharged and shall be stored in the Guard Ponds and recycled back into the Effluent Treatment Plant for further treatment to achieve the GPCB norms.***
2. ***M/s GHCL shall install necessary facilities for this purpose and shall strictly ensure the compliance with the GPCB norms, round the clock.***
3. ***The pipelines for seawater intake and effluent disposal shall be laid in a safe manner so that the sand dunes stretch between the plant boundary and respective land fall points (LFP) are protected without any disturbance to their natural appearance and stability.***
4. ***The pipeline shall be monitored regularly by the company and it shall be ensured that there is no leak from the pipeline. In case of any such eventualities, the company shall immediately stop disposal through the***

D.M.Thaker

said pipeline and take the corrective measures in consultation with the GPCB and the District Collector

5. *There shall not be any blockage of creek/river etc due to laying of pipeline, and free flow of water shall be maintained.*
6. *All the recommendations and mitigation measures suggested for sea turtle conservation plan shall be complied with by the GHCL.*

Agenda–4.3.3:
CRZ clearance for proposed Berthing Jetty with Backup areaand Pipeline for intake and outfall point area for Lakhpat Cement Works in Kori Creak located in Gulf of Kutch by M/s. Adani Cementation Ltd, Kutch.

M/s. Adani Cementation Ltd, vide its application dated 26-02-2019 has requested Gujarat Coastal Zone Management Authority for issuance of recommendations for obtaining CRZ Clearance from Ministry of Environment, Forest and Climate Change, Government of India for proposed Berthing Jetty with Backup area and Pipeline for intake and outfall point area for Lakhpat Cement Works in Kori Creak located in Gulf of Kutch Kutch.

M/s. Adani Cementation Ltd has submitted Form-1, with required documents as per GCZMA guidelines. PP has paid requisite processing fee. INDOMER COASTAL HYDRAULICS (P) LTD consultant having NABET accreditation registration No.:NABET/EIA/ 1720/RA 0082 ANDNABET/EIA /2023/SA 0170 Validity upto 12.09.2020 carried out EIA.

Adani Cementation Limited (ACL) proposes to setup an integrated cement project called "Lakhpat Cement Works" which includes 'Limestone Mine in 251.9 ha. Area, Captive Power Plant and WHRS (99 MW), Cement Plant of production capacity 10 MMTPA Clinker and 10 MMTPA of OPC/PPC/PSC/PCC, berthing jetty of 19 MMTPA traffic capacity connected with trestle and approach road and 9 MLD desalination plant with seawater intake & brine reject outfall, dedicated 10.2 km conveyor corridor' in village

D. M. Thakker.

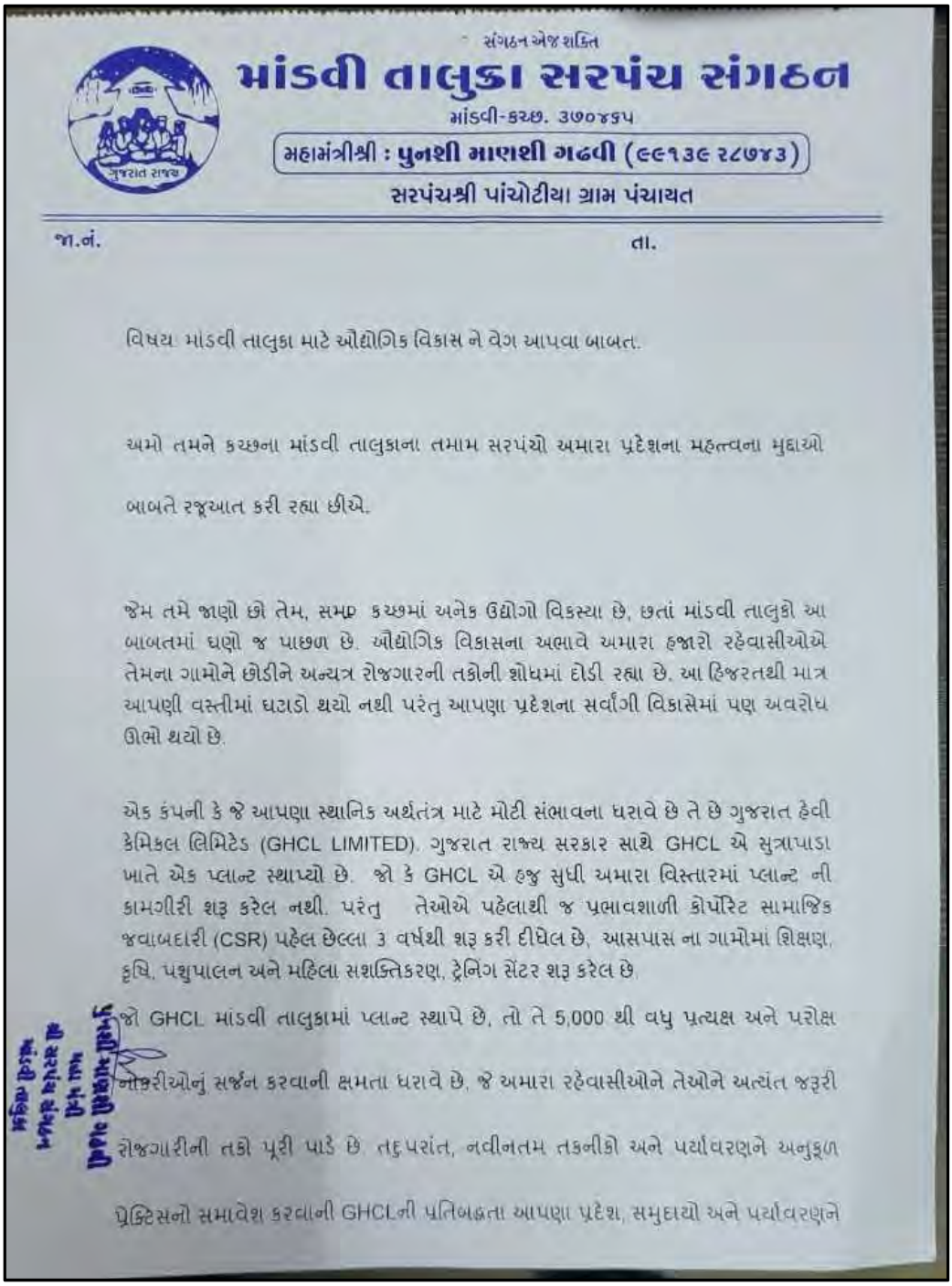
Sanjay

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ANNEXURE R/49

- **Various Supporting Letters**

1) Letter from Mandvi Taluka Sarpanch Sangathan – Sarpanch Shri – Panchotiya Gram Panchayat
This letter was handed over to Chief Minister-Gujarat during his visit to Mandvi



સંગઠનમેં હૈ શક્તિ

માંડવી તાલુકા સરપંચ સંગઠન

માંડવી-કચ્છ. ૩૭૦૪૬૫

મહામંત્રીશ્રી : પુનશી માણશી ગઢવી (૯૯૧૩૯ ૨૮૭૪૩)

સરપંચશ્રી પાંચોટીયા ગ્રામ પંચાયત

જા.નં. તા.

વિષય: માંડવી તાલુકા માટે ઔદ્યોગિક વિકાસ ને વેગ આપવા બાબત.

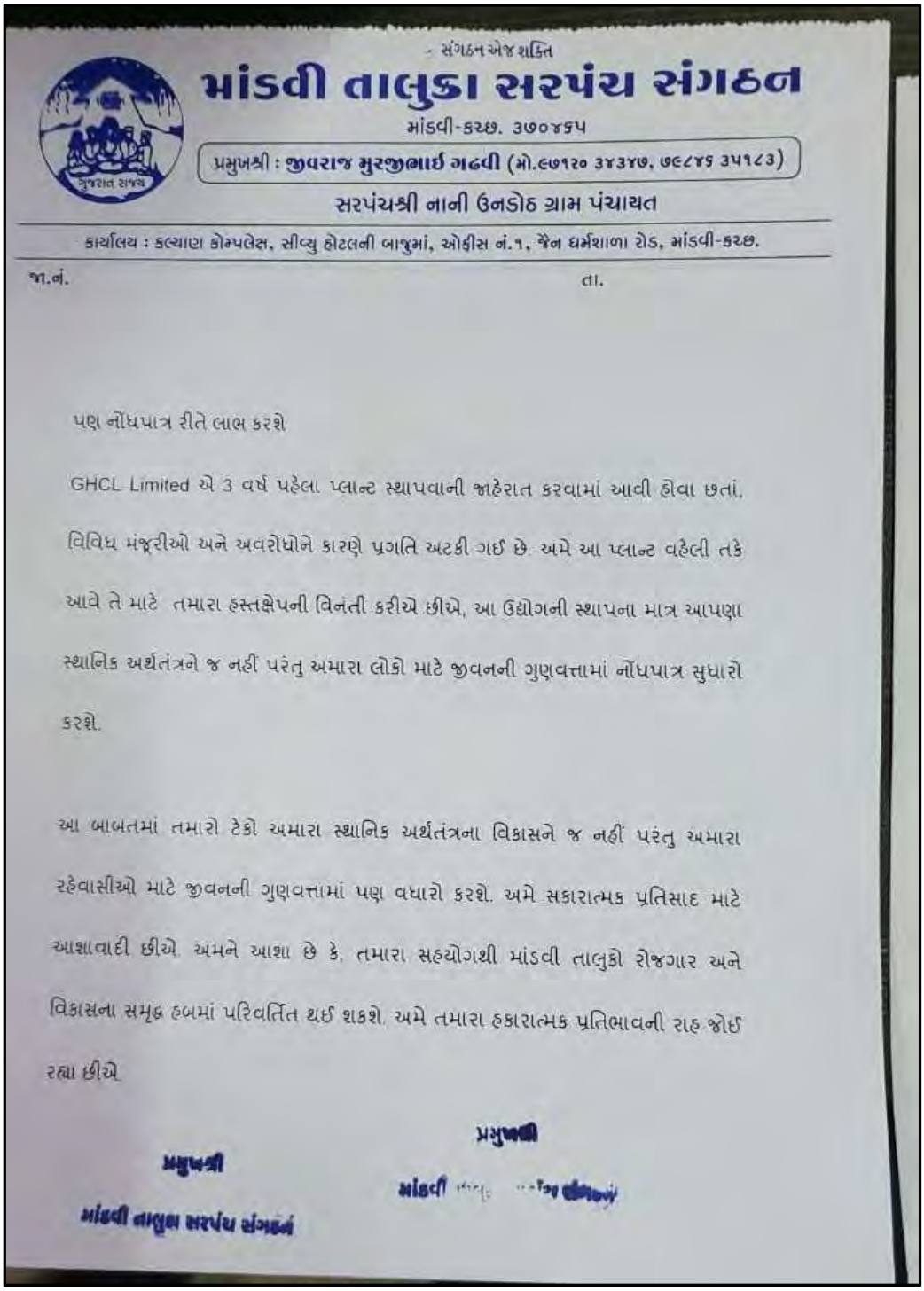
અમો તમને કચ્છના માંડવી તાલુકાના તમામ સરપંચો અમારા પ્રદેશના મહત્વના મુદ્દાઓ બાબતે રજૂઆત કરી રહ્યા છીએ.

જેમ તમે જાણો છો તેમ, સમગ્ર કચ્છમાં અનેક ઉદ્યોગો વિકસ્યા છે, છતાં માંડવી તાલુકો આ બાબતમાં ઘણો જ પાછળ છે. ઔદ્યોગિક વિકાસના અભાવે અમારા હજારો રહેવાસીઓએ તેમના ગામોને છોડીને અન્યત્ર રોજગારની તકોની શોધમાં દોડી રહ્યા છે. આ હિજરતથી માત્ર આપણી વસ્તીમાં ઘટાડો થયો નથી પરંતુ આપણા પ્રદેશના સર્વાંગી વિકાસમાં પણ અવરોધ ઊભો થયો છે.

એક કંપની કે જે આપણા સ્થાનિક અર્થતંત્ર માટે મોટી સંભાવના ધરાવે છે તે છે ગુજરાત હેવી કેમિકલ લિમિટેડ (GHCL LIMITED). ગુજરાત રાજ્ય સરકાર સાથે GHCL એ સુત્રાપાડા ખાતે એક પ્લાન્ટ સ્થાપ્યો છે. જો કે GHCL એ હજુ સુધી અમારા વિસ્તારમાં પ્લાન્ટ ની કામગીરી શરૂ કરેલ નથી. પરંતુ તેઓએ પહેલાથી જ પ્રભાવશાળી કોર્પોરેટ સામાજિક જવાબદારી (CSR) પહેલ છેલ્લા 3 વર્ષથી શરૂ કરી દીધેલ છે. આસપાસ ના ગામોમાં શિક્ષણ, કૃષિ, પશુપાલન અને મહિલા સશક્તિકરણ, ટ્રેનિંગ સેંટર શરૂ કરેલ છે.

જો GHCL માંડવી તાલુકામાં પ્લાન્ટ સ્થાપે છે, તો તે 5,000 થી વધુ પ્રત્યક્ષ અને પરોક્ષ નોકરીઓનું સર્જન કરવાની ક્ષમતા ધરાવે છે, જે અમારા રહેવાસીઓને તેઓને અત્યંત જરૂરી રોજગારીની તકો પૂરી પાડે છે. તદુપરાંત, નવીનતમ તકનીકો અને પર્યાવરણને અનુકૂળ પ્રેક્ટિસનો સમાવેશ કરવાની GHCLની પ્રતિબદ્ધતા આપણા પ્રદેશ, સમુદાયો અને પર્યાવરણને

2) Letter from Mandvi Taluka Sarpanch Sangathan – Sarpanch Shri – Nani Undoth Gram Panchayat



- સંગઠન એજ શક્તિ

માંડવી તાલુકા સરપંચ સંગઠન

માંડવી-કચ્છ. ૩૭૦૪૫૫

પ્રમુખશ્રી : જીવરાજ મુરજીભાઈ ગઢવી (મો.૯૭૧૨૦ ૩૪૩૪૭, ૭૯૮૪૬ ૩૫૧૮૩)

સરપંચશ્રી નાની ઉનડોઠ ગ્રામ પંચાયત

કાર્યાલય : કલ્યાણ કોમ્પલેક્ષ, સીવ્યુ હોટલની બાજુમાં, ઓફીસ નં.૧, જૈન ધર્મશાળા રોડ, માંડવી-કચ્છ.

જા.નં. તા.

પણ નોંધપાત્ર રીતે લાભ કરશે.

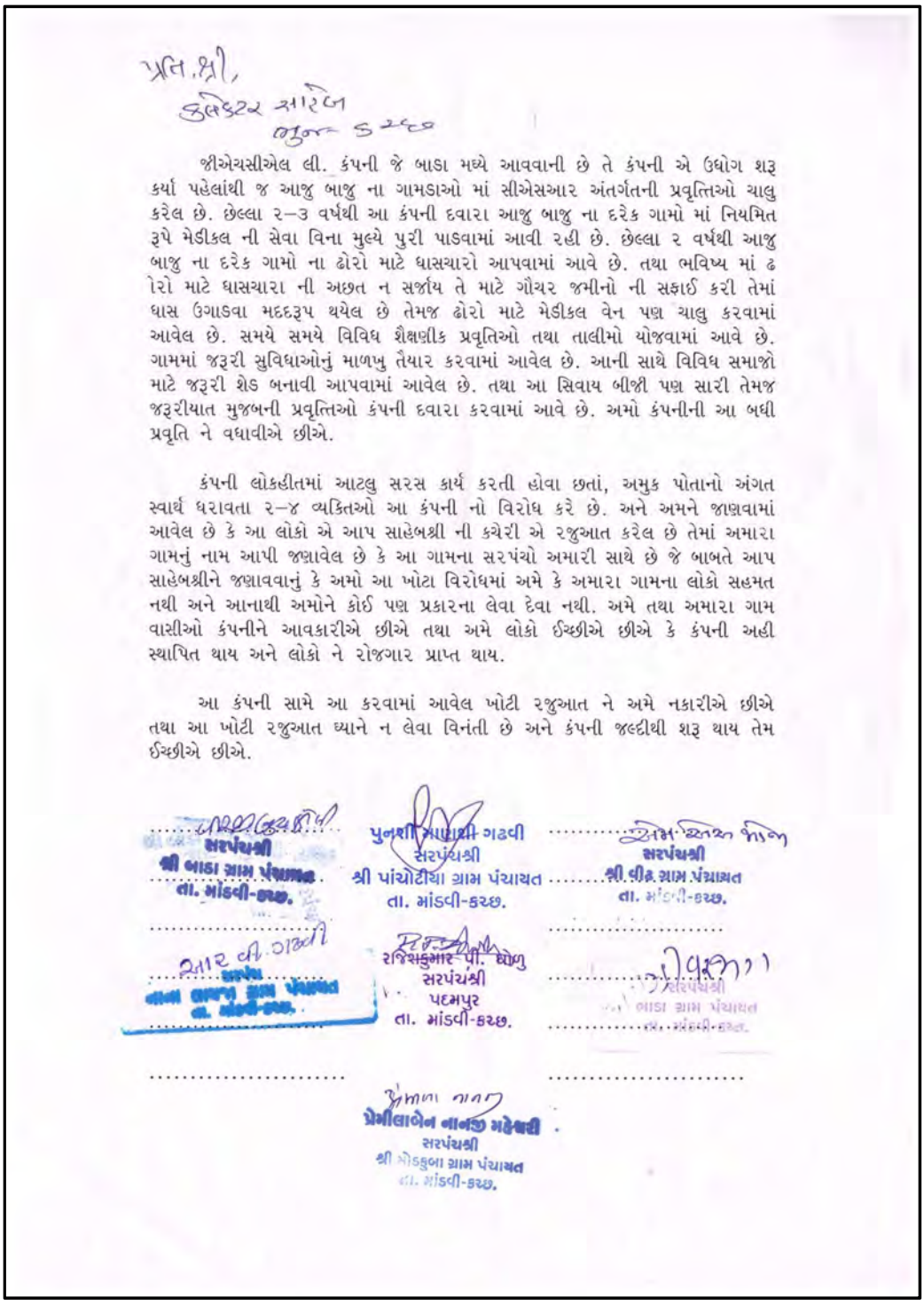
GHCL Limited એ 3 વર્ષ પહેલા પ્લાન્ટ સ્થાપવાની જાહેરાત કરવામાં આવી હોવા છતાં, વિવિધ મંજૂરીઓ અને અવરોધોને કારણે પ્રગતિ અટકી ગઈ છે. અમે આ પ્લાન્ટ વહેલી તકે આવે તે માટે તમારા હસ્તક્ષેપની વિનંતી કરીએ છીએ, આ ઉદ્યોગની સ્થાપના માત્ર આપણા સ્થાનિક અર્થતંત્રને જ નહીં પરંતુ અમારા લોકો માટે જીવનની ગુણવત્તામાં નોંધપાત્ર સુધારો કરશે.

આ બાબતમાં તમારો ટેકો અમારા સ્થાનિક અર્થતંત્રના વિકાસને જ નહીં પરંતુ અમારા રહેવાસીઓ માટે જીવનની ગુણવત્તામાં પણ વધારો કરશે. અમે સકારાત્મક પ્રતિસાદ માટે આશાવાદી છીએ. અમને આશા છે કે, તમારા સહયોગથી માંડવી તાલુકો રોજગાર અને વિકાસના સમૃદ્ધ હબમાં પરિવર્તિત થઈ શકશે. અમે તમારા હકારાત્મક પ્રતિભાવની રાહ જોઈ રહ્યા છીએ.

પ્રમુખશ્રી
માંડવી તાલુકા સરપંચ સંગઠન

પ્રમુખશ્રી
માંડવી

3) Letter From Bada and surrounding villages



પ્રતિ,શ્રી,
કલેક્ટર સાહેબ
મુન્દ્રા કચ્છ

જીએચસીએલ લી. કંપની જે બાડા મધ્યે આવવાની છે તે કંપની એ ઉધોગ શરૂ કર્યા પહેલાંથી જ આજુ બાજુ ના ગામડાઓ માં સીએસઆર અંતર્ગતની પ્રવૃત્તિઓ ચાલુ કરેલ છે. છેલ્લા ૨–૩ વર્ષથી આ કંપની દવારા આજુ બાજુ ના દરેક ગામો માં નિયમિત રૂપે મેડીકલ ની સેવા વિના મુલ્યે પુરી પાડવામાં આવી રહી છે. છેલ્લા ૨ વર્ષથી આજુ બાજુ ના દરેક ગામો ના ઢોરો માટે ઘાસચારો આપવામાં આવે છે. તથા ભવિષ્ય માં ઢોરો માટે ઘાસચારા ની અછત ન સર્જાય તે માટે ગૌચર જમીનો ની સફાઈ કરી તેમાં ઘાસ ઉગાડવા મદદરૂપ થયેલ છે તેમજ ઢોરો માટે મેડીકલ વેન પણ ચાલુ કરવામાં આવેલ છે. સમયે સમયે વિવિધ શૈક્ષણીક પ્રવૃતિઓ તથા તાલીમો યોજવામાં આવે છે. ગામમાં જરૂરી સુવિધાઓનું માળખુ તૈયાર કરવામાં આવેલ છે. આની સાથે વિવિધ સમાજો માટે જરૂરી શેડ બનાવી આપવામાં આવેલ છે. તથા આ સિવાય બીજી પણ સારી તેમજ જરૂરીયાત મુજબની પ્રવૃત્તિઓ કંપની દવારા કરવામાં આવે છે. અમો કંપનીની આ બધી પ્રવૃતિ ને વધાવીએ છીએ.

કંપની લોકહીતમાં આટલુ સરસ કાર્ય કરતી હોવા છતાં, અમુક પોતાનો અંગત સ્વાર્થ ધરાવતા ૨–૪ વ્યકિતઓ આ કંપની નો વિરોધ કરે છે. અને અમને જાણવામાં આવેલ છે કે આ લોકો એ આપ સાહેબશ્રી ની કચેરી એ રજુઆત કરેલ છે તેમાં અમારા ગામનું નામ આપી જણાવેલ છે કે આ ગામના સરપંચો અમારી સાથે છે જે બાબતે આપ સાહેબશ્રીને જણાવવાનું કે અમો આ ખોટા વિરોધમાં અમે કે અમારા ગામના લોકો સહમત નથી અને આનાથી અમોને કોઈ પણ પ્રકારના લેવા દેવા નથી. અમે તથા અમારા ગામ વાસીઓ કંપનીને આવકારીએ છીએ તથા અમે લોકો ઈચ્છીએ છીએ કે કંપની અહી સ્થાપિત થાય અને લોકો ને રોજગાર પ્રાપ્ત થાય.

આ કંપની સામે આ કરવામાં આવેલ ખોટી રજુઆત ને અમે નકારીએ છીએ તથા આ ખોટી રજુઆત ધ્યાને ન લેવા વિનંતી છે અને કંપની જલ્દીથી શરૂ થાય તેમ ઈચ્છીએ છીએ.

સરપંચશ્રી
શ્રી બાડા ગ્રામ પંચાયત
તા. માંડવી-કચ્છ.

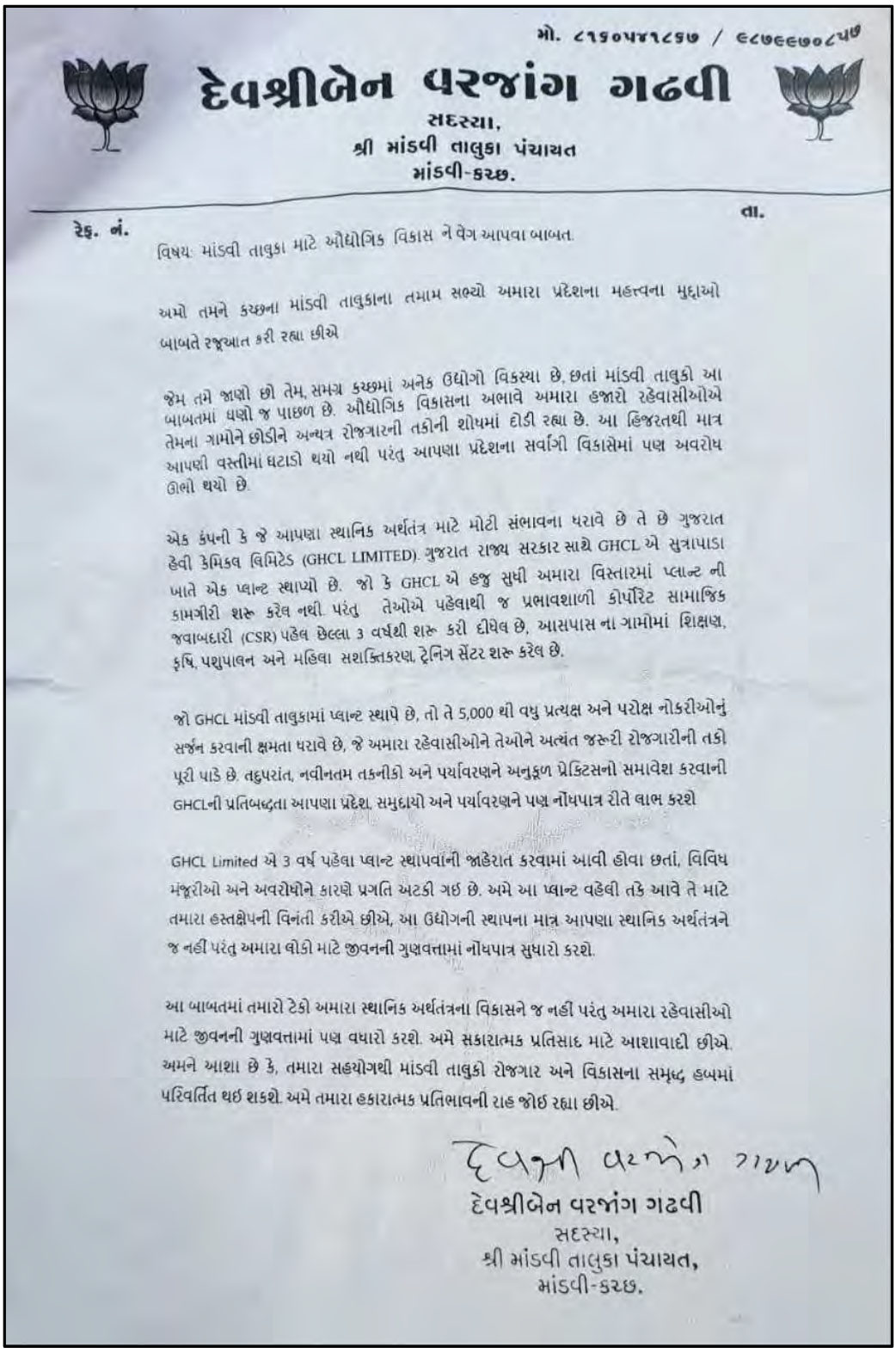
પુનશી આણારામ ગઢવી
સરપંચશ્રી
શ્રી પાંચોટીયા ગ્રામ પંચાયત
તા. માંડવી-કચ્છ.

સરપંચશ્રી
શ્રી વીરા ગ્રામ પંચાયત
તા. માંડવી-કચ્છ.

રજનીકુમાર પી. છોટુ
સરપંચશ્રી
પદમપુર
તા. માંડવી-કચ્છ.

પ્રેમીલાબેન નાનજી મહેશ્વરી
સરપંચશ્રી
શ્રી મોડકુબા ગ્રામ પંચાયત
તા. માંડવી-કચ્છ.

4) Devshriben Varjang Gadhvi



મો. ૮૧૬૦૫૪૧૮૬૭ / ૯૮૭૬૬૭૦૮૫૭

દેવશ્રીબેન વરજાંગ ગઢવી

સદસ્યા,
શ્રી માંડવી તાલુકા પંચાયત
માંડવી-કચ્છ.

રેફ. નં. તા.

વિષય: માંડવી તાલુકા માટે ઔદ્યોગિક વિકાસ ને વેગ આપવા બાબત.

અમો તમને કચ્છના માંડવી તાલુકાના તમામ સભ્યો અમારા પ્રદેશના મહત્ત્વના મુદ્દાઓ બાબતે રજૂઆત કરી રહ્યા છીએ

જેમ તમે જાણો છો તેમ, સમગ્ર કચ્છમાં અનેક ઉદ્યોગો વિકસ્યા છે, છતાં માંડવી તાલુકો આ બાબતમાં ઘણો જ પાછળ છે. ઔદ્યોગિક વિકાસના અભાવે અમારા હજારો રહેવાસીઓએ તેમના ગામોને છોડીને અન્યત્ર રોજગારની તકોની શોધમાં દોડી રહ્યા છે. આ હિજરતથી માત્ર આપણી વસ્તીમાં ઘટાડો થયો નથી પરંતુ આપણા પ્રદેશના સર્વાંગી વિકાસમાં પણ અવરોધ ઊભો થયો છે.

એક કંપની કે જે આપણા સ્થાનિક અર્થતંત્ર માટે મોટી સંભાવના ધરાવે છે તે છે ગુજરાત હેવી કેમિકલ લિમિટેડ (GHCL LIMITED). ગુજરાત રાજ્ય સરકાર સાથે GHCL એ સુત્રાપાડા ખાતે એક પ્લાન્ટ સ્થાપ્યો છે. જો કે GHCL એ હજુ સુધી અમારા વિસ્તારમાં પ્લાન્ટ ની કામગીરી શરૂ કરેલ નથી. પરંતુ તેઓએ પહેલાથી જ પ્રભાવશાળી કોર્પોરેટ સામાજિક જવાબદારી (CSR) પહેલ છેલ્લા 3 વર્ષથી શરૂ કરી દીધેલ છે, આસપાસ ના ગામોમાં શિક્ષણ, કૃષિ, પશુપાલન અને મહિલા સશક્તિકરણ ટ્રેનિંગ સેંટર શરૂ કરેલ છે.

જો GHCL માંડવી તાલુકામાં પ્લાન્ટ સ્થાપે છે, તો તે 5,000 થી વધુ પ્રત્યક્ષ અને પરોક્ષ નોકરીઓનું સર્જન કરવાની ક્ષમતા ધરાવે છે, જે અમારા રહેવાસીઓને તેઓને અત્યંત જરૂરી રોજગારીની તકો પૂરી પાડે છે. તદુપરાંત, નવીનતમ તકનીકો અને પર્યાવરણને અનુકૂળ પ્રેક્ટિસનો સમાવેશ કરવાની GHCLની પ્રતિબદ્ધતા આપણા પ્રદેશ, સમુદાયો અને પર્યાવરણને પણ નોંધપાત્ર રીતે લાભ કરશે

GHCL Limited એ 3 વર્ષ પહેલા પ્લાન્ટ સ્થાપવાની જાહેરાત કરવામાં આવી હોવા છતાં, વિવિધ મંજૂરીઓ અને અવરોધોને કારણે પ્રગતિ અટકી ગઇ છે. અમે આ પ્લાન્ટ વહેલી તકે આવે તે માટે તમારા હસ્તક્ષેપની વિનંતી કરીએ છીએ, આ ઉદ્યોગની સ્થાપના માત્ર આપણા સ્થાનિક અર્થતંત્રને જ નહીં પરંતુ અમારા લોકો માટે જીવનની ગુણવત્તામાં નોંધપાત્ર સુધારો કરશે.

આ બાબતમાં તમારો ટેકો અમારા સ્થાનિક અર્થતંત્રના વિકાસને જ નહીં પરંતુ અમારા રહેવાસીઓ માટે જીવનની ગુણવત્તામાં પણ વધારો કરશે. અમે સકારાત્મક પ્રતિસાદ માટે આશાવાદી છીએ. અમને આશા છે કે, તમારા સહયોગથી માંડવી તાલુકો રોજગાર અને વિકાસના સમૃદ્ધ હબમાં પરિવર્તિત થઇ શકશે. અમે તમારા હકારાત્મક પ્રતિભાવની રાહ જોઇ રહ્યા છીએ.

દેવશ્રીબેન વરજાંગ ગઢવી
સદસ્યા,
શ્રી માંડવી તાલુકા પંચાયત,
માંડવી-કચ્છ.

-TRUE COPY-

Mandvi Taluka Sarpanch Association

Mandvi-Kutch. 370475

(Secretary General: Punshi Manshi Gadvi (99139 28743)

Sarpanchshree Panchotia Gram Panchayat

Subject: Regarding promoting industrial development for Mandvi Taluka.

We are presenting this to you on behalf of all the Sarpanches of Mandvi Taluka in Kutch regarding the important issues of our region.

As you know, many industries have flourished in Kutch. However, Mandvi taluk is far behind in this regard. Lack of industrial development has forced thousands of our residents to leave their villages and seek employment opportunities elsewhere. This migration has not only reduced our population but also hindered the overall development of our region.

One company that holds great potential for our local economy is Gujarat Heavy Chemical Limited (GHCL LIMITED), GHCL with Gujarat State Government has set up a plant at Sutrapada. However, GHCL has not yet started plant operations in our area. But they have already launched impressive Corporate Social Responsibility (CSR) initiatives for the past 3 years. Education, agriculture, animal husbandry and women empowerment, training centers have been started in surrounding villages.

If GHCL sets up a plant in Mandvi taluka, it will create more than 5,000 direct and indirect jobs.

It has the potential to create jobs, which our residents desperately need.

Provides employment opportunities. Moreover, latest technologies and environment friendly.

GHCL’s commitment is to incorporate practices into our region for communities and environment.

Mandvi Taluka Sarpanch Association

Mandvi-Kutch. 370475

President: Jivraj Murjibhai Gadhvi (Mb. 97120 34347, 79846 35183)

Sarpanch Nani Undoth Gram Panchayat

Office: Kalyan Complex, Beside Seaview Hotel, Office No.1, Jain Dharamshala Road, Mandvi-Kutch.

Although GHCL Limited has announced to set up the plant 3 years ago, progress has stalled due to various clearances and hurdles. We request your intervention for early arrival of this plant. The establishment of this industry will not only improve our local economy but will significantly improve the quality of life for our people.

Your support in this matter will not only enhance the growth of our local economy but also enhance the quality of life for our residents. We are hopeful for a positive response. We hope, with your cooperation, Mandvi Taluk can be transformed into a thriving hub of employment and development. We are waiting for your positive response.

To Mr.

[illegible]

GHCL Ltd., the company which is going to come up has started CSR activities in the neighboring villages even before starting the project. For the last 2-3 years, this company has been providing free medical services regularly in every village around Dawara. For the last 2 years, fodder is provided for the cattle of all the neighboring villages. And in the future, in order not to create a deficit of fodder for cattle, cleaning of gauchar lands has helped to grow fodder and medical van for cattle has also been started. Various educational activities and trainings are organized from time to time. A framework of necessary facilities has been prepared in the village. Along with this, necessary facilities have been made for various societies. And apart from this, other good and necessary activities are done by the company. We appreciate all these activities of this company.

Even though the company is doing so well, some 2-4 people with their own selfish interests are hating this company. And we have been informed that these people are the office of your sir, in which we have given the name of our village and stated that the sarpanch of this village is with us. We and our village welcome the company and we the people want the company to establish itself here and provide employment to the people.

We reject the false representation made with this company and request not to entertain this false representation and wish the company to start soon.

Devshriben Varjang Gadhvi

Member, Sri Mandvi Taluka Panchayat

Mandvi - Kutch

Subject Matter to boost industrial development for Mandvi Taluka.

We are presenting to you all the members of Mandvi Taluka regarding the important issues of our region.

As you know many industrialists have flourished all over Kutch. However, Mandvi taluk is far behind in this regard. Lack of industrial development has forced thousands of our residents to leave their villages and run for employment opportunities elsewhere. This migration has not only reduced our population but also hindered the overall development of our region.

One company that holds great potential for our local economy is Gujarat Heavy Chemical Limited (GHCL LIMITED) GHCL has set up a plant at Sutrapada with Gujarat State Government. Although GHCL is yet to start plant operations in our area but they have already launched impressive Corporate Social Responsibility (CSR) initiatives for the past 3 years. Education, Agriculture, Animal Husbandry and Women Empowerment Training Centers have been started in surrounding villages.

If GHCL sets up a plant in Mandvi taluk. It has the potential to create more than 5,000 direct and indirect jobs, providing our residents with much-needed employment opportunities. Moreover, GHCL's commitment to incorporating the latest technologies and environment-friendly practices will also significantly benefit our region's communities and environment.

Although GHCL Limited was announced to set up the plant 3 years ago, progress has stalled due to various approvals and hurdles. We request your intervention to come up with this plant at the earliest, the establishment of this industry will not only

improve our local economy but also significantly improve the quality of life for our people.

Your support in this matter will not only enhance the growth of our local economy but also enhance the quality of life for our residents. We are hopeful for a positive response and we hope that with your support, Mandvi Taluk can be transformed into a thriving hub of employment and development. We are waiting for your positive response.

"सत्यमेव जयते" "वंदे मातरम्" "मारुं गाम स्वच्छ गाम"

શ્રી પદમપુર ગ્રામ પંચાયત

પદમપુર, તા. માંડવી-કચ્છ.

જાવક નં . તા. 14 / 10 /2022

પ્રતિ શ્રી

ગુજરાત પ્રદૂષણ નિયંત્રણ બોર્ડની કચેરી

ગાંધીનગર ગુજરાત

વિષય મે જી એચ સી એલ લિમિટેડ દ્વારા સૂચિત સોડા એસ ગ્રીનફિલ્ડ પ્રોજેક્ટ ને સત્વરે પર્યાવરણી મંજૂરી આપી કચ્છના ઔધોગિક વિકાસને વેગ આપવા અંગે

માન. સાહેબ શ્રી,

ઉપરોક્ત વિષય જય ભારત સહ જણાવવાનું કે કચ્છ જિલ્લાના બાડા ગામ ખાતે જીએચસીએલ થકી સમગ્ર કચ્છ જિલ્લો વિકાસની હરણફાળ ભરશે તેના કારણે આજે કચ્છ જિલ્લો તેમજ સમગ્ર પ્રદેશના હજારો લોકો રોજગારી મેળવશે ત્યારે જીએચસીએલ કંપની દ્વારા સ્થાપનારા સોડાએસ ગ્રીનફિલ્ડ પ્રોજેક્ટને આમો આવકારીએ છીએ અને આ નવા પ્રોજેક્ટને કચ્છમાં સ્થાપવા માટે જીએચસીએલ નો આભાર માનીએ છીએ અત્રે ઉલ્લેખનીય છે કે સુત્રાપાડા ગામમા જીએચસીએલ કંપની આવ્યા પહેલા જે પરિસ્થિતિ હતી અને આજે ઔધોગિક વિકાસના કારણે લોકોના જીવન ધોરણમા બદલાવ આવ્યો છે તેમજ લોકોનું જીવન ધોરણ પણ ઊચુ આવ્યું છે તેનું આકલન કરવામાં આવે તો આ કામ જીએચસીએલ જુથ થકી સંભવ બન્યું છે આજે દેશ અને દુનિયામા જીએચસીએલ જુથ થકી કચ્છનું નામ રોશન થશે ત્યારે ઔધોગિક વિસ્તારમા નવા પ્રકલ્પો સ્થાપાય તે સમસ્ત કચ્છ જિલ્લાના અને દેશ હિતમા છે તથા દેશને આત્મ નિર્ભર બનવા માટે પણ તેમનો સહયોગ રહેશે તેવું અમારુ માનવું છે સમગ્ર કચ્છના અને દેશ હિતમાં નવા કચ્છના અને દેશના હિતમા જીએચસીએલ ના નવા પ્લાન્ટને સત્વરે પરવાણીને મંજૂરી આપાય તેવી અમારી આગ્રહ ભરી વિનંતી છે

આ નવા પ્રોજેક્ટને અમારા ગામના ગ્રામજનોને રોજગારી તેમજ ખેતીવાડી પશુપાલન શિક્ષણ આરોગ્યને લગતી સેવાઓ પૂરી પાડશે તેમજ અમારા ગામમાં પાણી ઇન્ફ્રાસ્ટ્રક્ચર વિવિધ વિકાસના કામો કરશે તેમજ અમારા એસએજી ગ્રુપોને રોજગાર લક્ષી ટ્રેનિંગ આપી અને તેમને રોજગારી પૂરી પાડવામાં મદદરૂપ થશે તેવી અમોને આશા છે અમારા ગામના યુવાનોને રોજગારી આપશે તેમ જ પશુપાલન ની અંદર ચારો કે દવાઓ એ વિવિધ પ્રકારના કામો કરશે એવી અમોને આશા છે ઉપરોક્ત માગણીઓ લેખિતમાં અમોને આપવામા આવશે તો જ અમે જીએસએલ કંપનીને સ્વીકારીએ છીએ આવકાર્ય છે

અત્રે ઉલ્લેખનીય છે કે સુત્રાપાડા ગામમા જીએચસીએલ કંપની આવ્યા પહેલા જે પરિસ્થિતિ હતી અને આજે ઔધોગિક વિકાસના કારણે લોકોના જીવન ધોરણમા બદલાવ આવ્યો છે તેમજ લોકોનું જીવન ધોરણ પણ ઊચું આવ્યું છે તેનું આકલન કરવામાં આવે તો આ કામ જુથ થકી સંભવ બન્યું છે આજે દેશ અને દુનિયામાં જીએચસીએલ જુથ થકી કચ્છનું નામ રોશન થશે ત્યારે ઔધોગિક વિસ્તારમા નવા પ્રકલ્પો સ્થાપાય તે સમસ્ત કચ્છ જિલ્લાના અને દેશ હિતમા છે તથા દેશને આત્મ નિર્ભર બનવા માટે પણ તેમનો સહયોગ રહેશે તેવું અમારું માનવું છે સમગ્ર કચ્છના હિતમા અને દેશના હિતમાં જીએચસીએલ ના નવા પ્લાન્ટને સત્વરે પર્યાવરણીય મંજૂરી આપાય તેવી અમારી આગ્રહ ભરી વિનંતી છે

નકલ રવાના

૧.પ્રશાત શ્રી,કલેકટર સાહબે કલેકટર કચેરી,ભજ -કચ્છ,

૨.પ્રશાત શ્રી, પ્રાદેશિક અધિકારી સાહબે ,G.P.C.B ભજ -કચ્છ.

R.P. Dholu

રાકુમાર પી. ધોળુ

સરપંચશ્રી

પદમપુર

તા. માંડવી- કચ્છ.

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Shri Padampur Gram Panchayat

Padampur, Mandvi Taluka

14.10.2022

To

Office of Gujarat Pollution Control Board

Gandhinagar Gujarat

SUBJECT: Environmental Clearance for Soda Ash Greenfield Project proposed by GHCL Limited to accelerate industrial development of Kutch.

Dear Sir,

On the above subject, it is stated that through GHCL's project at Bada Village of Kutch District, the entire Kutch District will benefit from the development. Today thousands of people of Kutch District and the entire region will get employment, and so we welcome the Soda Ash Greenfield project established by GHCL company and thank GHCL for setting up this new project in Kutch. It is worth mentioning here that in Sutrapada village itself, if we consider the situation that existed before and after the company established its operations, today due to industrial development the standard of living of the people has changed and the standard of living of the people has also increased. In the interest of Kutch and the country, it is our urgent request that the new plant of GHCL be given permission for the new plant in the interest of Kutch and the country.

We hope that this new project will provide employment to the villagers of our village as well as contribute to agriculture, animal husbandry, education, health related services, water infrastructure, various development works in our village, and will provide employment oriented training and help in providing employment to the youth of our village. So, we welcome GHCL company.

It is worth mentioning here that the situation that existed before the arrival of GHCL company in Sutrapada village and today due to industrial development, the standard of living of the people has changed and the standard of living of the people has also increased. We believe that their cooperation will be there for the sake of Kutch as a whole and in the interest of the country.

Copied to:

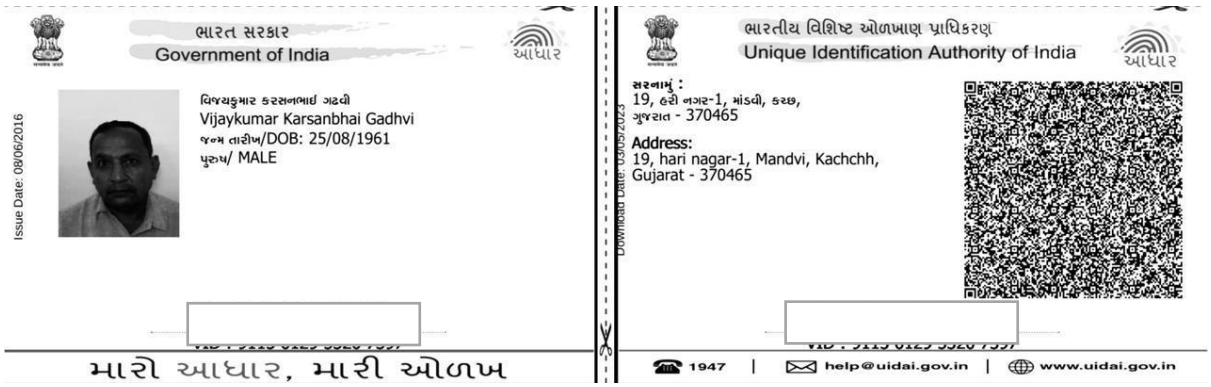
1. Collector, Collector Office, Kutch,

2. Regional Office, G.P.C.B -Kutch.

Shri Padampur Gram Panchayat (Mandvi)

Sarpanch

ANNEXURE R/50



-TRUE COPY-

2351

ANNEXURE R/51

Goods and Services Tax

Government of India, States and Union Territories

REGISTER LOGIN

Home › Search Taxpayer › Search by GSTIN/UIN

Search Taxpayer

• indicates mandatory fields

GSTIN/UIN of the Taxpayer •

Enter GSTIN/UIN of the Taxpayer

SEARCH

Search Result based on GSTIN/UIN : 27AADPG2634H1Z0

Legal Name of Business

BHARAT GANGJI GALA

Trade Name

MEENA BAZAR

Effective Date of registration

01/07/2017

Constitution of Business

Proprietorship

GSTIN / UIN Status

Top

2352 Active

Taxpayer Type ℹ

Composition

Administrative Office

(JURISDICTION - STATE)
State - Maharashtra
Zone - MUMBAI_NORTH_WEST
Division - SANTACRUZ
Charge - SANTACRUZ-EAST_701

Other Office

(JURISDICTION - CENTER)
State - CBIC
Zone - MUMBAI
Commissionerate - MUMBAI-CENTRAL
Division - DIVISION VI
Range - RANGE-I

Principal Place of Business

1ST FLOOR, 51/52/53, NAKSHTRA CINE SHOPPEE, RANADE ROAD, DADAR, Mumbai Suburban, Maharashtra, 400028

Whether Aadhaar Authenticated?

Yes

(On 28/01/2021)

Whether e-KYC Verified?

Not Applicable

Additional Trade Name

View

Nature Of Core Business Activity

Top

Trader - Retailer

Nature of Business Activities

1. Office / Sale Office2. Retail Business

Dealing In Goods and Services

Goods		Services	
HSN	Description	HSN	Description
61130000	GARMENTS, MADE UP OF KNITTED OR CROCHETED FABRICS OF HEADING 5903, 5906 OR 5907		

HSN: Harmonized System of Nomenclature of Goods and Services

SHOW FILING TABLE

SHOW RETURN FILING FREQUENCY

Financial Year •

2024-2025

SEARCH

Search Result based on GSTIN/UIN : 27AADPG2634H1Z0

Filing details for CMP08

Financial Year	Tax Period	Date of filing	Status
2024-2025	Oct-Dec	17/01/2025	Filed
2024-2025	Jul-Sep	17/10/2024	Filed
2024-2025	Apr-Jun	18/07/2024	Filed

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About GST

GST Council Structure

GST History

Website Policies

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Terms and Conditions

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Grievance Nodal Officers

Free Accounting and Billing Services

GST Suvidha Providers

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Help Desk Number:
1800-103-4786

Log/Track Your Issue:
Grievance Redressal Portal for GST

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Site Last Updated on 04-03-2025 Designed & Developed by GSTN

Site best viewed at 1024 x 768 resolution in Microsoft Edge, Google Chrome 49+, Firefox 45+ and Safari 6+

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FORM NO. DIR-12

[Pursuant to sections 7(1) (c), 168 & 170 (2) of The Companies Act, 2013 and rule 17 of the Companies (Incorporation) Rules 2014 and 8, 15 & 18 of the Companies (Appointment and Qualification of Directors) Rules, 2014]

सत्यमेव जयते

Particulars of appointment of directors and the key managerial personnel and the changes among them

Form Language (•) English ( ) Hindi

Refer the instruction kit for filing the form.

1. *This form is for ( ) New company (•) existing company
2. (a) * Corporate Identity Number (CIN) of company
   (b)Global location number (GLN) of company — Pre-fill
3. (a) Name of the company
   (b) Address of the registered office of the company
   (c) E-mail ID of the company
4. Number of Managing director or director(s) for which the form is being filed — 1
5. Details of the Managing Director, directors of the company

I Details of the Managing Director or Director of the company

i Director Identification Number (DIN) 02135056 Pre-fill

ii Name RAJESH GANGJI SAVLA

iii Father's name GANGJI KURPAR SAVLA

iv Present residential address
1502-Michael Enclave, P.K. Road,
Above Ratna Super Market, Mulund West
Mumbai Mumbai Suburban
Maharashtra
India
400080

v Nationality IN vi Date of birth 31/08/1965 vii Gender Male

viii (•) Appointment ( ) Cessation ( ) Change in designation

ix Designation

x Date of Appointment or change in designation (DD/MM/YYYY)

xi Category

xii Whether Chairman, Executive Director, Non-Executive Director

[ ] Chairman [ ] Executive director [ ] Non Executive Director

xiii DIN of such director to whom appointee is alternate Pre-fill

xiv Name of the director to whom such appointee is alternate

xv Name of the company or institution whose nominee the appointee is

xvi E-mail ID of director

xvii In case of cessation

Hereby confirmed that the above mentioned ( ) Director, ( ) Managing director xviii is not associated with the company with effect from (DD/MM/YYYY) xix due to

xx **Interest in other entities**

xxi Number of such entities

xxii *CIN/LLPIN/FCRN/Registration number Pre-fill

xxiii *Name

xxiv *Address

xxv **Nature of interest**

xxvi *Designation

xxvii Percentage of Shareholding xxviii Amount

xxix Others (specify)

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NATIONAL ACCREDITATION BOARD FOR EDUCATION & TRAINING

QUALITY COUNCIL OF INDIA

QCI Office, 2nd Floor, Institution of Engineers Building, BSZ Marg, New Delhi

Accreditation Scheme for EIA Consultant Organizations

Minutes of 73rd Accreditation Committee Meeting held on March 20, 2012 from

1330 to 1800 Hrs

Present

1. Prof. C. K. Varshney – Member
2. Mr. K. P. Nyati – Member
3. Dr. S. Devotta – Member
4. Prof. B. B. Dhar – Member

Leave of absence was granted to Dr. Prodipto Ghosh, Dr. B. Sengupta & Mr. Chandra Bhushan. In absence of Dr. Prodipto Ghosh, Prof. C. K. Varshney Chaired the meeting.

NABET was represented by:

Mr. A. K. Ghose- Principal Advisor, Dr. Hari Prakash- Joint Director, Mr. Abhay Sharma – Executive & Ms. Sakshi Bhargava.

The following were discussed/ decided:

1. The minutes of the 71th & 72nd Accreditation Committee Meeting held on February 21 & 28 2012, respectively, were considered and approved.

2. Guidelines

An expert proposed as an EIA Coordinator (EC) needs to score minimum 40% marks in sectoral knowledge as well as in overall marks.

An expert proposed as Functional Area Expert (FAE) needs to score minimum 40% marks in subject knowledge for respective FAs and also in overall marks.

3. Cases to be considered:

a. National Institute of Oceanography, Goa
b. National Institute of Ocean Technology, Chennai
c. Rightsource Industrial Solutions Pvt. Ltd., Hyderabad
d. Vison Labs, Hyderabad

4. Cases considered:

i. National Institute of Oceanography (NIO), Goa & National Institute of Ocean Technology (NIOT), Chennai

The applications of the above two organizations are not accepted for not having eligible experts for all 5 core functional areas.

However, these organizations are involved in providing specialized inputs to EIAs on marine aspects. NABET will identify relevant functional areas and criteria of evaluation for specialized agencies for providing inputs to EIAs in such aspects and notify on QCI website in the next 6 months.

The certification/ accreditation of such specialized agencies would be restricted to their area/s of specialization e.g. marine components of EIAs in this instance. Such specialized agencies after certification/ accreditation may provide inputs to marine related aspects of EIAs through the approved experts in relevant functional areas to any accredited EIA Consultant Organization for developing seamless EIAs addressing all aspects of EIAs including marine.

In the interim, the agencies involved in providing marine ecology related inputs to EIAs may allow their scientists/ professionals/EIA units to take up marine component of EIAs in association with any accredited EIA consultant organization.

ii. Rightsource Industrial Solutions Pvt. Ltd., Hyderabad

Clarifications to be sought on specific EIA related experience for Shri K. Sreeramulu. Final decision shall be taken on receipt of clarifications.

iii. Vison Labs, Hyderabad

<u>Overall assessment for the organization</u>- Since Vison Labs, Hyderabad has scored less than 60 % marks in Office Assessment, the organization has qualified for Accreditation as Cat. B Consultant only.

<u>EIA Coordinators</u>

Sl	Name	Sectors applied for	Sectors approved	Cat.	Remarks
In-house					
1	**A C Ram Reddy**	1	1	B	-
2	**Suresh Battu**	1 8 9 21	1 (open cast only) 9 21	B A* A*	Not recommended for sector 8 due to inadequate sectoral experience. *M/s Vision Labs can take up projects in this sector in Cat. A only when they are upgraded to Cat. A as an organization.

Sl	Name	Sectors applied for	Sectors approved	Cat.	Remarks
3	**K Jithender Reddy**	1 8 21 38	21 38	A* B	Not recommended for sector 1 & 8 due to inadequate knowledge in the sectors. *M/s Vision Labs can take up projects in this sector in Cat. A only when they are upgraded to Cat. A as an organization.
4	**Lakkireddy Chandra Sekhar Reddy**	4 8 9 17	4 8 (Ferro Alloys) 9	B A* B	Not recommended for sector 17 due to inadequate sectoral experience. *M/s Vision Labs can take up projects in this sector in Cat. A only when they are upgraded to Cat. A as an organization.

Functional Area Experts

Sl	Name	Functional Areas applied for	Functional Areas approved	Cat.	Remarks
In-house					
1	**A C Ram Reddy**	AP	None	-	Not recommended for AP due to inadequate knowledge in the FA.
2	**Suresh Battu**	AP AQ RH NV	AP AQ	A B	Not recommended for: - RH due to inadequate knowledge - NV due to inadequate experience.
3	**K Jithender Reddy**	AP AQ WP	AP	B	Not recommended for AQ & WP due to inadequate knowledge in the FAs.
4	**Lakkireddy Chandra Sekhar Reddy**	AQ SHW	None	-	Not recommended for any FA due to inadequate knowledge in the FAs.
5	**D Mohan Rao**	SE	SE	B	
6	**V Subba Reddy**	EB	None	-	Not recommended for EB due to inadequate knowledge in the FA.
7	**T laxmikant Reddy**	AP WP	None	-	Not recommended for any FA on qualification grounds.
Empanelled					
8	**S Parthasarathi**	GEO SC	None	-	Not recommended for: - GEO due to inadequate EIA related experience. - SC on qualification grounds.
9	**Murali Mohan**	LU	LU	A	-

The applicant organization is required to induct experts in under mentioned areas and the shortfall of the experts is to be made up at the earliest but not later than three months from the date of communication.

1. **For WP & SHW - In-house experts**
2. **For NV, EB, RH, HG, GEO & SC - In-house/empanelled experts**

Final accreditation is subject to the fulfillment of the above requirements.

The results on various aspects of assessment may be communicated to the AO.

5. Cases covering clarifications

i. Building Environment India Pvt. Ltd., Mumbai

Clarifications sought from Building Environment in 69th AC Meeting dated February 7, 2012 were received and considered.

Functional Area Expert

Sl	Name	Areas applied	Areas approved	Cat.	Remarks
Empanelled					
1	**Vivek Sadanand Kulkarni**	EB	-	-	The response to clarifications sought is still vague and not clear. Further clarifications to be sought on his employment status.

ii. AECOM India Private Limited, Gurgaon

Clarifications sought from AECOM in 68th AC Meeting dated January 31, 2012 were received and considered.

EIA Coordinator

Sl	Name	Sectors applied	Sectors approved	Cat.	Remarks
In- house					
1	**Ajay Kumar Pillai**	2 31	2 31	A B	-

iii. Environmental System Consultants & Ambiente Lab Solutions Pvt. Ltd., Chennai

Clarifications sought from Environment System Consultants & Ambiente Lab Solutions in 67th AC Meeting dated January 17, 2012 were received and considered.

EIA Coordinators

Sl	Name	Sectors applied	Sectors approved	Cat.	Remarks
In- house					
1	**G. Kalaiselvi**	1 9	-	-	Further clarifications to be sought on specific experience.
Empanelled					
2	**S. D. Badrinath**	9 33	-	-	Further clarifications to be sought on his employment status.

Functional Area Expert

Sl	Name	Areas applied	Areas approved	Cat.	Remarks
Empanelled					
1	**S. D. Badrinath**	AP WP NV SHW	-	-	Further clarifications to be sought on his employment status.

iv. Precitech Laboratories, Vapi

Clarifications sought from Precitech Laboratories in 66th AC Meeting dated January 10, 2012 were received and considered.

Further clarifications to be sought on the role as EIA Coordinator for the specified projects for **sector 19** for **Shri H.M. Bhatt** & **Shri Rujul H. Bhatt.**

The meeting ended with a vote of thanks to the Chair.

Vipin Sahni
Director
NABET

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ANNEXURE R/54

ADDENDANUM of EIA REPORT

FOR

"Greenfield Chemical Complex" of GHCL Ltd. (Light Soda Ash Plant of Capacity 3000 TPD, Dense Soda Ash 1500 TPD, Sodium Bicarbonate 600 TPD with Solid Fuel based Captive Co-generation Power Plant (120 MW capacity), Seawater Intake and Effluent Disposal System) Village Bada, Taluka Mandvi, District Kutch, Gujarat"

GHCL Limited,
GHCL House, Opp. Punjabi Samaj Seva Hall,
Navrangpura, Ahmedabad.

CATEGORY: 4 (e) and 1(d), 'A'

Baseline Monitoring Period [December 2022 to February 2023]
Baseline Study Carried By: T. R. Associates Laboratory
(NABL Certificate Number: TC-7896)

PREPARED BY:

T. R. ASSOCIATES
[NABET ACCREDITED EIA CONSULTANT]
A-401, S. G. Business Hub,
B/w sola Bhagwat & Gota Over Bridge,
Near Umiya Campus, S. G. Highway, Ahmedabad – 380060
E-MAIL: adm.trassociates@gmail.com
CONTACT NO.: 09825371099

NABET Accreditation No.: NABET/EIA/2326/RA 0293 valid up to April 8, 2026.

JANUARY, 2024

trassociates.in

A-401, S.G.Business Hub, Between Sola Bhagwat & Gota Over Bridge, Near Umiya Campus, S.G. Highway, Ahmedabad - 380060. Gujarat. | P : +91 98253 71099, +91 97241 49800 | E : adm.trassociates@gmail.com

OUR SERVICES : ENVIRONMENTAL CONSULTANT | ENVIRONMENTAL LABORATORY
EXPLOSIVE CONSULTANT | PROJECT CONSULTANT | CHARTERED ENGINEER

T. R. ASSOCIATES

UNDERTAKING

I, Mr. T. R. Patel, Proprietor of T. R. Associates, a QCI/NABET accredited consultant for Soda Ash Industry and Thermal Power Plant, here confirm that we have checked/verified the Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP) report for the "Greenfield Chemical Complex" of GHCL Ltd., at Bada, Kutch.

We have verified the EIA/EMP report, and prepared an addendum report describing our findings and observations. This report conveys our satisfaction with the data presented in the EIA/EMP report.

Furthermore, it is important to note that a fresh baseline study has been conducted by T. R. Associates Laboratory, a NABL accredited laboratory. This study was conducted during the winter season from December 2022 to February 2023. The results of this baseline study have been incorporated into the EIA Addendum report.

Date: 30.01.2024

Place: Ahmedabad

T. R. ASSOCIATES AHMEDABAD

Mr. T. R. Patel,

Proprietor,

T. R. Associates

PART A: DECLARATION BY ACO AND EXPERTS CONTRIBUTING TO THE ADDENDUM OF EIA REPORT

Declaration by experts contributing to the EIA study for proposed soda ash manufacturing plant at Village Bada, Taluka – Mandvi, District Kutch, Gujarat by **M/s. GHCL Limited.**

I, hereby certify that I was a part of the EIA team in the following capacity that developed the EIA report.

EIA sector number as per NABET	14 & 4	**Name of the sector**	Soda Ash Industry & Thermal power plants

EIA CO-ORDINATOR

Name:	**Mr. T. R. Patel**
Signature:	
Date:	30th January, 2024.
Period of Involvement:	**November, 2022 – January, 2024**
Contact information:	**M/s. T. R. Associates** A-401, S. G. Business Hub, B/w. Sola Bhagwat & Gota Over Bridge, Near Umiya Campus, S. G. Highway, Ahmedabad – 380060. Contact No.: 98253 71099 adm.trassociates@gmail.com

FUNCTIONAL AREA EXPERTS

Sr. No.	Function Area	Name of the FAEs	Involvement & Task	Signature
1	**AP** Air Pollution Monitoring, Prevention & Control	Mr. T. R. Patel	**Period of Involvement:** November, 2022 – January, 2024 **Tasks:** • Baseline monitoring visit; • Identification of impacts of the proposed project based on industrial activities and proposing mitigation measures; • Finalisation of EIA Addendum report.	30/1/24.
		Mrs. Hiral Shah	**Period of Involvement:** November, 2022 – January, 2024 **Tasks:** • Data Collection and identification of pollutants; • Baseline monitoring visit and noted filed observation; • Verification of ambient air quality results. • Preparation of EIA Addendum report.	Hiral Shah 30/1/24
2	**AQ** Meteorology, Air Quality Modeling & Prediction	Mr. T. R. Patel	**Period of Involvement:** November, 2022 – January, 2024 **Tasks:** • Verification of primary data received, for air quality modelling; • Finalization of EIA Addendum report; • Identification of impacts of the proposed project and suggesting mitigation measures.	30/1/24.
		Mrs. Hiral Shah	**Period of Involvement:** November, 2022 – January, 2024 **Tasks:** • Identify fuel characteristics, calculate proposed pollution load generation due to combustion of fuel; • Collection of primary and secondary meteorological data; • Air Quality Modeling for Point source and Line source; • Preparation of EIA Addendum report.	Hiral Shah 30/1/24

Sr. No.	Function Area	Name of the FAEs	Involvement & Task	Signature
			Period of Involvement:	
3	**WP** Water Pollution Monitoring, Prevention & Control	Mr. Malav Dalwadi	November, 2022 – January, 2024 **Tasks:** • Site visit; • Verification of analysis results; • Contributiuon in preparation of EIA Addendum; • Identification of impacts of the proposed project and suggestion for its mitigation measures.	30/1/24
		Mr. Darshit Dave	**Period of Involvement:** November, 2022 – January, 2024 **Tasks:** • Baseline monitoring visit and collected water samples & noted field observation and co-relate with baseline monitoriong results; • Perform ground truth verification of relevant ground water & surface water. • Onsite preservation of samples; • Onsite parameter measurement.	30/1/24
4	**SHW** Solid & Hazardous Waste Management	Mr. T. R. Patel	**Period of Involvement:** November, 2022 – January, 2024 **Tasks:** • Finalization of categorization of sources of non-hazardous & hazardous/solid waste from proposed project; • Finalization of quantification of hazardous waste generated from industrial activities; • Identification of impacts of the proposed project & suggestions for mitigation measures related to solid & hazardous waste management. • Finalization of action plan for fly ash & gypsum generation from desulphurisation plant.	30/1/24.

T. R. ASSOCIATES

Sr. No.	Function Area	Name of the FAEs	Involvement & Task	Signature
			Period of Involvement:	
	SHW (SW & HW)	Mrs. Hiral Shah	November, 2022 – January, 2024 **Tasks:** • Review of categorization of sources of non-hazardous & hazardous/solid waste from proposed project; • Verification of quantification of hazardous waste generated from industrial activities; • Preparetion of action plan for fly ash & gypsum generation from desulphurisation plant.	Hiral Shah 30-1-24.
5	**RH** Risk Assessment & Hazards Management	Mr. T. R. Patel	**Period of Involvement:** November, 2022 – January, 2024 **Tasks:** • Site visit; • Finalization of disaster management plan; • Verification of impacts of the proposed project and suggesting mtitgation measures; • Finalisation of RH report.	30/1/24.
		Mr. Darshit Dave	**Period of Involvement:** November, 2022 – January, 2024 **Tasks:** • Site visit with EIA coordinator, FAEs and relevant team members; • Analysis and Identification of impact of the proposed project from the manufacturing process and storage hazards. • Verification & review of RH report.	30/1/24
6	**SE** Socio-Economics	Mrs. Snehaben Patel	**Period of Involvement:** November, 2022 – January, 2024 **Tasks:** • Collection of secondary data; • Evaluation of socio economic status from primary data; • Assessment of the possible changes to socio-economic issues arising out of the project; • Identification of impacts of the proposed project on surrounding environment and suggesting mitigating measures; • Preparation of SE report.	Patel 30/1/24

Sr. No.	Function Area	Name of the FAEs	Involvement & Task	Signature
7	**SC** Soil Conservation	Dr. B. T. Patel	**Period of Involvement:** November, 2022 – January, 2024 **Tasks:** • Site and field visit for baseline monitoring; • Collection of soil samples; • Compilation of data; • Review & finalization of results for soil analysis; • Interpretation of results of soil analysis; • Identification of impacts of the proposed project on soil environment and suggestion of its mitigation measures.	30-01-2024
8	**N** Noise	Mr. Rajendra Gohil*	**Period of Involvement:** November, 2022 – January, 2024 **Tasks:** • Site and field visit for baseline monitoring; • Review & finalization of noise monitoring results; • Identification of impacts of the proposed project on surrounfing environment & suggestions for mitigation measures.	Rajendra Gohil 30/1/24
9	**HG** (Hydrology, Ground Water & Water Conservation) **&** **GEO** (Geology)	Mr. I. M. Patel	**Period of Involvement:** November, 2022 – January, 2024 **Tasks:** • Collection of secondary data; • Site visit; • Primary data collection; • Verification of secondary data during site visit; • ground water quality results; • Identification of impacts & mitigation measures; • Preparation of FAE report.	30/1/24.

Sr. No.	Function Area	Name of the FAEs	Involvement & Task	Signature
10	LU Land Use	Mr. Vishwas Patel	**Period of Involvement:** November, 2022 – January, 2024 **Tasks:** • Site visit; • Preparation and Finalization of landuse map of study area; • Preparation & finalization of landuse report.	30/1/24
11	EB Ecology and Biodiversity	Dr. Pankaj Joshi*	**Period of Involvement:** November, 2022 – January, 2024 **Tasks:** • Site visit; • Varification of primary data; • Identification and assessment of impacts of proposed activities of project on biological environment; • Preparation and finalization of EB report.	30/1/24

Note: * Empaneled Expert

Name of the EIA consultant organization: T. R. ASSOCIATES

NABET Certificate No.: NABET/EIA/2326/RA 0293 valid up to April 8, 2026.

CHAPTER – 3
DESCRIPTION OF ENVIRONMENT

3.1 INTRODUCTION

Baseline monitoring is required to evaluate prevailing environment to workout direct and indirect impacts on various components of environment (viz. water, air, noise, soil, socio) due to upcoming project and their interrelationships as per EIA Notification 2006. Based on the identified impacts required and adequate mitigation measures will be proposed in the project.

The objective of establishing baseline conditions is "To compile authentic and relevant information on the environmental components in the study area, which are likely to undergo change due to the proposed project-related activities in both short as well as long term and have potential of causing environmental impacts." This necessitates ensuring focus on capturing the information which is relevant, appropriate, authentic and credible.

Baseline data requirement is also necessary to identify environmentally significant issues as well as to enumerate the critical environmental change that is likely to occur due to the project activity. Here an attempt has been made to collect the information about an existing environment on the below mentioned six major environmental attributes:

1. Air Environment
2. Water Environment
3. Noise Environment
4. Land & Soil Environment
5. Biological Environment
6. Socio – Economic Environment

For baseline data collection, an effective methodology is important and impact prediction is important to develop an efficient environment management plan. For this aspect, it is very important to understand the ground realities of the site and surrounding by the Functional Area Experts.

Accordingly, a team of Functional Area Experts had visited the project site to understand the surrounding environment and possible impacts from the activities of the proposed plant. The EIA coordinators in consultation with the respective Functional Area Experts had selected the sampling locations as per the TORs prescribed by the EAC, New Delhi.

3.1.1 BASELINE STUDY PERIOD

The baseline monitoring was undertaken during **December 2022 to February 2023 (01-12-2022 to 22-02-2023)** by the members of T. R. Associates along with in-house NABL accredited laboratory and external NABL accredited laboratory. The collected data were analyzed and interpreted. The same is represented below under various sections. The photo of visit of all Functional area Expert, Team Member & Functional Area Associates as well as EIA Co-Ordinator at project site is shown under various sections of this chapter:

3.1.2 BASELINE STUDY AREA

To carry out Environment Baseline Monitoring and to generate baseline environmental data, study area of 10 km radial distance from project site has been selected. Base line data of ambient air quality, water quality, soil quality, noise, ecology as well as socio economic status were collected for study area of 10 km.

3.1.3 BASELINE STUDY METHODOLOGY

For the generation of baseline data, guidelines proposed by MoEF&CC as well as generic TORs issued by Expert Appraisal Committee (EAC) of MoEF&CC has been taken into consideration. Relevant secondary data available for different environmental components were collected and analyzed. Baseline planning has been described in **Table 3.1** in brief. Pre-Baseline Network design of 10 km study area is briefly described in **Annexure-1**.

Table 3.1 Brief Baseline Monitoring Planning

Sr. No.	Environmental Attribute	Description of Baseline Monitoring Planning
1	Air	**Monitoring Frequency**: 24 hourly twice a week throughout the study period for some parameters and once a month throughout the study period for others **No. of Locations:** 10 locations in core and buffer zone of the project site **Parameters:** PM_{10}, $PM_{2.5}$, SO_2, NO_x (24 hourly, twice a week) VOC (hourly & Once during Monitoring Period) NH_3 (24 hourly, twice a week & Once during Monitoring Period) O_3 (hourly, twice a week & as per NAAQS) CO, As, Ni, Pb, Benzo alpha Pyrene, Benzene (once a month)
	Meteorology	**Monitoring Frequency**: On hourly basis for entire study period **Parameters:** Temperature, Relative humidity, Wind direction, Wind speed, Precipitation
2	Water	**Surface Water Monitoring** **Monitoring Frequency**: Once during Monitoring Period **Type of sampling**: Grab sampling **No. of Locations**: 8 locations in core and buffer zone of the project site **Parameters**: As per CPCB guidelines
		Ground Water Monitoring **Monitoring Frequency**: Once during Monitoring Period **Type of sampling**: Grab sampling **No. of Locations**: 11 locations in core and buffer zone of the project site **Parameters**: As per CPCB guidelines
3	Noise	**Noise Monitoring Frequency**: Day & Night Time monitoring; **No. of Locations**: 10 locations within core zone of study area **Traffic Monitoring Frequency:** **Monitoring Frequency:** Once in a season Morning (10 AM to 14 PM),

3.4 WATER ENVIRONMENT

Studies on Water Environment aspects of ecosystem is integral for Environmental Impact Assessment to identify sensitive issues and take appropriate action by maintaining balance of the organisms in an ecosystem in the early stages of development of the project. The objective of this report is to define the present environment in which the proposed plant will operate, to evaluate all possible events, to ensure that all negative impacts are minimized, and to demonstrate that proposed project has been appropriately announced to all interested parties so that their concerns can be considered.

Water quality studies have been carried out in the study area to understand the availability of water resources, possibility of water contamination and existing water quality.

3.4.1 WATER QUALITY

Water of high quality is essential to human life as well as for flora & fauna and water of acceptable quality is essential for drinking, agricultural, industrial, domestic and commercial uses; in addition, most recreation is water based; therefore, major activities having potential effects on surface water are certain to be of appreciable concern to the consumers.

3.4.1.1 SAMPLE COLLECTION AND ANALYSIS

The water resources in the study area may be classified into two major categories like Surface water and Ground water.

Water samples were collected at 19 different locations, out of which 8 samples were selected from surface water sources and 11 samples selected from ground water sources for physico-chemical and biological parameters. Parameters like pH, Odour, Temperature, TDS and DO were analyzed at the time of sampling. TDS & DO were also analyzed in laboratory. For other Parameter analysis the samples were preserved as per the recommended techniques for various Elemental determinations as per `IS: 3025 (part I) 1987'. Preservation chart for the different parameters is given in **Table 3.13**. These parameters were analyzed as per the procedures specified in 'Standard Methods for Examination of Water and Wastewater' Published by American Public Health Association (APHA) / IS 3025. Ground water & Surface water samples results were compared with IS: 10500 specifications.

Method of Water Sampling, Collection, Preservation

The following procedures were followed while sampling:

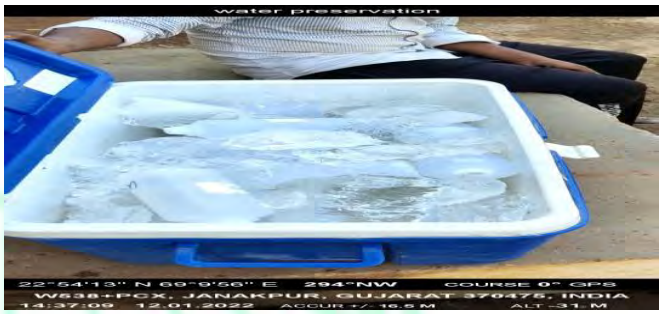
- Washing the bottles/cans with distilled water prior to the sampling.
- Before collection of water the bottles/cans are again washed 2-3 times with the same water.
- For surface water, bottles were lowered to a minimum depth of 30 cm below water surface.
- At each point different sets of water samples were collected so as cover all the parameters.
- Proper attention is taken in proper numbering at the site.
- Sterilized bottles were used for the samples that are to be analysed for bacteria.
- Civil supply water pipeline taps are sterilized before collection for bacteriological analysis
- Parameters like pH, Odour, Temperature and TDS were analysed in the field conditions and the results were reconfirmed after getting to the laboratory. DO is fixed in the field itself. Appropriate

preservatives are added, depending upon the elements to be analysed and marked accordingly (IS: 3025 (part I) 1987). Preservation chart for the different parameters is given in **Table 3.13.**

- All the water samples collected in the ice box, were immediately transported to the laboratory and freeze at < 4°C for analysis
- Field observations were noted in the field notebook
- As far as possible photographs were taken in almost all sampling points. Sampling & analysis of all the parameters are as per APHA, 22nd Edition & IS: 3025.



Sample preservation



Sample preservation

Figure 3.8 Photographic proof of sample preservation

Table 3.13 Preservation chart for different parameters

Sr. No.	Parameters
A. SAMPLE PRESERVATION: **ONSITE ANALYSIS**	
1.	Odor
2.	Temperature
3.	pH
B. SAMPLE PRESERVATION: **COOL, 4°C**	
1.	Acidity
2.	Alkalinity
3.	Bicarbonate
4.	Carbonate
5.	Chloride
6.	Chlorine Demand
7.	Chlorine Residual
8.	Chromium Hexavalent
9.	Chromium Total
10.	Color
11.	Conductivity
12.	Dissolved Oxygen
13.	Fluoride
14.	Nitrate-Nitrogen
15.	Nitrite-Nitrogen
16.	Phosphate (ortho)
17.	Settleable Solids
18.	Silica

19.	Solids (dissolved)
20.	Solids (fixed) each
21.	Solids (volatile) each
22.	Sulfate
23.	Sulfites
24.	Suspended Solids
25.	Total Solids
26.	Turbidity
C. SAMPLE PRESERVATION: **HNO_3, pH <2**	
1.	Aluminum
2.	Boron
3.	Calcium (Titrimetric)
4.	Copper
5.	Hardness (calcium)
6.	Hardness (total)
7.	Iron
8.	Magnesium
9.	Manganese
10.	Nickel
11.	Sodium
12.	Potassium
13.	Sodium Absorption Ratio (SAR)
D. SAMPLE PRESERVATION: **H_2SO_4 PH<2, COOL 4°C**	
1.	Ammonical Nitrogen
2.	Chemical Oxygen Demand (COD)
3.	Oil & Grease
4.	Phosphate (total)
E. SAMPLE PRESERVATION: **FIX ON SITE AND STORE IN DARK (2 ml $MnSO_4$ + 2 ml ALKALI AZIDE + 2 ml H_2SO_4)**	
1.	Dissolved Oxygen (Winkler)
2.	Biochemical Oxygen Demand (BOD)
F. SAMPLE PRESERVATION: **NaOH pH > 11**	
1.	Phenol
G. SAMPLE PRESERVATION: **ZINK ACETATE + NaOH pH > 9, COOL 4°C**	
1.	Sulfide

Table 3.14 Ground Water Monitoring Locations

Sr. No.	Location	Distance from project site (km)	Direction	Latitude & Longitude	Taluka	District	Site Observation
1.	Bhada	5.51	SE	22°51'14.6"N 69°12'8.7"E	Mandvi	Kutch	Water used for domestic purpose.
2.	Panchotiya	3.06	SE	22°51'50.4"N s69°10'49.9"E	Mandvi	Kutch	Open well was at the bank of pond. Water used for domestic purpose.
3.	Bada	0.78	NNW	22°54'2.8"N 69°08'33.5"E	Mandvi	Kutch	Water used for domestic purpose. Depth – 100 ft. Dia- 5 mts. Single phase motor.
4.	Bhinsara	2.45	East	22°53'22.1"N 69°11'22.5"E	Mandvi	Kutch	Waste debris, frogs observed in the well. Water level was at 20 ft. In the open well, water mixed with pond water due to monsoon activity.
5.	Mota Layja -1	5.59	East	22°53'39.6"N 69°13'14.2"E	Mandvi	Kutch	Pond water is directly penetrating into the open well. Well is surrounded by the pond.
6.	Mota Layja -2	4.16	NE	22°55'34"N 69°11'19.5"E	Mandvi	Kutch	Some debris along with frog, fishes and small insects observed in the well. Borewell constructed in open well.
7.	Bayath	5.31	NNE	22°56'28.2"N 69°10'47.4"E	Mandvi	Kutch	Water is used for the domestic purpose.
8.	Bambhadai	6.86	NW	22°56'11.2"N 69°05'27.6"E	Mandvi	Kutch	Water used for domestic purpose. Dug well near pond. Depth – 40 ft.
9.	Nana Layja	6.62	ESE	22°52'9.6"N 69°13'22.8"E	Mandvi	Kutch	Water used for domestic and agriculture purpose.
10.	Padampur	6.61	NNE	22°57'16.1"N 69°10'43.9"E	Mandvi	Kutch	Sample taken from open well. Water used for domestic and agriculture purpose.
11.	Dedhiya	8.12	NNW	22°58'11.1"N 69°08'25"E	Mandvi	Kutch	Water used for drinking and domestic purpose after treatment. Depth – 100 ft. Dia - 200 mm. Single phase motor. Phreatic water level – 70 ft.



Location: Nana Layja
Latitude: 22°52'4"N, Longitude: 69°13'24"E



Location: Bhada
Latitude: 22°51'14"N, Longitude: 69°12'8"E



Location: Panchotiya
Latitude: 22°51'49"N, Longitude: 69°10'49"E



Location: Bhinsara
Latitude: 22°53'46"N, Longitude: 69°11'22"E



Location: Bayath
Latitude: 22°56'25"N Longitude: 69°10'46"E



Location: Padampur
Latitude: 22°57'26"N, Longitude: 69°10'39"E



Location: Mota Layja-1
Latitude: 22°53'39"N, Longitude: 69°13'13"E



Location: Mota Layja-2
Latitude: 22°55'34"N, Longitude: 69°11'19"E



Location: Dedhiya
Latitude: 22°58'58"N, Longitude: 69°7'40"E

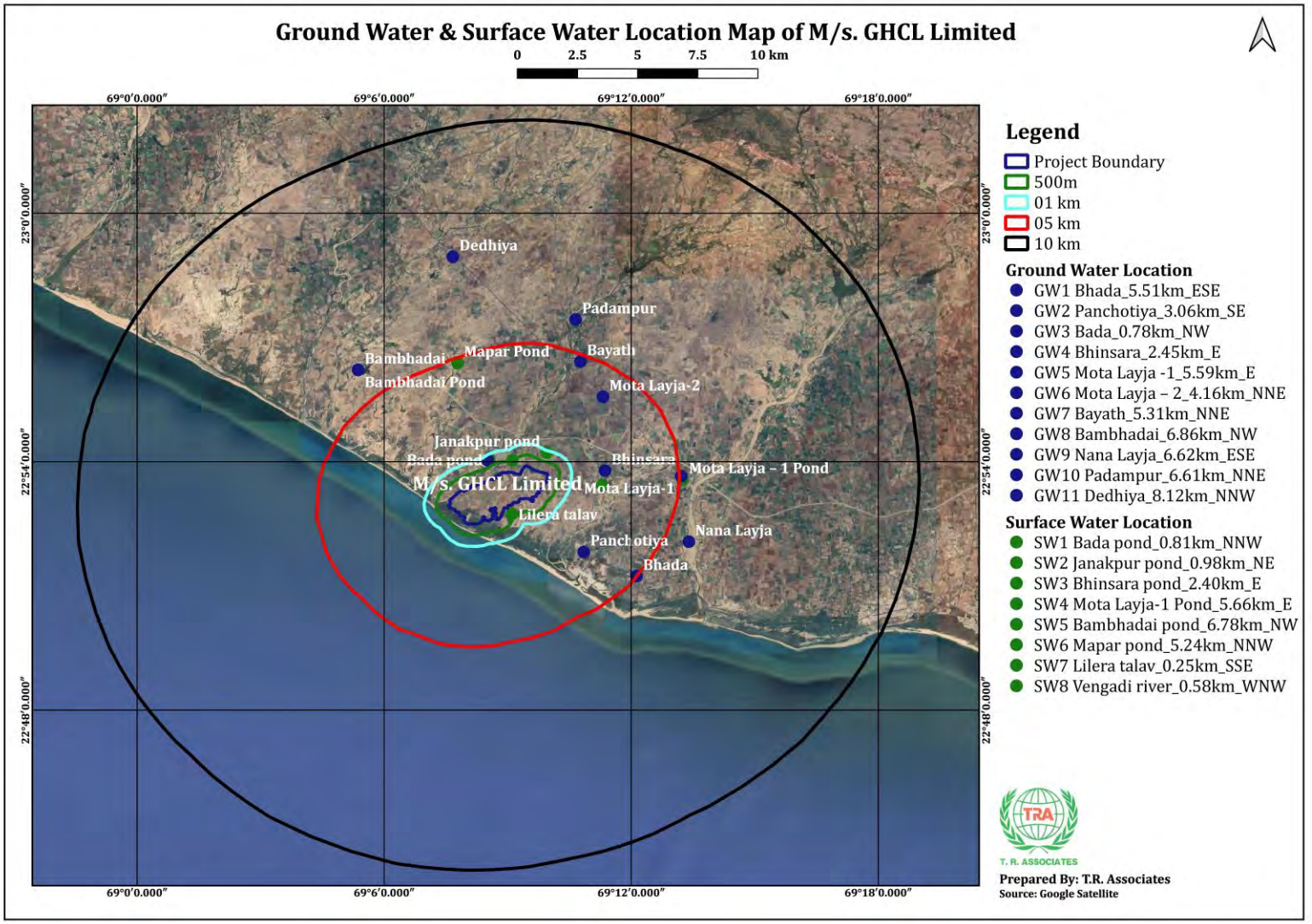


Location: Bada
Latitude: 22°54'3"N, Longitude: 69°8'33"E



Location: Bambhadai
Latitude: 22°56'13"N, Longitude: 69°5'22"E

Figure 3.7 Photograph showing Ground Water Sample Collection



Source: Satellite Image (Google Earth)

Figure 3.8 Map showing Ground Water and surface water Monitoring Locations

Table 3.15 Surface Water Monitoring Locations

Sr. No.	Location	Distance from project site (km)	Direction	Latitude & Longitude	Taluka	District	Observation
1.	Bada Pond	0.81	NNW	22°54'4"N 69°8'33.3"E	Mandvi	Kutch	Animal bathing observed. Washing activity also observed & water used for domestic purpose.
2.	Janakpur Pond	0.98	NE	22°54'13.8"N 69°09'57.3"E	Mandvi	Kutch	Religious debris observed. Water is used for Domestic purpose.
3.	Bhinsara Pond	2.40	E	22°53'24.6"N 69°11'20.9"E	Mandvi	Kutch	Slide turbidity observed in water due to suspended particles of soil. Biota and green vegetation observed.
4.	Mota Layja – 1 pond	5.66	E	22°53'34.8"N 69°13'15.4"E	Mandvi	Kutch	Waterbody was full of water. Biota observed around the pond. Religious waste observed.
5.	Bambhadai Pond	6.78	NW	22°56'12"N 70°28'28.42"E	Mandvi	Kutch	Use for domestic activity. Animal bathing and biota observed.
6.	Mapar Pond	5.24	NNW	22°56'23.2"N 69°07'47"E	Mandvi	Kutch	Biota observed. Animal bathing observed.
7.	Lilera Talav	0.25 km	SSE	22°52'44.00"N 69° 9'6.00"E	Mandvi	Kutch	Biota observed. Animal drinking and bathing observed.
8.	Vengadi River	0.58 km	WNW	22°54'2.00"N 69° 9'7.00"E	Mandvi	Kutch	Vengadi river is seasonal river and stagnant water observed. Biota observed all over area. Also, small fish observed.

<table>
<tr><td> 
</td><td> 
</td></tr>
<tr><td>Location: Bhinsara Pond
Latitude: 22°53'26"N, Longitude: 69°11'18"E</td><td>Location: Mota Layja Pond
Latitude: 22°53'34"N, Longitude: 69°13'15"E</td></tr>
<tr><td> 
</td><td> 
</td></tr>
<tr><td>Location: Bhambhdai Pond
Latitude: 22°56'13"N, Longitude: 69°5'22"E</td><td>Location: Lilera Talav
Latitude: 22°52'44"N, Longitude: 69°9'6"E</td></tr>
<tr><td> 
</td><td> 
</td></tr>
<tr><td>Location: Janakpur pond
Latitude: 22°54'13"N, Longitude: 69°9'57"E</td><td>Location: Bada Pond
Latitude: 22°54'4"N, Longitude: 69°8'33"E</td></tr>
<tr><td> 
</td><td> 
</td></tr>
<tr><td>Location: Mapar Pond
Latitude: 22°56'23"N, Longitude: 69°7'47"E</td><td>Location: Vengadi River
Latitude: 22°54'2"N, Longitude: 69°9'7"E</td></tr>
</table>

Figure 3.9 Photograph showing Surface Water Sample Collection

3.4.1.2 DATA ANALYSIS

The physiochemical and biological analysis of the collected sample results are given in **Table 3.16 & 3.17**

Table 3.16 Water Quality - Physico-chemical Analysis of Ground Water

Sr. No.	Parameters	Nana Layja	Bhada	Panchotiya	Bhinsara	Bayath	Padampur	Mota layja-1	Mota Layja-2	Bambhadai	Bada	Dedhiya	Acceptable Limit	Permissible Limit
1	pH	7.64	7.72	7.67	7.46	7.97	7.72	8.09	7.88	8.22	7.85	7.95	6.5-8.5	No Relaxation
2	Temp(°C)	25.5	25.2	26.0	24.0	25.7	27.2	26.7	25.8	26.1	27.1	27.2	--	--
3	Color(cu)	B.D.L (DL=5)	B.D.L (DL=5)	B.D.L (DL=5)	B.D.L (DL=5)	B.D.L (DL=5)	B.D.L (DL=5)	B.D.L (DL=5)	B.D.L (DL=5)	5	B.D.L (DL=5)	B.D.L (DL=5)	5	15
4	Odour	Aggreable	Aggreable	Aggreable	Agreeable	Aggreable	Aggreable	Aggreable	Aggreable	Aggreable	Aggreable	Aggreable	Agreeable	Agreeable
5	EC (µS)	2082	1476	1947	6529	906	4188	1047	2753	288	5659	1576	--	--
6	DO (mg/L)	3.8	3.7	4.3	4.4	4.0	4.2	4.5	4.6	3.3	4.7	3.9		
7	Turbidity (NTU)	0.18	0.15	0.17	0.11	0.12	0.16	0.14	0.13	0.28	0.21	0.20	1	5
8	Ammonical Nitrogen(mg/L)	B.D.L (DL=5)	B.D.L (DL=5)	B.D.L (DL=5)	B.D.L (DL=5)	B.D.L (DL=5)	B.D.L (DL=5)	B.D.L (DL=5)	B.D.L(DL=5)	B.D.L(DL=5)	B.D.L (DL=5)	B.D.L (DL=5)	--	--
9	Chloride as Cl (mg/L)	292.0	271.8	206.4	785.3	201.4	629.2	166.1	266.8	65.4	1026.9	276.9	250	1000
10	Total Hardness as $CaCO_3$ (mg/L)	520.0	380.0	410.0	1500.0	310.0	940.0	244.4	420.0	77.8	1611.1	455.6	200	600

Sr. No.	Parameters	Nana Layja	Bhada	Panchotiya	Bhinsara	Bayath	Padampur	Mota layja-1	Mota Layja-2	Bambhadai	Bada	Dedhiya	Acceptable Limit	Permissible Limit
11	**Ca Hardness (mg/L)**	250.0	120.0	180.0	728.6	110.0	420.0	77.8	200.0	22.2	800.0	244.4	--	--
12	**Mg Hardness (mg/L)**	270.0	260.0	230.0	771.4	200.0	520.0	166.7	220.0	55.6	811.1	211.1	--	--
13	**Calcium as Ca(mg/L)**	100.2	48.1	72.1	292.0	44.1	168.3	31.2	80.2	8.9	320.6	98.0	75	200
14	**Magnesium as Mg (mg/L)**	65.6	63.2	55.9	187.5	48.6	126.4	40.5	53.5	13.5	197.1	51.3	30	100
15	**Carbonate (mg/L)**	B.D.L (DL=5)	B.D.L(DL=5)	B.D.L(DL=5)	B.D.L(DL=5)	B.D.L(DL=5)	B.D.L(DL=5)	B.D.L(DL=5)	B.D.L(DL=5)	B.D.L(DL=5)	B.D.L(DL=5)	B.D.L(DL=5)	--	--
16	**Bicarbonate (mg/L)**	180	110	150	225	60	53	44	84	8	300	40	--	--
17	**Nitrate as NO_3(mg/L)**	1.11	1.70	2.55	5.17	3.91	6.81	4.55	4.25	1.40	5.12	4.48	45	No Relaxation
18	**Fluoride as F (mg/L)**	B.D.L(DL=0.2)	1.33	B.D.L(DL=0.2)	B.D.L(DL=0.2)	0.94	B.D.L(DL=0.2)	B.D.L(DL=0.2)	B.D.L(DL=0.2)	B.D.L(DL=0.2)	B.D.L(DL=0.2)	B.D.L(DL=0.2)	1	1.5
19	**Chromium(mg/L)**	B.D.L(DL=1)	B.D.L(DL=1)	B.D.L(DL=1)	B.D.L(DL=1)	B.D.L(DL=1)	B.D.L(DL=1)	B.D.L(DL=1)	B.D.L(DL=1)	B.D.L(DL=1)	B.D.L(DL=1)	B.D.L(DL=1)	--	--
20	**Copper (mg/L)**	B.D.L(DL=0.5)	B.D.L(DL=0.5)	B.D.L(DL=0.5)	B.D.L(DL=0.5)	B.D.L(DL=0.5)	B.D.L(DL=0.5)	B.D.L(DL=0.5)	B.D.L(DL=0.5)	B.D.L(DL=0.5)	B.D.L(DL=0.5)	B.D.L(DL=0.5)	0.05	1.5

Sr. No.	Parameters	Nana Layja	Bhada	Panchotiya	Bhinsara	Bayath	Padampur	Mota layja-1	Mota Layja-2	Bambhadai	Bada	Dedhiya	Acceptable Limit	Permissible Limit
21	**Nickel (mg/L)**	B.D.L(DL=0.5)	B.D.L(DL=0.5)	B.D.L(DL=0.5)	B.D.L(DL=0.5)	B.D.L(DL=0.5)	B.D.L(DL=0.5)	B.D.L(DL=0.5)	B.D.L(DL=0.5)	B.D.L(DL=0.5)	B.D.L(DL=0.5)	B.D.L(DL=0.5)	--	--
22	**Iron (mg/L)**	1.50	B.D.L(DL=0.2)	B.D.L(DL=0.2)	1.31	B.D.L(DL=0.2)	1.08	B.D.L(DL=0.2)	B.D.L(DL=0.2)	0.25	0.28	B.D.L(DL=0.2)	0.3	No Relaxation
23	**Manganese (mg/L)**	0.12	0.13	B.D.L(DL=0.02)	0.22	B.D.L(DL=0.02)	0.12	B.D.L(DL=0.02)	B.D.L(DL=0.02)	0.29	0.14	B.D.L(DL=0.02)	0.1	0.3
24	**Sodium as Na (mg/L)**	104	85	81	91	45	50	47	56	17	90	61	--	--
25	**Potassium as K(mg/L)**	56	43	42	60	12	26	28	32	6	37	20	--	--
26	**Boron as B (mg/L)**	B.D.L(DL=1)	B.D.L(DL=1)	B.D.L(DL=1)	B.D.L(DL=1)	B.D.L(DL=1)	B.D.L(DL=1)	B.D.L(DL=1)	B.D.L(DL=1)	B.D.L(DL=1)	B.D.L(DL=1)	B.D.L(DL=1)	0.5	2.4
27	**Phenol (mg/L)**	B.D.L(DL=0.01)	B.D.L(DL=0.01)	B.D.L(DL=0.01)	B.D.L(DL=0.01)	B.D.L(DL=0.01)	B.D.L(DL=0.01)	B.D.L(DL=0.01)	B.D.L(DL=0.01)	B.D.L(DL=0.01)	B.D.L(DL=0.01)	B.D.L(DL=0.01)	--	--
28	**Phosphate as PO_4^{-3} (mg/L)**	B.D.L(DL=1)	B.D.L(DL=1)	B.D.L(DL=1)	B.D.L(DL=1)	B.D.L(DL=1)	B.D.L(DL=1)	B.D.L(DL=1)	B.D.L(DL=1)	B.D.L(DL=1)	B.D.L(DL=1)	B.D.L(DL=1)	--	--
29	**Phosphorus as P(mg/L)**	B.D.L(DL=1)	B.D.L(DL=1)	B.D.L(DL=1)	B.D.L(DL=1)	B.D.L(DL=1)	B.D.L(DL=1)	B.D.L(DL=1)	B.D.L(DL=1)	B.D.L(DL=1)	B.D.L(DL=1)	B.D.L(DL=1)	--	--
30	**Sulphate as SO_4 (mg/L)**	169	81	141	419	83	284	73	97	12	198	147	200	400

Sr. No.	Parameters	Nana Layja	Bhada	Panchotiya	Bhinsara	Bayath	Padampur	Mota layja-1	Mota Layja-2	Bambhadai	Bada	Dedhiya	Acceptable Limit	Permissible Limit
31	**Nitrite as NO_2 (mg/L)**	B.D.L(DL=0.01)	B.D.L(DL=0.01)	B.D.L(DL=0.01)	B.D.L(DL=0.01)	B.D.L(DL=0.01)	B.D.L(DL=0.01)	B.D.L(DL=0.01)	B.D.L(DL=0.01)	B.D.L(DL=0.01)	B.D.L(DL=0.01)	B.D.L(DL=0.01)	--	--
32	**TDS (mg/L)**	1416	1004	1324	4440	616	2848	712	1872	196	3848	1072	500	2000
33	**TSS (mg/L)**	48	60	44	84	40	61	32	52	16	80	24	--	--
34	**TS (mg/L)**	1464	1064	1368	4524	656	2908	744	1924	212	3928	1096	--	--
35	**Oil & grease (mg/L)**	B.D.L (DL=5)	B.D.L (DL=5)	B.D.L (DL=5)	B.D.L (DL=5)	B.D.L (DL=5)	B.D.L (DL=5)	B.D.L (DL=5)	B.D.L (DL=5)	B.D.L (DL=5)	B.D.L (DL=5)	B.D.L (DL=5)	--	--
36	**Fecal coliform per 100 ml (MPN)**	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	--	--
37	**Total coliform bacteria per 100 ml (MPN)**	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	--	--
38	**Arsenic as As (mg/L)**	BQL (QL= 0.005)	BQL (QL= 0.005)	BQL (QL= 0.005)	BQL (QL= 0.005)	BQL (QL= 0.005)	BQL (QL= 0.005)	BQL (QL= 0.005)	BQL (QL= 0.005)	BQL (QL= 0.005)	BQL (QL= 0.005)	BQL (QL= 0.005)	0.01	No relaxation
39	**Cadmium as Cd (mg/L)**	BQL (QL= 0.002)	BQL (QL= 0.002)	BQL (QL= 0.002)	BQL (QL= 0.002)	BQL (QL= 0.002)	BQL (QL= 0.002)	BQL (QL= 0.002)	BQL (QL= 0.002)	BQL (QL= 0.002)	BQL (QL= 0.002)	BQL (QL= 0.002)	0.003	No relaxation
40	**Cobalt as Co (mg/L)**	BQL (QL=	BQL (QL=	BQL (QL=	BQL (QL=	BQL (QL=	BQL (QL= 0.02)	BQL (QL= 0.02)	BQL (QL= 0.02)	BQL (QL= 0.02)	BQL (QL=	BQL (QL=	--	--

Sr. No.	Parameters	Nana Layja	Bhada	Panchotiya	Bhinsara	Bayath	Padampur	Mota layja-1	Mota Layja-2	Bambhadai	Bada	Dedhiya	Acceptable Limit	Permissible Limit
		0.02)	0.02)	0.02)	0.02)	0.02)					0.02)	0.02)		
41	**Lead as Pb (mg/L)**	BQL (QL= 0.005)	BQL (QL= 0.005)	BQL (QL= 0.005)	BQL (QL= 0.005)	BQL (QL= 0.005)	BQL (QL= 0.005)	BQL (QL= 0.005)	BQL (QL= 0.005)	BQL (QL= 0.005)	BQL (QL= 0.005)	BQL (QL= 0.005)	0.01	No relaxation
42	**Mercury as Hg (mg/L)**	BQL (QL= 0.0005)	BQL (QL= 0.0005)	BQL (QL= 0.0005)	BQL (QL= 0.0005)	BQL (QL= 0.0005)	BQL (QL= 0.0005)	BQL (QL= 0.0005)	BQL (QL= 0.0005)	BQL (QL= 0.0005)	BQL (QL= 0.0005)	BQL (QL= 0.0005)	0.001	No relaxation
43	**Molybdenum as Mo (mg/L)**	BQL (QL= 0.01)	BQL (QL= 0.01)	BQL (QL= 0.01)	BQL (QL= 0.01)	BQL (QL= 0.01)	BQL (QL= 0.01)	BQL (QL= 0.01)	BQL (QL= 0.01)	BQL (QL= 0.01)	BQL (QL= 0.01)	BQL (QL= 0.01)	--	--
44	**Selenium as Se (mg/L)**	BQL (QL= 0.005)	BQL (QL= 0.005)	BQL (QL= 0.005)	BQL (QL= 0.005)	BQL (QL= 0.005)	BQL (QL= 0.005)	BQL (QL= 0.005)	BQL (QL= 0.005)	BQL (QL= 0.005)	BQL (QL= 0.005)	BQL (QL= 0.005)	0.01	No relaxation
45	**Zinc as Zn (mg/L)**	BQL (QL= 0.02)	BQL (QL= 0.02)	BQL (QL= 0.02)	BQL (QL= 0.02)	BQL (QL= 0.02)	BQL (QL= 0.02)	BQL (QL= 0.02)	BQL (QL= 0.02)	BQL (QL= 0.02)	BQL (QL= 0.02)	BQL (QL= 0.02)	5	15

Note: BDL = Below Detection Limit, D.L. = Detection Limit, NS = Not Specified, ND = Not Detected, BQL = Below Quantification Limit, QL= Quantification Limit.
Permissible Limit is applicable in the absence of Alternate source

3.4.1.3 BASELINE DATA INTERPRETATION OF GROUND WATER ANALYSIS

- pH is found between 7.46 to 8.22 which is within the acceptable limit.
- Chloride is found within range of 65.4 to 1026.9 mg/L. The concentration of chloride found higher than acceptable limit at Nana Layja, Bhada, Bhinsara, Padampur, Mota Layja-2, Bada, and Dedhiya. At Bada the concentration is found higher than the permissible limit. This may be due to river system flowing through the area have subsequently been overlain by the aeolian deposits. The texture is sandy to sandy loam with silty clay loam in areas. The salt content is very high with the sodium chloride as the dominant salt.

- Total Hardness within the range of 77.8 mg/L to 1611.1 mg/L. Total Hardness is found above the acceptable limit at all the locations except Bambhadai and found above the permissible limit at Bhinsara, Padampur and Bada. It may be due to whole area is saline area and near to the coastline.
- Calcium is found within the range of 8.9 mg/L to 320.6 mg/L. It was observed within the acceptable limit at only Bhada, Panchotiya, Bayath, Mota Layja-1 & Bambhadai. It was observed above the permissible limit at Bhinsara and Bada. It may be due to salinity of the area.
- Magnesium ranges between 13.5 mg/L to 197.1 mg/L. It was observed above the acceptable limit at all locations except Bambhadai. The results were observed within permissible limits except Bhinsara, Padampur and Bada. This may be due to Present near the seawater and after sodium most commonly found cation in seawater.
- Sulphate ranges between 12 mg/L to 419 mg/L. It was observed within the acceptable limit at all locations except Padampur but well within the permissible limits. This may be due to ground water moves through soil and rock formation that contain sulphate Minerals.
- TDS is found within the range of 196 mg/L to 4440 mg/L. TDS is found higher than the acceptable limits at all locations except Bambhadai. It was observed higher than the permissible limit at Bhinsara, Padampur and Bada It may be due to present of Salt contain is very high and presence of sufficient amount of gypsum in soil.
- Iron content found higher than the acceptable limit at Nana Layja, Bhinsara, and Padampur, which may be due to geological formation of that region. Higher concentration of iron may lead to health concern.
- Other parameters like Arsenic as As, Zinc as Zn, Selenium as Se, Molybdenum as Mo, Mercury as Hg, Lead as Pb, Cobalt as Co and Cadmium as Cd at all the locations are found BQL.
- Ground water is suitable for domestic and agricultural purpose after primary treatment and disinfection.

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Table 3.17 Water Quality - Physico-chemical Ana lysis of Surface Water

Sr No	Parameters	Bhinsara Pond	Mota Layja-1 Pond	Bada Pond	Bambhadai Pond	Mapar Pond	Janakpur Pond	Vengadi river	Lilera Talav	Acceptable Limit	Permissible Limit
1	pH	7.37	7.86	7.73	8.06	8.23	8.38	7.78	8.22	6.5-8.5	No Relaxation
2	Temp(°C)	28.1	26.2	27.2	24.6	25.4	25.1	26.2	27.5	--	--
3	Color(cu)	B.D.L(DL=5)	B.D.L(DL=5)	B.D.L(DL=5)	5.0	B.D.L(DL=5)	B.D.L(DL=5)	B.D.L(DL=5)	B.D.L(DL=5)	5	15
4	Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
5	EC (µS)	1153	771	1265	312	259	1912	3635	441	--	--
6	DO (mg/L)	5.6	5.3	4.9	5.5	5.2	5.4	5.1	5.0		
7	Turbidity (NTU)	0.12	0.10	0.22	0.34	0.16	0.28	0.21	0.31	1	5
8	Ammonical Nitrogen(mg/L)	B.D.L(DL=5)	B.D.L(DL=5)	B.D.L(DL=5)	B.D.L(DL=5)	B.D.L(DL=5)	B.D.L(DL=5)	B.D.L(DL=5)	B.D.L(DL=5)	--	--
9	Chloride as Cl (mg/L)	166.1	167.8	191.3	50.3	41.5	281.9	589.0	55.9	250	1000
10	Total Hardness as $CaCO_3$ (mg/L)	300.0	263.6	290.0	100.0	70.0	366.7	890.0	88.9	200	600
11	Ca Hardness (mg/L)	190.0	154.5	160.0	50.0	30.0	188.9	370.0	55.6	--	--

Sr No	Parameters	Bhinsara Pond	Mota Layja-1 Pond	Bada Pond	Bambhadai Pond	Mapar Pond	Janakpur Pond	Vengadi river	Lilera Talav	Acceptable Limit	Permissible Limit
12	Mg Hardness (mg/L)	110.0	109.1	130.0	50.0	40.0	177.8	520.0	33.3	--	--
13	Calcium as Ca(mg/L)	76.2	61.9	64.1	20.0	12.0	75.7	148.3	22.3	75	200
14	Magnesium as Mg (mg/L)	26.7	26.5	31.6	12.2	9.7	43.2	126.4	8.1	30	100
15	Carbonate (mg/L)	B.D.L(DL=5)	B.D.L(DL=5)	B.D.L(DL=5)	B.D.L(DL=5)	B.D.L(DL=5)	29	B.D.L(DL=5)	B.D.L(DL=5)	--	--
16	Bicarbonate (mg/L)	160	130	48	12	38	88	116	18	--	--
17	Nitrate as NO_3(mg/L)	3.31	3.90	1.98	2.18	1.72	2.79	1.44	3.51	45	No Relaxation
18	Fluoride as F (mg/L)	B.D.L(DL=0.2)	B.D.L(DL=0.2)	B.D.L(DL=0.2)	B.D.L(DL=0.2)	B.D.L(DL=0.2)	B.D.L(DL=0.2)	B.D.L(DL=0.2)	B.D.L(DL=0.2)	1.0	1.5
19	Chromium (mg/L)	B.D.L(DL=1)	B.D.L(DL=1)	B.D.L(DL=1)	B.D.L(DL=1)	B.D.L(DL=1)	B.D.L(DL=1)	B.D.L(DL=1)	B.D.L(DL=1)	--	--
20	Copper (mg/L)	B.D.L(DL=0.5)	B.D.L(DL=0.5)	B.D.L(DL=0.5)	B.D.L(DL=0.5)	B.D.L(DL=0.5)	B.D.L(DL=0.5)	B.D.L(DL=0.5)	B.D.L(DL=0.5)	0.05	1.5
21	Nickel (mg/L)	B.D.L(DL=0.5)	B.D.L(DL=0.5)	B.D.L(DL=0.5)	B.D.L(DL=0.5)	B.D.L(DL=0.5)	B.D.L(DL=0.5)	B.D.L(DL=0.5)	B.D.L(DL=0.5)	--	--
22	Iron (mg/L)	1.50	B.D.L(DL=0.2)	B.D.L(DL=0.2)	2.10	B.D.L(DL=0.2)	B.D.L(DL=0.2)	B.D.L(DL=0.2)	B.D.L(DL=0.2)	0.3	No Relaxation

Sr No	Parameters	Bhinsara Pond	Mota Layja-1 Pond	Bada Pond	Bambhadai Pond	Mapar Pond	Janakpur Pond	Vengadi river	Lilera Talav	Acceptable Limit	Permissible Limit
23	Manganese (mg/L)	0.29	B.D.L(DL= 0.02)	B.D.L(DL =0.02)	0.20	0.22	B.D.L(DL= 0.02)	B.D.L(DL= 0.02)	B.D.L(DL= 0.02)	0.1	0.3
24	Sodium as Na (mg/L)	42	31	39	11	15	75	84	27	--	--
25	Potassium as K(mg/L)	29	18	10	7	8	49	51	11	--	--
26	Boron as B (mg/L)	B.D.L(DL =1)	B.D.L(DL= 1)	B.D.L(DL =1)	B.D.L(DL=1)	B.D.L(DL= 1)	B.D.L(DL= 1)	B.D.L(DL= 1)	B.D.L(DL= 1)	0.5	2.4
27	Phenol (mg/L)	B.D.L(DL =0.01)	B.D.L(DL= 0.01)	B.D.L(DL =0.01)	B.D.L(DL=0. 01)	B.D.L(DL= 0.01)	B.D.L(DL= 0.01)	B.D.L(DL= 0.01)	B.D.L(DL= 0.01)	--	--
28	Phosphate as $P0_4^{-3}$(mg/L)	B.D.L(DL =1)	B.D.L(DL= 1)	B.D.L(DL =1)	B.D.L(DL=1)	B.D.L(DL= 1)	B.D.L(DL= 1)	B.D.L(DL= 1)	B.D.L(DL= 1)	--	--
29	Phosphorus as P (mg/L)	B.D.L(DL =1)	B.D.L(DL= 1)	B.D.L(DL =1)	B.D.L(DL=1)	B.D.L(DL= 1)	B.D.L(DL= 1)	B.D.L(DL= 1)	B.D.L(DL= 1)	--	--
30	Sulphate as SO_4 (mg/L)	66	49	64	48	10	125	166	52	200	400
31	Nitrite as NO_2 (mg/L)	B.D.L(DL =0.01)	B.D.L(DL= 0.01)	B.D.L(DL =0.01)	B.D.L(DL=0. 01)	B.D.L(DL= 0.01)	B.D.L(DL= 0.01)	B.D.L(DL= 0.01)	B.D.L(DL= 0.01)	--	--
32	TDS (mg/L)	784	524	860	212	176	1300	2472	300	500	2000
33	TSS (mg/L)	28	28	16	36	20	32	44	12	--	--
34	TS (mg/L)	812	552	876	248	196	1332	2516	312	--	--
35	COD (mg/L)	36.4	28.3	8.1	28.5	12.1	40.4	32.3	44.4	--	--

Sr No	Parameters	Bhinsara Pond	Mota Layja-1 Pond	Bada Pond	Bambhadai Pond	Mapar Pond	Janakpur Pond	Vengadi river	Lilera Talav	Acceptable Limit	Permissible Limit
36	BOD (mg/L)	11.8	9.9	3.0	8.9	3.8	12.6	10.1	15.0	--	--
37	Oil & Grease (mg/L)	B.D.L (DL=5)	B.D.L (DL=5)	B.D.L (DL=5)	B.D.L (DL=5)	B.D.L (DL=5)	B.D.L (DL=5)	B.D.L (DL=5)	B.D.L (DL=5)	--	--
38	Fecal coliform per 100 ml (MPN)	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	--	--
39	Total coliform bacteria per 100 ml (MPN)	27	44	08	21	56	94	78	104	--	--
40	Arsenic as As (mg/L)	BDL(DL=0.005)	BDL(DL=0.005)	BDL(DL=0.005)	BDL(DL=0.005)	BDL(DL=0.005)	BDL(DL=0.005)	BDL(DL=0.005)	BDL(DL=0.005)	0.01	No relaxation
41	Cadmium as Cd (mg/L)	BDL(DL=0.002)	BDL(DL=0.002)	BDL(DL=0.002)	BDL(DL=0.002)	BDL(DL=0.002)	BDL(DL=0.002)	BDL(DL=0.002)	BDL(DL=0.002)	0.003	No relaxation
42	Cobalt as Co (mg/L)	BDL(DL=0.02)	BDL(DL=0.02)	BDL(DL=0.02)	BDL(DL=0.02)	BDL(DL=0.02)	BDL(DL=0.02)	BDL(DL=0.02)	BDL(DL=0.02)	--	--
43	Lead as Pb (mg/L)	BDL(DL=0.005)	BDL(DL=0.005)	BDL(DL=0.005)	BDL(DL=0.005)	BDL(DL=0.005)	BDL(DL=0.005)	BDL(DL=0.005)	BDL(DL=0.005)	0.01	No relaxation
44	Mercury as Hg (mg/L)	BDL(DL=0.0005)	BDL(DL=0.0005)	BDL(DL=0.0005)	BDL(DL=0.0005)	BDL(DL=0.0005)	BDL(DL=0.0005)	BDL(DL=0.0005)	BDL(DL=0.0005)	0.001	No relaxation
45	Molybdenu	BDL(DL=	BDL(DL=	BDL(DL=	BDL(DL=0.0	BDL(DL=0	BDL(DL=0	BDL(DL=	BDL(DL=0	0.07	No relaxation

Sr No	Parameters	Bhinsara Pond	Mota Layja-1 Pond	Bada Pond	Bambhadai Pond	Mapar Pond	Janakpur Pond	Vengadi river	Lilera Talav	Acceptable Limit	Permissible Limit
	m as Mo (mg/L)	0.01)	0.01)	0.01)	1)	.01)	.01)	0.01)	.01)		
46	**Selenium as Se (mg/L)**	BDL(DL= 0.005)	BDL(DL= 0.005)	BDL(DL= 0.005)	BDL(DL=0.0 05)	BDL(DL=0 .005)	BDL(DL=0 .005)	BDL(DL= 0.005)	BDL(DL=0 .005)	0.01	No relaxation
47	**Zinc as Zn (mg/L)**	BDL(DL= 0.02)	BDL(DL= 0.02)	BDL(DL= 0.02)	BDL(DL=0.0 2)	BDL(DL=0 .02)	BDL(DL=0 .02)	BDL(DL= 0.02)	BDL(DL=0 .02)	5	15

Note: BDL = Below Detection Limit, NS = Not Specifies, D.L. = Detection Limit, ND = Not Detected
Permissible Limit is applicable in the absence of Alternate source

3.4.1.4 BASELINE DATA INTERPRETATION OF SURFACE WATER ANALYSIS

- pH is found between 7.37 to 8.38 which is well within the acceptable limits.
- Chloride is found within the range of 41.5 mg/L to 589 mg/L. The concentration is found higher than the acceptable limit at Janakpur pond and Vengadi river, but found well within the permissible limit. The higher concentration is may be due to the use of surfactants for domestic washing activities such as cloth and utensil washing. Also, the higher concentration can be due to the saline soil of study area.
- Total Hardness is found within the range of 70 mg/L to 890 mg/L. The concentration is found higher than the acceptable limit at all locations except Bambhadai pond, Mapar pond and Lilera talav. Total hardness was found higher than the permissible limit at only Vengadi river. It may be due to the saline soil due to nearby coastal area.
- Magnesium is found within the range of 8.1 mg/L to 126.4 mg/L. The value found higher than the acceptable limit at Bada pond and Vengadi river and found higher than the permissible limit at only Vengadi river.
- Calcium is found within the range of 12 mg/L to 148.3 mg/L. The value found higher than the acceptable limit at Bhinsara Pond, Janakpur pond and Vengadi river, but found well within the permissible limit.
- TDS is found within the range of 176 mg/L to 2472 mg/L. TDS found higher than the acceptable limit at all locations except Bambhadai pond, Mapar pond and Lilera talav. The TDS is found higher than the permissible limit at Vengadi river. It may be due to the salty soil of the study area. The sampling location is nearby the coastal area. Also, domestic washing activities may contribute to the higher results of TDS.
- DO is found within the range of 4.9 mg/L to 5.6 mg/L, which is quite good for aquatic life.
- COD is found within the range of 8.1 mg/L to 44.4 mg/L, which may be due to the agriculture run off and storm water runoff.

- The concentration of iron found higher than the acceptable limit at Bhinsara pond and Bambhadai pond. It may be due to the iron content in the soils of the area.
- Other parameters like Arsenic as As, Zinc as Zn, Selenium as Se, Molybdenum as Mo, Mercury as Hg, Lead as Pb, Cobalt as Co and Cadmium as Cd at all the locations are found BQL.
- Total coliform was found at all locations. And it may be due to the cattle washing, presence of algae, and use of water for domestic activities, which may impact on health of persons who will use this water.
- Thus, surface water can be used for domestic and agricultural purpose after primary treatment as well as after disinfection.
- Water quality of all 8 locations is found below E as per CPCB guidelines

3.4.1.5 WATER QUALITY INDEX

Table 3.18 water quality classification based on WQI value

WQI Value	Water Quality
<50	Excellent
50-100	Good water
100-200	Poor water
200-300	Very poor water
>300	Water unsuitable for drinking

(Ramakrishnaiah *et al.*2009)

Table 3.19 Water Quality Index for Surface Water

Parameter	Standard	Bada Pond	Janakpur Pond	Bhinsara Pond	Mota Layja-1 Pond	Mapar Pond	Bambhadai Pond	Lilera Talav	Vengadi River
	S1	C1	C2	C3	C4	C5	C6	C7	C8
pH	7	7.73	8.38	7.37	7.86	8.23	8.06	8.22	7.78
Chloride as Cl^-	250	191.3	281.9	166.1	167.8	41.5	50.3	55.9	589
Total Hardness as $CaCO_3$	200	290	366.7	300	263.6	70.0	100	88.9	890
Calcium as Ca^{++}	75	64.1	75.7	76.2	61.9	12	20	22.3	148.3
Magnesium as Mg^{++}	30	31.6	43.2	26.7	26.5	9.7	12.2	8.1	126.4
Nitrate as NO_3^-	45	1.98	2.79	3.31	3.90	1.72	2.18	3.51	1.44
Fluoride as F	1	0	0	0	0	0	0	0	0
Sulphate as SO_4^{-2}	200	64	125	66	49	10	48	52	166
TDS	500	860	1300	784	524	176	212	300	2472
Bicarbonate*	600	48	88	160	130	38	12	18	116

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Bada Pond	Janakpur Pond	Bhinsara Pond	Mota Layja-1 Pond	Mapar Pond	Bambhadai Pond	Lilera Talav	Vengadi River	Weight (wi)	Relative Weight (Wi)
q1	q2	q3	q4	q5	q6	q7	q8		
110.43	119.71	105.29	112.29	117.57	115.14	117.43	111.14	4	0.1
76.52	112.76	66.44	67.12	16.58	20.12	22.36	235.60	3	0.1
145.00	183.33	150.00	131.82	35.00	10.00	44.45	445.00	2	0.1
85.47	100.93	101.60	82.53	16.00	16.27	29.73	197.73	2	0.1
105.33	144.00	89.00	88.33	32.33	40.67	27.00	421.33	2	0.1
4.40	6.20	7.36	8.67	3.82	4.84	7.80	3.20	5	0.2
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4	0.1
32.00	62.50	33.00	24.50	5.00	24.00	26.00	83.00	4	0.1
172.00	260.00	156.80	104.80	35.20	42.40	60.00	494.40	4	0.1
8.00	14.67	26.67	21.67	6.33	2.00	3.00	19.33	3	0.1
								33	1.0

Bada Pond	Janakpur Pond	Bhinsara Pond	Mota Layja-1 Pond	Mapar Pond	Bambhadai Pond	Lilera Talav	Vengadi River
SI1	**SI2**	**SI3**	**SI4**	**SI5**	**SI6**	**SI7**	**SI8**
13.39	14.51	12.76	13.61	14.25	13.96	14.23	13.47
6.96	10.25	6.04	6.10	1.51	1.83	2.03	21.42
8.79	11.11	9.09	7.99	2.12	0.61	2.69	26.97
5.18	6.12	6.16	5.00	0.97	0.99	1.80	11.98
6.38	8.73	5.39	5.35	1.96	2.46	1.64	25.54
0.67	0.94	1.11	1.31	0.58	0.73	1.18	0.48
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3.88	7.58	4.00	2.97	0.61	2.91	3.15	10.06
20.85	31.52	19.01	12.70	4.27	5.14	7.27	59.93
0.73	1.33	2.42	1.97	0.58	0.18	0.27	1.76
66.81	**92.08**	**65.99**	**57.01**	**26.84**	**28.81**	**34.28**	**171.61**
Good	**Good**	**Good**	**Good**	**Excellent**	**Excellent**	**Excellent**	**poor**

Interpretation for Surface water: Water quality index is found to be Excellent at Mapar Pond, Lilera pond and Bambhadai Pond, good at Bada Pond, Janakpur pond, Bhinsara pond, and Mota Layja-1 pond and observed poor at vengadi river. Poor quality water can be used after appropriate treatment.

Table 3.3.2. Water Quality Monitoring Parameters and Analytical Methods

Sr. No.	Parameter	Method of Analysis (APHA 23rd Eds., 2017/ IS Standard)
1	pH	APHA-4500-H+ B
2	Temperature (°C)	APHA - 2550 B
3	Turbidity (NTU)	APHA-2130 B
4	TSS (mg/L)	APHA-2540 D
5	TDS (mg/L)	APHA 2540 C
6	EC (µS/cm)	APHA 2510 B
7	Total Alkalinity as CaCO3 (mg/L)	IS 3025-23 (1986)
8	Total Hardness as CaCO3 (mg/L)	APHA - 2340 C
9	Calcium Hardness as $CaCO_3$ (mg/L)	APHA - 2340 C
10	Chlorides (mg/L)	APHA -4500 B
11	Sulphates (mg/L)	IS 3025-24 (1986)
12	Sodium (mg/L)	APHA - 3500 B
13	Potassium (mg/L)	APHA - 3500 B
14	Nitrates as NO_3 (mg/L)	APHA - 4500 B
15	Total Phosphates (mg/L)	IS 3025-31 (1988)
16	DO (mg/L)	APHA - 4500 C
17	COD (mg/L)	IS 3025-58 (2006)
18	BOD (mg/L)	IS 30256-44 (1993)
19	Oil & Grease (mg/L)	APHA - 5520 B
20	Phenolic Compounds	APHA - 5520 B
21	Fluoride (mg/l)	APHA -4500 C
22	Heavy Metals (mg/L)	APHA - 3030 E
23	Total Coliform (CFU/100 ml)	APHA – 9222 B
24	Feacal Coliform (CFU/100 ml)	APHA – 9222 B

Table 3.3.3. Water Quality - Physical Parameters (February 2020)

Sr. No.	Sample Code	Sampling Locations	pH	Temp. (°C)	Turbidity (NTU)	TSS (mg/l)	TDS (mg/l)	Conductivity (µS/cm)	Total Hardness (mg/l)	Chlorides (mg/l)
Surface Water (pond Water)										
1	SW1	Bada	7.1	29.4	52	92	362	612	120	30
2	SW2	Janakpur	7.6	29.5	17	38	853	1410	236	161
3	SW3	Bhishra	6.9	29.1	238	257	326	554	96	24
4	SW4	Layja-Mota	7.5	30.7	14	44	954	1586	216	206
5	SW5	Bambhdai	7.0	29.5	71	138	486	825	172	55
6	SW6	Mapar	7.9	28.3	19	28	811	1340	176	149
Ground Water										
Dug Well										
1	GW1	Bhada	6.9	26.8	6	19	458	773	158	48
2	GW2	Panchotiya	8.2	28.3	1	7	853	1411	196	66
3	GW3	Bada	7.8	27.9	2	20	569	936	144	36
4	GW4	Bhisra	7.8	29.9	34	44	1015	1670	252	199
5	GW5	Layja-Mota-I	8.9	30.1	<1	14	1812	2986	428	289
6	GW6	Layja-Mota-II	8.9	28.7	1	20	2067	3426	312	470
7	GW7	Bayat	7.9	27.9	<1	4	644	1065	240	42
8	GW8	Bambhdai	7.7	26.9	1	17	570	936	168	34
Bore Well										
9	GW9	Nana-Layja	8.8	29.9	<1	7	1741	2923	236	407
10	GW10	Padmpur	8.5	30.1	5	36	4002	6658	772	1509
11	GW11	Dedhiya	8.3	30.5	<1	12	4246	7062	780	1652

Table 3.3.3 (a) Ground water quality results compared with Drinking water standards IS 10500

pH		Min	Max	Acceptable Limit	Permissible Limit in absence of alternate source
Temp	°C	6.9	8.9	6.5-8.5	No relaxation
Turbidity	NTU	<1	34	1	5
TDS	mg/l	458	4246	500	2000
Fluoride	mgl	0.3	1.5	1.0	1.5
Heavy Metal Fe	mg/l	0.006	1.881	0.3	No relaxation
Total Hardness	mg/l	144	780	200	600
Chloride	mg/l	34	1652	250	1000

Table 3.3.4. Water Quality - Nutrient and Demand Parameters (February 2020)

Sr. No.	Sample Code	Sampling Locations	Nitrate as NO_3	Total Phosphates	DO	COD	BOD	TKN	Fluoride	Oil & Grease	Phenol µg/l
			mg/l								
Surface Water (pond Water)											
1	SW1	Bada	2.35	6.0	5.4	35	<3	36	0.6	0.38	0.10
2	SW2	Janakpur	1.61	1.0	5.2	42	<3	48	0.4	0.16	0.32
3	SW3	Bhishra	2.38	0.5	6.3	38	<3	36	0.5	0.47	0.28
4	SW4	Layja-Mota	1.44	0.6	5.6	29	<3	14	0.6	0.74	0.56
5	SW5	Bambhdai	2.80	0.6	6.1	86	<3	62	0.9	0.87	0.47
6	SW6	Mapar	2.90	1.0	6.9	42	<3	25	1.5	0.67	0.55
Ground Water											
Dug Well											
1	GW1	Bhada	1.88	8.4	-	-	-	39	0.5	0.18	0.28
2	GW2	Panchotiya	4.03	2.5	-	-	-	31	0.6	0.68	ND
3	GW3	Bada	1.62	2.6	-	-	-	22	1.5	0.38	ND
4	GW4	Bhisra	2.72	2.7	-	-	-	62	0.5	0.21	0.26
5	GW5	Layja-Mota-I	1.61	8.8	-	-	-	31	0.4	0.10	ND
6	GW6	Layja-Mota-II	7.81	7.7	-	-	-	76	0.8	0.05	ND
7	GW7	Bayat	2.34	4.3	-	-	-	36	0.3	0.06	ND

8	GW8	Bambhdai	2.77	0.8	-	-	-	50	0.8	0.08	0.63
Bore Well											
9	GW9	Nana-Layja	3.53	5.2	-	-	-	115	1.5	0.10	ND
10	GW10	Padmpur	10.10	1.8	-	-	-	25	0.5	0.08	ND
11	GW11	Dedhiya	1.93	2.5	-	-	-	34	0.6	0.07	0.76

Table 3.3.5 (i). Water Quality-Heavy Metals (February 2020)

Sr. No.	Sample Code	Sampling Locations	As	Cd	Co	Cr	Cu	Fe	Mn	Mo
			mg/l							
Surface Water (pond Water)										
1	SW1	Village Bada	ND	ND	0.001	ND	ND	0.183	0.109	ND
2	SW2	Janakpur	0.001	ND	ND	0.001	0.014	0.345	0.322	ND
3	SW3	Bhishra	ND	0.001	0.003	0.014	0.006	3.559	0.293	0.023
4	SW4	Layja-Mota	ND	ND	0.001	0.022	0.000	0.544	0.116	ND
5	SW5	Bambhdai	ND	ND	0.003	0.017	0.007	4.849	0.224	ND
6	SW6	Mapar	ND	ND	0.001	0.003	0.001	0.858	0.218	ND
Ground Water										
Dug Well										
1	GW1	Bhada	0.012	0.004	ND	0.001	0.015	ND	0.059	0.012
2	GW2	Panchotiya	0.008	0.000	ND	0.002	0.005	0.403	0.067	0.148
3	GW3	Bada	0.001	0.005	ND	0.009	ND	0.996	0.112	0.010
4	GW4	Bhisra	0.000	ND	ND	0.006	0.004	1.199	0.274	ND
5	GW5	Layja-Mota-I	ND	ND	ND	ND	ND	ND	0.048	ND
6	GW6	Layja-Mota-II	ND	ND	ND	0.001	0.018	0.006	ND	0.010
7	GW7	Bayat	ND	ND	ND	0.05	ND	ND	0.024	ND
8	GW8	Bambhdai	ND	ND	ND	0.006	0.014	0.500	0.413	0.003
Bore Well										
9	GW9	Nana-Layja	0.028	0.004	ND	0.026	0.043	1.881	0.088	0.044
10	GW10	Padmpur	ND	0.001	ND	0.007	ND	0.982	0.063	ND
11	GW11	Dedhiya	ND	ND	ND	ND	ND	ND	0.029	ND

ND: Not Detectable

Table 3.3.5 (ii). Water Quality-Heavy Metals (February 2020)

Sr. No.	Sample Code	Sampling Locations (near/in the village)	Ni	Pb	Se	V	Zn	Hg
			mg/l					
Surface Water (pond Water)								
1	SW1	Bada	ND	ND	ND	ND	ND	ND
2	SW2	Janakpur	ND	ND	ND	ND	ND	ND
3	SW3	Bhishra	ND	0.004	ND	ND	ND	ND
4	SW4	Layja-Mota	ND	0.001	ND	ND	ND	ND
5	SW5	Bambhdai	ND	0.004	ND	ND	0.004	ND
6	SW6	Mapar	ND	0.003	ND	ND	ND	ND
Ground Water								
Dug Well								
1	GW1	Bhada	ND	0.087	0.012	0.009	0.106	ND
2	GW2	Panchotiya	ND	0.006	0.010	0.017	0.011	ND
3	GW3	Bada	0.007	0.091	0.001	ND	ND	ND
4	GW4	Bhisra	ND	0.002	ND	ND	0.042	ND
5	GW5	Layja-Mota-I	ND	0.001	ND	0.051	ND	ND
6	GW6	Layja-Mota-II	ND	0.004	0.006	ND	ND	ND
7	GW7	Bayat	ND	0.003	ND	0.080	ND	ND
8	GW8	Village Bambhdai	ND	ND	ND	0.004	ND	ND
Bore Well								
9	GW9	Village Nana-Layja	ND	0.034	0.013	ND	0.169	ND
10	GW10	Village Padmpur	ND	ND	ND	0.204	ND	ND
11	GW11	Village Dedhiya	ND	ND	ND	0.134	ND	ND

ND: Not Detectable

Table 3.3.6. Water Quality – Bacteriological Parameters (February 2020)

Sr. No.	Sample Code	Sampling Locations (near/in the village)	Total Coliform	Feacal Coliform
			CFU/100 ml	
Surface Water (pond Water)				
1	SW1	Bada	100	ND
2	SW2	Janakpur	ND	ND
3	SW3	Bhishra	ND	ND
4	SW4	Layja-Mota	800	ND
5	SW5	Bambhdai	ND	ND
6	SW6	Mapar	200	ND
Ground Water				
Dug Well				
1	GW1	Bhada	ND	ND
2	GW2	Panchotiya	70	ND
3	GW3	Bada	ND	ND
4	GW4	Bhisra	100	ND
5	GW5	Layja-Mota-I	ND	ND
6	GW6	Layja-Mota-II	ND	ND
7	GW7	Bayat	240	ND
8	GW8	Bambhdai	40	ND
Bore Well				
9	GW9	Nana-Layja	ND	ND
10	GW10	Padmpur	ND	ND
11	GW11	Dedhiya	ND	ND

CFU: Colony Forming Unit; ND- Not Detectable

सत्यमेव जयते

Ministry of Environment, Forest and Climate Change

National Marine Turtle Action Plan

Government of India
Ministry of Environment, Forest & Climate Change

(2021-2026)



National Marine Turtle Action Plan

Government of India
Ministry of Environment, Forest & Climate Change

(2021-2026)

Cover photograph Daniel Torobekov

मंत्री
पर्यावरण, वन एवं जलवायु परिवर्तन,
सूचना एवं प्रसारण और
भारी उद्योग एवं लोक उद्यम
भारत सरकार

MINISTER
ENVIRONMENT, FOREST & CLIMATE CHANGE,
INFORMATION & BROADCASTING AND
HEAVY INDUSTRIES & PUBLIC ENTERPRISES
GOVERNMENT OF INDIA

प्रकाश जावडेकर
Prakash Javadekar



MESSAGE

India is blessed with its rich and varied biodiversity. We have always taken pride in conserving this natural heritage. Our marine biodiversity is no exception to this. Marine Turtles have always captured our imagination and has been conserved since the ages. Marine Turtles are considered to be flagship species in various marine habitats such as coral reefs, sea grass meadows, sandy beaches, etc.

Besides being home to one of the largest congregations of nesting of the Olive Ridley Turtles, five species of marine turtles are found in India. These species found in Indian waters have been listed in the Schedule-I of the Wild Life (Protection) Act, 1972 and therefore, accorded very high protection status. Considering the importance of conservation of marine turtles, the Ministry had included marine turtles as one of the 22 species for taking up focussed conservation programme under the Centrally Sponsored Scheme- Development of Wildlife Habitats.

I am happy to note that the Ministry has now prepared a 'National Marine Turtle Action Plan' through an extensive consultative process with relevant stakeholders. This Action Plan focuses on reducing threats, conserving critical habitat, exchanging scientific data, increasing public awareness and most importantly emphasizes on a participatory approach in conservation of marine turtles and its habitats. The Action Plan will enable the stakeholders to perform their roles in a coordinated manner and take effective measures for the conservation of marine turtles.

I am confident that this 'National Marine Turtle Action Plan' will provide a fresh impetus to work towards conserving these magnificent species and their habitats and provide them with safe havens for their future and for a healthy planet.

With best wishes.

Date: 19.01.2021

(Prakash Javadekar)

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Babul Supriyo
Union Minister of State
Ministry of Environment, Forest & Climate Change
Government of India

बाबुल सुप्रियो
केन्द्रीय राज्य मंत्री
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय
भारत सरकार

स्वच्छ भारत
एक कदम स्वच्छता की ओर



MESSAGE

Marine turtles play a variety of ecological roleslike controlling prey populations, supporting coastal vegetation through their hatchlings etc.in maintaining healthy marine habitats.They are key indicators of healthy marine habitats.

Numerous direct and indirect pressures arising from various factors adversely impact marine turtle populations and their habitat. This includes man made factors such as pollution, habitat destruction, bycatch, etc. and also includes natural disasters such as tsunamis, cyclones, hurricanes and storms. With a view to conserve marine turtles, associated species and their habitats, the Ministry of Environment, Forest and Climate Change, Government of India has prepared this "National Marine Turtle Action Plan, 2021-2026" with a vision to create a viable and healthy marine ecosystem for marine turtles and associated species through a coordinated and participatory mechanismto ensure long term survival of marine turtles.

The National Marine Turtle Action Plan, 2021-2026 would be implemented at the National and State Government level with the following objectives:

a. Reduce direct and indirect causes of marine turtle mortality;
b. Protect, conserve and rehabilitate marine turtle habitats;
c. Improve understanding of marine turtle ecology and populations through research, monitoring and information exchange;
d. Increase public awareness of the threats to marine turtles and their habitats, and enhance public participation in conservation activities;
e. Enhance national, regional and international cooperation.

I wish all the best for the successful implementation of the "National Marine Turtle Action Plan, 2021-2026".

(Babul Supriyo)

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Important Marine Turtle Habitats in India

State	Important Turtle Habitats (Catchment District)	Remarks / Clarification	Major Threats
Odisha	Rushikulya river (Kandhamal and Ganjam)	Mass nesting ground of Olive Ridley	Erosion, Nest predation, plastic pollution, light pollution and bycatch
Odisha	Gahirmatha river (Kandhamal and Ganjam)	Mass nesting ground of Olive Ridley	Erosion and Nest predation, bycatch
Odisha	Devi River (Jagatsinghpur, Puri)	Sporadic mass nesting ground of Olive ridley	Nest predation, plastic pollution, light pollution, plantation and bycatch
Andaman & Nicobar Islands	Galathea bay, Indira point, Hingloi, Alexandria, Dagmar, and Renhongbeaches (Great Nicobar Island)	Largest Leatherback turtle nesting ground in India	Nest predation
Andaman & Nicobar Islands	Bahua, Muhincohn and Kiyang beaches (Little Nicobar Island)	Leatherback, Green, Hawksbill and Olive ridley	Nest predation and bycatch
Andaman & Nicobar Islands	West Bay, Jackson Creek beaches (Little Andaman Island)	Leatherback nesting ground, currently largest in the Andaman group	Nest predation and bycatch
Andaman & Nicobar Islands	Cuthbert Bay, (Middle Andamans)	Leatherback, Green, hawksbill, and Olive ridley	Nest predation
Andaman & Nicobar Islands	South Reef Island, (Middle Andamans)	Best hawksbill turtle nesting ground in India	Nest predation
Lakshdweep Islands	Lagoons of Lakshdweep Islands (Agatti, Kadmat, Kavaratti and other islands)	Foraging ground of Green turtle	Erosion, over grazing, conflict with fishermen, nest predation and bycatch
Lakshdweep Islands	Suhelilsland, (Lakshadweep)	Olive ridley / Hawksbill / Green turtle nesting ground (sympatric habitat for three species)	Erosion and bycatch
Andhra Pradesh	Godavari River Mouth (Sacramentoshoal, East Godavari)	Very high sporadic nesting of Olive ridleys (approx. 500 to 1000/year),	Nest predation, plastic pollution, light pollution, habitat degradation and bycatch
Andhra Pradesh	Kapasukuddi (Bahuda river mouth), Nagavali, Bamsadhara (Srikakulam)	High sporadic nesting of Olive ridleys	Nest predation, plastic pollution, light pollution, habitat degradation and bycatch
Andhra Pradesh	Beaches along Krishna River and Penneru river mouth (Nellore)	Moderate sporadic nesting of Olive Ridley	Nest predation, plastic pollution, light pollution, habitat degradation and bycatch

Important Marine Turtle Habitats in India

Puducherry	Nallavadu,Pannithittu, Narambi and Moorthikuppam villages (Puducherry) and beaches around Arasalar River (Karaikal)	High sporadic nesting of Olive Ridley	Nest predation, by-catch, erosion, habitat degradation, plantation, plastic and light pollution
Tamil Nadu	Gulf of Mannar Biosphere Reserve (Thoothukkudi and Ramanathapuram)	Foraging ground of green and Olive ridley, good seagrass beds	Nest predation, plastic pollution, habitat degradation, poaching, bycatch
Tamil Nadu	Chennai coast, (northern Tamil Nadu)	Sporadic nesting ground of Olive ridley turtles with conservation programmes from 1973	Nest predation, by-catch, plastic pollution, light pollution, egg poaching, habitat degradation
Gujarat	Western Saurashtra coast, Gujarat (Junagadh, Jamnagar and Porbandar)	Green and -Olive ridley turtle nesting grounds	Nest predation, by-catch, plastic pollution, habitat degradation
Maharashtra	Sindhudurg Coasts (Raigad and Ratnagiri)	Sporadic nesting of Olive ridley and Green	Nest predation, bycatch, plastic pollution, habitat degradation
Goa	Galgibaga beach (South Goa)	Sporadic nesting of Olive Ridley	Nest predation, by-catch, plastic pollution, lighting, tourism, habitat degradation



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Page 1 Saturday, March 22, 2025
Printed For: Mr. Sanjay Upadhyay Enviro Legal Defence Firm
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2021 SCC OnLine NGT 2143

In the National Green Tribunal[†]

(Before Adarsh Kumar Goel, Chairperson, Sudhir Agarwal, Member (Judicial), M. Sathyanarayanan, Member (Judicial), Brijesh Sethi, Member (Judicial) and Nagin Nanda, Member (Expert))

Sayyed Mohammed Sabir Usman and another ... Appellant(s);

Versus

Union of India and others ... Respondent(s).

Appeal No. 45/2020(WZ) (I.A. No. 102/2020)

Decided on July 7, 2021

Advocates who appeared in this case:

Mr. Nitin Lonkar, Advocate Appellant(s).

ORDER

1. This appeal has been preferred against Environmental Clearance (EC) dated 19.08.2020 granted by the Ministry of Environment, Forest & Climate Change (MoEF&CC) for expansion cum modernization of Soda Ash manufacturing unit (from 35,720 TPM to 45020 TPM) and Cogeneration power plant (20 MW to 40 MW) by M/s. Saurashtra Chemicals (Division of Nirma Ltd.) at Birlasagar, Porbandar, Gujarat.

2. The impugned EC shows details of existing and proposed products as follows:—

S. No	*Product*	*Production Capacity (TPM)*		
		Existing	*Proposed Additional*	*Total after expansion*
1	*Soda Ash (Light)*	35720	9300	45020
2	*Caustic Lye (100%)*	620	0	620
3	*Soda Ash (Dense)*	5100	0	5100
4	*Sodium Bi-Carbonate*	1800	660	2400
5	*Power (Co-generation Power Plant)*	20 MW	20 MW	40 MW

3. Expansion does not require any additional land. The estimated project cost is *f* 151.78 crores, excluding existing investment of f764.16 crores. Total capital cost earmarked towards environmental pollution control measures is f1.25 crores and the recurring cost (operation and maintenance) will be about f53.12 lakh per annum. Total existing employment is 1169 persons as direct and 400 persons will be indirect after expansion.

4. The impugned EC records further facts and steps taken which are as follows:—

"5. Porbandar Bird Sanctuary is at a distance of 885 meters in North-North-west direction. Arabian Sea is flowing at a distance of 0.520 km in SW direction.

6. Total water requirement is 176100 m^3/day which will be met from Arabian Sea. The Effluent of 169960 m^3/day quantity will be treated through Effluent Treatment Plant. Treated water will be discharged in to Arabian sea beyond lowest tile water level through closed pipeline and diffuser system. Domestic sewage (1000 KLD) shall be disposed off though septic tank/soak pit system. Power requirement after expansion will be 33.8 MW including existing 24.9MW and will be met from Captive Co-generation power plant & Paschim Gujarat Vij Corporation limited (PGVCL). Existing unit has one DG set of 1500 KVA capacity, is used as

standby during power failure. Stack (height 20 m) will be provided as per CPCB norms to the proposed DG sets. Existing unit has 240 TPH (Two boilers with 120 TPH ea.ch-regular) and one boiler.

7. The project/activities are covered under category A of item 4(e) 'Soda ash industry' and category B of item 1(d) Thermal Power Plants' of the schedule to the Environment Impact Assessment Notification, 2006, and requires appraisal/approval at central level by the sectoral EAC in the Ministry.

8. The standard terms of reference (ToR) was granted by the Ministry on 24th May, 2019. The public hearing was conducted by the State Pollution Control Board on 10th January, 2020. The public hearing was presided over by the District Magistrate. The main issues raised during the Public Hearing are related to death of fishes due to discharge of effluent by the unit and fish harvesting by fishermen.

9. The proposal for environmental clearance was considered by the EAC (Industry -2) in its meeting held on 11-13 May, 2020. The project proponent and their accredited consultant M/s T.R. Associates, made a detailed presentation through Video Conferencing (VC) and have presented the EIA/EMP report. The Committee found the EIA/EMP report to be satisfactory, complying with the ToR, and recommended the project for grant of environmental clearance.

10. The EAC, constituted under the provision of the EIA Notification, 2006 and comprising of Experts Members/domain experts in various fields, have examined the proposal submitted by the Project Proponent in desired form along with EIA/EMP report prepared and submitted by the Consultant accredited by the QCI/NABET on behalf of the Project Proponent. The EAC noted that the Project Proponent has given undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the EIA/EMP report. If any part of data/information submitted is found to be false/misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.

11. The Committee noted that the EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. The Committee has found the baseline data and incremental GLC due to the proposed project within NAAQ standards. The Committee has also deliberated on the public hearing issues, action plan and CER plan and found to be addressing the issues in the study area and the issues raised during the public hearing. The EAC has deliberated the proposal and has made due diligence in the process as notified under the provisions of the EIA Notification, 2006, as amended from time to time and accordingly made the recommendations to the proposal. The Experts Members of the EAC have found the proposal in order and have recommended for grant of Environmental Clearance (EC) subject to further examination vis-a-vis CRZ clearance. In this context, the proposal was processed and forwarded to CRZ for comments on 8th June 2020. CRZ sector has sought certain information which PP has submitted on 30th June 2020 and again forwarded to CRZ on 6th July & 20th July 2020 for comments. CRZ sector has provided the comments on 30.07.2020.

12. The proposal has been further examined in the Ministry and it is observed that EAC has recommended Rs. 3 crore towards the Corporate Environment Responsibility (CER) on expansion cost of Rs. 151.78 crore which should be maximum of Rs. 1.14 crore @ 0.75% of the cost for expansion project as per the Ministry's Office Memorandum No. 22- 65/2017-IA.III on CER dated 01.05.2018. Accordingly, the competent authority in the Ministry has approved the CER cost of Rs. 1.14 crore. The CER funds shall be utilized as per the specific condition no. 14

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(xv).

13. The environmental clearance granted to the project/activity is strictly under the provisions of the EIA Notification 2006 and its amendments. It does not tantamount/construe to approvals/consent/permissions etc. required to be obtained or standards/conditions to be followed under any other Acts/Rules/Subordinate legislations, etc : , as may be applicable to the project. The project proponent shall obtain necessary permission as mandated under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, as applicable from time to time, from the State Pollution Control Board, prior to construction & operation of the project."

The impugned EC is subject to Specific and General Conditions which include study of impact of pollution on fish harvesting, report on improvements done through modernization. Other conditions are to ensure necessary safeguards for protection of the environment. Manner of discharge of treated water is specified as follows:

"(ii) Treated water of 169960 m^3/day shall be discharged to Arabian sea beyond lowest tile level through closed pipeline and diffuser system."

Other Specific Conditions are as follows:

"(xi) Fly ash should be stored separately as per CPCB guidelines so that it should not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing along with the storm water. Direct exposure of workers to fly ash & dust should be avoided.

(xii) The company shall undertake waste minimization measures as below:—

a. *Metering and control of quantities of active ingredients to minimize waste.*

b. *Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.*

c. *Use of automated filling to minimize spillage.*

d. *Use of Close Feed system into batch reactors.*

e. *Venting equipment through vapour recovery system.*

f. *Use of high pressure hoses for equipment clearing to reduce wastewater generation."*

5. Main contention on behalf of the appellant is that there should be further safeguards to avoid adverse impact on the adjacent Bird Sanctuary. Necessary pollution control devises must be installed. Precaution must also be taken to prevent contamination of ground water and damage to the marine life.

6. Violations alleged and safeguards expected have been setup by the appellant as follows:—

"a. Because Environment Clearance dated 19.08.2020 is procured in ex-post facto manner and by making substantial change in scope of project.

b. Because Application for ToR dated 12.04.2019 and Application dated 13.03.2020 for EC is nothing but defective and suppressing vital information required for appraisal and assessment.

c. Because admittedly Project under challenge is established in 1959, wherea.s first EIA notification is enforced on 04.05.1991. There is substantial increase in the capacity of the Project even after 04.05.1991, but PP failed to obtain the Environment Clearance under EIA Notification-1991 even after 04.05.1991.

d. Because there is substantial increase in the capacity of the Project even after 14.09.2006, But PP failed to obtain prior Environment Clearance under EIA Notification-2006 even after 14.09.2006.

e. Because there is substantial increase in the capacity of the Project, But PP failed to obtain prior CRZ clearance under CRZ Notification-1991 dated 19.02.1991 and

Amended CRZ Notification-2011 dated 06.01.2011.

f. Because PP failed to obtain prior Wildlife Clearance under guidelines issued by MoEF & CC vide F. No. 1-9/2007 WL-I(pt) dated 09.02.2011.

g. Because Project is sharing boundaries with Porbandar Bird Sanctuary and it is affecting adversely to the Bird Sanctuary due to its water pollution, air pollution, noise, emission of gases etc.

h. Because this project is discharging polluted water without scientific treatment and government authorities are intentionally neglecting this pollution at the cost of Mother Nature.

i. Because this project has created eminent threat to the marine life and causing serious irreparable damage to the environment, ecology, marine life, costal area from Porbandar to Due and wildlife.

j. Because it is admitted in Consent to Operate dated 02.12.2014 that, the Project has manufacturing facility of Soda Ash (Light : 28.0 MT/month & Dense : 6,000 MT/month), Sodium Bicarbonate (1100 MT/month), Caustic Lye (620 MT/month) and Liquid Bromine (20 MT/month).

k. Because it is admitted in 1st meeting of EAC held on 28.12.2016 that, the Project is in operation since 1959 is catering to the manufacturing facility of Soda Ash (Light : 28.0 MT/month & Dense : 6,000 MT/month), Sodium Bicarbonate (1100 MT/month), Caustic Lye (620 MT/month) and Liquid Bromine (20 MT/month).

l. Because the PP has filed application for ex-post facto EC in 2016 for expansion of Power Plant, which was considered in 1st EAC Meeting held on 28.12.2016 and same application is not placed on MoEF Website intentionally, but Minutes of 1st meeting clearly shows that PP has misleaded to EAC on account of distance of Porbandar City at 3.5 Km, Distance of Arabian Sea at 1.5 Km, Distance of project boundary beyond 500 M from CRZ boundary, EIA Notification-2006, distance of Porbandar Bird Sanctuary at 1.1 Km protected under Wildlife (Protection) Act, 1972, additional fuel non-requirement for increase of capacity to 40 MW, no additional water requirement, use of prohibited fuel of lignite etc.

m. Because the PP has filed amended application for ex-post facto EC in 23.02.2017 for expansion of Power Plant, which was considered in 21st EAC Meeting held on 27.02.2017 with exemption in public hearing & EAC concluded that environment scenario will not change by this expansion in Power Plant and recommended the proposal for grant of EC and then considered in 25th EAC Meeting held on 07.07.2017, however MoEF did not accepted the proposal for grant of EC and EAC decided to issue ToR and accordingly ToR dated 25.08.2017 were issued with conditions of Zero liquid discharge plan, Green Belt of 10 M, 33% of green Cover, Public Hearing, EIA Report, NBWL recommendation wrt to Porbandar Bird Sanctuary, GCZMA recommendation wrt to CRZ Notififcation-2011, study on migration of bird & biodiversity, MoU for Flyash use, Certified Compliance Report of Regional Officers from MoEFCC & GPCB which are not complied in letter & spirit by PP and there is misleading, false & baseless information is submitted to EAC.

n. Because the Director of Environment Department Government of Gujarat has recommended the CRZ proposal to MoEFCC vide its letter dated 20.01.2018 for grant of CRZ Clearance for Replacement of Existing Seawater Intake Pipeline & Enhancement in Seawater Intake by Developing Two Earthen Ponds and Auxiliary Facilities without there being prior EC under EIA Notification-1991 & 2006 and only on the basis of non-complied Consent to Operates from GPCB and based on false & misleading HTL & LTL maps.

o. Because PP filed false, misleading, baseless, misconceived application on

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12.02.2018 for Replacement of Existing Seawater Intake Pipeline & Enhancement in Seawater Intake by Developing Two Earthen Ponds and Auxiliary Facilities before MoEFCC and EAC (CRZ) considered this proposal in its 186th meeting held on 27.03.2018 and recommended the CRZ clearance for replacement of pipeline.

p. Because PP further approached the EAC with substantial change in the scope of project for replacement of pipeline for intake sea water and decided to left the water from deep sea to avoid the scarcity of water during low tide and therefore the EAC in its 194th meeting held on 27.07.2018 decided to visit the project site and to prepare the visit report to take further decision and case was deferred. But no such report is submitted on record and not placed online on MOEF website of 'Parivesh'.

q. Because it is admitted in Application for ToR for expansion through modernization dated 12.04.2019 that, the Project has manufacturing facility of Soda Ash (Light : 35,720 MT/month & Dense : 5100 MT/month), Sodium Bicarbonate (1800 MT/month), Caustic Lye (620 MT/month) and Liquid Bromine (20 MT/month). It means there is substantial increase in the capacity of production of Soda Ash from 28000 MT/Month to 35720 MT/Month and Sodium Bicarbonate from 1100 MT/month to 1800 MT/Month from year 02.12.2014 to 12.04.2019 without obtaining prior mandatory EC.

r. Because EAC has not place the minutes of 213th meeting dated 26.04.2019 wherein the proposal for replacement of pipeline for seawater was finally considered before grant of CRZ clearance.

s. Because the DCF Porbandar in connivance with PP has misleaded the EAC on account of M/s. Saura shtra Chemicals distance form Eco-sensitive Zone Limits of Porbandar Bird Sanctuary vide its letter dated 04.05.2019.

t. Because without EIA, without public hearing, without proposer study, MoEFCC granted CRZ Clearance for replacement of existing seawater intake pipeline vide letter dated 22.05.2019 by manipulating the vital facts wrt to environment, ecology, wildlife, marine life, CRZ, etc. and this CRZ Clearance is considered as base for grant of EC under challenge, therefore many wrongs cumulatively cannot make right thing.

u. Because there is no appraisal of the proposal dated 12.04.2019 for expansion through modernization of project by EAC before grant of Terms of reference, also there is no scrutiny of the proposal.

v. Because it is admitted in Application for ToR for expansion through modernization dated 12.04.2019 that, the following production capacities those are without prior EC and therefore this application for Prior EC dated 01.04.2020 is illegal as there is completion of project increasing the capacity of production as sought under EC dated 19.08.2020.

Sr. No.	Name of Product	Existing as per Consent MT/Month	Proposed Expansion MT/Month	Total production Capacity after expansion MT/Month
1	Soda Ash(Light)	35,720	9,300	45,020
2	Soda Ash(Dense)	5100	0	5100
3	Caustic Lye (100%)	620	0	620
4	Sodium Bi-Carbonate	1800	600	2400
5	Liquid Bromine	20	0	20
6	Power (Co-generation Plant)	20 MW	20 MW	40 W

w. Because MoEF has granted ToR on 25.06.2019 without appraisal of proposal by Expert Committee.

x. Because the public hearing is not conducted in by following due procedure of law and also no objection is incorporated in final EIA Report and none of the objections is considered by the MoEFCC & EAC while grant of EC.

y. Because cumulative environmental impact of three project viz. Seawater intake pipeline upgradation, Expansion of the Power Plant from 20 MW to 40 MW and expansion for capacity increase in production of Soda Ash (Light), Soda Ash (Dense), Caustic Lye (100%), Sodium Bi-Carbonate, Liquid Bromine has not considered together to take appropriate measures of environmental, ecological, marine, wildlife, CRZ & Other social infrastructure issues.

z. Because EIA Report is not incorporated for CRZ clearance issues for ocean water consumption and its related study.

aa. Because conditions imposed in ToR are not incorporated in final EIA and also no submission of final Form-1 & Form-1A

bb. Because the EIA is not incorporated for new technology and plant is operated on very old machineries having no synchronization with pollution control systems.

cc. Because EIA is not prepared for all three seasons.

dd. Because incomplete process flow diagrams and false energy inputs and outputs and no material and energy balance is incorporated in EIA.

ee. Because incomplete details on requirement of raw materials (sea water, lime-stone, coke, ammonia, additives, etc.), its source and unscientific storage at the plant are incorporated in EIA.

ff. Because incomplete details on handling ammonia and misleading risk assessment and actual there is no measures are taken are incorporated in EIA.

gg. Because false and misleading details on water balance including water use, quantity of effluent generated, recycled and reused and its impact of discharge to receiving water body are incorporated in EIA.

hh. Because false and misleading details on effluent treatment plant, inlet and treated water quality with specific efficiency of each treatment unit in reduction in respect of all concerned/regulated environmental parameters are incorporated in EIA.

ii. Because false and misleading details of CO2 emissions including its quantum per tone of soda ash are incorporated in EIA.

jj. Because false and misleading management plan for solid waste generation (fines of lime stone, grits, brine sludge etc.), storage, utilization and disposal modes are incorporated in EIA.

kk. Because false and misleading compliance of ToR is given in EIA Report.

ll. Because despite of multiple show cause notices, proposed direction and closures from GPCB on multiple occasion, there is no further action.

mm. Because the GPCB has granted the consent on 24.06.2019 in unscientific manner without actual consideration of proposal, site visit, scientific study which clearly shows that the threshold limits imposed by GPCB for various parameters have adverse impact on the human habitants, sea, trees, water bodies, traffic congestion causing air pollution, noise in the area etc.

nn. Because no use & installation of advance Distributed Control System (DCS) and Emergency Shutdown System (ESD) for pollution control & environment protection.

oo. Because process flow used by PP in this project is very old and no advance technology is used for pollution control.

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pp. Because no up-gradation of technology for protection of environment and pollution control by way of installation air & water quality monitoring instrumentation system.

qq. Because Concept of granting of ex-post facto Environment Clearance is not allowed in environmental jurisprudence in India.

rr. Because Environment Clearance under challenge is not prior EC and it is nothing but ex-post facto Environment clearance.

ss. Because if the procedure of the post facto Environment Clearance is allowed to be followed, any project proponent would complete his project by causing irreversible damages to the environment and then seek post-facto environmental clearance making the provisions of EIA notification infructuous. The grant of post facto clearance defeats the very purpose of environmental protection law and the mandate of obtaining environmental clearance as per the provisions of EIA Notifications 2006.

tt. Because the environment clearance granted by the State Level Impact Assessment Authority is illegal and has no legal sanctity.

uu. Because the EIA Notification-2006, no were provides the grant of post facto clearance after the completion of the project.

Vv Because the MoEFCC & EAC failed to take any action for the violation of the provision of EIA notification, 2006 and Environment (Protection) Act, 1986.

ww. Because the MoEFCC and its Expert Appraisal Committee is equally liable for allowing the illegal structures of expansion & its Operations and also they are equally liable for granting of ex-post facto Environment Clearance to the project in gross violation of EIA Notification-2006 and other applicable laws.

xx. Because PP has submitted false, baseless & misleading information to MoEFCC & EAC for obtaining ToR & Environment Clearance and therefore PP is guilty of "Suppressio Veri Suggestio Falsi".

yy. Because PP has submitted false misleading compliances to the minutes of MoEFCC & EAC.

zz. Because In Case of Common cause *v.* Union of India *(2017) 9 SCC 499 to 578, Hon'ble Supreme Court has observed that,*

> *"124. We are not in agreement with learned counsel for the mining lease holders. There is no doubt that the grant of an EC cannot be taken as a mechanical exercise. It can only be granted after due diligence and reasonable care since damage to the environment can have a long term impact. EIA 1994 is therefore very clear that if expansion or modernization of any mining activity exceeds the existing pollution load, a prior EC is necessary and as already held by this Court in M.C. Mehta even for the renewal of a mining lease where there is no expansion or modernization of any activity, a prior EC is necessary. Such importance having been given to an EC, the grant of an ex post facto environmental clearance would be detrimental to the environment and could lead to irreparable degradation of the environment. The concept of an ex post facto or a retrospective EC is completely alien to environmental jurisprudence including EIA 1994 and EIA 2006. We make it clear that an EC will come into force not earlier than the date of its grant."*

aaa. Serious violations and illegal acts of respondents are damaging the environment and giving counter blast to the sustainable development.

bbb. As per Item No. 1.1 in form-1, there is no disclosure for "Change of land use if any and the statutory approval from the competent authority be submitted". PP did not disclosed the Non-agricultural permission as well as industrial use of project land. There is no Appraisal & Assessment to this effect. Therefore the

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Application is defective and grant of such EC is illegal.

ccc. As per Item No. 1.8 in form-1, there is no disclosure for quantity of excavated material as the construction is undertaken by the PP and Ground water level in the excavation site is going to damage. There is no Appraisal & Assessment to this impact of excavation. Therefore the Application is defective and grant of such EC is illegal.

ddd. Because as per Item No. 2.4 in form-1, there is no disclosure for quantity of construction material and PP has suppressed these quantity in the application and these are the natural resources used for the preparation of fine building material having larger adverse impact on the environment and ecology. There is no Appraisal & Assessment to this adverse impact and PP has suppressed the quantity of building material required for construction in item#2.3 of Form-1, therefore the technical appraisal and Impact Assessment is wrong and therefore the Application is defective and grant of such EC is illegal.

eee. Because PP has not provided the details under item-5 of form- 1 of vehicles used for remaining excavation, transportation of building material and their conditions. There is no Appraisal & Assessment to this impact of vehicular pollution. Therefore the Application is defective and grant of such EC is illegal.

fff. PP has suppressed the defense installation in Item#III.7 in "ENVIRONMENT SENSITIVITY", Airport, Naval Operations base within the 15 Kms of the project site, adjoining bird sanctuary, lakes etc. and this is affecting the operations of these establishment.

ggg. PP has not complied the terms & condition of Consents obtained from GPCB.

hhh. PP has not obtained permission for Ground Water Extraction and PP is extracting huge quantity of ground water from bore well.

iii. PP is operating STP, WTP, ETP etc. in unscientific manner.

jjj. PP has not provided any solid waste disposal system for scientific disposal of hazardous wastes generated from the Plant.

kkk. PP has deep unholy nexus with corrupt bureaucrats, providing funding to the political parties for avoiding legal actions and regularize his illegal activity.

lll. PP is careless, reckless and unapologetic towards the environment protection and to perform his fundamental duties.

mmm. Serious intentional violations and illegal acts of authorities are damaging the environment and giving counter blast to the precautionary principle sustainable development and PP is causing huge irreparable damage to the Environment.

nnn. Thus it is mandatory to stop the project operations & Construction activity for expansion permanently.

ooo. Therefore EC dated 19.08.2020 may kindly be quashed with application of principle of sustainable development for environmental issue."

7. We have heard learned Counsel for the appellants. While it is undisputed that prior EC for expansion in question is mandatory in terms of EIA Notification dated 14.09.2006, in view of judgment of the Hon'ble Supreme Court in *Alembic Chemicals* v. *Rohit Prajapati*[1], the doctrine of proportionality has to be applied. In absence of irreversible damage by the project, quashing of EC is not the only option. The project proponent can be required to take suitable mitigation measures to be overseen by an independent oversight Committee.

8. The measures to be so taken are by and large covered by the EC and Consent Conditions. To ensure that the said measures are duly adopted, we constitute a six member oversight Committee comprising of CPCB, Gujarat Pollution Control Board, District Magistrate, Porbandar, SEIAA, Gujarat, National Institute of Oceanography (NIO) and Chief Wildlife Warden (Forest), Gujarat. Gujarat Pollution Control Board will

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be the Nodal Agency for coordination and compliance. The Committee will be free to interact with the stake holders and consider any grievance arising out of violation of environmental norms. Considering the impact of expansion of the project, the Committee may inter alia look into the adequacy of capacity of Effluent Treatment Plant, Air Pollution Control Devices, storage and utilisation of sludge and solid waste, performance of currently operated sub-marine outfall/other method for utilisation and disposal of effluents, additional measures in view of high load of suspended solids in effluents and other related aspects. The Committee may also examine other measures for protection of ecology in the area and role to be played by the industry. First meeting of the oversight Committee may be held within one month and visit to the site may be undertaken. Except for visit to the site, other proceedings can be conducted online. Action plan be prepared to ensure compliance of environmental norms by regular monitoring. Wildlife Conservation Plan dated January, 2020 submitted by the project proponent dealing with conservation of wildlife within the circumference of 10 km, including the Bird Sanctuary at Porbandar, be duly executed with such further modifications as may be found necessary.

9. If any, grievance survives it is open to the aggrieved parties to take the remedies, in accordance with law.

The appeal is disposed of accordingly.

In view of order in the main matter, I.A. No. 102/2020 also stands disposed of.

A copy of this order be forwarded to CPCB, Gujarat Pollution Control Board, District Magistrate, Porbandar, SEIAA, Gujarat, National Institute of Oceanography and Chief Wildlife Warden (Forest), Gujarat by e-mail for compliance.

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† Principal Bench, New Delhi (By Video Conferencing)

1 2020 SCC OnLine SC 347

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IN THE NATIONAL GREEN TRIBUNAL

APPEAL NO. 19 of 2025

IN THE MATTER OF:

Vijaykumar Karsanbhai Gadhavi & Ors. — Petitioner (s) / Appellant (s)

-VERSUS -

Union of India & Ors. — Respondent(s) / Defendant (s)

VAKALATNAMA

I, Mr. Ranjan Tiwari, S/o Late Shri H.C. Tiwari, aged about 55 years am the Authorized Signatory for GHCL Ltd., B-38, Institutional Area, Sector - 01 Noida, Uttar Pradesh – 201301, DEFENDANT / RESPONDENT/ PETITIONER /OPPOSITE PARTY, in the above application/ suit/appeal/petition/ reference do hereby appoint and return **/ Eisha Krishn / Mansi Bachani/ Gitanjali Sanyal** Advocates of the National Green Tribunal, to act and appear for me/us in the above application/ suit/petition/appeal reference and on my/our behalf to conduct and prosecute or defend or with draw the same and all proceedings that may be taken in respect of any application connected with the same or any decree or order passed therein, including proceedings in taxation and application for Review to file and obtain return of documents and to deposit and receive money on my / our behalf in the Application/Suit/Petition/Appeal reference and application for Review, and to represent me/us and to take all necessary steps on my/our behalf in the above matter. I/We agree to ratify all acts done by the aforesaid advocate, in pursuance of this authority.



Dated this the 20th day of March, 2025

For GHCL LIMITED

Authorised Signatory

Accepted Identified By

Advocate,

(Petitioner (s) / Appellant (s)
Respondent (s) / Defendant(s) / Opposite Party

MEMO OF APPEARANCE



To,

The Registrar,
National Green Tribunal
Western Zone Pune

Sir,

Kindly enter my appearance in the above matter on behalf of the Petitioner / Appellant / Respondent.

Dated: 20.03.2025

Advocate for the
Petitioner(s)/Appellant(s)/Respondent(s)

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