BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL WESTERN ZONE BENCH, PUNE, AT PUNE

APPEAL NO. 41/2020

Hiteshbhai Uttambhai Dodi
and others .. **APPELLANTS**

V/s

Ministry of Environment, Forestry&
Climate Change and others **... RESPONDENTS**

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Place: Pune

Date: - 02/08/2021 **ADVOCATE FOR THE RESPONDNETS NO.4**

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WESTERN ZONE BENCH, PUNE, AT PUNE

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REPLY ON BEHALF OF RESPONDENT NO.4, MADURA CABON INDIA LIMITED

MAY IT PLEASE BE THE HON'BLE TRIBUNAL

1. At the outset, the present Respondent states that, the Respondent No.4 has perused the copy of the Appeal memo and the d ines each and every averment, statement made therein except so far as the same admitted expressly hereunder. The Respondent No.4 submits that the present Appeal has been filed to harass the present Respondent and malign the image of this Respondent and with a pure intention to abuse the process of law.

2. The Respondent No.4 is a Company, incorporated under the provisions of Companies Act and is having its registered address as 1, Janki Centre, Off Veera Desai Road, Andheri (W), Mumbai – 400 053. The Respondent No.4 Company is incorporated on 7thDecember, 2017 and has proposed to set up a project of manufacturing of Carbon black along with power generation

(green power). The power will be generated by utilising of off-gas generated during the manufacturing process of carbon black. The Respondent No. 4 desires to set up the said project at land Survey Nos.3705, 3708, 3719, 3725, 3738, 4108, 4110, 4318 situated at village Fansa, Tal. Umbergaon, Dist. Valsad. The said site has been finalized by the Respondent No.4 after conducting the due survey, Environment Impact Assessment and all other allied permissions, as required under the provisions of environmental statutes and after completing the entire study, the said site has been finalized.

3. The Respondent No.4 intends to increase the capacity of carbon black in the coming years by setting up of the present project and in view of the same, since the process of manufacturing of carbon black falls under item 5 (e) of EIA Notification, 2006, the Respondent No.4 proceeded to apply for the grant of EC.

4. The Respondent No.4 vide its application dated 6.3.2019 submitted form –I as required under the EIA Notification, 2006 to the Respondent No.1 herein along with all requisite qualification. Copy of the said Form-I along with all necessary documents including Terms of References (ToR) and Pre-Feasibility Report are annexed herewith and marked as **ANNEXURE 'R-1** collectively.

5. The Respondent No.4 submits that, the Carbon Black is re-enforcing material and fill-up in rubber products. There are severe crises of availability of Carbon Black. Presently, the Carbon Black

demand including that of Tyre Manufacturers is at 12.85 T, while the country's CB manufacturing capacity is at 9.5 T. Apparently, CB manufacturers are not aware about the imposition of anti-dumping Chinese Tyres would create huge demand of CB. On account of this, the Respondent No.4 decided to set up the present plant with all modern technologies for the manufacturing of CB. In view of the same, the Respondent No.4 approached to GIDC and requested for a suitable land for setting up of the present plant, Accordingly, the Respondent No.4 and the Collector, Valsad proceeded to issue N.A. orders dated 16.01.2019 in respect of the lands mentioned herein above for setting up of the said manufacturing unit. Copies of the N.A. orders dated 16.01.2019 are annexed herewith and marked as **ANNEXURE 'R-2'** collectively.

6. It may be mentioned herein that, said N.A orders have not been challenged in Court of law by any of the Appellants before this Hon'ble Tribunal.

7. In view of this, the permissions received from the GIDC and the Collector, the Respondent No.4 proceeded to set up the present manufacturing unit of the Respondent No.4 at the said site the Respondent No.4 appointed the Consultant to conduct the Environment Impact Assessment Report (EIAR) for setting up of the CB manufacturing plan. In the said EIAR, the Respondent No.4 has in detail stated the process, it will deploy for manufacturing of CB and the said process is set to be with most advanced techniques to be deployed by the Respondent No.4, which will considerably reduce the air pollution. In the said EIAR

the Respondent No.4 has also given the Environment Management Plan, which will ensure the compliance of all the Regulations, applicable Laws, as stipulated by the Respondent No.1. Vide said EMP, the Respondent No.4 will also contribute significantly towards sustainable development by Resource Conservation and Waste Minimization Practices. The Respondent No.4 has also taken structural measures to have an adequately designed enclosed area for reduction of particulate during construction material, storage and handling. It has also ensured the barricading around the construction site to particulate emission going out from the said area. The copy of the said Environment Impact Assessment Report is annexed herewith and marked as **ANNEXURE 'R-3'.**

8. In view of the said EIA, submitted by the Respondent No.4, the Respondent No.3 issued a public hearing proceeding to conduct the public hearing for the setting up of the manufacturing project of the Respondent No.4 in the nearby villages vide its order dated 19.7.2019. Copy of the notice dated 19.7.2019 issued by the Respondent No.3 is annexed herewith and marked as **ANNEXURE 'R-4'.**
9. The Appellants herein have candidly admitted in the Appeal memo that; they have also attended the public hearing. In the said public hearing all the issues raised by the Appellants were considered by the Authorities and Authorities after considering the objections and also the queries raised by the villages, has proceeded to conclude the said public hearing. The Respondent No.1 on the basis of the Minutes of the Public Hearing, along with the

documents submitted by the Appellants, has proceeded to grant the Environment Clearance certificate in favour of the Respondent No.4 dated 18.5.2020. Copy of the Minutes of Meeting of Public hearing is annexed herewith and marked as **ANNEXURE 'R-5'.**

10. The Respondent No.4 would like to deal the averments made by the Appellants in the present Appeal, and denials in respect of the paragraphs mentioned in the Appeal as follows:

11. The Respondent No.4 submits that the EIA notification stipulates a certain procedure for applying for Environmental Clearance. The Respondent No.4 had applied in accordance to the said procedure. The Application was scrutinised, verified along with all documents. The Authorities have duly conducted the Public Hearing in accordance to the said Notification and hence the Environmental Clearance is granted by following the due procedure mentioned in the Notification. Thus, the Environmental Clearance cannot be set aside on any ground. The Appellants have been duly heard by the Authorities on every aspect and thus, they cannot agitate the same cause again before this Hon'ble Tribunal.

12. With respect to contents of Para 1 and 2, the Respondent No.4 does not wish to offer any comments.

13. With respect to contents of Para 3, the Respondent No.4 submits that, the Respondent No.4 has received the EC after due compliance of procedure, as mandated under the EIA Notification, 2006 and the same has been granted after conducting Impact

Assessment Study in respect of the project to be set up by the Respondent No.4. In view of this, the Appeal filed by the Appellants, is pre-mature and hence, ought not to be considered by this Hon'ble Tribunal.

14. With respect to contents of Para 4, the Respondent No.4 denies the contents of the Appellants and that Respondent no.4 has published the advertisement of grant of EC in two newspapers. Copies of the clippings of the said newspapers regarding advertisement are annexed herewith and marked as **ANNEXURE 'R-6'**

15. With respect to Para 1 of the facts in brief, the contents of the Para 1 are herewith denied by the Respondent No.4 and that the land which has been procured by the Respondent No.4 is not an agricultural land in Scheduled area and that has been confirmed by the Collector, Valsad.

16. With respect to Para 2 to 4 of the facts in brief, the comments of the Respondent No.4 are not required.

17. With respect to the contents of Para 5 of the facts in brief are partially correct.

18. With respect to the contents of Para 6 to 9 of the facts in brief are true and correct, no comments of the Respondent No.4 are required.

19. With respect to the contents of Para 10 of the facts in brief, the Respondent No.4 denies the said contentions. It is submitted that the land was finalized by the Collector and the GIDC for awarding it to the Respondent No.4 for setting of the manufacturing of CB. The said land was finalized after conducting due diligence on the part of the respective Authorities. The Respondent No.4 also vide its letter dated 20.02.2019 has given a declaration that, the land is not covered U/s 73 (aa) of the Panchayats (Extension to the Scheduled Areas) Act, 1996 and hence, Gram Panchayat Meeting was held on01.12.2018, wherein they have unanimously passed a resolution No i. 24(01) of Awarding the land to the Respondent No.4 for setting up of the Manufacturing Unit. Copy of the said letter dated 20/02/2019 is annexed herewith and marked as **ANNEXURE 'R-7'.**

20. The National Green Tribunal is governed by the provisions of NGT Act, 2010. The provisions of the statute mentioned in Para 10 is not a part of Scheduled 1 of the NGT Act, hence, the Hon'ble Tribunal would have no jurisdiction to decide the issues falling within the Panchayats (Extension to the Scheduled Areas) Act, 1996.

21. With respect to contents of Paras 11 and 12 of the facts in brief, the same is repetition and thus, the earlier paragraphs of this reply would part and parcel for the denial of the contents of these paragraphs.

22. With respect to contents of Para 13, the Respondent No.4 has already stated that, a detailed Environment Impact Assessment study has been conducted by the Respondent No.4 and in view of the said study and upon conducting the public hearing, the authorities have considered all the objections of the Appellants and has proceeded to grant EC. As stated earlier, the Appellants are trying to invoke the provisions of the Gujarat Land Revenue Code 1879 and the Gujarat Tenancy and Agricultural Lands Act, 1948, which are not forming part of Schedule I of the NGT Act, hence, the Hon'ble Tribunal would not have jurisdiction to entertain the submissions mentioned in support of the said Enactments.

23. With respect to contents of Para 14 of the facts in brief, the Respondent No.1 would be in the appropriate authority to respond to the contents of the said statements.

24. With respect to contents of Para 15 of the facts in brief, the contents therein are true and correct and hence, do not require any comments.

25. With respect to contents of Para 16 of the Appeal, the contents therein are denied, as the same are false and incorrect. It appears that, the Appellants have not studied the EIA submitted by the Respondent No.4 the Respondent No.4 has dedicated a complete chapter in the report with regard to the control of the Air Pollution and control of emission in the said Report. The Environment Management Plan as submitted by the Respondent No.4 is also

crystal clear with regard to the same. The Respondent No.4 has annexed the said EIAR to the present reply and that it is well advise to go through the said report before making any baseless allegations against the Respondent No.4.

26. With respect to contents of Para 17 of the Appeal, it is submitted that, the Appellants have attended the public hearing and have also submitted their objections before the Appropriate Authorities. The Respondent No.4 submits that, during the public hearing, all the contentions and objections made by the Appellants have been considered by the Authorities and have been duly responded during the course of public hearing. Upon the basis of the objections made by the Appellants and the submissions made by the Respondent No.4, also the reports of the Authorities and the EIAR of the Respondent No.4, the Respondent No.1 has proceeded to grant EC to the Respondent No.4 herein.

27. With respect to contents of Paras 18 to 23 of the facts in brief, the contents therein are false and incorrect. The Respondent No.4 in view to avoid repetition, has already filed EIA on record and that the contentions raised by the Appellants are also repetition and their objections raised before the Authorities at the time of public hearing and the EIA, which has been duly certified by the Respondent No.1 covers all the objections.

28. The Hon’ble Bombay High Court and the Supreme Court of India have on the interpretation of various statutes held that when statutes prescribe a shorter period of limitation and different scheme of limitation, the provision of the limitation Act is

excluded and the court/ Tribunal must apply the period of limitation as prescribed in the specific statutes while exercising the powers. In the view of this the application preferred by the Appellants for condonation of delay is totally misconceived and liable to be dismissed. The Appellants are unnecessarily hampering the operation/execution of the plant and denying the benefits to numerous employees and their families for their vested interest. The issues raised in the present Appeal are already dealt by the Authorities having expertise in the field. Hence, on this ground the present application be rejected. It is submitted that the present Appeal is barred by limitation u/s 16 of the NGT. The said Act is a special enactment and hence, there is a statutory prescription of the special period of limitation under the said Act, which will certainly exclude general law of limitation. That the Hon'ble Supreme Court in the case of L.C. Hanumanthappa vs H.B. Shivakumar (2016) I SCC 332 has held that the word 'first' has been used between the words 'sues and 'accrued'. This would mean that if a' suit is based on multiple causes of action, the period of limitation will begin to run from the date when the right to sue first accrues. To put it differently, successive violation of the right not give rise to fresh cause and the suit will be liable to be dismissed if it is beyond the period of limitation counted from the day when the right to sue first accrued.

29. It is submitted that, the present Appeal has been filed beyond the prescribed period of limitation and hence, this Hon’ble Tribunal would not have been any jurisdiction to entertain the present

Appeal. It is submitted that, the Hon'ble Tribunal in its appellate jurisdiction does not have the power to go into the factual aspects, which has already been examined by the respective Authorities having expertise in the said field and after having considered all the documents submitted by the Respondent No.4 and also during the course of public hearing, the EC cannot be termed to be granted as bad in law.

30. It is submitted that, the present Appeal is nothing but an abuse of process of law and hence, need to be dismissed with exemplary cost.

PUNE
DATE 02/08/2021

For MADURA CARBON INDIA LIMITED

Director

Respondent No.4

ADVOCATE FOR THE RESPONDENT No.4

BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL

WESTERN ZONE BENCH, PUNE, AT PUNE

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Ministry of Environment, Forestry &
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A F F I D A V I T

MAY IT PLEASE THE HON'BLE TRIBUNAL

I, Vipan Kalra, Age : 66 , Occu.: Business, having address at 1, Janki Centre, Off Veera Desai Road, Andheri (W), Mumbai – 400 053, do hereby state on solemn affirmation as under :-

1. I am Director of the Respondent No.4 and responsible for day to day administration of the Respondent No.4's business. As such, I have gone through the Reply and annexure thereto being filed today. I find that the contents therein are true and correct to the best of my knowledge and belief and which may be treated as part and parcel of the present affidavit.

WHATEVER STATED ABOVE is true and correct to the best of my knowledge and belief. In witness whereof I have signed hereunder at Mumbai on 21st day of December, 2020.

Identified by

Advocate

Vipan Kalra,
Director
Respondent No.4.

IDENTIFIED BY
ANIL KUMAR PANDEY
B.COM.LL.B
ADVOCATE HIGH COURT
Add. Omkar
Opp. Ranjar Naga
(E) Mumbai-93

NOTARY
UDAI PRAKASH
Mumbai (Maharashtra)
Regd. No. 9972
Exp. Date. 27/07/2023
GOVT. OF INDIA

BEFORE ME
21/12/2020
UDAI PRAKASH (M.A.LL.B.,)
ADVOCATE & NOTARY GOVT. OF INDIA
MUMBAI (MAHARASHTRA)
REG. NO. 9972
Room No. 10, s. nO. 94, Inshwadi, Kharodi, Village,
Marve Road, Malad (W), Mumbai-400 095.

NOTARIAL REG. NO. 11
Sr. No. 5598 Page No. 02
Date 21/12/2020

NOTARIAL

ANNEXURE-R-1

Monitoring the Implementation of Environmental Safeguards
Ministry of Environment, Forest & Climate Change
Regional Office (WZ) Bhopal
Monitoring Report
DATA SHEET

<table>
<tr><th>Sr. No.</th><th>PARTICULARS</th><th>REPLY</th></tr>
<tr><td>1</td><td>Project Type : River Valley/ mining/ Industry/ Thermal /Nuclear/ Other (Specify)</td><td>Industry & Thermal</td></tr>
<tr><td>2</td><td>Name of the Project</td><td>M/s Madura Carbon (India) Ltd.</td></tr>
<tr><td>3</td><td>Clearance Letter (s) / OM No. and date</td><td>Environment Clearance-
F. No. J-11011/266/2018-IA-II (I),
Dated 18/05/2020.</td></tr>
<tr><td>4</td><td>Location
a) District
b) State
c) Location/Latitude/Longitude</td><td>M/s Madura Carbon (India) Ltd.
a) District: Valsad
b) State: Gujarat
c) Location Latitude/Longitude
Survey no. 3705, 3708, 3719, 3725, 3738, 4108, 4110, 4318, Village: Fansa (Karajgam), Taluka: Umbergaon,
Dist.: Valsad, Gujarat.
Latitude – 20°18'7.41"N
Longitude - 72°50'20.66"E</td></tr>
<tr><td>5</td><td>Address for correspondence
a) Address of concerned Chief Engineer (With Pin code & Mob. No./ Telephone/ Telefax / E-mail)

b) Address of concerned Project Engineer
(With Pin code & Mob. No./ Telephone/ Telefax / E-mail)</td><td>Mr. Vipan Kalra

M/s Madura Carbon (India) Ltd.
Survey no. 3705, 3708, 3719, 3725, 3738, 4108, 4110, 4318, Village: Fansa (Karajgam), Taluka: Umbergaon,
Dist.: Valsad, Gujarat.
9322672461

Email- vipan.kalra@maduratex.com</td></tr>
<tr><td>6</td><td>Sailent Features
a) Of the Project

b) Of the Environment management Plan</td><td>a) Salient features of the project:
<table>
<tr><td>Project/ Plant Area</td><td>94499 m^2</td></tr>
<tr><td>Cost of the Project</td><td>440 Crore</td></tr>
<tr><td>Production Capacity/ Month</td><td>Carbon Black (230000 TPA) and Power Generation - Green Power (45MW)</td></tr>
<tr><td>Water Consumption</td><td>3115 KLD</td></tr>
<tr><td>Wastewater Generation</td><td>630 KLD</td></tr>
<tr><td>Greenbelt</td><td>24800 m^2</td></tr>
<tr><td>Source of water</td><td>Damanganga Canal Distry</td></tr>
</table></td></tr>
</table>

<table>
<tr><td></td><td></td><td>
<table>
<tr><td>Wastewater Treatment & Discharge</td><td>Total 630 KLD wastewater will be generated from plant operations. Out of which @45 KLD will be domestic & @585 KLD will be industrial waste water. The domestic wastewater will be treated in STP. Treated water from STP will be used for gardening.
ETP treated water partially will be recycled for plant washing and remaining will be recycled for industrial activities after RO & MEE treatment.</td></tr>
<tr><td>Electricity Consumption</td><td>13 MW (In-house PP & DGVCL - during startup)</td></tr>
<tr><td>Fuel Consumption</td><td>Off-gas generated during manufacturing of CB will be used in boilers & dryers. FO (Furnace Oil) will be used as auxiliary fuel for start-up in boilers & dryer. HSD (High Speed Diesel) will be used as fuel in D.G. Set.</td></tr>
</table>
b) Salient features for Environment Management Plan are:
<table>
<tr><td>Areas</td><td>EMP Implemented</td></tr>
<tr><td>Raw Material Storage Area</td><td>• The company will provide separate storage area/tank farm for the storage of hazardous chemicals/materials.</td></tr>
<tr><td>Process</td><td>• All storage silo will be closed.
• Dedusting System (with Polyester bags) will be provided as APCM
• with storage silo, packing area & bucket elevator.</td></tr>
<tr><td>Waste</td><td>Dedicated waste collection and storage area.
Ensured proper disposal through manifest system to authorized agency.</td></tr>
</table>
</td></tr>
<tr><td>7</td><td>Production details during compliance period and (or) during the previous financial year</td><td>The project has not been initiated yet.</td></tr>
<tr><td>8</td><td>Break up of the Project Area
a) Submerged area: forest & Non Forest</td><td>a) No Forest land involved in Project area.
b) Breakup of the area is:</td></tr>
</table>

<table>
<tr><td></td><td>b) Others</td><td><table>
<tr><td>Process Area</td><td>31703 m^2</td></tr>
<tr><td>Open Area (Roads, Drains, Space)</td><td>37996 m^2</td></tr>
<tr><td>Greenbelt Area</td><td>24800 m^2</td></tr>
<tr><td>Total</td><td>94499 m^2</td></tr>
</table></td></tr>
<tr><td>9</td><td>Break up of the project affected population with enumeration of those losing house/dwelling unit only agricultural land, both dwelling unit & agricultural land & less labours/artisan
a) SC, ST, Adivasi
b) Others

(Pl indicate whether these figures are based on any scientific and systematic survey carried out give details and year of survey)</td><td>The proposed site is a NA land purchased from private owners. Hence, no displacement of any population is required for the proposed project.</td></tr>
<tr><td>10</td><td>Financial Detail
a) Project cost as originally revised estimates and the year of price reference

b) allocation made for environment management plan with item wise and year wise break up</td><td>The financial details are as below:
a) The approx. capital cost for proposed project will be 440 Cr. (in INR).

b) EHS in CapEx planning (For Proposed Project)
<table>
<tr><th>Purpose</th><th>Cost in Crore (INR)</th></tr>
<tr><td>ETP, STP, RO & MEE</td><td>11.5</td></tr>
<tr><td>Air pollution control device</td><td>70.0</td></tr>
<tr><td>Noise Control</td><td>0.5</td></tr>
<tr><td>Safety instruments</td><td>4.2</td></tr>
<tr><td>Greenbelt Development</td><td>0.3</td></tr>
<tr><td>Total</td><td>86.5</td></tr>
</table>
EHS in OpEx planning
<table>
<tr><th>Purpose</th><th>Recurring Cost (Crores per annum)</th></tr>
<tr><td>ETP, STP, RO & MEE</td><td>19.40</td></tr>
<tr><td>Air pollution control device</td><td>6.20</td></tr>
<tr><td>Fees for Common disposal facilities</td><td>0.30</td></tr>
<tr><td>Noise Control</td><td>0.10</td></tr>
<tr><td>Env. Monitoring expenses</td><td>0.03</td></tr>
<tr><td>Safety instruments maintenance</td><td>0.10</td></tr>
<tr><td>Environment & safety training</td><td>0.02</td></tr>
</table></td></tr>
</table>

		<table><tr><td>Occupational Health & Medical surveillance</td><td>0.10</td></tr><tr><td>Green belt maintenance</td><td>0.20</td></tr><tr><td>**Total**</td><td>**26.45**</td></tr></table>
	c) Benefit cost ratio/internal rate of return and the year of assessment (if applicable)	c) The project has not been initiated yet.
	d) Whether above includes the cost of environment management as shown in the above	d) The cost as mentioned in 9(a) includes the environment management cost.
	e) Actual expenditure incurred on the project so far	e) The project has not been initiated yet.
	f) Actual expenditure incurred on the Environment Management Plan so far	f) The project has not been initiated yet.
11	Forest Land Requirement a) The status of approval for diversion of forest land for non forestry use	a) There is no diversion of land. The Project is to be established on Non-Agriculture land diverted for Industrial purpose.
	b) The status of cleaning felling	b) No cleaning or felling of trees required.
	c) The status of compensatory afforestation, if any	c) No compensatory afforestation required.
	d) Comments on the viability & sustainability of compensatory afforestation programme in the light of actual field experience so far	d) Not applicable.
12	The Status of clear felling in non forest areas (such as submergence area of reservoir, approach roads) if any with quantitative information	No clear felling in non-forest area will be required.
13	Status of Construction a) Date of commencement (Actual and/or planned)	The project has not been initiated yet.
	b) Date of completion (Actual and/or planned)	
14	Reasons for the delay if the project is yet to start	Delay in initiation of the project due to 'Covid-19' pandemic.
15	Details of Site visit	No site visit so far.

	a) The dates on which the project was monitored by the MoEF & CC, Regional Office on previous occasions. (If applicable) b) Date of site visit for the monitoring report	
16	Details of correspondence with project authorities for obtaining action plans/information on status of compliance to safeguards other than the routine letters for logistic support for site visit. (The first monitoring report may contain the details of all the letters issued so far but the later reports may cover only the letters issued subsequently)	No correspondence so far except letter no. 5-51/2020(ENV) dtd. 03/07/2020.

Signature of the Project in Charge

જ.સુશા/ગણત/૬૩નિયમ૩૬/૨જી.૨૩/૧૮/વશી.૮૪ /૧૯
કલેક્ટર કચેરી,જ.સુ.શાખા,
વલસાડ, તા.૧૫/૦૧/૨૦૧૯.

વંચાણે લીધુ :

(૧) અરજદારશ્રી તાજદીન હસનઅલી હાલાણી,તૌસીફ તાજદીન હાલાણી તથા અભિ હિતેશ દત્તાણી રહે.જી–૨૩, ગીરનાર ખુશ્બુ પ્લાઝા, વીશાલ મેગા મોલની સામે, જી.આઈ.ડી.સી. મું.વાપી જિ.વલસાડની અરજી તા.૧૫/૧૧/૨૦૧૮.
(૨) મામલતદારશ્રી ઉમરગામના શેરાપત્ર નં.જમન/વશી.૨૬૧૧/૨૦૧૮ તા.૧૨/૧૨/૧૮.
(૩) નાયબ કલેક્ટરશ્રી, પારડીના શેરાપત્ર નં.જમન/૬૩–૩૬/ફણસા/વશી.૧૧૩૬૨/૨૦૧૮ તા.૨૬/૧૨/૨૦૧૮.
(૪) મામલતદાર અને કૃષિપંચશ્રી, વલસાડનું પ્રમાણપત્ર નં.સીલીગ/પ્રમાણપત્ર/૨જી.નં.૨૫૩/૨૦૧૮ તા.૨૧/૧૨/૨૦૧૮.
(૫) અરજદારશ્રી દ્વારા રજુ થયેલ સોગંદનામુ તા.૧૦/૧૨/૨૦૧૮.
(૬) ગુજરાત ગણોત વહિવટ અને ખેતીની જમીનનો અધિનિયમ – ૧૯૪૮ની કલમ ૬૩ –નિયમ–૩૬.

હુકમ:–

આ કામના અરજદારશ્રી તાજદીન હસનઅલી હાલાણી,તૌસીફ તાજદીન હાલાણી તથા અભિ હિતેશ દત્તાણી રહે.જી–૨૩, ગીરનાર ખુશ્બુ પ્લાઝા, વીશાલ મેગા મોલની સામે, જી.આઈ.ડી.સી. મું.વાપી જિ.વલસાડ નાઓએ આમુખ (૧) ની અરજીથી તેમના સંયુકત નામે ચાલતી મોજ.ફણસા તા.ઉમરગામના રિ.સ.નં.૩૭૦૮ (જુના સ.નં.૩૬૩/૩/૪) ક્ષે.હે.૦–૦૯–૪૫ ચો.મી. વાળી ખેતીની જમીન બીનખેતીના ઔદ્યોગિક હેતુ માટે મદુરા કાર્બન ઈન્ડીયા લીમીટેડને વેચાણ કરવા ગ.ધા.ક. ૬૩ નિયમ ૩૬ હેઠળ પરવાનગી મળવા વિનંતી કરેલ છે.

આ કામે મામલતદારશ્રી, ઉમરગામ તથા નાયબ કલેક્ટરશ્રી, પારડીના પાસેથી તપાસ અહેવાલ મંગાવતા તેઓશ્રીના અનુક્રમે આમુખ(૨) તથા આમુખ(૩) થી જરૂરી તપાસ કરી હકારાત્મક અભિપ્રાય આપેલ છે. તેમજ મામલતદાર અને કૃષિપંચશ્રી, વલસાડ દ્વારા આમુખ(૪) મુજબ હકારાત્મક અભિપ્રાય આપેલ છે. જે ચકાસતાં સાવલવાળી જમીન અંગેની હકીકત નીચે મુજબ છે :

સવાલવાળી જમીન અરજાદરશ્રીઓને વેચાણ હકકે પ્રાપ્ત થયેલ છે. જે અંગે ગામ દફતરે પડેલ ફેરફાર નોંધ નં.૬૯૧૯ તા.૦૨/૧૦/૧૮ મુજબ અરજદારશ્રીઓના નામો દાખલ કરવામાં આવેલ છે. આમ,સવાલવાળી જમીનનું ટાઈટલ સ્પષ્ટ જણાય છે.

સબબ,શ્રી તાજદીન હસનઅલી હાલાણી,તૌસીફ તાજદીન હાલાણી તથા અભિ હિતેશ દત્તાણીના નામે ચાલતી મોજ.ફણસા તા.ઉમરગામના રિ.સ.નં.૩૭૦૮ (જુના સ.નં.૩૬૩/૩/૪) ક્ષે.હે.૦–૦૯–૪૫ ચો.મી. વાળી ખેતીની જમીન બીનખેતીના ઔદ્યોગિક હેતુ માટે મદુરા કાર્બન ઈન્ડીયા લીમીટેડને વેચાણ કરવા ગ.ધા.ક. ૬૩ નિયમ ૩૬ હેઠળ નીચેની શરતોને આધિન પરવાનગી આપવા હુકમ કરવામાં આવે છે.

શરતો :

(૧) પ્રશ્નવાળી જમીન બીનખેતીના ઔધોગિકના હેતુ માટે વેચાણ કરવાની રહેશે. અન્ય હેતુ માટે તેનો ઉપયોગ કરતા પહેલા જરૂરી પરવાનગી મેળવી લેવાની રહેશે.
(૨) બીનખેતીના કૃત્ય માટે સક્ષમ અધિકારીશ્રી પાસેથી જરૂરી પરવાનગી આ હુકમની તારીખથી છ માસમાં મેળવી લેવાની રહેશે અને એક વર્ષમાં માંગણી મુજબના હેતુ માટે પરવાનગી મેળવી તે મુજબનો ઉપયોગ જમીનનો કબજો લીધાની તારીખથી ત્રણ વર્ષની અંદર કરવાનો રહેશે.
(૩) આ પરવાનગીના આધારે વેચાણ લેનાર અરજદારશ્રી તરફથી અન્ય ખેતીની જમીન ખરીદી શકશે નહી. આ પરવાનગીથી તેઓ ખેડુત નથી બનતા.
(૪) અરજદારશ્રી એ જ્યારે પણ આ જમીન વેચાણ કરવાનો પ્રશ્ન ઉપસ્થિત થાય ત્યારે સક્ષમ સતાધિકારીશ્રીની પુર્વ પરવાનગી મેળવવાની રહેશે.
(૫) સદરહુ પરવાનગી ગ.ધા.ક. ૬૩ નિયમ ૩૬(૧)(ખ) ની જોગવાઈઓને આધિન આપવામાં આવી છે.જેથી અન્ય કોઇ પ્રવર્તમાન કાયદાની જોગવાઇઓને આધિન પરવાનગી મેળવવાની થાય તે મેળવી લેવાની રહેશે.
(૬) આ પરવાનગી અત્રે રજુ થયેલ આધાર પુરાવા, નિવેદનો અને નકલો ધ્યાને લઇ આપવામાં આવેલ છે. ભવિષ્યમાં તે પૈકી કોઇ બનાવટી કે ખોટા માલુમ પડશે તથા સાચી વિગત છુપાવીને અથવા ખોટી વિગતો રજુ કરીને પરવાનગી મેળવ્યાનુ જણાશે તો આ પરવાનગી રદ કરવામાં/ગણવામાં આવશે અને આપોઆપ રદ થયેલી ગણાશે. તે અંગે આ પરવાનગી આપનાર અધિકારીની જવાબદારી રહેશે નહી.

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(૭) સદર પરવાનગી આપ્યા બાદ ઉપરોક્ત જમીન અંગે ભવિષ્યમાં કોઇ વાદ–વિવાદ, તકરાર કે હિસ્સા સંબંધિ તકરાર ઉપસ્થિત થશે તો તે અંગેના જવાબદારી પરવાનગી આપનાર અધિકારીની રહેશે નહી.

(૮) સવાલવાળી જમીન ખેતી સદરે ચાલી આવેલ છે. સદર હુકમની તારીખથી છ માસમાં ઓછામાં ઓછી ખેતીની જમીનની પ્રવર્તમાન જંત્રી મુજબની કિંમતનો તેથી વધુ પરંતુ ઓછી નહી તેવી કિંમતનો વેચાણ દસ્તાવેજ રજીસ્ટ્રેશન કરાવી તેની નકલ અત્રેની કચેરીએ રજુ કરવાની રહેશે. વેચાણના તેવા દસ્તાવેજમાં ઔદ્યોગિક હેતુની પ્રવર્તમાન જંત્રી મુજબનો સ્ટેમ્પ વાપરવાનો રહેશે.

(૯) જે હેતુ માટે પરવાનગી આપવામાં આવી હોય તે હેતુ માટે જમીનનો ઉપયોગ કરવાનો રહેશે. તે વ્યક્તિ આવી નિર્દિષ્ટ કરેલ શરતોનું પાલન ન કરે તો કલમ – ૬૩ ની પેટા કલમ (૧) હેઠળ આપેલી પરવાનગી રદ થયેલી ગણાશે અને વેચાણ અત્રેની અગાઉથી મંજુરી મેળવ્યા સિવાય કરેલ એમ સમજવુ.

ઉપરોક્ત પૈકી કોઈ શરતનો ભંગ થશે તો આ હુકમથી આપવામાં આવેલ પરવાનગી આપોઆપ રદ થશે તથા જમીન મહેસુલ અધિનિયમ અને નિયમોમાં કરેલ જોગવાઇ અનુસાર શિક્ષાત્મક કાર્યવાહી પણ કરવામાં આવશે.

COLLECTOR VALSAD DISTRICT

16/11/19

(સી.આર. ખરસાણ)
કલેક્ટર વલસાડ

પ્રતિ,

BY RPAD

(૧) શ્રી તાજદીન હસનઅલી હાલાણી,
શ્રી તૌસીફ તાજદીન હાલાણી તથા
શ્રી અભિ હિતેશ દત્તાણી
રહે.જી–૨૩, ગીનાર ખુશ્બુ પ્લાઝા,
વીશાલા મેગા મોલની સામે,
જી.આઈ.ડી.સી. મું.વાપી
જિ.વલસાડ

(૨) મદુરા કાર્બન ઈન્ડીયા લીમીટેડ.
યુનિટ–૧, જાનકી વીરા દેસાઈ રોડ,
અંધેરી વેસ્ટ, મુંબઈ.
મહારાષ્ટ્ર–૪૦૦૦૨૮.

નકલ જયભારતસહ રવાના : (૧) નાયબ કલેક્ટરશ્રી, પારડી (૨) મામલતદારશ્રી,ઉમરગામ
૨/– જાણ તથા જરૂરી કાર્યવાહી સારૂ.

નકલ રવાના : નાયબ મામલતદારશ્રી, ઈ–ધરા, મામલતદાર કચેરી ઉમરગામ તરફ
૨/– જાણ તથા રેકર્ડે અમલવારી કરી કાચી નોધની નકલ સાથે સત્વરે
રીપોર્ટ કરવા સારૂ.

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Annexure-1: 63 AA Permission for Conversion of Land.

No. Jasusha / Ganat/ 63 rule 36/REG.25/18/Vashi -74-80/19.

Collector office, J. Su. Branch

Valsad, date-16.01.2019.

Stamp of

Collector, Valsad district.

Purchase:

1. The application is of Petitioner Shri Tajdin Hasanali Halani, Toshif Tajdin Halani and Abhi Hitesh Dattani residing at G-23, Girnar Khushboo Plaza, opposite Vishal Megha Mall, G.I.D.C -Vapi, District -Valsad, dated -15.11.2018.
2. Mamlatdar Umaragam's Sherapatra no Jaman/Vashi.2613/2018, dated 12.12.2018.
3. Assistant Collector, Pardi's Sherapatra no Jaman/63-36/Fansa/Vashi.11368/2018 dated 26.12.2018.
4. Mamlatdar and Krishi Panchshree, Valsad's PramanPatra no. ceiling/pramanpatra/reg.268/18 dated 21.12.2018.
5. Affidavit submitted by the Petitioner dated 10.12.2018.
6. Section 63 and Rule 63 of Gujarat Ganot Administration and Agricultural Land Act 1948.

Order:

The Applicants for this work are Shri Tajdin Hasan Ali Halani, Tousif Tajin Halani and Abhi Hitesh Dattani residing at G-23, Girnar Khushboo Plaza, Opposite Vishal Mega Mall, GIDC, Vapi District Valsad of prologue(1) application under joint name of Moj. Fansa District Umragam's R.S No. 3705 (Old S.No. 363/3/1) Area Hectare 0–34–91 sq.m agricultural land to be sell to Madura Carbon India Limited for non-agricultural industrial purpose. Permission to sell is requested under G.D.K 63 rule 36.

Asking for investigation report from Mamlatdar Shri, Umargam and Deputy Collector Shri, Requesting investigation report from Pardi in this work, They have given necessary positive opinion after conducting necessary investigation from Prologue (2) and Prologue (3) respectively. Also Mamlatdar and Krishi Panchshree, Valsad have given positive opinion as per the Prologue (4) The facts about the land in question being tested are as follows:

Sabab, Shri Tajdin Hasan Ali Halani, Tousif Tajdin Halani and Abhi Hitesh Dattani in the name of Moj. Fansa District Umragam's R.S No. 3705 (Old S.No. 363/3/1) Area Hectare 0–34–91 sq.m agricultural land to be sell to Madura Carbon India Limited for non-agricultural industrial purpose,the Permission is granted to sell under G.D.K 63 rule 36 subject to the following conditions.

Terms:

(1) The land in question shall be sold for non-agricultural industrial purposes. Necessary permission must be obtained before using it for any other purpose .

(2) Necessary permission for the act of non-agricultural activity on land shall be obtained from the competent authority within six months from the date of this order, and within one year the permission obtained for the purpose as per demand shall be used within three years from the date of possession of the land.

(3) On the basis of this permission, the applicant buyer will not be able to purchase other agricultural land. With this permission they do not become farmers.

(4) Prior permission of the competent authority shall be obtained by the applicant whenever the question of sale of this land arises.

(5) Aforesaid permission G.D.K 63 subject to the provisions of Rule 36 (1) (K), so that permission must be obtained subject to the provisions of any other existing law.

(6) This permission is given in view of the supporting evidence, statements and copies presented here. In the future, if any of them are found to be fake or false and if it is found that permission has been obtained by concealing the correct details or by presenting false details, this permission will be considered revoked and will be automatically be considered as cancelled. It will not be the responsibility of the permitting authority

(7) After granting aforesaid permission, any future dispute, wire or share regarding the above land arises, the permitting authority will not be responsible for it.

(8) The land in question is under cultivation. Within six months from the date of the said order, at least a sale document of the prevailing index price of the agricultural land as per the existing index price but not less should be registered and a copy should be submitted to the office here. Such sales

shall be deemed to have been revoked and the sale shall be deemed to have been made without prior approval.

In case of violation of any of the above conditions, the permission granted by this order will be automatically revoked and disciplinary action will be taken as per the provisions of the Land Revenue Act and Rules.

Sd/-
(C.R. Kharsan)
Collector, Valsad District

Stamp of
Collector, Valsad district.

To,

BY RPAD

(1) Shri Tajdin Hasan Ali Halani,
Shri Tousif Tajdin Halani and
Shri Abhi Hitesh Duttani
Residing at G-23, Girnar Khushboo Plaza,
In front of Vishal Mega Mall,
GIDC Vapi, District Valsad.

(2) Madura Carbon India Limited,
Unit-1, Janaki Veera Desai Road,
Andheri West, Mumbai.
Maharashtra-400028.

Copy to be sent with Jaybharat: (1) Deputy Collector, Pardi
(2) Mamlatdar, Umargam
2 / - Information and necessary action.

Copy Sent: Towards Deputy Mamlatdar Shri, E-Dhara, Mamlatdar Office Umargam
2 / - Summary to report immediately with a copy of the raw note by implementing the report and record

- END OF DOCUMENT –

ANNEXURE-R-3

MADURA CARBON

Ref No: MCIL/1/19-20

Date: December 17, 2019

To,
The Member Secretary (EAC-Ind2)/
The Director IA (I),
Ministry of Environment & Forests and Climate Change,
Indira Paryavaran Bhavan,
Vayu Wing,3rd Floor,Aliganj,
Jor Bagh Road,New Delhi-110003

Subject: Submission of Final EIA Report for our proposed project for manufacturing of Carbon Black (2,30,000 TPA) & Power Generation (45 MW) at 3705, 3708, 3719, 3725, 3738, 4108, 4110, 4318, Village: Fansa (Karajgam), Taluka: Umbergaon, Dist.: Valsad, Gujarat by Madura Carbon India Ltd. – Reg. EC.

Ref.: 1) TOR issued vide file no. IA-J-11011/266/2018-IA-II(I), dated 06th April 19.
2) Proposal No.: IA/GJ/IND2/76156/2018

Dear Sir/Madam,

With reference to the above subjected matter, we have been awarded by Terms of Reference by MoEF&CC for carrying out the EIA study for our proposed project.

In this regard, we hereby submit the Final EIA report addressing the awarded TORs for your kind consideration.

We request your kind self to take-up our project for consideration in upcoming meeting of EAC for appraisal of project at the earliest.

Thanking you

Yours faithfully,
For Madura Carbon India Ltd.

Authorized Signatory

MADURA CARBON INDIA LIMITED
Regd. Off.: 1, Janki Centre, Off: Veera Desai Road,
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November 2019

FINAL ENVIRONMENTAL IMPACT ASSESSMENT REPORT

FOR

Proposed Project for Mfg of Carbon Black (230000 TPA) & Power Generation - Green Power (45MW)

AT

Plot no. Survey no. 3705, 3708, 3719, 3725, 3738, 4108, 4110, 4318,
Village: Fansa (Karajgam), Taluka: Umbergaon,
Dist.: Valsad, Gujarat.

PROJECT PROPONENT:

MADURA CARBON

Madura Carbon (India) Ltd.

PREPARED BY:

precitech Laboratories PVT. LTD.

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Dist.: Valsad, Gujarat.

Report No.: PL/FINAL/EIA/MCB/2019

Project Sector & Category: 5(e)- Petroleum products and petrochemical based processing such as production of carbon black and electrode grade graphite, Category A and 1(d)- Power Generation, Category B

Project Proponent:

Madura Carbon (India) Ltd.

Prepared By:

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1st Floor, Bhanujyot Complex, Plot C5/27, Opp. Oriental Ins. Co. Ltd.
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MADURA CARBON

TO WHOMSOEVER IT MAY CONCERN

I, the undersigned Mr. Vipan R. Kalra, Director of **M/s. Madura Carbon (India) Ltd.**, at survey no. 3705, 3708, 3719, 3725, 3738, 4108, 4110, 4318, Village: Fansa (Karajgam), Taluka: Umbergaon, Dist.: Valsad., Gujarat, do hereby solemnly undertake that all the contents (data and information) related to the project, which are presented in the EIA report are accurate, true and correct and I own the responsibility for the same.

Date: December 17, 2019

Place::Mumbai

For M/s. Madura Carbon (India) Ltd.

Vipan R. Kalra

Director

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Declaration by Experts

DECLARATION AND UNDERTAKING BY EIA CONSULTANT ORGANISATION

Declaration by experts contributing to the Final EIA study for Proposed project for Manufacturing of carbon black & power generation (green power) at survey no. 3705, 3708, 3719, 3725, 3738, 4108, 4110, 4318, Village: Fansa (Karajgam), Taluka: Umbergaon, Dist.: Valsad by **M/s. Madura Carbon (India) Ltd.**

I, hereby, certify that I was a part of the EIA team in the following capacity that developed the above EIA.

EIA Coordinator: Dr. H. M. Bhatt

Name of EIA Coordinator:	**Dr. H. M. Bhatt**
Signature & Date:	
Name of EIA Co-Coordinator:	**Mr. Rujul Bhatt**
Signature & Date:	
Period of Involvement:	**October 2018 to November 2019**
Contact Information:	**Precitech Laboratories Pvt. Ltd., C5/27 Bhanujyot Complex, B/H Panchratna Complex, Nr. GIDC Char Rasta, Vapi, Gujarat. Tel.: +91-260-2425542**

Functional Area Experts:

S. No.	Functional Areas	Name of the Expert/s	Involvement (Period & Task)	Signature
1.	**AP**	Mr. Rujul Bhatt	**Period of involvement: (October 2018 to November 2019)** Task: Data collection with site-visit for proposed facilities - Verification of primary data for air monitoring. Finalization for mitigation/control. Delineation of EMP for Air Pollution control measures. Compilation of data/survey in the Final EIA Report.	
2.	**WP**	Dr. H. M. Bhatt	**Period of involvement: (October 2018 to November 2019)** **Task:** Site visit, Planning of sampling network for Water quality monitoring. Finalization of analysis results, Water balance and working of pollution load, Identification of impacts related to water quantity & quality, suggestions for mitigation measures as a part of Environment management plan, Compilation of data/survey	

DECLARATION AND UNDERTAKING BY EIA CONSULTANT ORGANISATION

S. No.	Functional Areas	Name of the Expert/s	Involvement (Period & Task)	Signature
			in the Final EIA Report.	
3.	**HW**	Dr. H. M. Bhatt	**Period of involvement: (October 2018 to November 2019)** **Task:** Identification, Quantification & Characterization of hazardous waste, Impact assessment, Identification of impacts related to solid/hazardous waste and suggestions for mitigation measures. Delineation of Environment management plan.	
4.	**AQ**	Mr. Rujul Bhatt	**Period of involvement: (October 2018 to November 2019)** **Task:** Assessment of ambient air quality & calculation of source emission rates, collection of meteorological data, Air quality Modeling, Vehicular dispersion modeling, impact assessment, delineation of EMP & report writing.	
5.	**SE**	Dr. Harshit Sinha	**Period of involvement: (October 2018 to November 2019)** **Task:** Socio-economic survey of the study area and evaluation of SE layout of the study area. Write-up for Final EIA report. Impact assessment.	
6.	**EB**	Dr. Hemal Naik	**Period of involvement: (October 2018 to November 2019)** **Task:** Reconnaissance survey for primary data collection. Review of baseline data generated for probable impacts on various attributes with special focus on ecological environment, suggestions of mitigation measures, wildlife conservation plan preparation, EMP related to ecological environment.	
7.	**Noise**	Mr. Anil Chaumal	**Period of involvement: (October 2018 to November 2019)** **Task:** Verification of primary data for noise levels, identification of noise generating sources, delineation of impact assessment due to noise induced vibration, finalization of control measures, Modeling for Noise, EMP related to noise.	
8.	**SC**	Dr. H. M. Bhatt	**Period of involvement: (October 2018 to November 2019)** **Task:** Planning of sampling network for Soil quality monitoring, finalization of analysis results & interpretation on final results. Impact assessment.	

DECLARATION AND UNDERTAKING BY EIA CONSULTANT ORGANISATION

S. No.	Functional Areas	Name of the Expert/s	Involvement (Period & Task)	Signature
9.	**HG**	Mr. Nirzar Lakhia	**Period of involvement: (October 2018 to November 2019)** **Task:** Assessment of ground water quality data generated, Collection of secondary data for hydrology of the study area, Impact assessment for geo-hydrological attribute.	
10.	**GEO**	Mr. Nirzar Lakhia	**Period of involvement: (October 2018 to November 2019)** **Task**: Description of geological status of the area.	
11.	**LU**	Mr. Nirzar Lakhia	**Period of involvement: (October 2018 to November 2019)** **Task:** Preparation of base maps and land use maps based on available satellite imagery. Impact assessment.	
12.	**RH**	Mr. Anil Chaumal	**Period of involvement: (October 2018 to November 2019)** **Task:** Site visit, consequence analysis Preparation of Risk Assessment study report for details related to safety, verification of DMP report.	

Declaration by the Head of the Accredited Consultant Organization:

I, Dr. Hiten M. Bhatt, hereby, confirm that the above-mentioned experts prepared the Final EIA for Manufacturing of carbon black & power generation (green power) at survey no. 3705, 3708, 3719, 3725, 3738, 4108, 4110, 4318, Village: Fansa (Karajgam), Taluka: Umbergaon, Dist.: Valsad**,** Gujarat and undertake that we have carried out the Final EIA study in compliance the awarded ToRs prescribed for the proposed project to the best of our understanding and the data submitted in the Final EIA report are factually correct.

I also confirm that I shall be fully accountable for any misleading information mentioned in this statement.

Signature:

Name: **Dr. H. M. Bhatt**

Designation: **Chairman & Managing Director**

Name of the EIA Consultant Organization: **Precitech Laboratories Pvt. Ltd., Vapi.**

NABET Accreditation Letter & Issue Date: **NABET/EIA/1518/RA012**

Abbreviations

ABBREVIATIONS

APC	Air Pollution Control	Haz.	Hazardous
APCD	Air Pollution Control Device	HC	Hydrocarbons
Amb	Ambient	HSE	Health, Safety &Environment
AAQM	Ambient Air Quality Monitoring	Ht.	Height
APHA	American Public Health Association	HW	Hazardous Waste
Atm	Atmospheric	HSD	High speed Diesel
Avg.	Average	HAZOP	hazard and operability study
BAT	Best available technology	ID	Induced Draft
BDL	Below Detectable Limit	IDLH	Immediate Dangerous to Life & Health
BOD	Biological Oxygen Demand	IMD	Indian Meteorological Department
BP	Boiling Point	INA	Industrial
Cap.	Capacity	IS	Indian Standards
CO_2	Carbon Dioxide	ISO	International Organization for Standardization
CO	Carbon Monoxide	IUNC	International Union for Conservation of Nature
COD	Chemical Oxygen Demand	kCal/hr	Kilo Calories per hour
CEO	Chief Executive officer	kg/hour	Kilogram per hour
CC&A	Consolidated Consents & Authorization	kg/KWH	Kilogram per kilo watt hour
Conc.	Concentration	kg/m^2	Kilo gram per meter square
CER	Corporate environment responsibility	kg/cm^2	Kilogram per square meter
Cr.	Crore	kL	Kilo Liter
CAPEX	Capital expenditure	KLD	Kilo Liter per Day
dB (A)	Decibel ‘A” weight frequency	MEE	Multi Effect Evaporator
m^3/day	Cubic meter per day	km	Kilo Meter
Deg. C	Degree Centigrade	kVA	Kilo Volt Ampere
Dept.	Department		
DG	Diesel Generator	kWH/T	Kilo watt hour per Tonne
Dia.	Diameter	LEL	Lower Explosive Limit
Dist.	District	Leq.	Equivalent continuous sound level
DO	Dissolved Oxygen	LFL	Lower Flammable Limit
DM	Demineralized	OPEX	Operational Expenditure
EC	Electrical Conductivity	kCal/hr	Kilo Calories per hour
EC	Environmental Clearance	OSEP	The Office of Special Education Programs
ECC	Emergency Control Centre	OSHA	Occupational Safety & Health Administration
EHS	Environmental Health & Safety	psi	Pound per inch square
EIA	Environmental Impact Assessment	PUC	Pollution Under Control
EMP	Environmental Management Plan	Pvt.	Private
EMS	Environment Management System	PHC	Primary health care
Env.	Environment	PPE	Personal protective equipment
ESC	Enterprise Social Commitment	PCC	Pollution control committee
L/hr	Liter per Hour	QC	Quality Control
L/Day	Liter per Day	QCI	Quality Council of India

Ltd.	Limited	R&D	Research & Development
m	Meter	RDS-HVS	Respirable Dust Sample-High Volume Sampler
M.P	Melting Point	REIA	Rapid Environmental Impact Assessment
m/s	Meter per second	RF	Reserved Forest
m^2	Square Meter	RH	Relative Humidity
m^3	Meter cube	RHW	Rain Water Harvesting
m^3/hr	Cubic meter per hour	RM	Raw Material
m^3/yr	Cubic meter per year	rpm	Rotation per Minute
mg/l	Milligram per liter	RSPM	Respirable Suspended Particulate Matter
mg/m^3	milligram per meter cube	R&R	Rehabilitation & Resettlement
mg/Nm^3	Milligram per Normal meter cube	RO	Reverse Osmosis
Min.	Minimum	SCMH	Standard Cubic Meter per Hour
kCal/h	Kilo calories per hour	SCMD	Standard Cubic Meter per Day
mg/l	Milligram per liter	sec	Second
mm	Millimeter	SHE	Safety Health & Environment
mm/annum	Millimeter per annum	SMC	Site Main Controller
mm/day	Millimeter per day	SO_2	Sulphur Dioxide
MOC	Material of Construction	SOP	Standard Operating Procedure
MoEF&CC	Ministry of Environment, Forests & Climate Change.	SPCB	State Pollution Control Board
MSDS	Material Safety Data Storage	SPM	Suspended Particulate Matter
MSIHC	Manufacture, Storage & Import of Hazardous Chemicals.	SCBA	Self-contained breathing apparatus
MSL.	Mean Sea Level	Sq. km	Kilo Meter Square
T	Tonne	Sq. meter.	Meter Square
MT/Hr	Metric Tonne per Hour	SRTM	Shuttle Radar Topography mission Global Coverage Maps
MT/month	Metric Tonne per Month	SS	Suspended Solids
MT/MT	Metric Tonne per Metric Tonne	Std.	Standard
MT/annum	Metric Tonne per annum	STP	Sewage Treatment Plant
N.A.	Not Applicable	TDS	Total Dissolved Solids
NAAQS	National ambient air quality standards	Temp.	Temperature
NABET	National Accreditation Board of Education and Training	TH	Total Hardness
NEPA	National Environment Protection Agency	TLV	Threshold Limit Value
NG	Natural Gas	TORs	Terms of References
NH	National Highway	TPA	Tonne per annum
NOC	No Objection Certificate	TPD	Tonne per Day
NW	North-Waste	TPM	Tonne per Month
NNE	North-North-East	TSDF	Treatment, Storage, Disposal Facility
No.	Number	TSS	Total Suspended Solids
NO_x	Oxides of Nitrogen	TVOC	Total volatile organic compound
NS	Not Specified	UEL	Upper Explosive Limit
O&G	Oil & Grease	UFL	Upper Flammable Limit
OECD	The organization for economic co-operation and development	UO	Unobjectionable

OHS	Occupational health & Safety	USEPA	United States Environmental Protection Agency
PLPL	Precitech Laboratories Pvt. Ltd.	UFL	Upper Flammable Limit
PH	Public Hearing	DeSOx	Desulphurization System
PM	Particulate Matter	DeNOx	Oxides of Nitrogen Reduction System
PM_{10}	Particulate Matter (<10 Micron)	CAGR	Compound Annual Growth Rate
$PM_{2.5}$	Particulate Matter (<2.5 Micron)	FO	Furnace Oil
PPE	Personal Protective Equipment	CBFS	Carbon Black Feed Stock
		USD	United State Dollar
VAM	Vapour Absorption Machine	MCIL	Madura Carbon (India) Ltd.
PTA	Pure Terepthalic Acid	ATMA	Automotive Tyre Manufacturers Association
ppm	Parts per million	FY	Financial Year
EPA	Environmental Protection Act	AIRIA	All India Rubber Industries Association
ETP	Effluent Treatment Plant	MW	Mega Watt
FD	Forced Draft	GIDC	Gujarat Industrial Development Corporation
FP	Flash Point	FGD	Flue Gas Desulphurization
g/mol	Gram per mole	CPCB	Central Pollution Control Board
g/s	Gram per Second	CTE	Consent to Establish
GIS	Geographic Information System	CTO	Consent to Operate
GLC	Ground Level Concentration	CHWIF	Common Hazardous Waste Incineration Facility
GSI	Geological Survey of India	w/w	Wastewater
GNFC	Gujarat Narmada Valley Fertilizers Company Ltd.	HP	Horsepower
TPH	Ton per hour	DGVCL	Dakshin Gujarat Vij Co. Ltd.

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Chapters

1. Introduction

1.1 PRELUDE

M/s. Madura Carbon (India) Ltd. is a public limited company incorporated on 7th Dec 2017. It has proposed a project for manufacturing of Carbon Black along with power generation (green power). The power will be generated by utilization of the off-gas generated during manufacturing process of carbon black.

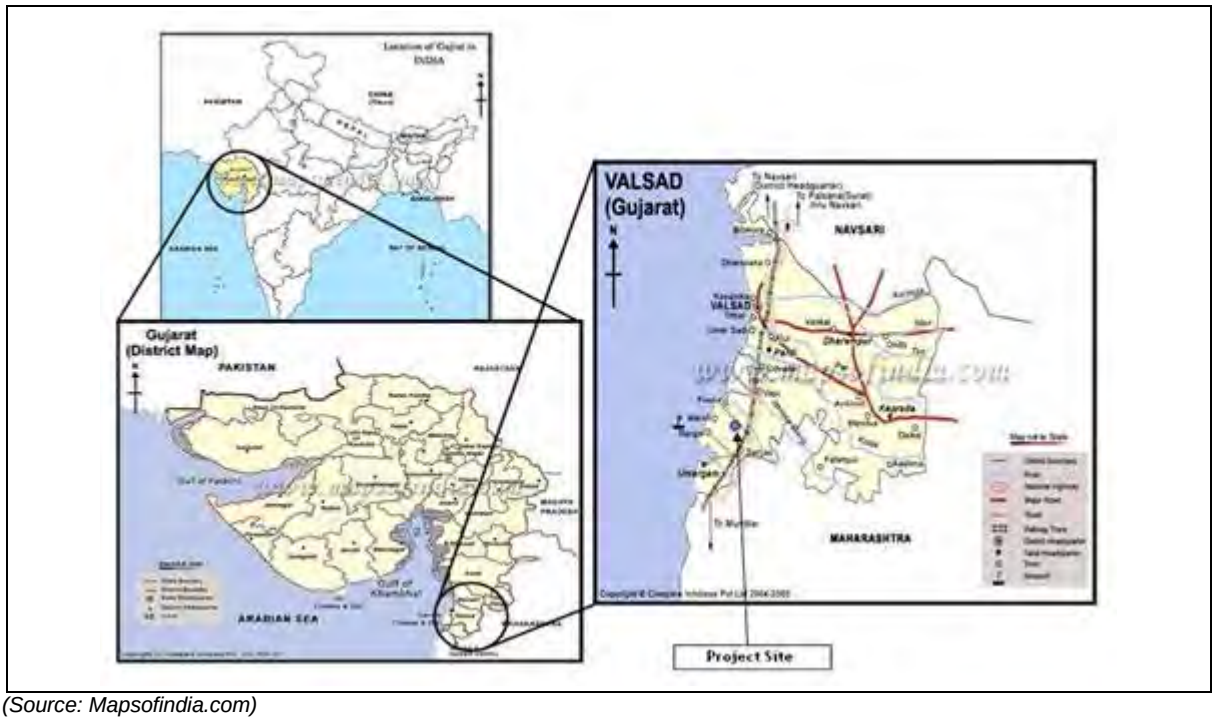
The copy of Terms of Reference (TORs) received from MoEF&CC for proposed expansion project along with its compliance is attached as ***Annexure - 1(a)*** and ***Annexure - 1(b)*** respectively.

Precitech Laboratories Pvt. Ltd. has been appointed by M/s. Madura Carbon (India) Ltd. to carry out the Environmental Impact Assessment (EIA) study for the said project.

1.2 PROJECT LOCATION

M/s. Madura Carbon (India) Ltd. is to be located at survey no. 3705, 3708, 3719, 3725, 3738, 4108, 4110, 4318, Village: Fansa (Karajgam), Taluka: Umbergaon, Dist.: Valsad. The map depicting location of project site is shown in the Figure 1.1.

Figure 1.1: The map depicting location of project site



(Source: Mapsofindia.com)

1.3 PURPOSE OF THE STUDY

The study aimed to establish the existing environmental quality within 10 km study area around the proposed project site, identify all the probable impacts due to the proposed project activities on the surrounding environment and suggest the Environment Management Plan (EMP) to mitigate adverse impacts in compliance to the awarded TORs.

1.4 PROMOTERS OF THE COMPANY

Madura Carbon (India) Ltd.is a limited company governed by the board of directors of seven members. The list of the board of directors are given below:

Table 1.1: List of Directors

S. No.	Name of Directors	Residential Address
1.	Mr. Vipan Ramnath Kalra	21 A/ 21B, Royal Accord III, Lokhandwala Complex, Andheri (W), Mumbai – 400 053
2.	Mr. Anil Radheshyam Kalra	12 A/ 12B, Royal Accord III, LokhandwalaComplex, Andheri (W), Mumbai – 400 053
3.	Mr. SanilRadheshyam Kalra	11 A/ 11B, Royal Accord III, Lokhandwala Complex, Andheri (W), Mumbai – 400 053
4.	Mrs. Promilla Raman Kalra	51, Royal Accord III, Lokhandwala Complex, Andheri (W), Mumbai – 400 053
5.	Mr. Gautam Kalra	21 A/ 21B, Royal Accord III, Lokhandwala Complex, Andheri (W), Mumbai – 400 053
6.	Mr. Rishi Kalra	51, Royal Accord III, Lokhandwala Complex, Andheri (W), Mumbai – 400 053
7.	Mr. Varun Kalra	12 A/ 12B, Royal Accord III, Lokhandwala Complex, Andheri (W), Mumbai – 400 053

(Source: Madura Carbon (India) Ltd.)

1.5 PROJECT JUSTIFICATION

1.5.1 Importance to the country & region

The global carbon black market size was estimated at USD 17.22 billion in 2018 and is projected to expand at a Compound Annual Growth Rate (CAGR) of 6% from 2019 to 2025. The region is rapidly transforming into a manufacturing hub, which has increased the demand for the material over the past few years. Major manufacturers are shifting their manufacturing facilities to countries like India, China, and Vietnam, as they have lower labor costs and support from the respective governments. Rising automotive production is also expected to drive the product demand over the forecast period.[1]

Demand for carbon black in India stood at 984.63 thousand tonnes in 2018 and is projected to grow at a CAGR of 5.82% during 2019-2030 to reach 1853.84 thousand tonnes by 2030. Growth in the Indian Packaging industry has increased the demand for carbon blacks in food packaging, industrial film, lamination, carrier bags and high-quality protective packaging applications. Furthermore, the Indian government's mission to make India a 100% electric vehicle nation by 2030 under the new National Electric Mobility Mission Plan is expected to push demand for automobiles in the coming years. This demand in turn would aid growth in ancillary industries such as tyre industry, which use carbon black as their primary raw material. Moreover, demand for industrial rubber such as in conveyor belts and hoses is anticipated to positively influence carbon black demand in India during 2019-2030. [2]

The proposed project also involves establishing a power plant from the off-gas a by-product from the carbon black manufacturing process thus creating a sustainable green movement. It will be helpful to reduce load on electricity department. [3]

1.5.2 Demand Supply Gap

According to the estimates made by Automotive Tyre Manufacturers Association (ATMA), the domestic demand-supply gap in carbon black, which was 14% in FY17, has gone up to 20% in FY18. According to ATMA's estimates, the total production of carbon black for the fiscal would be around 840,000 tonnes. With exports of 180,000 tonnes out of this production, the overall supply gap is estimated at 240,000 tonnes.

Note:
1. *(https://www.grandviewresearch.com/industry-analysis/carbon-black-market)*
2. *(https://www.giiresearch.com/report/tsci800136-india-carbon-black-comprehensive-techno-commercial.html)*
3. *(https://rubberasia.com/2018/05/31/carbon-black-conundrum/)*

The All India Rubber Industries Association (AIRIA) estimates that the total production of carbon black in the country comes to about 950,000 tonnes while the demand is around 1,285,000 tonnes.

India's non-tyre rubber industry is headed for a crisis with acute shortage and spiralling prices of carbon black, a key ingredient in the manufacture of rubber products. Rubber industry is slated to grow rapidly, the carbon black capacity has not expanded in the past two years.

1.5.3 Export Possibility

The domestic production in the current scenario will have a competitive edge over the international prices, which will help in bridging the gap of demand and supply for export.

1.5.4 Domestic/Export Markets

The rubber industry is growing domestically fast. There has been no increase in capacity of carbon black in last few years. The gap between demand and supply is increasing consistently.

1.6 NATURE/CATEGORIZATION OF PROJECT

The proposed project falls primarily under item no. 5(e) i.e. "Petroleum products and petrochemical based processing such as production of carbon black and electrode grade graphite (processes other than cracking and reformation and not covered under the complexes)" and under the category A as it is located outside the notified industrial area/ estate, as per the EIA notification, 14 September 2006 (& amendments).

Moreover, the project of power generation (green power) of 45 MW falls under item no. 1(d) i.e. Thermal Power Plants and under the category B (<50 MW and ≥ 5 MW (all other fuels except biomass and municipal solid non-hazardous waste).

It is to be noted that the power will not be generated using any additional fuel. The power will be generated by utilization of offgas generated during manufacturing of carbon black.

1.7 REGULATORY FRAMEWORK

The current EIA study has been conducted to fulfil the requirement of the regulatory provisions as enacted in EPA, 1986 (amended time to time). As per the EIA notification-2006 (amended time to time), the company needs to get the Environmental Clearance prior for installation & commissioning of the proposed project. The major acts & rules applicable to the project are:

Table 1.2: Applicable Regulatory Provision

Sr. No	Legal instrument	Concerned Authority or body	Chemical use categories/ pollutants	Objectives of legislation	License/ Authorization /Report to be obtained by Project proponent
1	Air (Prevention and Control of Pollution) Act,1981 amended 1987	CPCB and SPCB	Air pollutants from chemical industries	The prevention, control and abatement of air pollution	Consent to Establish(CTE) & Consent to Operate(CTO)

Sr. No	Legal instrument	Concerned Authority or body	Chemical use categories/ pollutants	Objectives of legislation	License/ Authorization /Report to be obtained by Project proponent
2	Air (Prevention and Control of Pollution) (Union Territories) Rules,1983,amended from time to time	CPCB and SPCB	Air pollutants from chemical industries	The prevention, control and abatement of air pollution	Consent to Establish(CTE) Consent to Operate(CTO)
3	Water (Prevention and Control of Pollution) Act,1974 amended 1988	CPCB and SPCB	Water Pollutants from water polluting industries	The prevention and control of water pollution and also maintaining or restoring the wholesomeness of water	Consent to Establish(CTE) Consent to Operate(CTO)
4	Water (Prevention and Control of Pollution) Rules,1975, amended from time to time	CPCB and SPCB	Water Pollutants from water polluting industries	The prevention and control of water pollution and also maintaining or restoring the wholesomeness of water	Consent to Establish(CTE) Consent to Operate(CTO)
5	The Environment (Protection) Act and Environmental (Protection) Rules,1986, amended from time to time	MoEF&CC ,CPCB and SPCB	All types of environmental pollutants	Protection and Improvement of the Environment	Environmental Clearance (EC), Environment Audit Report
6	EIA Notification, 2006, amended from time to time	MoEF&CC, SPCB/UTPCC	For all the identified developmental activities inthe notification	Requirement of environmental clearance before establishment of or modernization / expansion of identified developmental projects.	Environmental Clearance(EC)
7	Hazardous and Other Waste (Management and Trans boundary) Rules,2016	MoEF&CC, CPCB, SPCB, DGFT, Port Authority and Customs Authority	Hazardous Wastes generated from industries using hazardous chemicals	Management & Handling of hazardous wastes in line with the Basel convention	Consent to Establish(CTE) Consent to Operate(CTO) Permission from TSDF/CHWIF

Sr. No	Legal instrument	Concerned Authority or body	Chemical use categories/ pollutants	Objectives of legislation	License/ Authorization /Report to be obtained by Project proponent
					facilities A record of hazardous and other waste managed File an annual return of details specified. Record of Hazardous and other waste purchased in passbook issued by SPCB
8	Chemical Accidents (Emergency Planning, Preparedness and Response) Rules,1996.	CCG, SCG, DCG, LCG and MAH Units	Hazardous Chemicals - Toxic, Explosive, Flammable, Reactive	Emergency Planning Preparedness and Response to chemical accidents	Onsite emergency and Off site emergency plan report.
9	Manufacture Storage and Import of Hazardous Chemicals Rules, 1989 amended From time to time	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 Collector or District Emergency Authority, CEES under DRDO Director of industrial safety and health (DISH) department	Hazardous Chemicals - Toxic, Explosive, Flammable, Reactive as per Schedule I,II,II	Regulate the manufacture, storage and import of Hazardous Chemicals	Safety report as per Schedule-8 Safety audit Onsite-Offsite emergency plan

Sr. No	Legal instrument	Concerned Authority or body	Chemical use categories/ pollutants	Objectives of legislation	License/ Authorization /Report to be obtained by Project proponent
10	Public Liability InsuranceAct,1991 amended 1992	MoEF&CC, District Collector	Hazardous Substances	To provide immediate relief to persons affected by accident involving hazardous substances	Public Liability Insurance from insurance agency
11	Public Liability InsuranceRules,1991 amended 1993	MoEF&CC, District Collector	Hazardous Substances	To provide immediate relief to persons affected by accident involving hazardous substances and also for Establishing an EnvironmentalRelief fund	Public Liability Insurance from insurance agency
12	Factories Act,1948	Ministry of Labour, DGFASLI and Directorate of Industrial Safety and Health/Factories Inspectorate	Chemicals as specified in the Table	Control of workplace environment, and providing for good health and safety of workers	Form-26A Form-37 Onsite emergency plan as per Schedule-8A Safety report as per Schedule-8 Safety Audit once in two years. Safety manual as per Rule-68 K
13	Gujarat Factories Rules.1963	Ministry of Labour, DGFASLI and Directorate of Industrial Safety and Health/Factories Inspectorate	Chemicals as specified in the Table	Control of workplace environment, and providing for good health and safety of workers	Form-26A Form-37 Onsite emergency plan as per Schedule-8A Safety report as per Schedule-8 Safety Audit once in two years. Safety manual as per Rule-68 K

Sr. No	Legal instrument	Concerned Authority or body	Chemical use categories/ pollutants	Objectives of legislation	License/ Authorization /Report to be obtained by Project proponent
14	The Petroleum Act, 1934	Ministry of Petroleum and Natural Gas	Petroleum (Class A, B and C- as defined in the rules)	Regulate the import, transport, storage, production, refining and blending of petroleum	License for petroleum bulk transportation and storage.
15	The Petroleum Rules, 2002	Ministry of Petroleum and Natural Gas, Ministry of Shipping (for notification of authorized ports for import), Ministry of Environment &Forests or SPCB (for clearance of establishment of loading/unloading facilities at ports) Chief Controller of Explosives, district authority, Commissioner of Customs, Port Conservator, State Maritime Board (Import)	Petroleum(Class A, B and C- as defined in the rules)	Regulate the import, transport, storage, production, refining and blending of petroleum	Certificate of Safety
16	The Explosives Act, 1884	Ministry of Commerce and Industry (Department of Explosives)	Explosive substances as defined under the Act	To regulate the manufacture, possession, use, sale, transport, export and import of explosives with a view to prevent accidents	Grant to possess and use explosives
17	The Explosive Rules, 1983	Ministry of Commerce and Industry and Chief Controller of Explosives, port conservator, customs collector, railway	Explosive substances as defined under the Act	To regulate the manufacture, possession, use, sale, transport, export and import of explosives with a view to	Grant to possess and use explosives

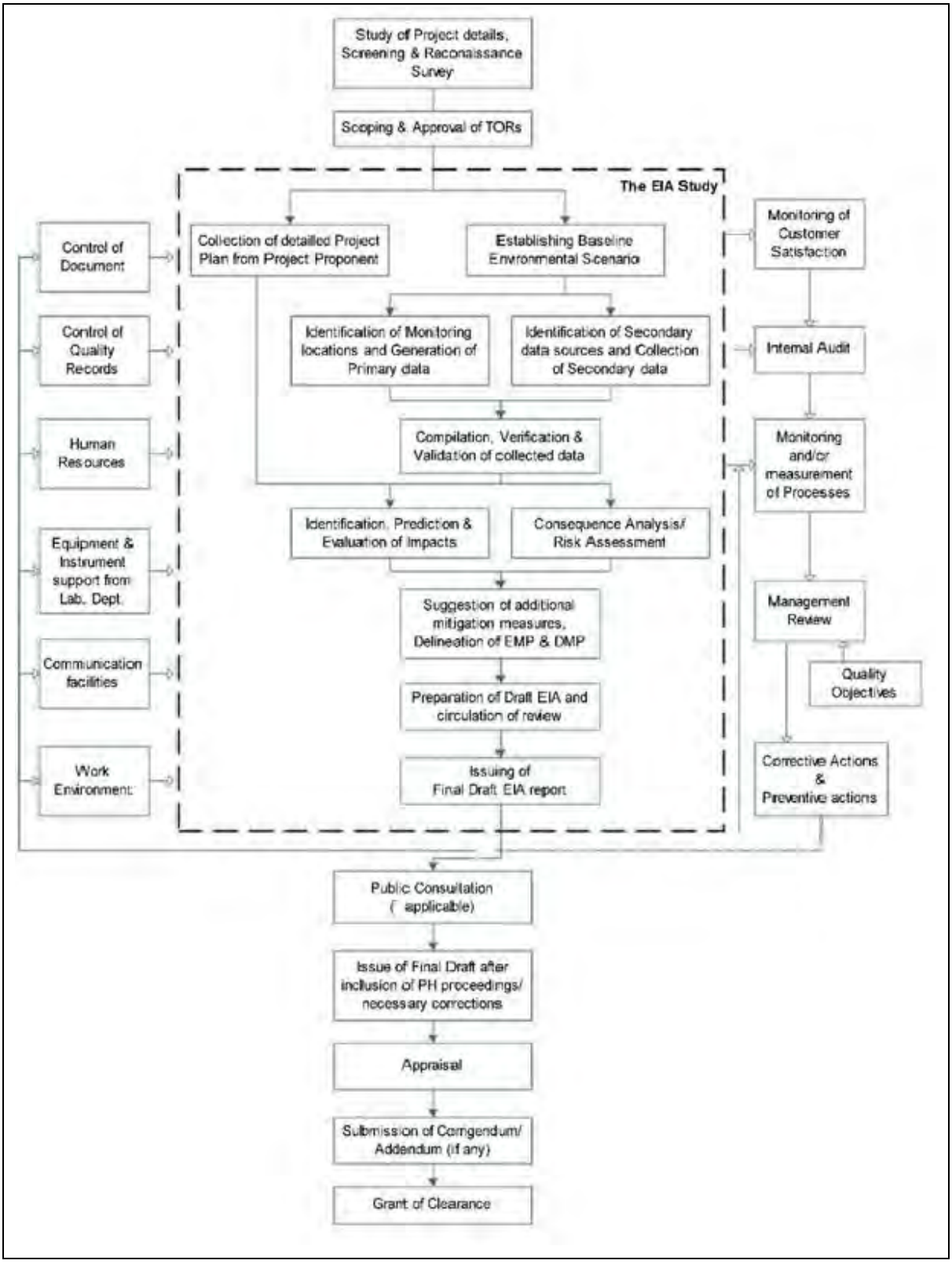
Sr. No	Legal instrument	Concerned Authority or body	Chemical use categories/ pollutants	Objectives of legislation	License/ Authorization /Report to be obtained by Project proponent
		administration		prevent accidents	
18	The Gas Cylinder Rules, 2004	Ministry of Commerce and Industry and Chief Controller of Explosives, port conservator, customs collector, DGCA, DC, DM, Police (sub inspector to commissioner)	Gases (Toxic, nontoxic and non-flammable, nontoxic and flammable, Dissolved Acetylene Gas, Nontoxic and flammable liquefiable gas other than LPG, LPG	Regulate the import, storage, handling and transportation of gas cylinders with a view to prevent accidents	License to store gas cylinders
19	Construction and Demolition Waste Management Rules,2016	MoEF&CC, CPCB, SPCB, DGFT, Port Authority and Customs Authority	Construction and Demolition Waste	Regulate Construction and Demolition Waste	Approval for Construction/ Demolition
20	The Static and Mobile Pressure Vessels (Unfired) Rules, 1981	Ministry of Commerce and Industry and Chief Controller of Explosives, port conservator, customs collector, DGCA, DC, DM, Police (sub inspector to commissioner)	Gases (Toxic, nontoxic and non-flammable, nontoxic and flammable, Dissolved Acetylene Gas, Nontoxic and flammable liquefiable gas other than LPG, LPG	Regulate the import, manufacture, design, installation, transportation, handling, use and testing of mobile and static pressure vessels (unfired) with a view to prevent accidents	License for transportation and storage of compressed gas. Test and inspection certificate Certificate of safety for transportation and storage of compressed gas.
21	The Motor Vehicle Act, 1988,amended from time to time	Ministry of Shipping, Road Transport and Highways	Hazardous and Dangerous Goods	To consolidate and amend the law relating to motor vehicles	Driving license

Sr. No	Legal instrument	Concerned Authority or body	Chemical use categories/ pollutants	Objectives of legislation	License/ Authorization /Report to be obtained by Project proponent
22	The Central Motor Vehicle Rules, 1989,amended from time to time	Ministry of Shipping, Road Transport and Highways	Hazardous and Dangerous Goods	To consolidate and amend the law relating to motor vehicles including to regulate the transportation of dangerous goods with a view to prevent loss of life or damage to the environment	Driving license Permit for transportation PUC
NOTE: (License/ Authorization /Report to be obtained by project proponent to be obtained as per project requirement)					

1.8 METHODOLOGY ADOPTED FOR THE STUDY

Environmental Impact Assessment (EIA) is a tool used to identify the environmental, social and economic impacts of a project prior to decision-making. It aims to predict environmental impacts at an early stage in project planning and design, find ways and means to reduce adverse impacts, shape projects to suit the local environment and present the predictions and options to decision-makers. To conduct the EIA study, the general procedure practiced at PLPL is shown in Figure 1.2.

Figure 1.2: EIA procedure



1.9 STRUCTURE OF THE PROJECT REPORT

The entire report has been prepared in line with the generic structure of the EIA report as per Appendix III of EIA Notification 2006.

- **Chapter 1** Gives a brief outline of the project and project proponent, description of the nature, size and location of the project and its justification. It also includes the scope of the study as per the awarded Terms of Reference.
- **Chapter 2** Provides details regarding the project location, layout, process description, required resources & infrastructure and the pollution potential along with the brief on planned mitigation measures.
- **Chapter 3** Describes the environmental baseline status of the study area of 10 km radial periphery from the project site.
- **Chapter 4** Deals with the identification, prediction, evaluation of impacts and mitigation of the significantly adverse impacts. Chapter 4 has been developed based on the Chapter 2 and Chapter 3, by correlating the activities under the proposed project and their impacts on the baseline environmental attributes.
- **Chapter 5** Gives details about Analysis of Alternatives (Technology & Site).
- **Chapter 6** Delineates the proposed post-project monitoring plan and the budgetary provisions for EHS components.
- **Chapter 7** Discusses the additional details viz. Risk Assessment Study required for the project.
- **Chapter 8** Highlights the benefits of the project
- **Chapter 9** Provides Environmental Cost Benefit Analysis, if recommended at the Scoping stage
- **Chapter 10** Delineates the Environment Management Plan highlighting the mitigation measures and roles and responsibilities of the management.
- **Chapter 11** Attempts to summarize the entire report and conclude the outcome of the study.
- **Chapter 12** Provides the brief profile of the EIA consultant organization and the EIA project team for the current study.

2. Project Description

2.1 PROJECT PORTFOLIO

The list of the proposed products along with its capacity is provided in below table.

Table 2.1: List of Products

Sr. No.	Name of the Product	CAS No.	Quantity	End use of product
1.	Carbon Black	1333-86-4	230000 TPA	Reinforcing material & filler in rubber products
2.	Power Generation (Green Power)	--	45 MW	Power consumption

(Source: Madura Carbon (India) Ltd.)

2.2 PROJECT LOCATION

The project is to be sited at survey no. 3705, 3708, 3719, 3725, 3738, 4108, 4110, 4318, Village: Fansa (Karajgam), Taluka: Umbergaon, Dist.: Valsad, Gujarat. The nearest town to the project site is Sarigam.

Sarigam GIDC is a cluster of profuse large-scale, medium scale and small-scale industries, engaged in manufacturing of various products like bulk drugs, organic pigments, Organic and Inorganic Chemicals,

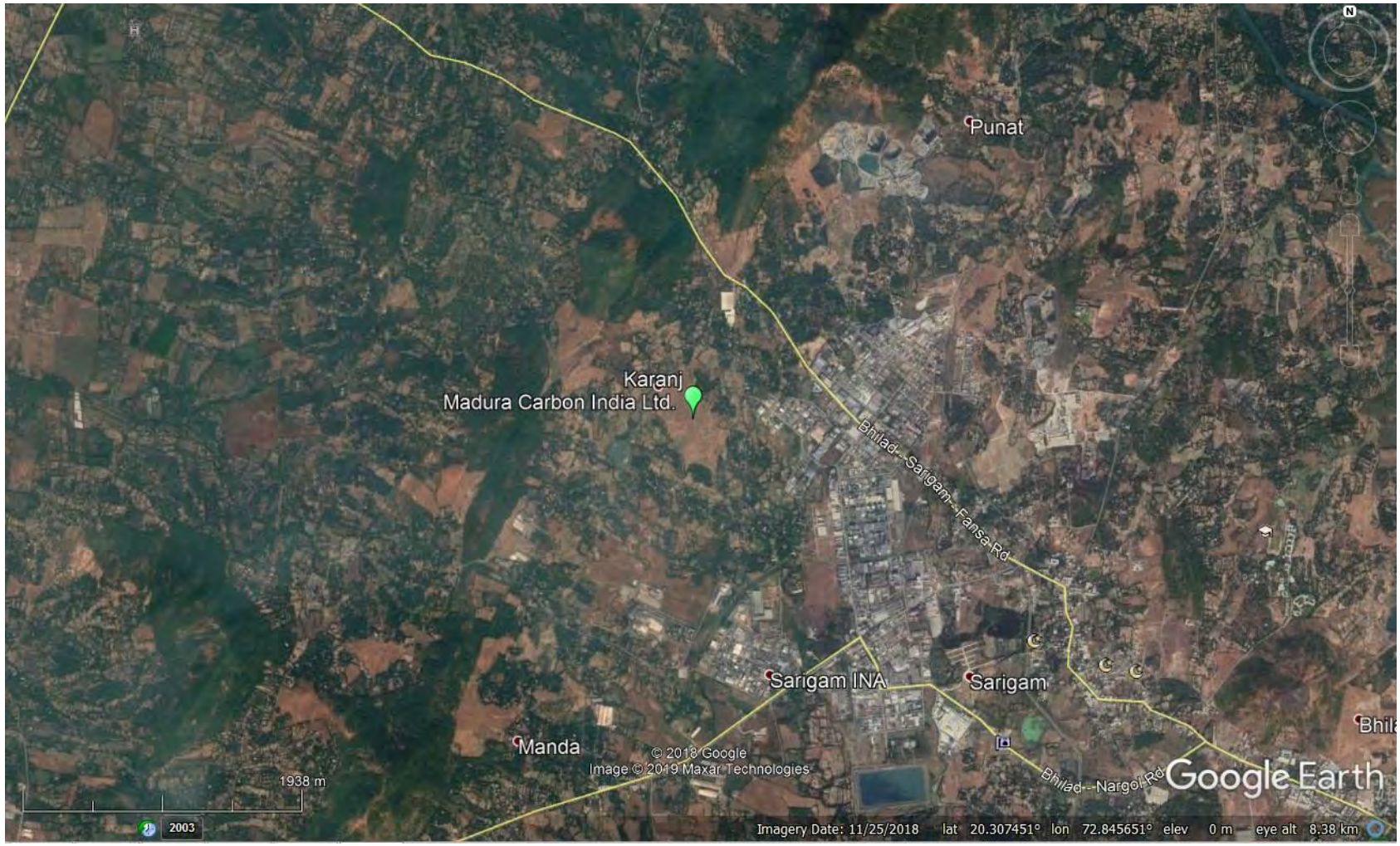
The site is approximately 10-15 km from Vapi - a well-known industrial town. Vapi is situated on the banks of Damanganga River in southern Gujarat, India. The satellite image of the project site is provided in figure 2.1

Table 2.2: Salient features of the project site

Particulars	Details
Village	Fansa (Karajgam)
Taluka/ Tehsil	Umbergaon
District	Valsad
Nearest Town	Sarigam ≈ 2.3 km (E)
Approx. Geographical positioning	Lat.: 20°18'7.41"N, Long.: 72°50'20.66"E
Nearest Water body	River Damanganga ≈ 6.66 km. (NE) River Darotha≈ 5.00 km (E)
Nearest Highway	N.H. 48 ≈ 6.1 km (E)
Nearest Railway line/ Railway station	Bhilad≈ 5.85 km (SE)
Nearest Airport/ Airbase	Airport - Daman ≈ 14.5 km (N)
Reserved Forests	Patches of RF within 10 km radial periphery of project site.
Protected Areas/ Sanctuaries	No
State/ International boundary	UT of Daman & Diu ≈ 7.65 km (NE) UT of Dadra Nagar Haveli ≈ 9.04 km (ESE) Maharashtra ≈ 9.60 km (SSE)
Defense installations	No
CRZ applicability	No
Seismicity	Seismic Zone-III (Moderate)
Major Industries in 10 km radial periphery	Sarigam GIDC and many small & large-scale industries located in 10 km study area. The list of industries is given in ***Annexure – 2.***
Note: All above are approximate aerial distances.	

(Source: Google Earth)

Figure 2.1: Satellite image of the project site

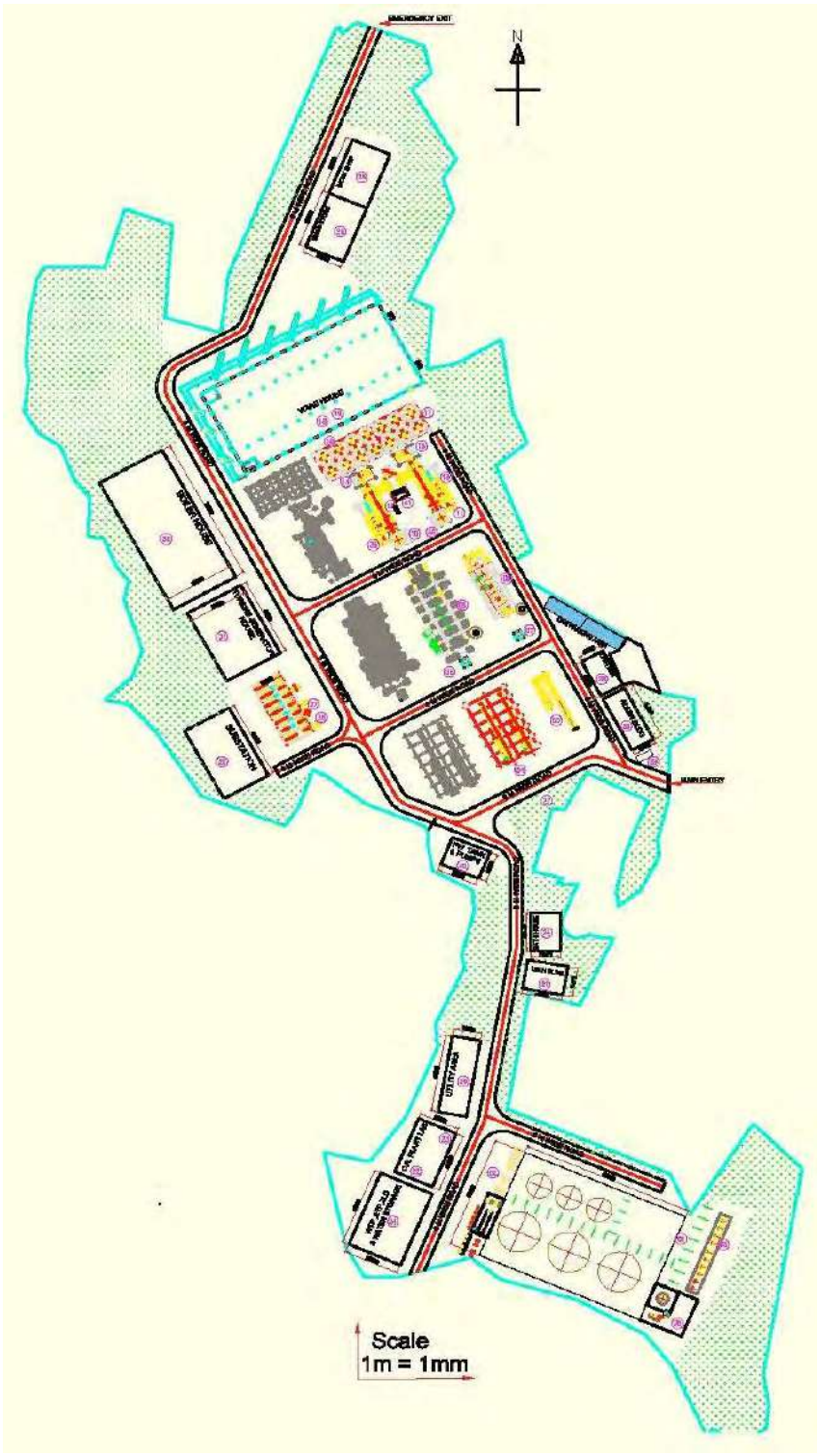


(Source: Google Earth)

2.3 SITE LAYOUT

The plant layout is provided in figure 2.2 and the area statement is provided in table 2.3.

Figure 2.2: Proposed Plant layout



(Source: Madura Carbon (India) Ltd.)

Table 2.3: Area statement

Sr. No.	Description	Area (m^2)
1.	Process Area	31703
2.	Open Area (Roads, Drains, Space)	37996
3.	Greenbelt Area	24800
	Total	**94499**

(Source: Madura Carbon (India) Ltd.)

2.4 RESOURCES

The major resources for the proposed project will be plant & machinery, raw-materials, power, fuel, water, man-power, etc.

2.4.1 Land

Total plot area for proposed project will be 94499 m^2. The NA is obtained for proposed land. The land is owned by the company. The land documents are attached as ***Annexure - 3***.

2.4.2 Building

The plot is currently a vacant land. Construction will be carried out for proposed project to develop process area, utility area, storage area, ETP etc. Total plot area of the proposed project is 94499 m^2. Out of which, the total ground coverage area will be 31703 m^2.

2.4.3 Equipment & Machinery

Based on process necessity, list of the proposed equipment's and machinery is given in table 2.4

Table 2.4: List of Proposed Equipment

Sr. No.	Equipment	Quantity x Capacity
1	Oil Tank Storage and Unloading / Charging System (Day Tanks)	6 Nos x 5000 kL + 6 Nos x 1250 kL
2	Process Air Blowers	8 Nos.
3	Air Compressors (Normal & HP)	5 x 2 Nos.
4	KNO_3 Dosing System	3 Nos.
5	Reactors	5 Nos.
6	Air Preheater	5 Nos.
7	Oil Preheater	5 Nos.
8	In-line Boiler	4 Nos. x 4.8 TPH 1 Nos. x 4.2 TPH
9	Quench Tower	3 Nos.
10	Agglomerator	3 Nos.
11	Process Bag Collectors	23 Modules
12	Pneumatic Conveying System	6 Nos.
13	Dense Tank Bag Collectors	5 Nos.
14	Dense (Surge) Tank	5 Nos.
15	Pelletizing System	6 Nos.
16	Dryer System along with Vapor Bag Collectors	2 Nos. x 300 TPD
17	Dryer System along with Vapor Bag Collectors	1 Nos. x 220 TPD
18	Fugitive Dedusting bag filter Systems	Lot
19	Elevator	3 Nos.
20	Screw Conveyors & Product Distribution System	Bulk
21	Product Silos	28 Nos. x 150 T
22	Packing Machines with Rerun System including Palletizer	Lot

Sr. No.	Equipment	Quantity x Capacity
23	Water pumps & Storage Tanks	Lot
24	Electrical Distribution System	Lot
25	Instrumentation System	Lot
26	Civil, Structure, Warehouse, Non-Plant Building & Roads	Lot
27	Piping System	Lot
28	Fire Fighting System	Lot
29	Cooling tower	2400 m^3/day
30	Power Plant with Offgas Boiler & Air Cooled Condensers	19.5 MW + 12.5 MW + 7.9 MW + 5.1 MW Boiler (112 TPH +72 TPH)
31	Silos	3 Nos.
32	Pre-treatment RO (RO-1)	2400 m^3/day
33	Post-treatment RO (RO-2)	100 m^3/day
34	MEE	375 m^3/day
35	ETP	90 m^3/day

(Source: Madura Carbon (India) Ltd.)

2.4.4 Raw Materials

The raw materials for the proposed range of products will be indigenously available and can also be imported based on market scenario. The product-wise raw-material consumption is given in Table 2.5.

Table 2.5: List of Raw Materials

Name of product	Raw material	CAS No.	Requirement (T/T)	Requirement (T/Month)
Carbon Black	Feed Stock (Carbon Black Feed Stock/ Furnace Oil)	90640-86-1	1.58	29868.49
	Secondary Fuel* (Furnace Oil)	68476-33-5	0.20	3870.82
	Molasses	68476-78-8	0.004	75.62
	Potassium Nitrate	7757-79-1	0.003	56.71

(Source: Madura Carbon (India) Ltd.)

2.4.5 Power & Fuel

For proposed project 13 MW power will be required. The total requirement will be fulfilled by in-house TPP & Dakshin Gujarat Vij Co. Ltd. (DGVCL).

Off gas will be generated during carbon black manufacturing process, which will be used in boilers & dryers.

FO (Furnace Oil) will be used as auxiliary fuel for start-up in boilers & dryer. HSD (High Speed Diesel) will be used as fuel in D.G. Set. CBFS will be Imported & sourced from Indian Market also. HSD & FO sources from local market.

2.4.6 Man-Power Requirement

The man-power required for the project will be employed locally from the nearby areas. Skilled as well as unskilled labour will be employed for the project. Due to proposed project, 760 persons will be employed. The man-power requirement for the proposed expansion project is provided in table 2.6.

Table 2.6: Man-power requirement

Phase of project	Type of Employee	No. of employee			
		General	1st Shift	2nd Shift	3rd Shift
Construction	Contractual	150			
Commissioning	Contractual/ In-house	150			
Operational	Managerial	5	5	5	5
	Skilled	125	85	85	85
	Semi-skilled (Contractual)	120	80	80	80

(Source: Madura Carbon (India) Ltd.)

2.4.7 Water requirement

Necessary water requirement for the proposed project will be fulfilled from Damanganga Canal Distry. Total water requirement for proposed project will be 3115 KLD, out of which 2525 KLD will be fresh water & remaining 590 KLD will be recycled. About 40-50 KLD water will be required during construction/commissioning phase of the proposed project. Water permission is attached as **Annexure - 4**. The category wise bifurcation of the fresh water requirement is given in table below.

Table 2.7: Total Water Consumption (KLD)

S. No.	Particulars	Requirement (KLD)		
		Fresh	Recycle	Total
1.	**Domestic**	5	45	50
2.	**Gardening**	56	44	100
3.	**Industrial**			
4.	Process	1600	--	1600
5.	Cooling Tower (Make-up)	135	--	135
6.	Dryer	128	372	500
7.	Plant Washing	1	29	30
8.	DM Plant Regeneration	20	--	20
9.	Miscellaneous	360	--	360
10.	Boiler (Make-up)	220	--	220
11.	DeSOx System	--	100	100
	Sub-Total: Industrial	**2464**	**501**	**2965**
	Grand Total	**2525**	**590**	**3115**

(Source: Madura Carbon (India) Ltd.)

2.4.8 Capital Cost

The approx. capital cost for proposed project will be 440 Cr. (in INR). The bifurcation is as below

Table 2.8: Total Capital Cost Projection

Sr. No.	Purpose	Capital Cost in Crore (INR)
1.	Land	20.0
2.	Building	35.0
3.	Plant & Machinery	268.5
4	Electrification and Administrative Set-up	25.0
5.	Environment & Safety Management	
a.	Air Pollution Control Measures	70.0
b.	Water Pollution Control Measures	11.5
c.	Noise Control	0.5
d.	Safety Instruments	4.2
e.	Greenbelt Development	0.3
7.	Chartered services/ Government fees	5.0
	TOTAL	**440**

(Source: Madura Carbon (India) Ltd.)

2.5 PROCESS DETAILS

Carbon Black is produced by the reaction of a hydrocarbon fuel such as oil or gas with a limited supply of combustion air at temperatures of 1320 to 1540°C. The unburned carbon is collected as an extremely fine black fluffy particle. Carbon Black can be manufactured by 4 processes –

A. Furnace Black Process
B. Channel Process
C. Acetylene Black Process
D. Lampblack Process

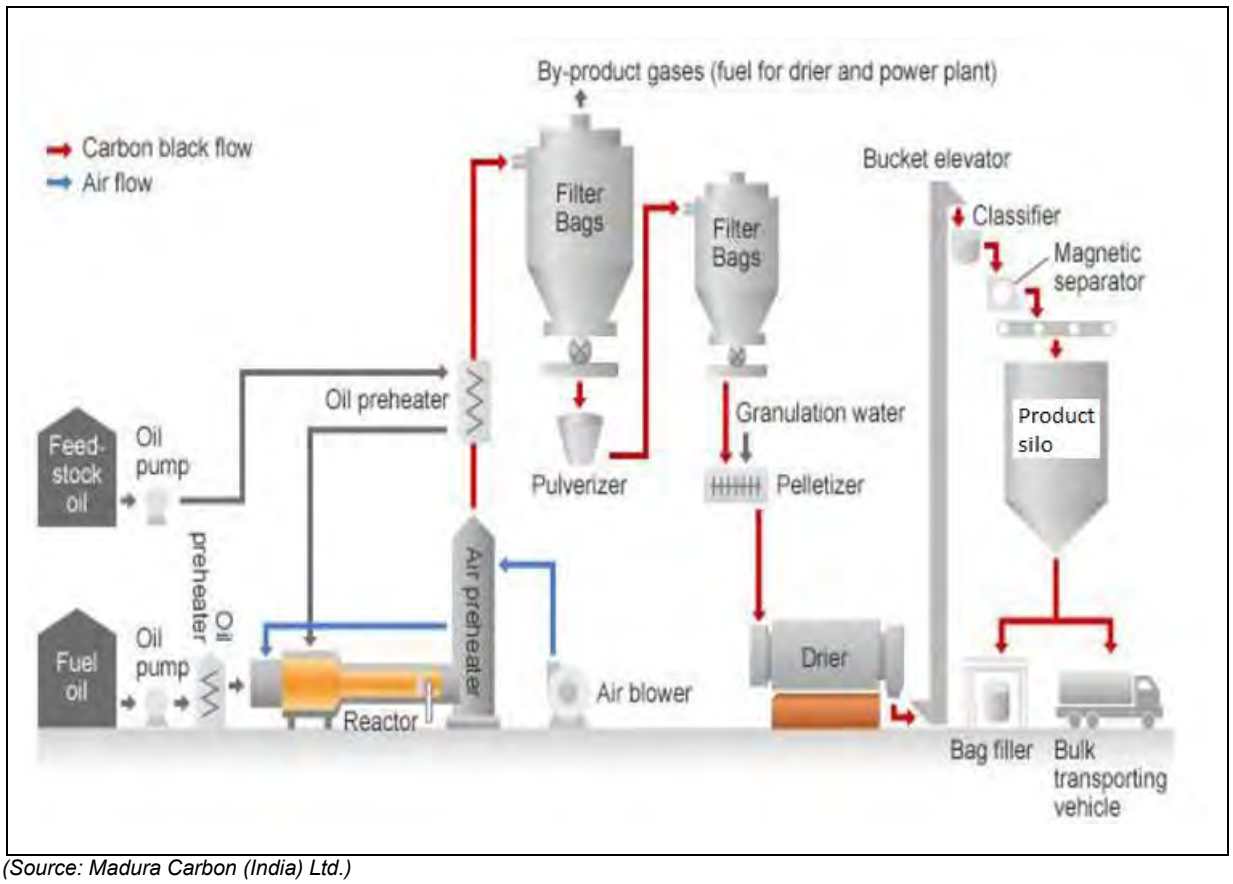
In this project, oil furnace black process will be used for producing Carbon Black.

In the furnace black process, Carbon Black is produced by thermal cracking of refinery base Feed Stock. The aromatic liquid hydrocarbon feedstock is heated and injected continuously into the combustion zone of a gas-fired furnace, where it is decomposed to form carbon black. The furnace is basically a specially designed refractory lined horizontal steel vessel having different segments like combustion zone, venture zone, reaction zone, quench zone & evaporation cum conveying sections. Primary quench water cools the gases to stop the cracking. The carbon laden flue gases enter the multi bag filter from the smoke header.

The Carbon Black is then separated from the gas stream, process bag filter. A cyclone for primary collection and particle agglomeration may precede the filter. The recovered carbon black is finished to a marketable product by pulverizing and wet pelletizing to increase bulk density. Water from the wet pelletizer is driven off in a gas-fired rotary dryer. Drying is achieved by burning the part of the waste gases from the process bag filter in waste gas combustor. The dried pellets are then conveyed to bulk storage.

During, Carbon Black manufacturing process, partial combustion feedstock generates off gases. In this project, the off gas which has a calorific value will be used to generate steam and use the steam to generate power (green power) & burning in dryer instead of flaring tail gas into atmosphere. The schematic of Carbon Black manufacturing is as below –

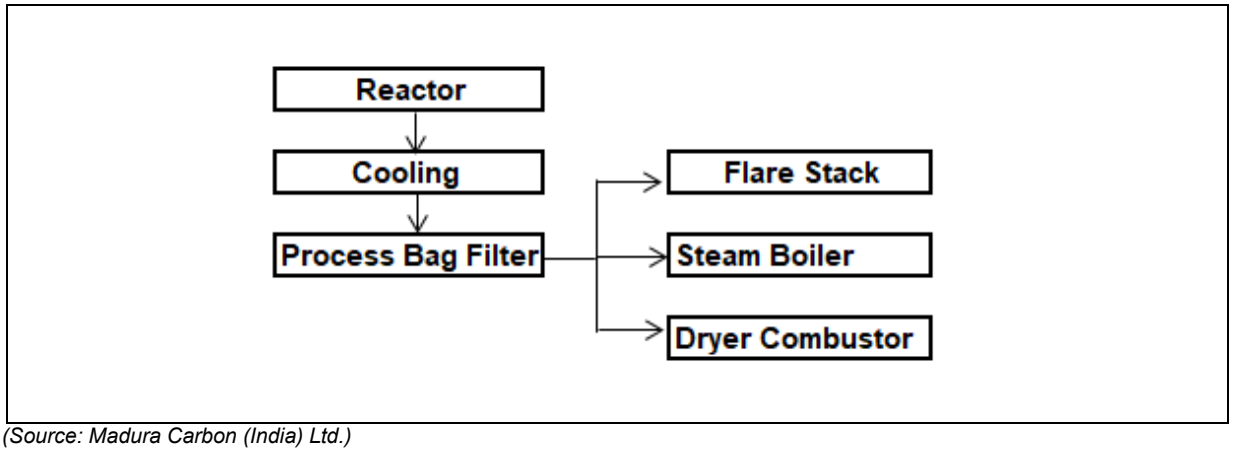
Figure 2.3: Schematic for Carbon Black Manufacturing



(Source: Madura Carbon (India) Ltd.)

The flue gas (off gas) from the carbon black line will be separated into two streams, one stream will used for carbon black drying system and the other will be sent to boiler for steam/ power generation. The flare system will be only operated when no operation of steam boiler &/ or dryer. Flare control scheme shown below.

Figure 2.4: Flare Control Scheme



(Source: Madura Carbon (India) Ltd.)

The detailed process description, material balance, and chemical reaction are provided at ***Annexure – 5.***

2.6 POLLUTION POTENTIAL & MITIGATION

2.6.1 Wastewater Generation & its Management

2.6.1.1 Wastewater Generation

Total 630 KLD wastewater will be generated from plant operations. Out of which @45 KLD will be domestic & @585 KLD will be industrial waste water. The domestic wastewater will be treated in STP. Treated water from STP will be used for gardening.

Industrial Wastewater mainly generated from industrial activities like boiler blowdown @55 KLD, Cooling blowdown @60 KLD, Plant washing @30 KLD, DeSOx blow down @60 KLD, DM plant regeneration @20 KLD and miscellaneous @360 KLD.

The boiler & cooling blowdown @100 KLD will be directly recycle in DeSOx system for lime slurry preparation. DeSOx blow down along with plant washing @90 KLD will be diverted to ETP. Part of treated water from ETP @29 KLD will be recycled for plant washing & remaining treated water from ETP @ 60 KLD along with remaining blow down from boiler &15 KLD & DM plant regeneration @20 KLD will be diverted to RO-2 for further treatment. Reject from RO-1 @ 360 KLD & RO-2 @15 KLD will be diverted to MEE. Permeate from RO-2 @80 KLD & Condensate from MEE @337 KLD will be recycled for domestic & industrial use.

As describe above out of 630 KLD of total waste water @590 KLD will be recycle back and @40 KLD will be losses/ uses during treatment.

The category wise bifurcation of the wastewater generation is given in table 2.10.

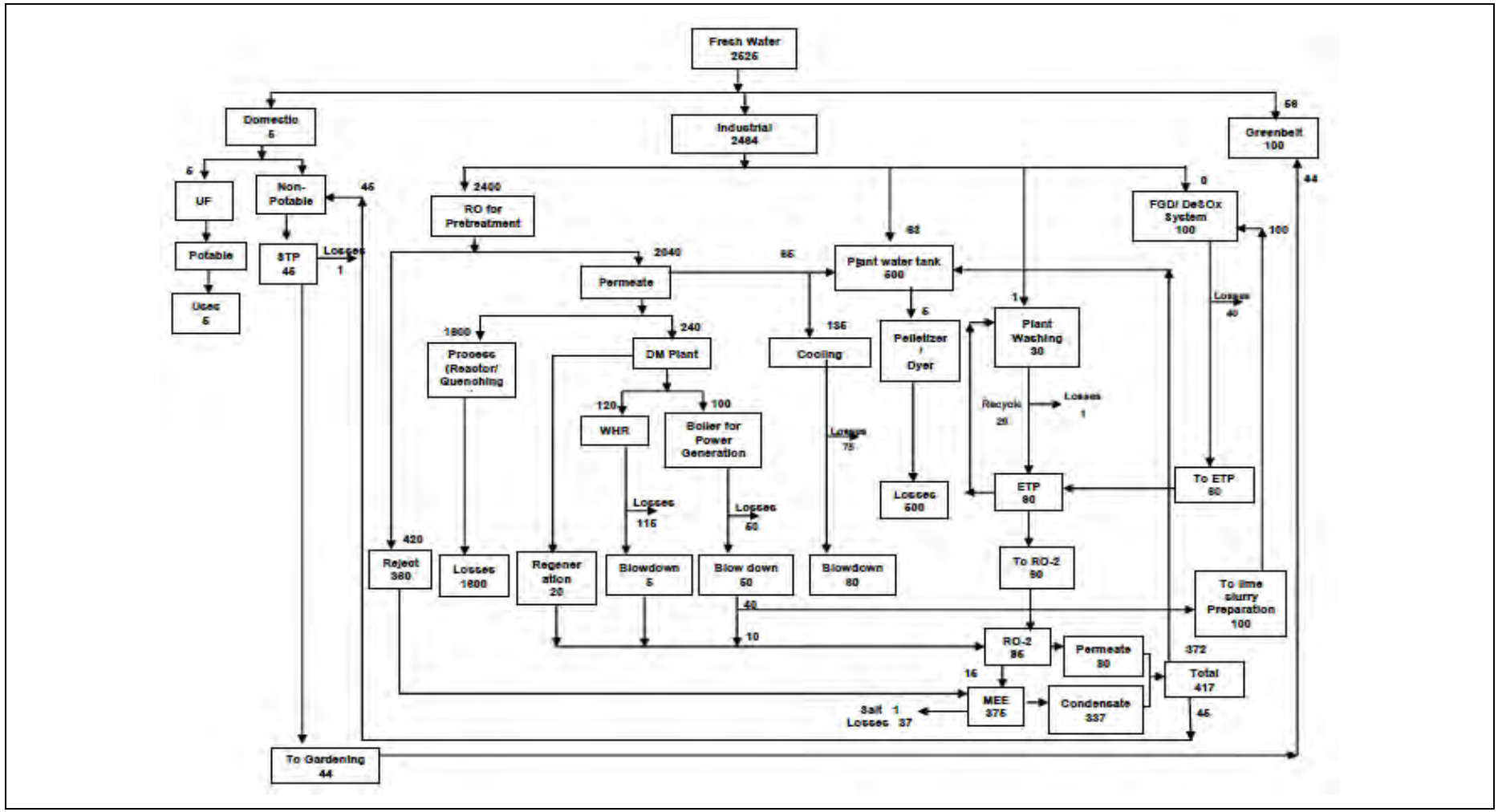
Table 2.9: Category-wise Wastewater Generation (KLD)

Particulars	Total WW Qty.	Directly Recycled	For Treatment in STP/ ETP/ RO & MEE	Losses/ Uses	Recycle After treatment	Remarks
Domestic	45	00	45	1	44	Recycle for Gardening after treatment in STP.
Industrial						
Process	00	00	00	00	00	--
CT blow down	60	60	00	00	00	@100 KLD will be directly recycled for lime slurry preparation in DeSOx system, and @15 KLD will be recycled for domestic & Industrial purpose after treatment in RO & MEE.
Boiler blow down	55	40	15	00	15	
Plant Washing	30	00	30	1	29	Recycle for plant washing after treatment in ETP.
DeSOx blow down	60	00	60	00	60	Recycle For domestic & Industrial purpose after treatment in ETP, RO & MEE
DM plant Regeneration	20	00	20	00	20	
Miscellaneous	360	00	360	38	322	
Sub – Total: Industrial	**585**	**100**	**485**	**39**	**446**	
Grand Total	**630**	**100**	**530**	**40**	**490**	

(Source: Madura Carbon (India) Ltd.)

2.6.1.2 Water balance diagram

Figure 2.5: Water balance diagram for proposed project (KLD)



(Source: Madura Carbon (India) Ltd.)

2.6.1.3 Wastewater characteristics

Stream wise expected characteristics of effluent are provided in below table.

Table 2.10: Stream wise expected characteristics of effluent

Sr. No.	Effluent streams	Flow KLD	Expected characteristics of wastewater					
			pH	SS	TDS	Oil & Grease	COD	BOD
Stream to be diverted to ETP (90 KLD)								
1	Washing water from tank farm and process area	30	6.5-8.0	400-500	400-500	15-25	200-300	40-60
2	Washing from Bag filter, Silo & Packing area		6.5-8.0	500-700	400-500	8-10	100-150	30-50
3	DeSOx System Blowdown	60	6.5 – 8.5	1800-2100	2300-2500	<5	200-250	40-60
Stream directly recycled for lime slurry preparation (100 KLD)								
3	Cooling blow down	60	7-8.5	100 - 300	300 - 500	<10	--	--
4	Boiler blow down	50	7-8.5	100 - 300	200 - 400	<10	--	--
Utility Streams diverted for RO treatment (95 KLD)								
5	Boiler blow down	15	7-8.5	100 - 300	200 - 400	<10	--	--
6	DM Regeneration	20	6.5-8.0	50-100	4000-5000	<10	--	--
7	ETP Treated	60	7-8.5	30-50	1600-1900	<10	100-150	30-50
Effluent to MEE (375 KLD)								
6	RO-1 Reject	360	6.5-8.0	50-100	600-800	<10	--	--
7	RO-2 Reject	15	6.5-8.0	50-100	6000-8000	<10	100-150	30-50

(Source: Madura Carbon (India) Ltd.)

Table 2.11 (a): Composite characteristics of wastewater to ETP

Sr. No.	Parameter	Treatment facility	Expected Characteristics		
			Untreated	Treated	Remarks
Effluent to ETP (90 KLD)					
1.	pH	ETP consisting primary & tertiary treatment	6.5-8.0	6.5-8.0	To be recycle back in plant washing & RO-2 for further treatment
2.	Suspended Solids (SS)		1500-1700	<100	
3.	Total Dissolve Solid (TDS)		1600-1900	<2100	
4.	Oil & Grease		30-50	<10	
5.	COD		200-300	100-150	
6.	BOD		40-60	20-30	

(Source: Madura Carbon (India) Ltd.)

Table 2.11 (b): Composite characteristics of wastewater to RO

Sr. No.	Parameter	Treatment facility	Expected Characteristics			
			RO Inlet	Permeate	Reject	Remarks
Effluent to RO-2 (95 KLD)						
1.	pH	RO	6.5-8.0	7.0-8.0	7.5-8.5	Ro permeate recycled back reject to MEE
2.	Suspended Solids (SS)		50-100	<10	<100	
3.	Total Dissolve Solid (TDS)		2000-2500	<100	12000-15000	

(Source: Madura Carbon (India) Ltd.)

Table 2.11 (c): Composite characteristics of wastewater to MEE

Sr. No.	Parameter	Treatment facility	Expected Characteristics		
			MEE Inlet	MEE Condensate	Remarks
Effluent to MEE (375 KLD)					
1	pH	MEE	6.5-8.0	6.5-7.5	Condensate form MEE recycled Back Salt from MEE sent towards TSDF
3	Total Dissolve Solids (TDS)		1000-1500	100-150	

(Source: Madura Carbon (India) Ltd.)

2.6.1.4 Wastewater treatment &disposal

The total domestic wastewater generated @ 45 KLD will be treated in STP. Treated water from STP will be used for gardening.

Industrial waste water is categorized as follows:

1. **Effluent from Plant washing (30 KLD)**
   Effluent containing free floating oil particles from tank farm & reactor section of plant process. Effluent containing Suspended carbon black particle from Bag filter, Silo & Packing area.

2. **Effluent from DeSOx blow down (60 KLD)**
   The entire effluent from plant washing and DeSOx blow down will be treated in ETP consisting primary and tertiary treatment. Part of treated water from ETP @29 KLD will be recycled for plant washing & remaining treated water from ETP @ 60 KLD will be diverted to RO-2 for further treatment.

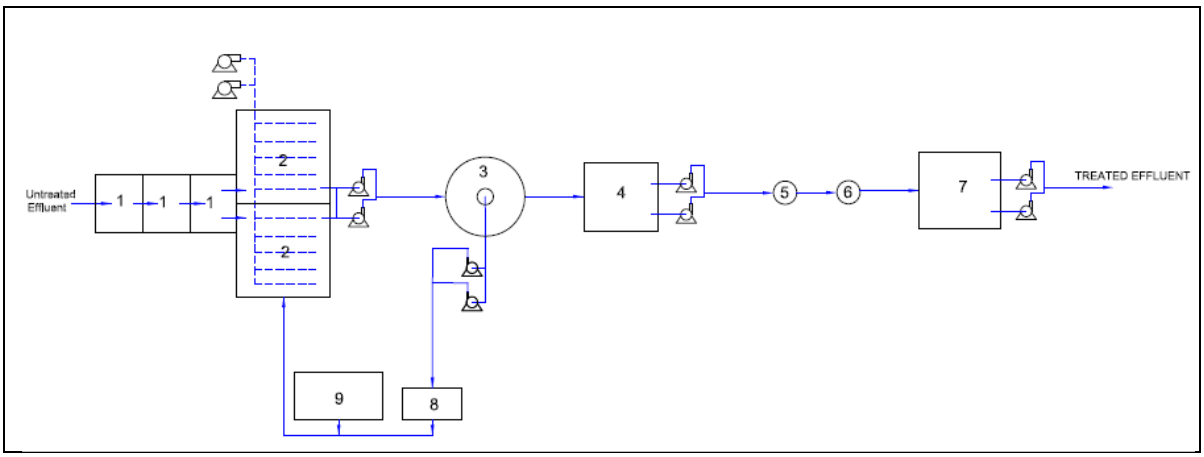
3. **Effluent from cooling and boiler blow down (115 KLD):**
   The boiler & cooling blowdown @ 100 KLD will be directly recycle in DeSOx system for lime slurry preparation. Remaining effluent @ 15 KLD will be diverted to RO-2 for further treatment.

4. **Effluent for further treatment in RO-2 (95 KLD):**
   Treated water from ETP @ 60 KLD along with remaining blow down from boiler &15 KLD, DM plant regeneration @20 KLD will be diverted to equalization cum collection tank before being sent to RO-2 for further treatment. Permeate from RO-2 @80 KLD will be recycled back for plant uses and reject from RO-2 @15 KLD will be diverted to MEE.

5. **Effluent for further treatment in MEE (375 KLD) :**
   Reject from pre-treatment RO-1 @ 360 KLD & RO-2 @15 KLD will be diverted to MEE. Condensate from MEE will be recycled back for domestic & industrial uses.

   As describe above out of 630 KLD of total waste water @590 KLD will be recycle back and @40 KLD will be losses/ uses during treatment.

Figure 2.6: Flow Diagram of ETP



(Source: Madura Carbon (India) Ltd.)

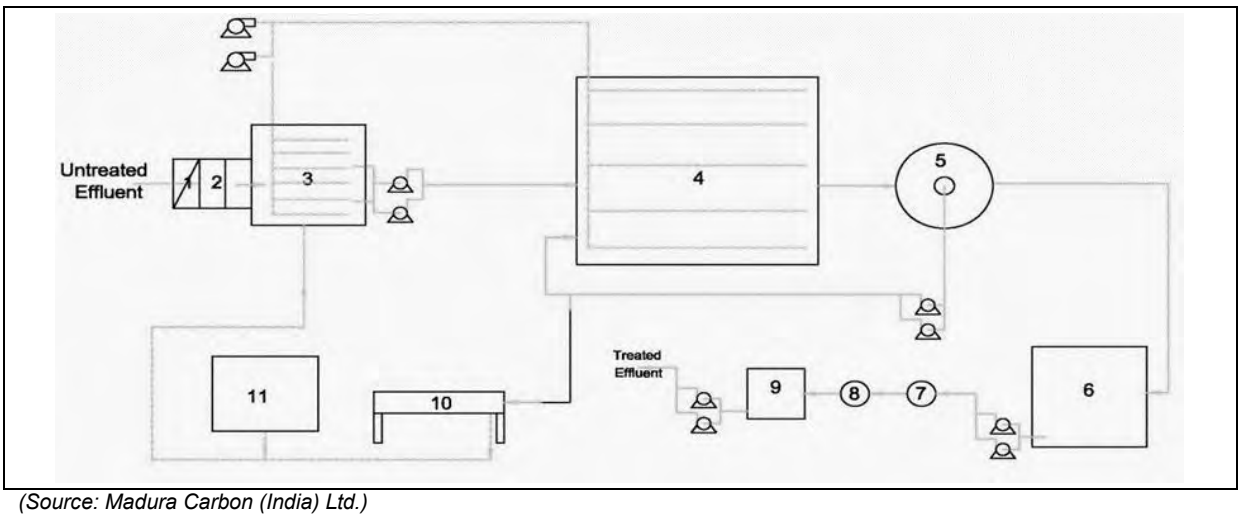
The details of ETP unit with capacity are given in below table.

Table 2.12: Technical Details of waste water treatment plant

Sr. No.	Unit	Quantity (Nos.)	Size (m)/ Volume (m^3)/ Capacity (m^3/day)
ETP for Plant Washing & DeSOx blow down (90 KLD)			
1	Oil & Grease Trap	3	3.9 x 1.3 x 2.5
2	Collection cum Equalization Tank	2	4 x 4 x 3.5
3	Primary Clarifier	1	Dia.-3, Ht.-2.8
4	Clarified Water Tank	1	2.5 x 2.5 x 3.5
5	Pressure Sand Filter	1	Dia.-1, Ht.-1.5
6	Activated Carbon Filter	1	Dia.-1, Ht.-1.5
7	Treated Water Tank	1	4 x 4 x 3.5
8	Filter Press	36 plates	36” x 36”
9	Sludge Storage Area	1	3 x 3
RO & MEE for Utility Section (375 KLD)			
1	Collection cum Equalization Tank	1	100 m^3
2	RO	1	100 m^3
3	MEE	1	375 m^3

(Source: Madura Carbon (India) Ltd.)

Figure 2.7: Flow Diagram of STP



(Source: Madura Carbon (India) Ltd.)

Table 2.13: Technical Details of STP

Sr. No.	Unit	Quantity (Nos.)	Volume (m^3)/ Size (m)
Flow – 45 KLD			
1.	Bar Screen Chamber	1	1 m^3
2.	Oil & Grease Trap	1	4.5 m^3
3.	Collection cum Reaction Tank	1	12 m^3
4.	Aeration Tank	1	48 m^3
5.	Secondary Settling Tank	1	15 m^3
6.	Clarified Water Tank	1	10 m^3
7.	Pressure Sand Filter	1	Dia.-0.8, Ht.-1.5
8.	Activated Carbon Filter	1	Dia.-0.8, Ht.-1.5
9.	Treated Water Tank	1	10 m^3
10.	Filter Press	24 plates	24” x 24”
11.	Sludge Storage Area with shed	1	6.25 m^2

(Source: Madura Carbon (India) Ltd.)

2.6.2 Air emission and control

2.6.2.1 Process Emission

The details of process vents are provided in table 2.14.

Table 2.14: Details of process vents

Sr. No	Stack attached to	No. of Stack	Height (m)	Emissions Parameters	Air Pollution Control Measures Attached
1	Process Bag Collector	2	35	PM, SO_2, NOx	Emergency Flare Stack (Normally closed)
2	Dense Bag collector	2	35	PM	Bag Filter
3	Vapour Bag collector	2	35	PM	Bag Filter

(Source: Madura Carbon (India) Ltd.)

2.6.2.2 Details of utility emission

The details regarding utility emissions and control measures are mentioned in the below table.

Table 2.15: Details of utility emissions

Sr. No	Locations	Fuel	Ht. & Dia. of Stack, (m)	Probable Pollutant	Emission Norms	APCM to be provided
1	Boiler – Capacity: 112 TPH	Off gas: 334840 Nm^3/hr	Common Stack H: 110 m D: 3.2 m	PM, SO_2, NOx	<50 mg/Nm^3 <100 ppm <50 ppm	Flue Gas Desulphurization (FGD), Selective Catalytic Reduction (SCR)/ Selective Non Catalytic Reduction (SNCR)
2	Boiler-Capacity 72 TPH					
3	DG Set - Capacity: 1000 kVA (As a standby)	LDO /HSD @300 L/hr.	H: 35 m D:1.1 m	PM, SO_2, NOx	<150 mg/Nm^3 <100 ppm <50 ppm	--
4	Dryer Combustor– 1	Off gas: 68750 Nm^3/hr	H: 60 m D: 2 m	PM, SO_2, NOx	<50 mg/Nm^3 <100 ppm <50 ppm	Lime slurry scrubber
4	Dryer Combustor – 2	Off gas: 45835 Nm^3/hr	H: 60 m D: 2 m	PM, SO_2, NOx	<50 mg/Nm^3 <100 ppm <50 ppm	

(Source: Madura Carbon (India) Ltd.)

2.6.2.3 Details of fugitive emission

There are chances of fugitive emission during manufacturing process as well as due to storage & handling of raw materials and products. Unit will take following precaution for the control of fugitive emission–

Table 2.16: Details of fugitive emissions

Probable Sources	Control Measures
Manufacturing activities	• Entire process will be in closed system • Whole process plant will be DCS based closed system. • Proper interlocks will be programmed in the DCS to isolate any line or any section of the plant depending upon the location of the leak till the maintenance work will be completed. • All dust producing areas will be well connected to dedusting system.
Emission from Carbon black storage silo and packing	• All storage silo will be closed. • Dedusting System (with Polyester bags) will be provided as APCM with storage silo, packing area & bucket elevator.
Pump and compressor Emissions	• Mechanical seals will be provided in pumps and agitators • Standby arrangement will be provided for critical equipment for periodic maintenance.
Valves, Flanges, plugs and instrument connections	• Welded pipes will be used wherever feasible. • Suitable gasket materials will be used. • Suitable gland packing will be used in valves. • Periodic inspection and maintenance of pipes and pipe fittings will be carried out. • All equipment welding will be done as per approved procedure.

(Source: Madura Carbon (India) Ltd.)

Fugitive emissions of VOCs are also likely to emit from the project activities. However, it will be at acceptable level.

To control VOCs, following steps will be taken:

- Closed storage tank to be provided.
- Ensure that sufficient space to be available in the storage area
- Providing Explosion Vents in spaces with possibility of air-vapour mixtures.
- Routine thorough check-up procedures.
- Proper housekeeping should be maintained
- Any leak will also be attended to immediately.
- Raw Materials are stored in properly designed storage are and under good storage conditions to prevent any volatilities.

2.6.3 Leak Detection and Repair Programme (LDAR)

LDAR Program – LDAR program will be carried out as per sources of Leakages. Following activities shall be carried out as part of LDAR

- Preventive Maintenance to prevent Leakages
- Immediate Corrections in case of Leakages

Monitoring:

- Storage and consumption of raw materials in product will be measured through Level Transmitters and Load cells weighing systems. The quantity at each stage shall be reconciled periodically to arrive at Losses.
- Batch outputs will be monitored and reconciled with quantity of input raw materials added. Any variation beyond 5% shall be analysed in detail and action plan shall be prepared to reduce the variation.
- Workplace VOC monitoring shall be carried out at the shop floor
- Periodic Leakage Audit at Plant

Preventive Maintenance to prevent Leakages:

In order to prevent leakage from Pump, Seals, Valves etc, preventive maintenance will be carried out periodically as per plan. In case of any recurring problem, action plan will be prepared or frequency will be revised.

Table 2.17: Preventive Maintenance Schedule

Sr. No.	Component	Preventive Maintenance schedule
1	Valves/flanges	Quarterly
2	Compressor seals	Quarterly
3	Pressure relief devices	Yearly
4	Pump seals with visible liquid dripping	Daily
5	Any component with visible leaks	Weekly
6	Any component after repair/ replacement	Weekly
7	Pipeline Thickness Testing	Yearly

(Source: Madura Carbon (India) Ltd.)

Repairing the components:

- After a leak is detected, the component will be modified or replaced to correct the leakage.
- The component will be considered repaired only after it has been monitored.
- Plant will have adequate number of spares and consumables required to repair the leaking device.
- Standby equipment like Pumps, valves etc will be kept based on the criticality and usage.
- In order to prevent leakage from Pump, Seals, Valves etc, preventive maintenance will be carried out periodically.

Record keeping: All the leakages identified will be captured in the monitoring register.

2.6.4 Hazardous and Non-hazardous waste management

The detail of the hazardous waste and its management is given below in table 2.18. Letter of intent from TSDF is attached as ***Annexure - 4***.

Table 2.18: Hazardous and Solid waste generation, management and disposal

Type of Waste	Source	Category	Quantity (T/Annum)	Disposal
ETP Sludge	ETP	35.3	50	Disposal at TDSF
MEE Salt	MEE	37.3	150	Disposal at TDSF
Scrubber Bleed Liquor	DeSOx System	35.1	21900	Treatment in In-house ETP.
Sludge from APCM	DeSOx/ DeNOx System	37.1	43625	Sell to cement/ gypsum board manufacturers.
Oily Cotton Waste	Maintenance	28.1	2	Incineration at CHWIF
Spent used Oil	Maintenance	5.1	100	Sale to registered reprocessor/ recycler
Discarded Containers	Raw material storage	33.1	5	Sale to registered recycler

(Source: Madura Carbon (India) Ltd.)

2.6.5 Noise control

Noise is likely to be generated in the process area mainly from operation of heavy duty motors, blowers and compressors in various sections of the manufacturing plant area. The compressors and blowers' operation in utility area will also result in high noise generation. Due to power plant operations, noise pollution can arising from turbine, compressor, generator room, etc. The control measures to be taken for reduction in noise levels are as below:

- The plant and equipment will be specified and designed with a view to minimize noise pollution.
- The major noise producing equipment such as turbine will be provided with acoustic enclosure.
- D.G. Set will be equipped with acoustic enclosure.
- Sturdy foundation & pads will be provided to all the noise generating equipment.
- Ear Plugs and Ear muffs will be provided to the workers in Utility Section.
- Regular maintenance of equipment will be carried out to minimize the noise generated by the equipment's.
- Regular monitoring of noise levels at all areas will be carried out.
- Greenbelt will be maintained

2.7 STORAGE &TRANSPORTATION OF RAW-MATERIALS/ PRODUCTS

The company will provide separate storage area/tank farm for the storage of hazardous chemicals/materials. Total no. of vehicles required for transportation of raw materials and products will be around 100 trucks/ tankers per day after proposed project.

The company will provide different parking spaces for employee & other transportation vehicle within the company premises and will also make arrangement of separate entry and exit gate to control movement of vehicle within the site.

3. DESCRIPTION OF ENVIRONMENT

3.1 PRELUDE

Preparation of EIA report needs collection and analysis of baseline environmental data on which an assessment can be done for prediction of impacts and mitigation plan can be suggested accordingly. It is therefore, necessary to collect baseline environmental data for different environmental attributes that are likely to be affected due to the proposed activity. Prior to implementation of any major developmental project or expansion of existing project, it is very important to monitor/collect the prevailing environmental quality status or the region, which is in the vicinity of project activity.

The baseline environmental baseline data helps in identifying the significant environmental issues and assess the likely changes in the environmental quality after implementation of the proposed project. The baseline environmental quality and the predicted impacts also help in determining the mitigation measures that needs to be adopted to maintain the environmental quality of the region.

The baseline environmental monitoring study has been conducted for various environmental components like air, water, noise, land use/ land cover, biological & social environment, as delineated in the Standard ToRs awarded to the project by EAC.

The details of the study for establishment of baseline environmental status are described in subsequent sections of this chapter.

3.2 METHODOLOGY

Primary data collected from project site and surrounding area (10 km around project site) and the secondary data taken from various sources has been used to derive the baseline environmental setting of the region. The baseline monitoring for meteorology, ambient air quality, water quality, noise levels, soil quality, hydrogeological aspects, ecological environment, land use/ land cover and socio-economic studies has been carried out by Precitech Laboratories Pvt. Ltd. The methodology of data collection is specified in table 3.1 and satellite image of study area is shown in figure 3.1.

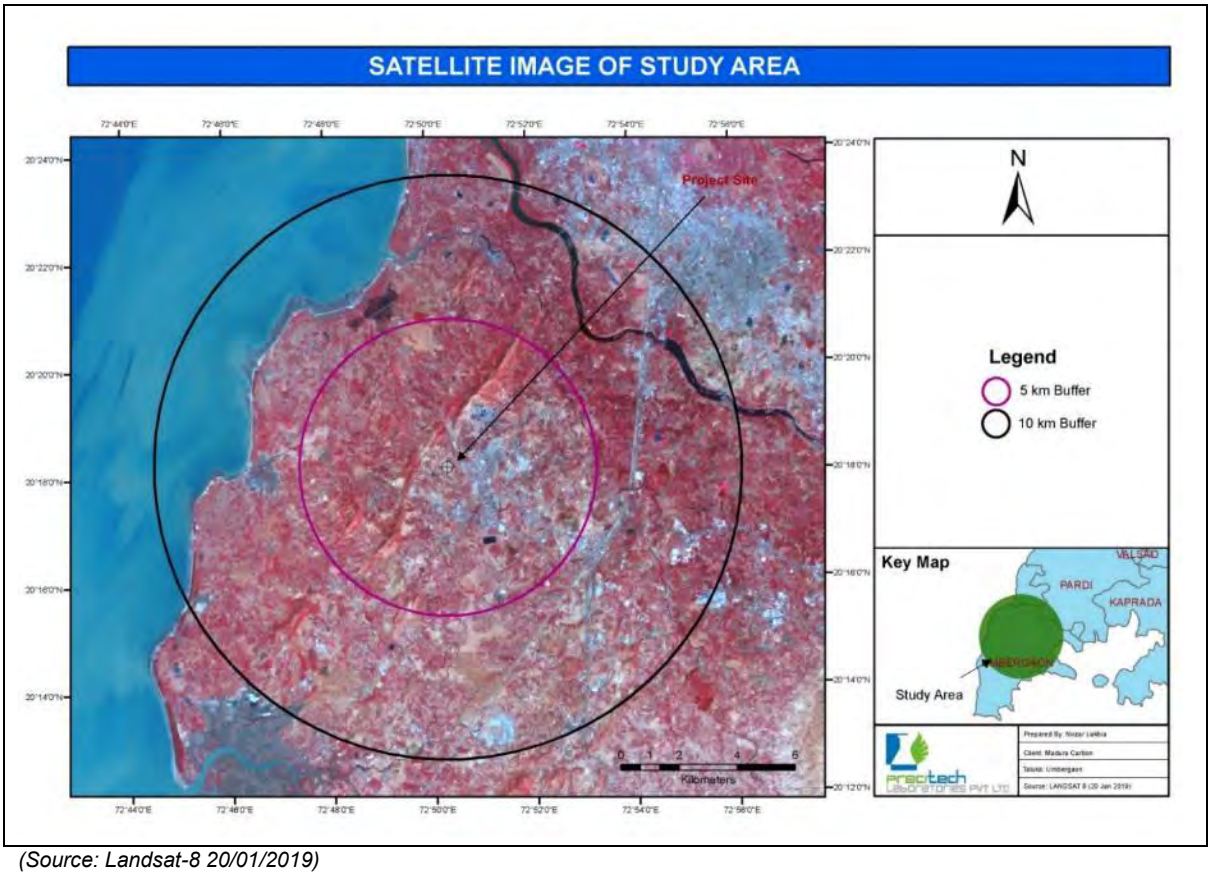
Table 3.1: Schedule & Methodology of Baseline Data Generation and Compilation

Environmental Attribute	Parameters	No. of locations	Frequency of Monitoring	Methodology
Climate & meteorology	▪ Temperature ▪ Relative humidity ▪ Wind direction ▪ Wind speed • Rainfall	• 1 location	• Continuous 1 hourly observations (from Oct to Dec-18)	• Secondary data from already published literature of National Data Centre of Indian Meteorological Department have been utilized to establish the general climatological pattern. • Primary data has been collected by installing weather station at 1 location during Oct to Dec-18. • MM5-processed micro-meteorological data obtained for the period of Oct to Dec-18 have been utilized for dispersion modelling.

Environmental Attribute	Parameters	No. of locations	Frequency of Monitoring	Methodology
Ambient air quality	PM_{10}, $PM_{2.5}$, SO_2, NO_2, CO, HC , TVOC and Hg	• 10 locations	• Twice in a week for 12 weeks at each sampling location for PM_{10}, $PM_{2.5}$, SO_2 and NO_2. • Twice in a month for 3 months at each location for CO, HC, TVOC and Hg during the study period.	▪ Monitoring & analysis as per relevant standard methods of CPCB/BIS. • TVOC (as isobutylene) monitored by PID based sensor. • The samples for CO & HC have been collected in gas bladder and analysed by NDIR based CO analyser Gas chromatography respectively. • Other parameters as per the NAAQMS are not monitored since there are no sources of emissions anticipated from the proposed project activities. • One station each for upwind and downwind directions. Rest other stations in crosswind directions.
Water quality	• pH, Temperature, Colour, Odour, Turbidity, TDS, EC, O&G, COD, BOD, Phenolic compounds, Total Alkalinity, Total Hardness, Calcium, Magnesium, Chlorides, Nitrates, Sulphates, Phosphates, Fluorides, Sodium, Potassium, Iron, Manganese, Cyanide, Copper, Nickel, Lead, Zinc, Chromium, Total coliform, Faecal coliform.	• Ground water: 8 locations within study area from bore well	• One time grab sampling at each location of ground water resources.	• Monitoring & analysis has been done as per Bureau of Indian Standards and APHA 22nd Edition, 2012.
		• Surface water: 8 locations within study area from village pond, river and canal	• One time grab sampling at each location of surface water resources	• Monitoring & analysis has been done as per Bureau of Indian Standards and APHA 22nd Edition, 2012.
Noise levels	• Day & Night time Noise levels in dB(A)	• 9 locations within study area covering	• Once during the study period	• Hourly recording using noise meter as per Bureau of Indian Standards

Environmental Attribute	Parameters	No. of locations	Frequency of Monitoring	Methodology
		residential, commercial, industrial and silent zone.		
Soil quality	• Texture class classification, Bulk density, Water holding capacity, pH, Conductivity, CEC, Organic matter, Organic carbon, Na, Ca, Mg, Zn, Cu, Mn, Fe, N, P, K	• 4 locations	• Once during the study period	• Analysis has been done as per relevant sections of Bureau of Indian Standards & USEPA.
Landuse/ Landcover pattern	• Establishing the landuse/ Land cover pattern of the study area	• 10 km radial periphery around the project site	--	• Land use pattern has been established with GIS software using latest Satellite image.
Ecological layout	• Terrestrial and aquatic ecological layout of the study area	• 10 km radial periphery around the project site	• Once in the study period	• Primary survey has been conducted. • Secondary data has been examined for determination of forest area in study region and identification of some species.
Socio-economic layout	• Establishing the demographic, social and economic status of the study area	• 10 km radial periphery around the project site (60 villages/ town fully or partially falls within the study area)	• Once in study period	• Primary survey by direct observation at project site/ study area. • Secondary analysis of Socio- economic census data (Secondary Survey) by referring 2011 census data.
Note: The detailed methodology for sampling and analysis is attached as ***Annexure-6.***				

Figure 3.1: Satellite image of the study area



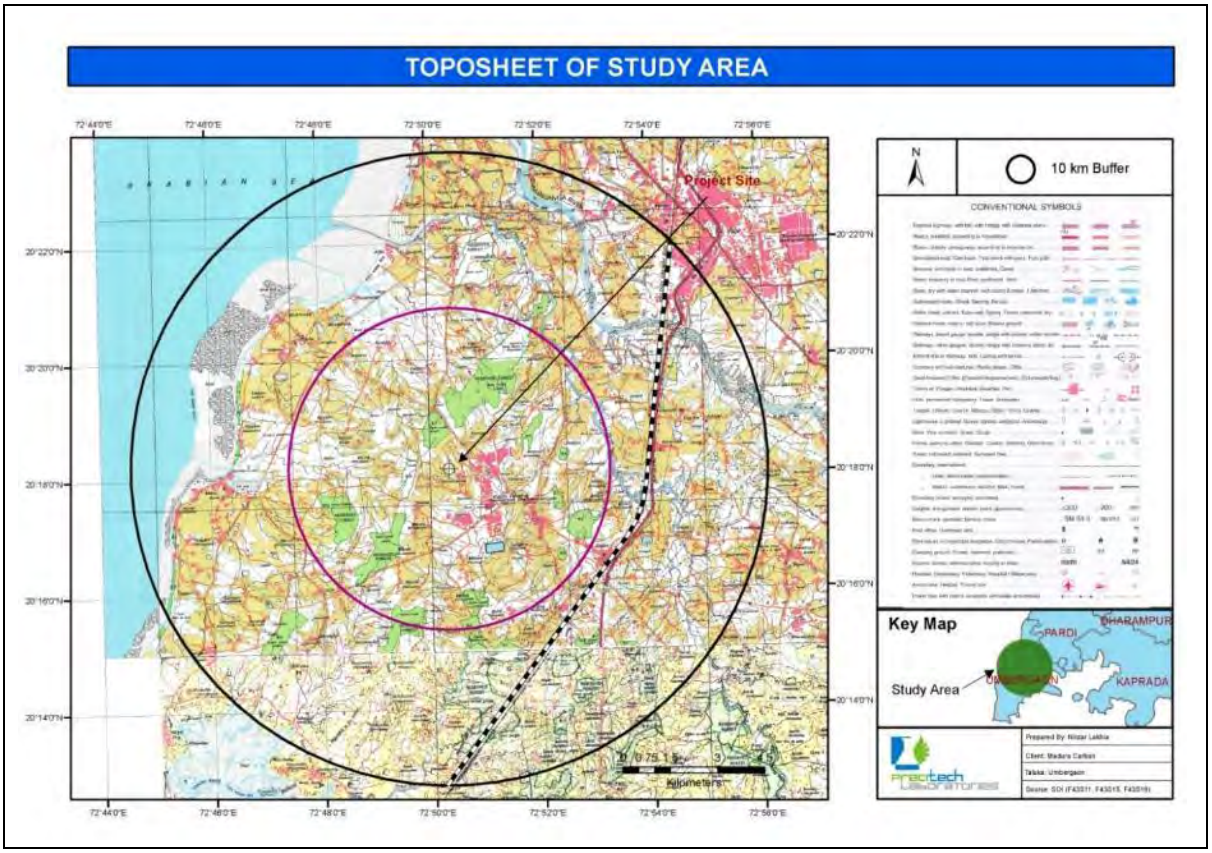
(Source: Landsat-8 20/01/2019)

3.3 PHYSIOGRAPHY, GEOLOGY AND SOIL

3.3.1 PHYSIOGRAPHY

The area is situated in the southernmost part of the Gujarat, which is adjacent to coastal area in western side and hill area in eastern side. Interstate boundary of Dadra & Nagar Haveli and Gujarat is situated in eastern side which is approximately 8-9 km. Interstate boundary of Daman & Diu (UT) and Gujarat is situated in northern side which is approximately 7-8 km. Interstate boundary of Maharashtra and Gujarat is situated in Southeast side which is approximately 9 km. The area is located on the western side of the foot hills of the Western Ghats and some geographical area is covered with some patches of reserve forests. The Damanganga River is passing through the study area in northern side, the intermittent river Darotha criss-cross the area and drain into Arabian Sea near Daman towards the northeast side, it is surrounded by the ranges of Sahyadri Mountains (Western Ghats). Tributary of Tumb river namely Tokar khadi is passing through the study area in southern side and drain to the River Tumb near Sanjan Town. The Tumb river finally drains to the Arabian Sea. The soil is rich and fertile. The topography is undulating and rolling. The territory has a hilly terrain, especially in the North and West, which is surrounded by some small hills. The topographic contour indicates that the elevation of area ranges between 20-200 m. Most of the area is having elevation between 20-40 m. The central part of the study area is fairly plain with slightly elevated regions in N, WSW and ESE. The project site is at an altitude of approximately 30 m above MSL.

Figure 3.2: Toposheet of the study area

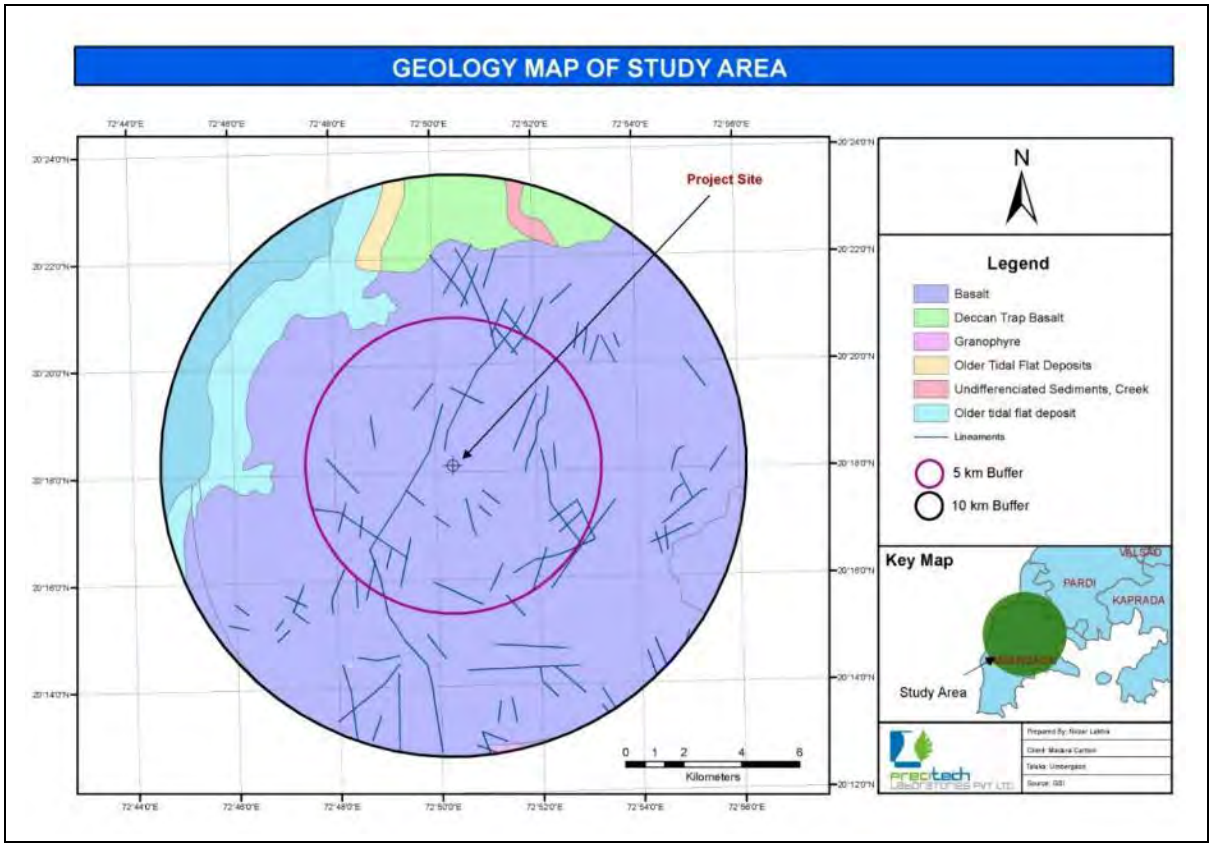


(Source: Survey of India Toposheet)

3.3.2 GEOLOGY

The site lies at the southern side of the coast of Valsad area. The major formations seen at the vicinity of the site are older tidal flats which belongs to rann clay formation and basalts which are extrusive rocks of Deccan volcanic group of upper cretaceous to Eocene age. More than 80 % of the area is composed of basalts. Holocene sediments are found along coastal parts of the district and include flood plain deposits of rann clay formation, coastal dunes of akhaj formation and younger tidal flat (spit/bar and shoal) deposits of Mahuva formation. The area consists predominantly of basaltic flows intruded, profusely by the basic rocks. Some of the flows carry giant phenocrysts of plagioclase, dacite flows are exposed near Anklas. The basic dykes are basaltic to dolertic in nature and trend in N-S to NNW-SSE, NW-SE, ENE-WSW and WNW-ESE directions. Compositionally, these are similar to the lava type's viz. normal tholeilite, olivine tholelite, pictrite basalt and giant phenocryst basalt. Basalt sill and plug are present around Kaprada and Pangarbari respectively.

Figure 3.3: Geology Map of the Study Area



(Source: GSI,)

The bouger gravity anomaly varies between -70 to +30 m Gal. The basement depth is about 1500 m in the western part which decreases towards east. The area lies in the moderate risk zone of seismic zonation. Earthquake epicentres in the eastern parts have been recorded. Groundwater prospects are good to excellent in alluvial plain, flood plain and vegetation anomaly geomorphologic domains.

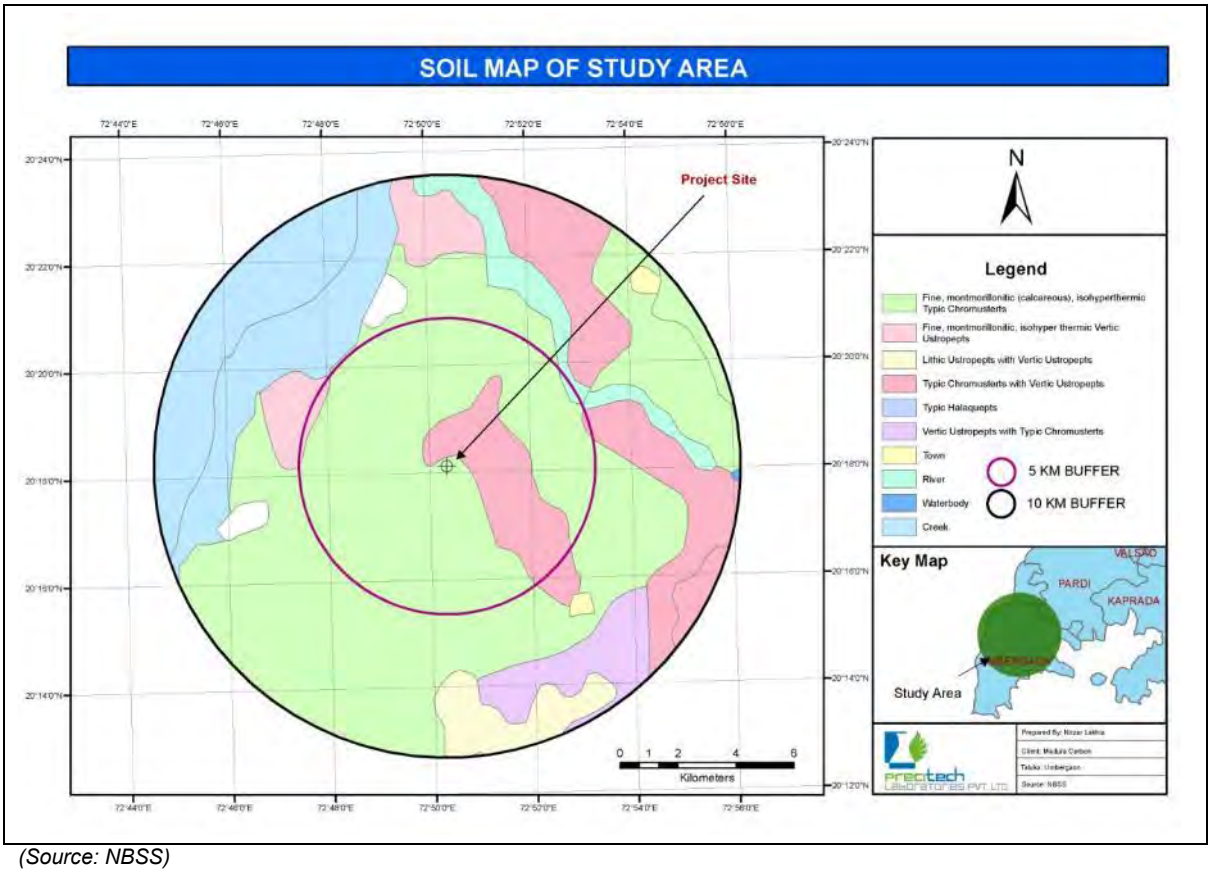
3.3.3 GEOMORPHOLOGY

3.3.4 SOILS

3.3.4.1 SOIL OF THE AREA

Natural soils are the product of physical and chemical weathering of rocks. The physical properties are formed during the course of formation and the subsequent existence is depending upon the topography, hydro meteorological condition and human interference. Soil characteristics of a terrain are more important aspects since they play a major role in ground water recharge and meet the basic needs of all agricultural production.

Figure 3.4: Soil Map of the study area



(Source: NBSS)

Largely, the map indicates two different types of soil based on location as below:

1. Soils of Western Hills
2. Soils of Western Coast

This soils can be further classified based on the terrain, as below:

1. Soils of Interfluves / Soils of Western Coast
2. Soils of Alluvial Plains / Soils of Western Coast
3. Soils of Coastal Plains / Soils of Western Coast
4. Soils of North Sahyadri / Soils of Hilly Terrain

Soils of North Sahyadri can mostly be related to Clayey, mixed, iso-hyperthermic Lithic Ustropepts and Fine, montmorillonitic, isohyperthermic Vertic Ustropepts. This soils are Shallow, well drained, clayey soils on very gently sloping dissected hills with moderate erosion and moderate stoniness; associated with moderately deep, well drained, fine soils with moderate erosion and slight stoniness.

Soils of Interfluves are Fine, montmorillonitic, isohyper- thermic Typic Chromusterts associated with Fine, montmorillonitic, isohyper thermic Vertic Ustropepts.This are Very deep, well drained, fine soils on gently sloping basaltic interfluves with slight to moderateerosion; associated with very deep, well drained, calcareous, fine soils on very gently sloping lands with slight erosion

Soils of Alluvial Plains are Fine, montmorillonitic (calcare-ous), isohyperthermic Typic Chromusterts. This are Very deep, moderately well drained, calcareous fine soils on nearly level alluvial plain with slight erosion; associated with very deep, moderately well drained, calcareous very fine soils on very gently sloping lands with slight erosion.

Soils of Coastal Plains are Fine, mixed (calcareous), iso-hyperthermic Typic Halaquepts mixed with Fine-loamy, mixed (calcareous), isohyperthermic Typic Halaquepts. This are Very deep, imperfectly drained, calcareous fine soils on very gently sloping coastal plain with slight erosion and strong salinity; associated with deep imperfectly drained, fine loamy soils with slight erosion and strong salinity.

About 60 per cent of the Umbergaon Taluka is covered by Ustropepts, of which Calcareous Typic Ustropepts soil is predominant which is also seen in the highlands. This soil type is also present in Pardi taluka. Typic Chromusterts with small amount of Vertic Ustropepts are the other soil types found in Umbergaon taluka along with Dadra and Nagar Haveli. Talasari Taluka is largely covered by Lithic Ustropepts mixed with little amount of Vertic Ustropepts.

3.3.4.2 METHODOLOGY

Physico-chemical parameters have been analysed to ascertain the baseline status of soil in the study area. Four (4) nos. of soil samples were collected from selected locations during the study period and analysed.

3.3.4.3 RESULTS

The soil sampling locations are provided in below Table 3.2. The results of the soil sample analysis are given in table 3.3.

Table 3.2: Soil sampling locations

Stn. Code	Location	Type of Soil	Approx. Geographical Coordinates	Approx. aerial distance & direction from the site (km)
SS1	Daheli	Agriculture	20.255° N, 72.844° E	≈ 5.2 km (SSE)
SS2	Punat	Agriculture	20.310° N, 72.866°E	≈ 3.0 km (NE)
SS3	Maroli	Agriculture	20.298° N, 72.820°E	≈ 2.3 km (WSW)
SS4	Bhilad	Agriculture	20.284° N, 72.884°E	≈ 5.6 km (E)

(Source: Precitech Laboratories Pvt. Ltd. & Google earth)

Figure 3.5: Soil sample location in the study area

10 km radius of the project site, SS: Soil sampling locations

(Source: Google earth)

Table 3.3: Soil quality of the study area

Parameters	SS1	SS2	SS3	SS4
	Daheli	Punat	Maroli	Bhilad
pH (5% Sol)	7.34	7.88	7.43	7.25
Electrical Conductivity (ms/cm)	1.20	1.32	1.26	1.28
Soil texture	Clay	Clay	Clay	Clay
Sand %	20	30	32	21
Slit %	30	26	28	34
Clay %	50	44	40	45
Bulk Density (gm/cm^3)	1.2	1.2	1.1	1.3
Water Holding Capacity (%)	29	27	31	34
Organic Matter (%)	0.42	0.39	0.37	0.34
Organic Carbon (%)	0.53	0.67	0.55	0.61
Sodium (mg/kg)	83	92	79	88
Zinc (mg/kg)	<5	<5	<5	<5
Copper (mg/kg)	<5	<5	<5	<5
Manganese (mg/kg)	14	9	18	8
Iron (As Fe) (mg/kg)	11	15	9	14
Nitrogen as N (mg/kg)	128	130	127	129
Phosphorus as P (mg/kg)	28	26	22	24

Parameters	SS1	SS2	SS3	SS4
Potassium as K (mg/kg)	103	90	91	99
Nitrogen as N (kg/ha)	230.4	234	209.55	251.55
Phosphorus as P (kg/ha)	50.4	46.8	36.3	46.8
Potassium as K (kg/ha)	185.4	162	150.15	193.05

(Source: Primary sampling carried out by Precitech Laboratories Pvt. Ltd. October'18 to December'18)

3.3.4.4 OBSERVATIONS FROM SOIL ANALYSIS

The following observation are made based on the comparison of test results of soil samples with standard soil classification of Hand Book of Agriculture, Indian Council of Agricultural Research, New Delhi.

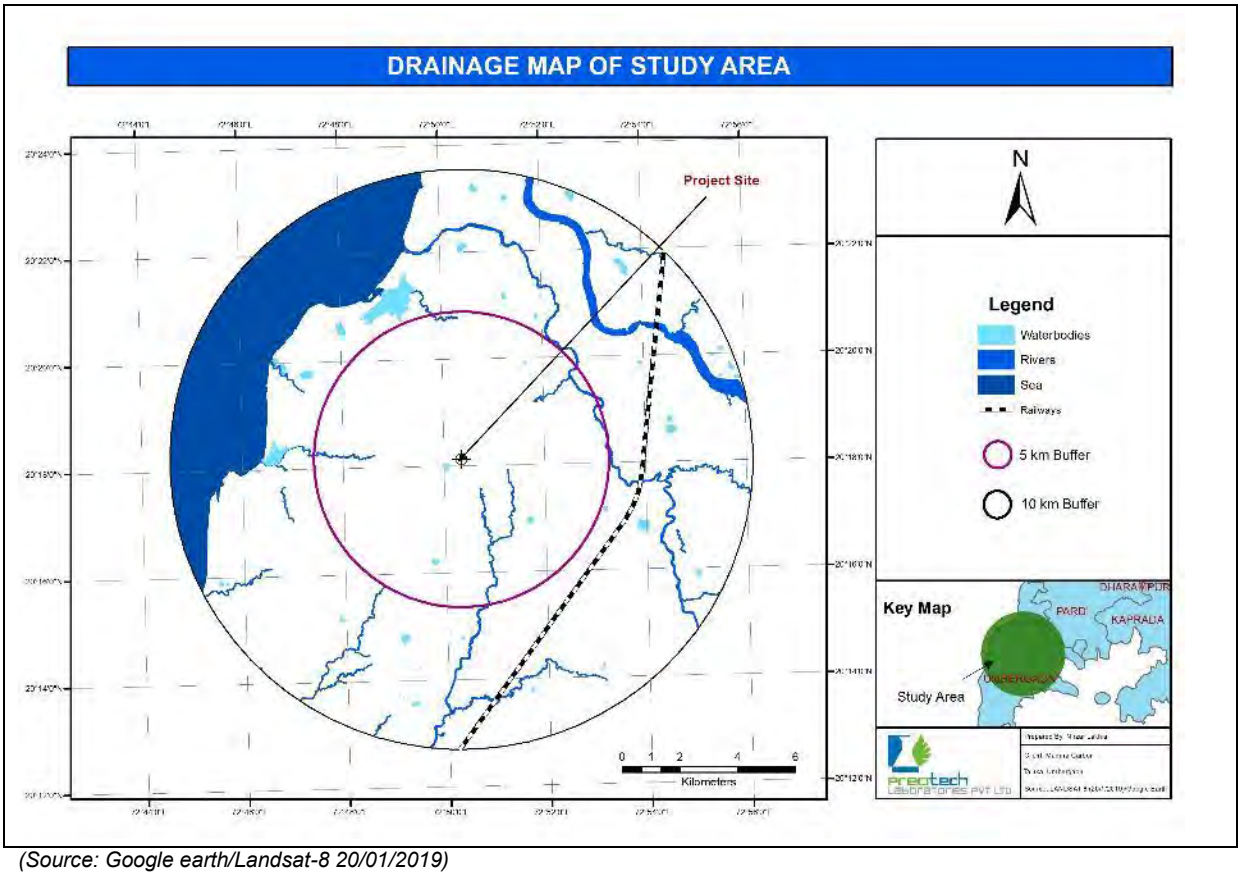
- The pH of soil was found to be varying in the range of 7.25 to 7.88 which indicates that pH of soil in the area are "Normal"
- Organic Carbon content ranged was found in the range 0.53 to 0.67 which indicates that organic carbon in soil were "Medium" in range.
- Total Nitrogen was found in the range of 209.55 kg/ha to 251.55 kg/ha which indicates that nitrogen content of soil in the study area is "better" in range.
- Total Phosphorous content was found in the range 36.3 kg/ha to 50.4 kg/ha which indicates that phosphorus content of soil in the study area is "low" to "medium" in range.
- Potassium content ranged was found in the range 150.15 kg/ha to 193.05kg/ha which indicates that potash content of soil in the study area is "medium".in range.
- Based on the above analysis, it can be concluded that the soil in the study area is suitable for agricultural purposes, however the soil needs to be enriched with some potassium & phosphorous enriched fertilizers to upgrade its quality.

3.4 GEOHYDROLOGY AND WATER RESOURCES

3.4.1 GEOHYDROLOGY

Different types of drainage and stream order are very important for understanding the infiltration and runoff of the water, especially in Perennial River like Damanganga observed near proposed area. These different types of drainage pattern mainly depend on the local geography, geology, structures and tectonics and also it depends on the slope of the area. The perennial river Damanganga is flowing in the northern part of study area. The area is under the influence of the river Damanganga being the main recharging source & controlling the drainage pattern. The study area lies neat the basin of this river. Overall the drainage pattern of the area is dendritic. The intermittent river Darotha criss-cross the area and drain into Arabian Sea near Daman towards the northeast side, it is surrounded by the ranges of Sahyadri Mountains (Western Ghats). Tributary of Tumb river namely Tokar khadi is passing through the study area in southern side after collecting drainage of other primary & secondary streams. The Tokar khadi then drain into the River Tumb near Sanjan Town in Southand the Tumb river finally drains in to the Arabian Sea in South western side. The area is covered with thick layer of alluvial. These alluvial deposits formed by river Damanganga are composed of argillaceous & arenaceous material in the form of alternate bands of sand & clay. These aquifers are Silt in texture with grain size of fine to medium grained. The site falls in a safe zone according to CGWB report 2013.

Figure 3.6: Drainage map of the study area

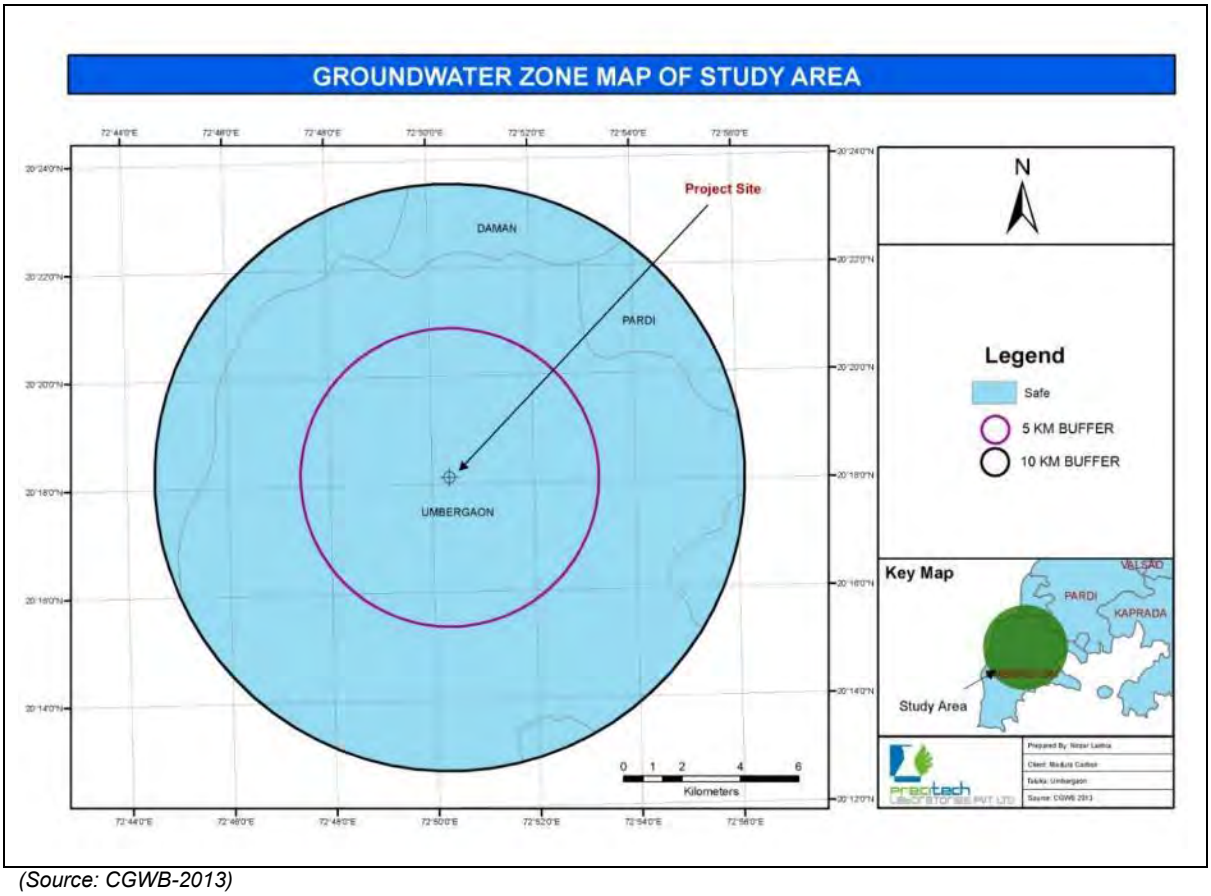


(Source: Google earth/Landsat-8 20/01/2019)

3.4.2 GROUND WATER

Nature of aquifers of Deccan basalt is un-confined, while aquifers of quaternary alluvium are both confined and un-confined. Ground water prospects are good to excellent in alluvial plain, flood plain and vegetation anomaly geomorphologic domains. In the study area, the water extraction is done through various types of sources like open well, hand pump and tube well.

Figure 3.7: Groundwater zone of the study area



(Source: CGWB-2013)

3.4.2.1 METHODOLOGY

8 ground water samples were taken from ground water sources viz bore wells which fall in the study area. The grab samples were collected in carboys/glass bottles and preserved, as per the techniques explained by APHA in 'Standard Methods for Examination of Water & Wastewater'. The preserved samples were brought to the laboratory and analysed. The samples have been analysed as per the procedures specified in 'Standard Methods for the Examination of Water and Wastewater' published by American Public Health Association (APHA – 22nd Edition) and Bureau of Indian Standards. The methodology for sample preservation and analysis techniques was followed as per the techniques mentioned in ***Annexure -6***.

Table 3.4: Location of ground water monitoring station

Station Code	Location	Source	Approx. Geographical Coordinates	Approx. Aerial distance & direction from the project site (km)
GW1	Near Sarigam-GIDC	Bore-well	20.279°N, 72.858°E	≈ 3.2 km (SE)
GW2	Sarigam	Bore-well	20.295°N, 72.856°E	≈ 1.7 km (E)
GW3	Bhandarwad road	Bore-well	20.276°N, 72.869°E	≈ 4.2 km (SE)
GW4	Manda village	Bore-well	20.272°N, 72.843°E	≈ 3.2 km (SSE)
GW5	Karanjgam village	Bore-well	20.304°N, 72.846°E	≈ 0.8 km (NE)
GW6	Daheli village	Bore-well	20.257°N, 72.855°E	≈ 5.1 km (SSE)
GW7	Maroli village	Bore-well	20.290°N, 72.829°E	≈ 1.5 km (SW)
GW8	Punat village	Bore-well	20.313°N, 72.856°E	≈ 2.1 km (NE)

(Source: Precitech Laboratories Pvt. Ltd. & Google earth)

Figure 3.8: Monitoring locations of ground water samples in the study area

10 km radius from the project site GW: Ground water sampling locations

(Source: Google Earth)

3.4.2.2 RESULTS

The results have been presented at table 3.5 and the ground water monitoring locations and their aerial distance & direction from the project site is given in table 3.4.

Table 3.5: Ground water quality

Parameters	GW1	GW2	GW3	GW4	GW5	GW6	GW7	GW8	Std. as per IS 10500	
									Desirable	Permissible
pH	7.52	7.69	7.64	7.68	7.72	7.82	7.51	7.65	6.5-8.5	NR
Temp (°C)	30	30	30	30	30	30	30	30	NS	NS
Colour (CU)	<5	<5	<5	<5	<5	<5	<5	<5	5	15
Odour	AGG	AGG	AGG	AGG	AGG	AGG	AGG	AGG	Agreeable	Agreeable
Turbidity, (NTU)	0.60	0.30	0.50	0.80	0.40	1.10	0.50	0.8	1	5
TDS (mg/l)	**587**	**564**	**502**	491	484	496	**542**	**617**	500	2000
EC (ms/cm)	0.92	0.89	0.79	0.77	0.76	0.78	0.85	0.97	NS	NS
Oil & Grease (mg/l)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	NS	NS
Phenolic compound (mg/l)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	0.002
Total Alkalinity (mg/l)	**274**	**239**	**218**	**225**	**206**	**224**	**265**	**274**	200	600
Total Hardness (mg/l)	**280**	**264**	**240**	**252**	**218**	**243**	**296**	**290**	200	600
Calcium (mg/l)	67	67	54	61	58	62	68	73	75	200
Magnesium (mg/l)	28	24	26	25	18	22	**31**	27	30	100
Chlorides (mg/l)	89	94	95	72	76	63	67	86	250	1000
Nitrates (mg/l)	3	5	3	4	10	14	8	15	45	NR
Sulphates (mg/l)	42	40	34	32	42	37	44	49	200	400
Phosphates (mg/l)	0.4	0.3	0.2	0.2	0.6	0.3	0.2	0.2	NS	NS
Fluorides (mg/l)	0.2	0.4	<0.1	<0.1	<0.1	0.2	<0.1	0.6	1	1.5
Sodium (mg/l)	78	72	66	84	67	106	80	103	NS	NS
Potassium (mg/l)	5	7	4	4	12	9	7	12	NS	NS
Iron (mg/l)	0.2	<0.1	0.2	0.2	0.3	<0.1	0.2	0.3	0.3	NR
Manganese (mg/l)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.1	0.3
Cyanide (mg/l)	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.05	NR
Copper (mg/l)	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.05	1.5
Nickel (mg/l)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	NR
Lead (mg/l)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	NR
Zinc (mg/l)	<0.2	<0.2	<0.2	0.8	0.5	0.4	0.7	0.3	5	15
Chromium (mg/l)	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.05	NR
Total Coliform (MPN/100ml)	<2	<2	<2	<2	<2	<2	<2	<2	Absent in 100 ml sample	Absent in 100 ml sample
Faecal Coliform (MPN/100ml)	<2	<2	<2	<2	<2	<2	<2	<2		
Note: NR= No relaxation, NS= Not Specified, AGG= Agreeable *All in mg/lit except Temp., pH, Turbidity, colour, odour, Electric Conductivity (EC)										

(Source: Primary monitoring survey by Precitech Laboratories Pvt. Ltd., Oct'18 to Dec'18.)

3.4.2.3 OBSERVATIONS FROM GROUND WATER ANALYSIS

The following observation is based on the analysis of the samples:

- pH of the samples have been found ranging from 7.51 to 7.82.
- From the above results, it can be observed that in the majority of the study area, TDS level, total hardness, and total alkalinity crossed the desirable limits. However, the levels of all parameters are found well within the permissible limits as per IS: 10500:2012 Drinking Water Standards.
- In case of water sample of Maroli village, Magnesium is found slightly higher than the desirable limits. However, all parameters have been found within the permissible limits as per IS: 10500:2012 Drinking Water Standards.
- Also the Total Coliform and Faecal Coliform in all the ground water samples have been found to be absent.

3.4.3 SURFACE WATER

Damangamga and Darotha River are passing through the study region and discharging in the Arabian Sea. It is a seasonal river but swells during the monsoon period. After the construction of Madhuban Dam on Damanganga River, flow of the river is controlled and that has helped in increasing the irrigation potential of the Region. Surface water is also supplied for industrial and domestic purposes in the region from the Damanganga Canal Distry. In some villages of the study area open ponds exist, which help to harvest rain water during monsoon season.

3.4.3.1 METHODOLOGY

8 surface water samples have been taken within the study area from village pond, River and canal in carboys/ glass bottles and preserved, as per the techniques explained by APHA in 'Standard Methods for Examination of Water & Wastewater'. The preserved samples have been brought to the laboratory and analysed. The samples have been analysed as per the procedures specified in 'Standard Methods for the Examination of Water and Wastewater' published by American Public Health Association (APHA – 21st Edition) and Bureau of Indian Standards. The methodology for analysis techniques was followed as per the techniques mentioned in ***Annexure-6.***

Table 3.6: Location of surface water monitoring station

Station Code	Location	Approx. Geographical Coordinates	Approx. Aerial distance & direction from the project site (km)
SW1	Damanganga Canal	20.293°N, 72.860°E	≈ 2.4 km (E)
SW2	Darotha River	20.298°N, 72.889°E	≈ 5.3 km (E)
SW3	Karanjgam Pond	20.299°N, 72.834°E	≈ 0.6 km (SW)
SW4	Manda Pond	20.269°N, 72.829°E	≈ 3.7 km (S)
SW5	Sarigam Pond	20.283°N, 72.862°E	≈ 3.1 km (SE)
SW6	Damanganga river near NH48	20.340°N, 72.909°E	≈ 8.4 km (NE)
SW7	Damanganga river near Zari causeway	20.375°N, 72.878°E	≈ 8.9 km (NNE)
SW8	Valvada pond	20.313°N, 72.908°E	≈ 7.2 km (ENE)

(Source: Precitech Laboratories Pvt. Ltd. & Google earth)

Figure 3.9: Monitoring locations of surface water samples in the study area

10 km radius from the project site SW: Surface water sampling locations

(Source: Google Earth)

3.4.3.2 RESULTS

Surface water sample have been collected from 8 different locations within the study area as defined in above table 3.6 and analysis results of the samples are given in table 3.7.

Table 3.7: Surface water quality

Parameters	SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8	Classification of Inland Surface Water (IS 2296:1982)				
									A	B	C	D	E
pH	7.8	7.9	7.7	7.6	7.8	7.86	8.16	7.8	6.5 - 8.5	6.5 - 8.5	6.5 - 8.5	6.5 - 8.5	6.5 - 8.5
Temperature (^{0}C)	28	28	28	28	28	28	28	28	NA	NA	NA	NA	NA
Colour (CU)	<5	6	<5	<5	<5	<5	32	<5	10	300	300	NA	NA
Odour	AG	AG	AG	AG	AG	AG	AG	AG	UO	NA	NA	NA	NA
Turbidity(NTU)	1.0	3.0	0.6	0.4	0.7	0.8	6.3	2.5	NA	NA	NA	NA	NA
Total Dissolved Solids (mg/l)	394	298	352	310	432	219	2310	368	500	NA	1500	NA	2100
Electric Conductivity (µS/cm))	0.65	0.49	0.58	0.51	0.71	0.35	3.6	0.57	NA	NA	NA	1000	2250
Oil & Grease (mg/l)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	1.4	0.6	NA	NA	0.1	0.1	NA
COD (mg/l)	22	31	18	20	25	14	112	65	NA	NA	NA	NA	NA
BOD (mg/l)	6	12	8	5	7	6	32	18	2	3	3	NA	NA
DO (mg/l)	5.6	3.4	4.2	3.8	3.6	6.3	1.3	5.4	6	5	4	4	NA
Phenolic compound (mg/l)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	0.005	0.005	NA	NA
Total Alkalinity (mg/l)	218	122	148	108	207	110	395	105	NA	NA	NA	NA	NA
Total Hardness (mg/l)	230	139	165	118	219	98	540	180	300	NA	NA	NA	NA
Calcium (mg/l)	49	36	33	27	46	26	115	64	200	NA	NA	NA	NA
Magnesium (mg/l)	26	11	20	12	25	8	53	5	100	NA	NA	NA	NA
Chloride (mg/l)	56	74	83	93	84	40	698	115	250	NA	600	NA	600
Nitrate (mg/l)	6	4	6	6	4	4	58	3	20	NA	50	NA	NA
Sulphate (mg/l)	12	10	16	12	17	3	395	20	400	NA	400	NA	1000
Phosphate (mg/l)	1	1.2	0.5	0.3	0.4	0.4	12.4	0.4	NA	NA	NA	NA	NA
Fluoride (mg/l)	0.2	0.3	<0.1	<0.1	<0.1	<0.1	0.9	<0.1	1.5	1.5	1.5	NA	NA
Sodium (mg/l)	39	48	55	59	66	32	520	49	NA	NA	NA	NA	NA
Potassium (mg/l)	5	5	7	3	3	3	46	6	NA	NA	NA	NA	NA
Iron (mg/l)	0.6	0.7	0.3	0.2	0.3	0.5	2.45	0.2	0.3	NA	50	NA	NA
Manganese (mg/l)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.5	NA	NA	NA	NA
Cyanide (mg/l)	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.05	0.05	0.05	NA	NA
Copper (mg/l)	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	1.5	NA	1.5	NA	NA
Nickel (mg/l)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	NA	NA	NA	NA	NA
Lead	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.1	NA	0.1	NA	NA
Zinc (mg/l)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	15	NA	15	NA	NA
Chromium (mg/l)	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	NA	NA	0.05	NA	NA
Total Coliform (MPN/100ml)	11	14	21	17	17	45	140	110	50	500	5000	NA	NA
Fecal Coliform (MPN/100ml)	4	9	8	9	7	11	21	50	NA	NA	NA	NA	NA
Note: NR= No relaxation, NS= Not Specified, AG= Agreeable, Ab= Absent *All in mg/lit except Temp., pH, Turbidity, colour, odour, Electric Conductivity (EC)													

(Source: Primary monitoring survey by Precitech Laboratories Pvt. Ltd., Oct'18-Dec'18)

Table 3.8: Classification of river water as per their intended use is described in below table

Sr. No.	Class	Type of use
1.	A	Drinking water source without conventional treatment but after disinfection
2.	B	Outdoor bathing
3.	C	Drinking water source with conventional treatment followed by disinfection.
4.	D	Fish culture and wild life propagation
5.	E	Irrigation, industrial cooling or controlled waste disposal

(Source: Classification of Inland Surface Water (IS 2296:1892))

3.4.3.3 OBSERVATIONS FROM SURFACE WATER ANALYSIS

The following observation is based on the analysis of the samples:

- pH of the samples have been found ranging from 7.6 to 8.16. DO have been found to be ranging between 1.3 to 6.3 mg/l.
- All parameters of Damanganga Canal (SW1), Darotha River (SW2), Karanjgam pond (SW3), Manda pond (SW4), Sarigam Pond (SW5), Damanganga river near NH. 8 (SW6), falls under class A, However, due to lower DO and higher BOD this samples falls under Class E as per classification of inland surface water standards.
- In sample of Damanganga River near Zari causeway (SW7) Parameter like Color, TDS, COD, BOD, Total Hardness, Chloride and Sodium were found high in range. This may be due to close proximately to tidal zone and influence of outfall of industrial treated water and domestic wastewater in the river.
- In Valvada pond (SW8) sample COD, BOD, and coliforms value have been found high in range it may be due to domestic activities like bathing washing etc.

3.5 CLIMATE AND METEOROLOGY

The year is usually divided into four seasons. The winter season from December to February is followed by the summer season from March to May. The south-west monsoon season is from June to September. The post-monsoon season is from the months of October and November.

3.5.1 METHODOLOGY

Secondary data from already published literature of National Data Centre of Indian Meteorological Department have been utilized to establish the general climatological pattern. Primary data has been collected by installing weather station at 1 location during the study period. MM5 processed micro-meteorological data obtained from Denvilabs for the period of Oct-Dec-18 have been utilized for dispersion modelling.

3.5.2 RESULTS

The summary of meteorological data of IMD observatory at Dahanu is presented in Table 3.9 and the summary of the site-specific meteorological data collected during the study period is presented in table 3.10. Summary of Pre-processed micro-meteorological data obtained from Denvilabs for the study period is presented in Table 3.11. The wind rose diagram of the study period is given as figure 3.7.

Table 3.9: Summary of Climatological data at IMD observatory-Dahanu

Location: Dahanu (Lat: N 19° 58', Long: E 72° 43')									
Month	**Temperature (°C)**		**Relative Humidity (%)**		**Cloud Cover (Oktas)**		**Mean Wind Speed (km/hr)**	**Pre-dominant Wind Direction**	**Rainfall (mm)**
	Max.	**Min.**	**Mor.**	**Eve.**	**Max.**	**Min.**			
January	27.7	17.3	66	67	0.9	0.8	5.8	Calm	0.3
February	28.5	18.2	63	63	0.9	0.6	6.8	E	0.0
March	31	21.2	64	62	1	0.7	7.8	E	0.1

Location: Dahanu (Lat: N 19° 58', Long: E 72° 43')									
Month	**Temperature (°C)**		**Relative Humidity (%)**		**Cloud Cover (Oktas)**		**Mean Wind Speed (km/hr)**	**Pre-dominant Wind Direction**	**Rainfall (mm)**
	Max.	**Min.**	**Mor.**	**Eve.**	**Max.**	**Min.**			
April	32.9	24.2	70	64	1.6	0.9	9.2	W	0.5
May	34.3	27.2	72	67	3	2	11.5	SW	4.5
June	33.1	27	81	76	5.5	5	13.1	SW	399.9
July	30.8	26	88	84	6.7	6.6	16.6	SW	650.7
August	30.2	25.5	88	83	6.8	6.6	16.1	SW	493.9
September	30.9	25	86	77	5.1	4.8	9.4	SW	265.2
October	32.9	23.8	74	69	2.3	2.3	6	Calm	47.5
November	32.3	21.2	64	67	1.3	1.4	5.3	Clam	11.7
December	29.8	18.6	64	67	1.3	1.3	5.2	Calm	0.3

(Source: Climatological tables of Observatories in India (1981 - 2010), IMD)

Table 3.10: Summary of generated primary meteorological data (Oct'18-Dec'18)

Location: Precitech laboratoies Pvt. Ltd. **Height of installation:** 20 m									
Month	**Temperature (°C)**			**Humidity (%)**			**Rainfall (mm)**		
	Min	**Max**	**Avg**	**Min**	**Max**	**Avg**	**Min**	**Max**	**Avg**
Oct	24.30	38.80	32.47	23.00	83.50	70.48	0	0	0
Nov	20.20	37.30	30.28	18.90	80.30	65.23	0	0	0
Dec	18.80	33.80	26.01	18.00	79.50	61.69	0	0	0
Oct-Dec 18	18.80	38.80	28.94	18.00	83.50	65.14	0	0	0

(Source: Precitech Laboratories Pvt. Ltd., Oct'18-Dec'18)

Table 3.11: Summary of MM5 processed Met data (Oct'18-Dec'18)

Month	**Temperature (°C)**			**Humidity (%)**			**Rainfall (mm)**		
	Min	**Max**	**Avg**	**Min**	**Max**	**Avg**	**Min**	**Max**	**Avg**
Oct	26.15	37.95	32.06	14	79	69	0	0	0
Nov	23.15	36.35	30.27	20	75	63	0	0	0
Dec	18.05	32.55	26.07	27	70	60	0	0	0
Oct-Dec 18	18.05	37.95	29.46	14	79	64	0	0	0

(Source: Meteorological data (MM5) obtained from Denvilabs)

3.5.3 OBSERVATIONS

3.5.3.1 TEMPERATURE

Temperature slightly increases during the post-monsoon season and again decreases during the winter. During the study period, the daily maximum temperature has been recorded at 37.95 °C in the month of Oct and daily minimum temperature was recorded at 18.05 °C in the month of December. The average temperature of the study period has been recorded at 29.46 °C.

3.5.3.2 HUMIDITY

Humidity is usually high during the monsoon months, with average relative humidity generally exceeding 85%. Humidity decreases gradually during the post-monsoon months and for rest of the year i.e. the period of December to April, The values of maximum & minimum relative humidity observed during the study period are 79% and 14% respectively with average humidity level of 64%.

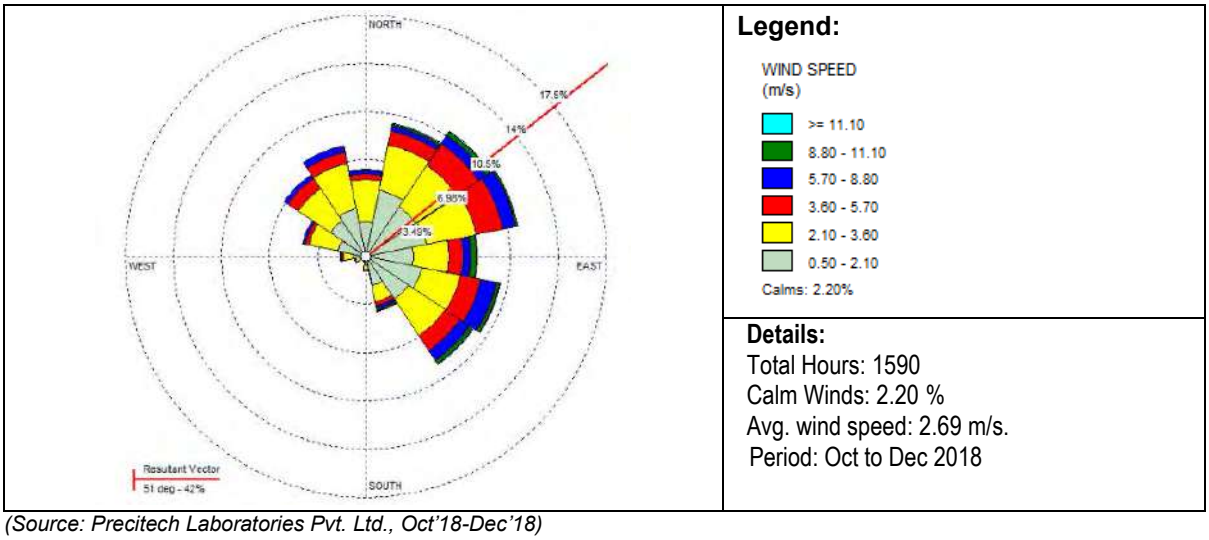
3.5.3.3 RAINFALL

About 95% of the annual rainfall is received during the southwest monsoon season i.e. from June to September, July being the month with highest rainfall. The total annual rainfall observed from the historical data of year 1981-2010 is 1874.6. mm. There was no rain during the study period.

3.5.3.4 WIND PATTERNS

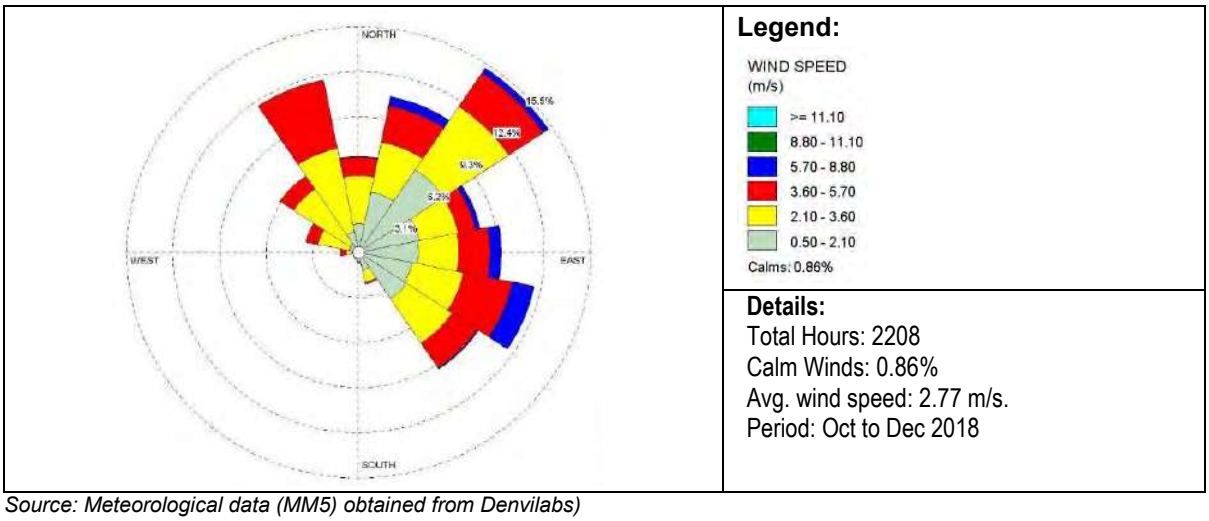
The annual resultant vector for wind direction shows winds blowing from SW. During summers and monsoon, the winds blow mostly from the sea i.e. the W or SW direction. The post-monsoon are usually CALM and winter season experience a change in wind direction, with winds blowing from between NE & SE. The wind speed is high during monsoon and post monsoon seasons, slightly moderate during summer and winter seasons. During the study period, the average wind vector is observed from the NE direction and average wind speed was observed 2.77 m/s.

Figure 3.10: Wind rose diagram (Blowing From)



(Source: Precitech Laboratories Pvt. Ltd., Oct'18-Dec'18)

Figure 3.11: Wind rose diagram (Blowing From)



Source: Meteorological data (MM5) obtained from Denvilabs)

3.6 AIR QUALITY

To ascertain the existing status of background air quality in the study area, ambient air quality monitoring has been carried out within 10 km radius of the project site. The various sources of air pollution in the present area are traffic, domestic fuel burning and Industrial activities.

3.6.1 METHODOLOGY

The baseline status of the ambient air quality has been established by carrying out ambient air quality monitoring at 10 locations within the study area network based on the awarded TORs

- Pre-dominant wind direction.
- One location in the upwind direction;
- One location in the downwind direction.
- Population zone and sensitive receptors.

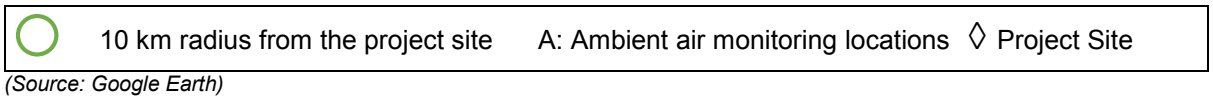
The AAQM has been conducted at 10 locations within the study area.

Table 3.12: Location of ambient air monitoring station

Stn. Code	Location	Area	Approx. Geographical Coordinates	Approx. aerial distance & direction from the site (km)
A1	Nearby Project Site	Residential	20.295°N, 72.840°E	≈ 0.7 km (S)
A2	Punat	Residential	20.326°N, 72.867°E	≈ 4.0 km (NE)
A3	Karanjgam -Punat Road	Residential	20.311°N, 72.852°E	≈ 1.7 km (NE)
A4	Sarigam	Commercial	20.279°N, 72.862°E	≈ 3.4 km (SE)
A5	Manda	Residential	20.270°N, 72.843°E	≈ 3.3 km (S)
A6	Kalgam	Residential	20.310°N, 72.818°E	≈ 2.4 km (NW)
A7	Maroli	Residential	20.294°N, 72.820°E	≈ 2.1 km (WSW)
A8	Angam	Residential	20.313°N, 72.873°E	≈ 3.8 km (ENE)
A9	Bhilad	Residential	20.279°N, 72.885°E	≈ 5.3 km (ESE)
A10	Daheli	Residential	20.271°N, 72.861°E	≈ 3.9 km (SE)

(Source: Precitech Laboratories Pvt. Ltd. & Google earth)

Figure 3.12: Monitoring Locations of ambient air samples for 10 km radius study area



(Source: Google Earth)

Ambient air quality monitoring has been carried out in the month of Oct'18 to Dec'18 at 10 locations. 24 samples (twice in a week for 12 weeks at each sampling location) have been collected & analysed for PM_{10}, $PM_{2.5}$, SO_2, and NO_2, CO, HC, Hg and TVOC (as iso-butylene) were monitored twice in a month for 3 months at each location. Respirable Dust Samplers, model RDS of Envirotech Instruments (duly calibrated) with gaseous sampling attachment, were used for monitoring of PM_{10}, SO_2, NO_2. And Hg. Fine particulate samplers of Envirotech Instruments (duly calibrated) were used for monitoring of $PM_{2.5}$. TVOC as isobutylene have been monitored with PID based Gas detector. The samples for CO & HC have been collected in gas bladder and analysed by NDIR based CO analyser Gas chromatography respectively.

The methodology for sample collection and analysis techniques was followed as per the techniques mentioned in ***Annexure – 6.***

3.6.2 RESULTS

The observations from the monitoring conducted at 10 locations within the study area are summarized below in Table 3.12.

Table 3.13: Ambient air quality of the study area (Oct'18 to Dec'18)

Pollutant parameter	Statistical parameter	Station Code										NAAQS
		A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	
PM_{10} ($\mu g/m^3$)	Average	82	72	73	79	70	70	77	74	81	77	**100**
	Maximum	89	84	88	85	88	78	82	86	87	86	
	Minimum	76	62	67	69	61	60	68	64	73	67	
	98 percentile	89	82	84	85	85	78	82	85	87	85	
$PM_{2.5}$ ($\mu g/m^3$)	Average	38	27	24	34	29	29	29	29	29	30	**60**
	Maximum	44	35	33	42	33	33	37	37	37	34	
	Minimum	27	19	16	24	24	25	20	21	21	26	
	98 percentile	44	35	31	42	33	33	36	37	37	34	
SO_2 ($\mu g/m^3$)	Average	14	13	11	16	12	13	13	15	15	13	**80**
	Maximum	22	16	16	19	15	15	19	20	19	17	
	Minimum	9	9	9	9	9	11	9	10	9	11	
	98 percentile	22	16	15	19	15	15	19	19	19	16	
NO_2 ($\mu g/m^3$)	Average	20	16	16	18	14	18	17	18	19	18	**80**
	Maximum	26	20	20	21	18	22	23	22	23	21	
	Minimum	15	12	11	14	10	13	14	14	13	15	
	98 percentile	26	20	20	21	18	21	22	22	23	21	
*Hg ($\mu g/m^3$)	Average	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	**---**
	Maximum											
	Minimum											
*TVOC (mg/m^3)	Average	0.033	0.032	0.033	0.031	0.027	0.035	0.028	0.024	0.031	0.033	**---**
	Maximum	0.039	0.043	0.039	0.044	0.044	0.047	0.039	0.033	0.041	0.045	
	Minimum	0.024	0.023	0.025	0.017	0.019	0.026	0.023	0.018	0.017	0.017	
*CO (mg/m^3)	Average	0.967	0.230	0.352	0.382	0.305	0.395	0.215	0.323	0.365	0.227	**4**
	Maximum	1.180	0.390	0.530	0.570	0.400	0.480	0.370	0.590	0.460	0.330	
	Minimum	0.820	0.160	0.220	0.280	0.250	0.330	0.110	0.220	0.240	0.120	
*HC As Methane (ppm)	Average	1.822	3.100	3.620	1.610	4.175	3.942	3.762	3.717	2.318	3.913	**---**
	Maximum	2.220	5.320	5.350	2.220	4.940	5.920	5.700	5.040	3.430	4.880	
	Minimum	1.320	2.230	1.980	0.980	3.490	2.020	2.800	3.000	1.440	3.340	
*HC As Non-Methane (ppm)	Average	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**---**
	Maximum											
	Minimum											
Note: *Sample were collected twice in a month for three months.												

(Source: Primary monitori ng survey by Precitech Laboratories Pvt. Ltd. Oct'18 to Dec'18)

3.6.3 OBSERVATION FROM AAQM RESULTS

The following observation is made based on the test results found during the study period.

- Concentration of PM_{10} ranged from 60 µg/m^3 to 89 µg/m^3.
- Concentration of $PM_{2.5}$ ranged between 16 µg/m^3 to 38 µg/m^3.
- Concentration of SO_2 ranged between 9 µg/m^3 to 22 µg/m^3.
- Concentration of NO_2 ranged between 10 µg/m^3 to 26 µg/m^3.
- Concentration of Hg was below detectable range. i.e. <5 µg/m^3.
- Concentration of TVOC ranged from 0.017 mg/m^3 to 0.047 mg/m^3.
- Concentration of CO ranged from 0.110 mg/m^3 to 1.18 mg/m^3.
- Concentration of HC as Methane ranged from 0.98 ppm to 5.92 ppm.
- Concentration of HC as None Methane was below detectable range. i.e. <0.5 ppm.

The results indicates that the ambient air quality for all the parameters at all the locations in the study area are below the National Ambient Air Quality Standards (NAAQS).

3.6.4 AIR QUALITY INDEX

Figure 3.13: AQI category

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)

Table 3.14: AQI index and associated health impact

AQI Category	Associated health impact
Good (0-50)	Minimal Impact
Satisfactory (51-100)	May cause minor breathing discomfort to sensitive people.
Moderately Polluted (101-200)	May cause breathing discomfort to people with lung disease such as asthma, and discomfort to people with heart disease, children and older adults.
Poor (201-300)	May cause breathing discomfort to people on prolonged exposure, and discomfort to people with heart disease
Very Poor (301-400)	May cause respiratory illness to the people on prolonged exposure. Effect may be more pronounced in people with lung and heart diseases.

AQI Category	Associated health impact
Severe (401-500)	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)

Table 3.15: Status of Air quality index in the study area (Oct'18 to Dec'18)

Stn. Code	Location	Value of air quality Index			
		Minimum	Maximum	Average	98 percentile
A1	Nearby Project Site	76	89	82	89
A2	Punat	62	84	72	82
A3	Karanjgam - Punat Road	67	88	73	84
A4	Sarigam	69	85	79	85
A5	Manda	61	88	70	85
A6	Kalgam	60	78	70	78
A7	Maroli	68	82	77	82
A8	Angam	64	86	74	85
A9	Bhilad	73	87	81	87
A10	Daheli	67	86	77	85

(Source: Primary monitori ng survey by Precitech Laboratories Pvt. Ltd. Oct'18 to Dec'18)

Minimum AQI in Baseline Area at 10 locations are in range of 60-76 and maximum AQI in Baseline Area at 10 locations are in range of 78-89. It seems that quality of Air is satisfactory. It may cause minor breathing discomfort to sensitive people.

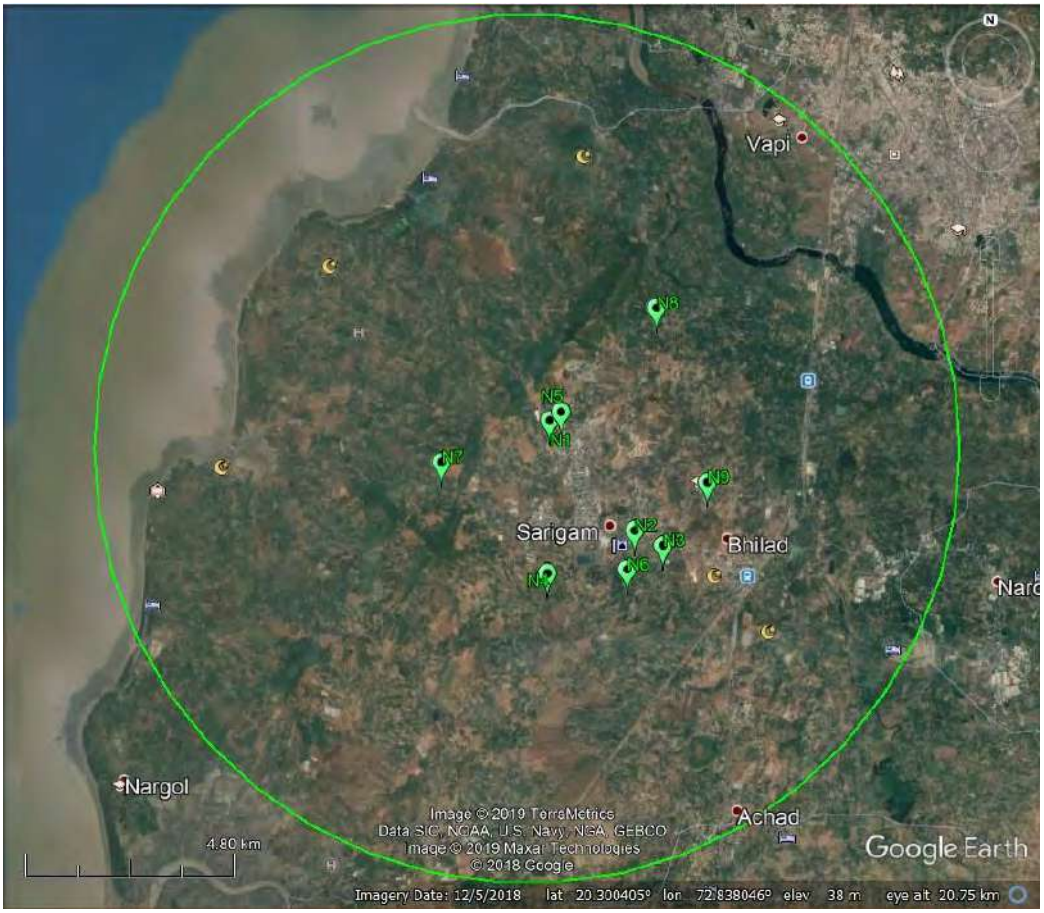
3.7 NOISE MONITORING

The most common and universally accepted scale of measuring noise levels is the 'A' weighted scale which is measured as dB (A). The scale has been designed to weigh various components of noise according to the response of a human ear.

3.7.1 METHODOLOGY

Noise level monitoring was carried out once at each location for 24 hours at hourly intervals, during the study period. 6 AM to 10 PM was considered as day time and 10 PM to 6 AM was considered as night time. Nearby residential area from the project site have been considered for monitoring.SLM100 Sound Level Meter from Envirotech (type II) was used for noise level monitoring.

Figure 3.14: Monitoring locations of noise level monitoring for 10 km radius study area



10 km radius from the project site N: Noise monitoring locations

(Source: Google Earth)

Table 3.16: Noise sampling locations

Stn. Code	Location	Area	Approx. Geographical Coordinates	Approx. aerial distance & direction from the site (km)
N1	Near Project Site	Industrial	20.302°N, 72.844°E	≈ 0.41 km (E)
N2	Sarigam	Commercial	20.279°N, 72.862°E	≈ 3.40 km (SE)
N3	Bhandarwada Road	Residential	20.276°N, 72.869°E	≈ 4.01 km (SE)
N4	Manda	Residential	20.270°N, 72.843°E	≈ 3.30 km (S)
N5	Karanjgam	Commercial	20.304°N, 72.846°E	≈ 0.83 km (NE)
N6	Daheli	Residential	20.271°N, 72.861°E	≈ 3.9 km (SE)
N7	Maroli	Residential	20.294°N, 72.820°E	≈ 2.1 km (WSW)
N8	Punat	Residential	20.326°N, 72.867°E	≈ 4.00 km (NE)
N9	Nr. Laxmi Vidhyapeeth	Silence zone	20.289°N, 72.878°E	≈ 4.23 km (ESE)

3.7.2 RESULTS

The levels measured in the study area have been presented and compared with the CPCB recommended noise levels for different specified zones at Table 3.11.

Table 3.17: Status of noise levels as dB (A) in the study area (Oct'18 to Dec'18)

Stn. Code	Station	Day Time (6am-10 pm)			Night Time (10pm-6am)		
		Max.	Min.	Leq.	Max	Min	Leq.
Industrial area							
N1	Near Project Site	73.1	61.6	69.9	65.1	59.6	62.9
Commercial Area							
N2	Sarigam	69.1	58.1	66.1	59.8	55.3	58.0
N5	Karanjgam	65.8	57.4	62.3	57.0	51.6	54.9
Residential area							
N3	Bhandarwad road	54.4	44.5	52.0	44.9	41.0	43.6
N4	Manda	53.3	44.3	48.0	43.7	37.8	41.4
N6	Daheli	54.3	41.3	50.8	44.3	41.8	43.0
N7	Maroli	54.2	44.3	51.8	44.8	40.8	43.5
N8	Punat	53.6	43.8	50.8	44.8	40.3	43.0
Silence zone							
N9	Nr. Laxmi Vidhyapeeth	44.5	39.3	42.8	39.3	34.4	37.4
Industrial area		75			70		
Commercial area		65			55		
Residential area		55			45		
Silence zone**		50			40		
Note: All values are in dB (A); As per Noise Pollution Rules, 2000 ** Silence zone is defined as area up to100 meters around premises of hospitals, educational institutions and courts. Use of vehicle horns, loud speakers and bursting of crackers are banned in these zones.							

(Source: Primary monitoring survey by Precitech Laboratories Pvt. Ltd. Oct'18 to Dec'18)

3.7.3 OBSERVATION FROM THE NOISE LEVEL RESULTS

From the above results, it can be observed that all the values were well within the prescribed noise standards of CPCB in industrial, residential and silence zone. In commercial zone values are slightly higher than the prescribe standards due to commercial activities and traffic movement.

3.8 LANDUSE/LAND COVER

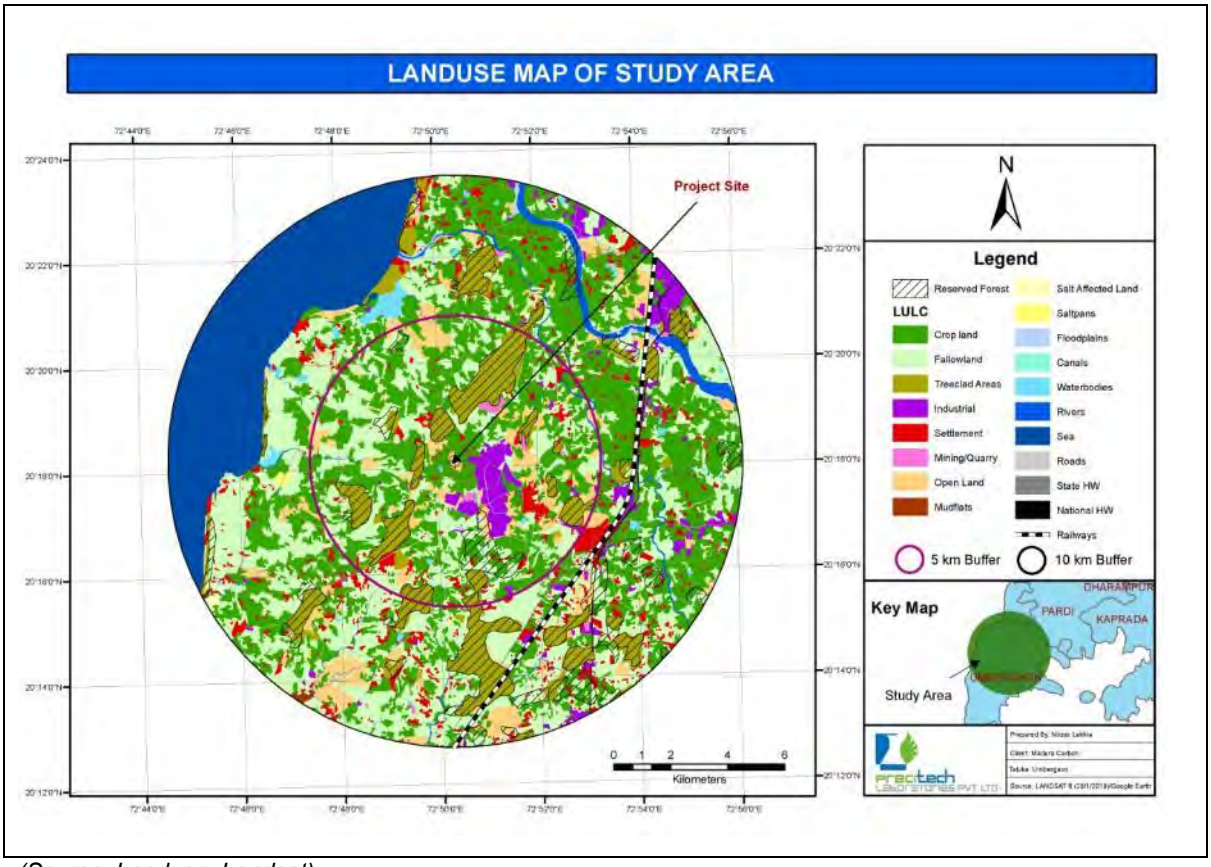
The land use/ land cover study gives a detailed idea to understand how the land use for proposed activity will affect the change in land use pattern, status of vegetation & land cover. The land use study helps in identifying the sensitive receptors in the study region and the impact of air pollution on them.

3.8.1 METHODOLOGY

The land use/ land cover status has been studied for 10 km radial area around the project site boundary. The land use/land cover has been presented in the form of a map prepared by using satellite image. The satellite image & land use/ land cover details have been presented in the Figure 3.1 & Figure 3.10 respectively. The area calculations have been carried out using GIS software after geo-referencing the interpreted data and the results tabulated in Table 3.12.

3.8.2 RESULTS

Figure 3.15: Landuse/Land cover Map



(Source: Landuse: Landsat)

Table 3.18: Land use/Land cover Statistics

Legends	Area (in Sq. km)	Percentage (%)
Agriculture	102.77	32.69%
Canals	0.29	0.09%
Creek	40.93	13.02%
Fallow land	85.37	27.15%
Floodplains	1.04	0.33%
Industries	9.16	2.91%
National HW	0.49	0.16%
Open Spaces	16.97	5.40%
Quarries	0.73	0.23%
Railway	0.72	0.23%
Rivers	6.45	2.05%
Roads	3.29	1.05%
Saltpans	0.22	0.07%
Settlements	14.77	4.70%
State HW	0.62	0.20%
Tree Clad Area	28.13	8.95%
Waterbodies	2.42	0.77%
Grand Total	**314.38**	**100.00**

3.8.3 OBSERVATIONS

The area is well connected with the road and Railway networks. The industry is located within a distance of 10km from the sea/ Gulf of Cambay. The land use pattern of study area is presented in

the map. The land used for the different purpose is categorized into various divisions and measured in Sq. Km. Nearly 12.36% or 38.85 sq.km fall under reserved forest. Cluster of trees has also been found with 10 km radius.

River Damanganga flows around 9.5 km away on the northeast of the industry while the distance to River Darotha is around 3.5 km (NE). There are few ponds/lakes present within 10km radius of the industry. But in the coming years due to declining trend in the forest area with the variation of monsoonal rainfall and ground water table the cultivable land area may tend to decline because of the urbanization, encroachment and development of the buildings and roads in the surrounding lands. The Agriculture land at present is 32.12% while the Fallow land is around 26.73% both together covering around 59 % of the total area under study. The uncultivated/fallow lands are the lands, which is left free without cultivation currently for various reasons such as replenishment of nutrient, water scarcity, etc. Alongside other major industries there is also the presence of Salt work activities at the coastal belts of the district.

3.9 ECOLOGY AND BIODIVERSITY

The term biodiversity is used to refer to life in all its forms and the natural processes that support and connect all life forms. Biodiversity is not easily defined because it is more than just the sum of its parts, as all its elements, regardless of whether to understand their roles or know their status, are integral to maintaining functioning, evolving, resilient ecosystems. Complex concepts such as biodiversity are often easier to grasp if reduced to their component pieces. While this approach does not give a complete picture of how these species interact and combine to create biodiversity, it helps us understand different aspects of biodiversity.

Species are a complete, self-generating, unique ensemble of genetic variation, capable of interbreeding and producing fertile offspring. They (and their subspecies and populations) are generally considered to be the only self-replicating units of genetic diversity that can function independently.

Thus, Biodiversity is the foundation of a vast array of ecosystem services essential for human well-being. Since the exhaustive study would certainly require of one year with one overlapping season. However, this report attempts to comprise the possible macro-biodiversity and the present data produced in the report consist of reconnaissance survey and the database of the areas available in the literatures that have been compared and mentioned.

In addition to the area identified for industrial development, major area in the study region has mango orchards. The central, northern and western parts of the region are suitable for agricultural activities. The main staple crops are paddy, ragi, small millets and pulses. Sugarcane is also cultivated in recent years. The biotic composition in the study region indicates richness in species diversity. The details of the ecological layout of the study area are presented in following sections.

3.9.1 OBJECTIVES OF THE TERRESTRIAL AND AQUATIC ECOLOGY SURVEY

- Qualitative biodiversity survey for plants, through line transect-during period of Oct ’18 to Dec’18 (Post-Monsoon season) at four locations
- Qualitative suvey for listing of Fauna through primary observation in area of line transect as well as other spots of study area by Sighting, remains, pugmarks & animal calls as well as report by local villagers
- Identification of endemic & endangered species as per Indian Wild Life (Protection) Act, 1972 and IUCN Red list 2018-1 & earlier.

3.9.2 STUDY AREA SELECTION

- Field survey area is selected based on the ecologically diverse and dense vegetation identified from Google map and land use patter map.

- The field survey was conducted at following identified survey areas for line transect, during the study period (Oct '18 to Dec'18) within the study area of 10 Km radial distance from the project site.
- Observations were made on following line transect and qualitative analysis of the vegetation and fauna is done.
    - Jampore & Pariyari of Daman
    - Coastal Highway from Bamanpuja to Tadgam and other minor coastal road near Shoreline from Maroli to Kalgam, Fansa to Kalai
    - Forest near Pali, Punat and Mohangam
    - Forest Near Manda/Vankas

3.9.3 FLORAL DIVERSITY OF THE STUDY AREA

The zone of Umbergaon Taluka shows fairly rich in plant biodiversity having more of annual and perennial herbaceous vegetation. The small hillocks existing in the perimeter of the proposed project site are already degraded forest patches and mainly comprised of planted trees and shrubs. Among the plant biodiversity Two of the species belongs to IUCN red list but none of the scheduled species as per WLPA has been found during the study period. During study, one vulnerable (VU) species- (*Dalbergia latifolia* (Ver. 2.3) and one Near Threatened (NT) species - *Hyphaene Dichotoma* (Ver. 2.3) as per IUCN Red list 2018-1 are found in the region. In addition to these important species of plantation area of the region, many other wild species of flora are observed in the forest and open unused area of the region. These list of floral species observed during the study period are given as ***Annexure-7*.**

3.9.4 FAUNA OF THE STUDY AREA

During observations, the sighting of wild animals was lesser in the entire study area. The assessment of wild life fauna has been carried out on the basis of information collected from personal interviews with local peoples as well as sighting of some animals. During field survey common garden lizard was observed frequently in the study area and occasionally some snakes belonging to both poisonous and non-poisonous category. Observations for birds were made during a walk through in the chosen line transects for sighting the birds. Dominant birds in the study area are Common peafowl, Common Myna, House sparrow, House crow, Black drongo, Small green Bee eater, Spotted dove, Rose ring parakeet, Blue rock pigeon, House swift, common babbler and the other birds are Indian robin, Black ibis, Indian roller, white wagtail, Pond heron, cattle egret. The list of all observed & reported fauna is given as ***Annexure-8.*** There are two Schedule-I species viz. *Pavo cristatus*- Common Peafowl (Least Concern /Sch-I) and *Varnus bengalensis*- Common Indian monitor (Least Concern /Sch-I) as per Wild Life Protection Act (WLPA) in the study area. Beside these, many schedule II & IV species and few Schedule V species of WLPA has been found/notice in study area. No threatened species as per IUCN 2018-1 except *Panthera pardus* has been found/notice during the study period. *Panthera pardus* (Leopard, Dipado) has been reported by only few villagers of the study area but was not observed, This species falls in Schedule-I species of WLPA and is reported as Vulnerable (VU) species in IUCN 2018-1.Beside these, one endemic (of western ghat) amphibian species *Indirana leithii* is also sighted in area of Kalai-Fansa which is reported as Vulnerable in IUCN. The conservation plan of these species is given as ***Annexure-8.***

3.9.5 AQUATIC ECOLOGY

For the purpose of the aquatic ecology study, qualitative survey of some water bodies for identification of Phytoplankton, Zooplankton, Bacteria and Fishes have been carried out. The study was conducted once in the study period (Post Monsoon 2018). Only qualitative assessment for identification of the aquatic flora & fauna has been conducted. The study for determination of aquatic ecological layout of the area was conducted for locations as given in Table 3.16 & Figure 3.14. The samples for plankton study were conducted following the method suggested by NIO & APHA. The samples for phytoplankton were collected using plankton net of 25-micron net size using measured bucket. The samples of zooplankton were collected using plankton net of 200-micron size. For each

sample, 30 litres of samples were passed/filtered through the plankton net to collect 100 ml concentrated sample. Studies of fishes was conducted for identification of fishes in the fish catch done by local fishermen.

Table 3.19: Sampling locations for Aquatic Ecology

Stn. Code	Location	Arial Distance	Sampling Details
AE1	Darotha River	≈ 5.3 km (E)	Phytoplankton /Zooplankton
AE2	Damanganga river near NH. 8	≈ 8.4 km (NE)	Phytoplankton /Zooplankton

(Source: Google earth)

A composite sample of the collected three samples was studied for identification of the phytoplankton after concentrating the samples by filtering technique. The details are given as ***Annexure-7.***

3.9.6 PROTECTED AREA

There are no protected areas (national park/ wildlife sanctuary) within 10 km from project site.

The nearest patch of Reserved/ Protected forest is around 800m from project site. The copy of NOC and authenticated distance map from Forest Dept. is attached as ***Annexure – 4***.

3.10 SOCIO-ECONOMIC LAYOUT

The main objective of the study is to conduct demographic analysis for villages/towns coming in the radial distance of 10 km using available census data to describe inference related to demographic, social and economic conditions of the region and to conduct the social impact assessment in context to upcoming proposed project. Further it also narrates the social development program identified through Need Assessment Survey and would be undertaken by the company under CER.

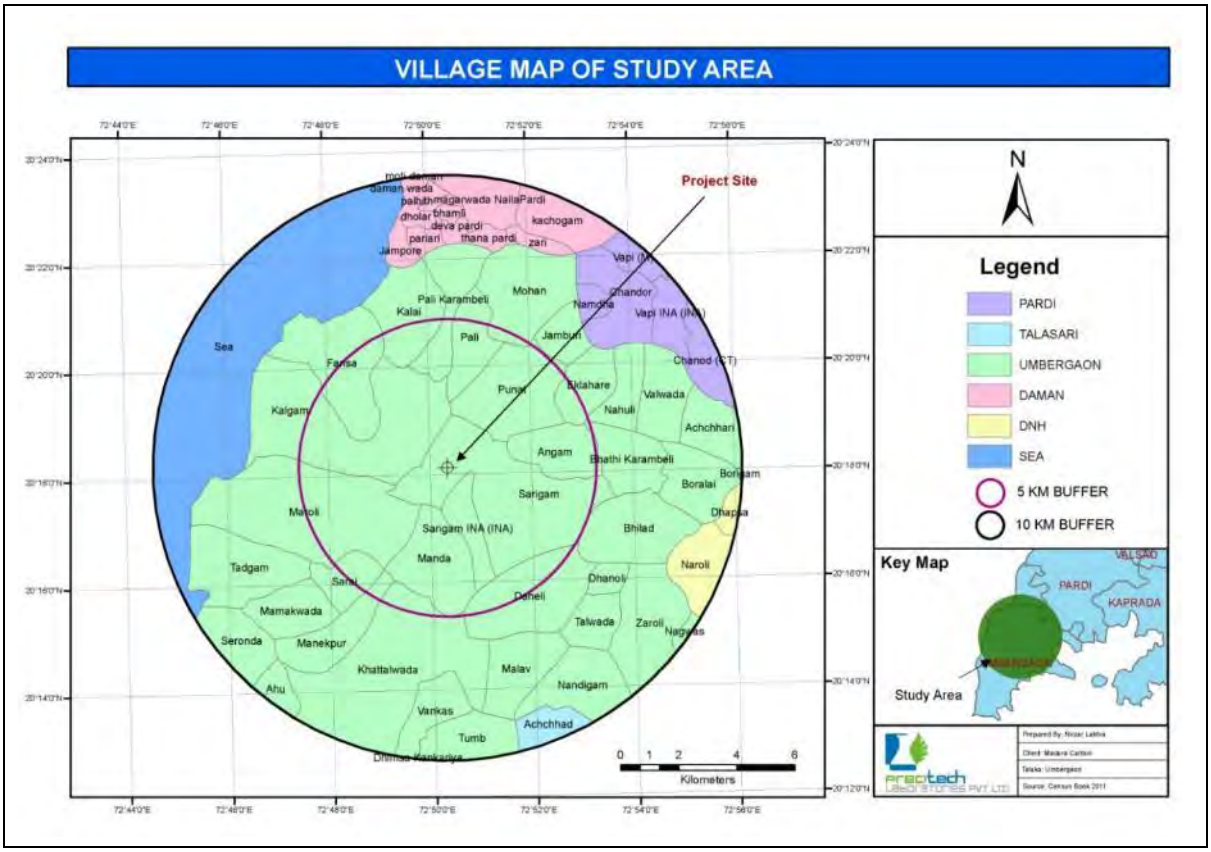
3.10.1 METHODOLOGY

Secondary analysis of socioeconomic census data (Secondary survey) by referring 2011 Census data. The exact status of amenities are confirmed by respective village /town panchayat office and also compared with village amenities data from 2011 respective district census hand books for the villages/towns coming in the radial distance of 10 km

3.10.2 ANALYSIS RESULTS AND OBSERVATIONS

A total of 60 villages/towns fall fully or partially in the radial distance of 10 km from the project site of M/s Madura Carbon India Ltd. Among these, 65% villages/towns fall in Umberagon taluka and 5% falls in Paradi taluka of Valsad district in Gujarat. Further, 13% of villages are found in UT Daman, 5% of villages falls in UT of DNH-Silvassa and 1% in Talasari taluka of Thane district in Maharashtra. The administrative map showing the village boundaries has been prepared from Census 2011 maps. The village boundaries highlighted in Village map is provided in figure 3.14.

Figure 3.14: Village Map of the study area



(Source: Census book, 2011)

3.10.3 DEMOGRAPHY

The comparative demographic status of Gujarat and Maharashtra State, Valsad and Thane district and UT Daman and Dadra Nagar Haveli shows that decadal population is highest in Daman UT (67.7%) followed by UT DNH (55.5%) and study area (52.7%). In the remaining area, the decadal population is less than project area. While the population density is the highest in the study area (6520 per sq km) comparative to States (Gujarat and Maharshtra) and other districts (Valsad and Thane). This shows greater influx of migratory population in the Sarigham Industrial areas adjoing to Vapi Industrial area. The comparative status of important demographic indicators at macro level with study area is indicated in table 3.17.

Table 3.20: Comparative Demographic Information at macro level

Sr. No	Demographic Information	Gujarat	Maharashtra	Valsad District	Thane District	Daman UT	UT DNH	Paradi Taluka	Umber-gaon Taluka	Talasari Taluka	Study Area
1	Total Population	60383628	112372972	1703068	11060148	191173	342853	518814	296964	154818	508468
2	Decadal Population Growth Rate*	19.17	16	20.9	36	67.71	55.5	27.82	25.7	27.7	52.7
3	Density of population (Per Sq. km)	308	365	561	1157	2655	698	1362	821	148	6520
4	Sex Ratio (females per 000' males)	918	922	567	858	534	774	836	920	1026	827
5	Rural Sex Ratio (females per 000' males)	949	960	926	942	759	863	937	970	1026	942
6	Urban Sex Ratio (females per 000' males)	880	873	975	828	494	682	770	849	0	735
7	Percentage of Urban Population	42.6	45.2	37.2	53.4	83.1	46.6	59.6	39.5	0	53.6
8	Percentage Total Literacy Rate	66.39	82.9	52.9	80.6	88.7	57.6	77.1	46.5	47.3	74.2
9	Percentage Female Literacy Rate	52.57	75.5	30.2	32.9	80.9	23.5	32.7	30.5	19.0	78.12
10	Percentage Work Participation rate	40.98	44.0	43.57	39.1	47.46	51.7	43.3	40.3	37.9	41.2

(Source: Gujarat & Maharashtra State and Valsad district Census Hand Book 2001& 2011; and UT Daman, Dadar Nagra Haveli Census Handbook 2001 & 2011)

Talasari taluka of Thane District in Maharshtra has highest sex ratio (1026 females per 1000 males) and the lowest is UT DNH (774 females per 1000 males). Similar situation also exist in rural and

urban among states (Gujarat and Maharashtra); districts (Valsad and Thane) and their engulfed taluka. The proportion of urban population is highest in UT Daman (83.1%); followed by Paradi taluka (59.6%) of Valsad district and Thane district and study area having same proporation (53.6%) of urban population. The literacy rate of the study area is less (74.2%) when compared with State of Maharashtra (82.9%); Thane district (80.6%); UT Daman (88.7) and Paradi Taluka (77.1%) but greater than the state of Gujarat; Valsad district; DNH; Umbergaon and Talasari Taluka. The female literacy rate is highest in Daman UT (80.9%) and the lowest in Talasari taluka (19.0). The female literacy rate in the study area is only 78.1% which is ranked second after UT Daman. Further the UT DNH had recorded highest work participation rate (51.7%) because It is near to the Asia's largest industrial hub 'VAPI GIDC' is located in the district.

3.10.4 DEMOGRAPHIC STATUS OF THE STUDY AREA:

The study area having a total of 56 villages and 10 cities/towns in the radial distance of 10 km from the project site. The demographic profiles is Describe in ***Annexure-9.*** It shows huge deviation of the value from the average value of each demographic variables and are largely concentrated among 12 villages only in the study area having radial distance of 10 km from the project site. These villages could also be considered for social development programs under Corporate Environmental Responsibilities to improve the social and economic condition of the resident population among these villages.

3.10.5 TRADE AND COMMERCE

Since the 65% of the study area (Sarigham) is covered with Umbergaon taluka the current description is restricted to this region. However, the cumulative effect of nearby Industrial area of VAPI; Union Territory Daman and DNH – Silvassa to the Sarigham industrial area is witnessed. Trade and Commerce includes wholesale and retail trade of all kinds and other commercial activities like financial, insurance, real estate and business services. Chemicals, plastic, agro and food processing, paper and sugar industries have developed well in the district. Chemical units at Vapi, Sarigam and chemical complex at Atul. The Chikoo and mango are two important fruits of the district being exported. The important commodities exported out of district from various towns are mentioned. There are nearly 86 branches of banks in urban areas.

3.10.6 WORK PARTICIPATION (ECONOMIC STATUS)

As per 2011 Census, among the registered establishments in the year of 2010-11 the four most important establishments are related to manufacture of (1) Basic Metal Industries (2) Service activities (3) Chemical & chemical Products (4) Textiles. Summary of the industrial analysis shows that in the year 2010-11, the four most important establishments are related to manufacture of (1) Basic Metal Industries (2) Service activities (3) Chemical & chemical Products (4) Textiles. It can be observed that number of establishment and average number of persons working per day has also decreased in 2010-11 as compared to the year 2009-10 Since Sarigham has a industrial hub, there is large influx of population due to industrialization specially in Sarigham (CT) city area and adjoining Vapi taluka of Valsad district. Restricting to study area confined to Umbergaon taluka, the work participation rate of Sarigham INA is 46.7%, which is more than to the work participation rate of Valsad District (43.57%). This happened, due to rapid growth of industrialization and as being Asia's faster growing and biggest industrial hub. The study area comprises of rural areas from Daman; DNH and Vapi of Valsad district covering major industrial zone. The M/s Madura Carbon (India) Limited is located adjacent to the GIDC of Sarigham. The industrial township of Sarigham with adjoining Vapi holds its place of importance on the "industrial" map and it is the fastest growing industrial area in Asia in terms of chemicals and paper industries units. The percentage of main worker in study area is the highest (99.7%) in Pariari village and lowest is in village Nagwas (52.5%), while the average percentage of main worker is 89% in the villages located in the 10 km radial distance from the project site. The work participation rate is maximum in the village Karanj (76.4%) and the minimum is in village Tumb (29%);

while the average work participation rate is 42.7% in the villages located in the radial distance of 10 km from the project site. The population largely engaged in service sector (41%); followed by Agricultural Labour (29%); Petty Business (18%); and Casual Labour (13%). The detailed villages' wise demographic and work participation status is indicated in ***Annexure-9.***

3.10.7 EDUCATION STATUS

The education status was explored in 10% of the sample villages which was discussed with Panchayat members or school teacher for adult working population only. Table shown in table 3.18 are mere approximate to give the rough idea of possible employment opportunity among the industries located in the project area. It is to be noted that the Skill gaps in the industries for persons having skilled degree jobs are largely fulfil by the urban areas while the persons with unskilled jobs are largely taken up from surrounding villages during construction and regular operation stage of the industries.

Table 3.21: Rough estimates of education status of working population (in No.) in sample villages

Sample Village	Literate* Population	*Illiterate Population	**Professional Course	**Post Graduate	**Graduate	**Below Graduate/
Fansa	10999	3460	2	3	18	77
Tumb	1705	1834	1	2	5	92
Tadgam	1922	592	3	8	10	79
Namdha	1495	443	2	6	12	80
Dholar	854	330	1	2	8	89
Deva Pardi	172	83	0	1	18	81

* Figure taken from District Census Hand book of Daman; DNH; Valsad & Thane 2011; ** Field survey data from FGDs in 10% of villages. It also includes population-having degree of under Graduate and schoolings but are not working.

3.10.8 ECONOMIC STATUS

As per 2011 Census, among the registered establishments in the year of 2010-11 the four most important establishments are related to manufacture of (1) Basic Metal Industries (2) Service activities (3) Chemical & chemical Products (4) Textiles. Summary of the industrial analysis shows that in the year 2010-11, the four most important establishments are related to manufacture of (1) Basic Metal Industries (2) Service activities (3) Chemical & chemical Products (4) Textiles. It can be observed that number of establishment and average number of persons working per day has also decreased in 2010-11 as compared to the year 2009-10. Since, Sarigham has an industrial hub, there is large influx of population due to industrialization specially in Srigham (CT) city area and adjoining Vapi taluka of Valsad district. Restricting to study area confined to Umbergaon taluka, the work participation rate of Sarigham INA is 46.7% which is more than to the work participation rate of Valsad District (43.57%). This happened, due to rapid growth of industrialization and as being Asia's faster growing and biggest industrial hub. The study area comprises of rural areas from Daman; DNH and Vapi of Valsad district covering major industrial zone. The M/s Madura Carbon (India) Limited is located adjacent to the GIDC of Sarigham. The industrial township of Sarigham with adjoining Vapi holds its place of importance on the "industrial" map and it is the fastest growing industrial area in Asia in terms of chemicals and paper industries units.

The percentage of main worker in study area is the highest (99.7%) in Pariari village and lowest is in village Nagwas (52.5%), while the average percentage of main worker is 89% in the villages located in the 10 km radial distance from the project site. The work participation rate is maximum in the village Karanj (76.4%) and the minimum is in village Tumb (29%); while the average work participation rate is 42.7% in the villages located in the radial distance of 10 km from the project site. The population largely engaged in service sector (41%); followed by Agricultural Labour (29%); Petty Business (18%);

and Casual Labour (13%). The detailed villages' wise demographic and work participation status is indicated in ***Annexure-9.***

3.10.9 QUALITY OF LIFE

The villages within the 10 km from the project site shows that amenities like presence of Telephone/Mobile; Metal Road; and Power supply are present in 100%of the villages. However, amenities are largely present in the villages viz; Govt. Primary School (96.7%); Anganwadi centers (95.0%); Public and Private mode of Transportation (91.7%); presence of self-help group and untreated water supply each, is among 78.3% villages and presence of water source (River and canal) 56.7%. Apart from this presence of community centers (48.3%); agriculture society is only among 33.3% villages; Commercial banks in 30% villages; presence of Government PHC/SC in villages is only 25%; total sanitation campaign (18.3%); and the government technical training institutions (ITIs) is only among 3% of the village largely missing for the skill development of the youths in generating employment in the study area. The aforesaid deficiency in public amenities could be improved using the associated funds from Corporate Environment Responsibilities.

3.11 TRAFFIC SURVEY

Is essential to know the current traffic conditions to access the adequacy of the road-network to cater the additional traffic load from the proposed project.

3.11.1 METHODOLOGY

Traffic Survey was carried out at 2 locations in the study area along the approach road where the additional traffic from the proposed project is expected to ply i.e. at the 'T' junction point on road connecting Bhilad to Sarigam Road and the road connecting the project site.

The Sarigam by pass Road (GIDC internal road) to Project Site is a 4-lane road, which is approx. 14 m wide and the approach road from Bhilad to Sarigam Road is 7m wide, which is a 2-lane road.

3.11.2 RESULTS

The summary of traffic survey (peak hourly) are given in Table 3.23.

Table 3.22: Summary of Traffic Survey

Road	Type of road as per IRC	Max. hourly vehicle movement					Avg. hourly vehicle movement					Converted PCUs during Peak hour	Converted Avg. PCUs per hour	Maximum PCU per hour as per IRC
		2W	3W	LMV	HMV	Cycle	2W	3W	LMV	HMV	Cycle			
Sarigam by pass Road (GIDC internal road)	Sub-arterial	154	168	95	666	14	89	70	48	422	7	1097	636	2900
Bhilad to Sarigam Road	Sub-arterial	111	132	90	355	12	53	52	50	241	3	700	399	1200

Note:
- 2W = two wheelers (Scooter, Bikes), 3W = three wheelers (Auto rickshaw), LMW = Light motor vehicles (Cars, Jeeps & Vans), HMV = Heavy motor vehicles (Trucks, Buses, Tractors)
- As per the IRC guidelines for capacity of urban roads in plain areas; If % of total stream >10 PCU factor for: Two-wheeler = 0.75, Three-wheeler = 2.0, Car/Jeeps = 1.0, Truck/Buses/Tractors = 3.7, Cycle = 0.5
- Collectors = Free Frontage access, Parked Vehicles, Bus stops, No waiting restriction

3.11.3 OBSERVATIONS

- The maximum hourly traffic on Bhilad to Sarigam Road is 1097 and 636 PCUs respectively.
- The average hourly traffic on Sarigam by pass Road (GIDC internal road) is 700 and 399 PCU's respectively.
- As per IRC, the carrying capacity of Bhilad to Sarigam Road is 1200 and that of the approach road Sarigam by pass Road (GIDC internal road) is 2900.
- Thus, the current traffic on both the roads is well within the carrying capacity of the road-network.

4. Anticipated Environmental Impacts & Mitigation Measures

4.1 PRELUDE

The Environmental Impact Assessment task starts with identification & prediction of impacts and then evaluation of the impacts on the environment due to the proposed project. These involve objective and subjective assessment of the project components, environmental attributes and their interrelationship. Main aim of conducting impact assessment is to establish sustainability of project by ensuring efficient mitigation measures for identified & predicted impacts. In doing so, environmental consequences must be characterized early in the project cycle and accounted for in the project design with necessary mitigation measures. Thus, the objective of EIA is to foresee the potential environmental problems that would arise out of a proposed development and address them in the project's planning and design stage with necessary mitigation to eliminate or minimize the impacts.

The main procedural steps can be summarized as follows:

- **Identification**

  This involves identification of the major activities, the environmental attributes, the impacts of the activities on the environmental attributes and formulation of cause & effect matrix,

- **Prediction**

  This involves prediction of the magnitude and significance of the impacts. It also includes analysis of the possibilities and/or probabilities of occurrences of the impacts,

- **Evaluation**

  This involves assessment and designation of the significance to the impacts, formulation of the assessment matrix and helps deriving decision on implementation of the mitigation measures for the anticipated impacts due to the proposed Project.

- **Communication**

  This allows for the communication of activities under the proposed project, their impacts, nature, significance, & magnitude of impacts and proposed/ suggested alleviating measures for all probable/ possible negative impacts among:

  a) The project proponent;
  b) The regulatory agencies;
  c) All stakeholders and interest groups through public consultation, if applicable.

During the present study, efforts have been made by the team of experts engaged in EIA study to identify, predict and evaluate the overall impacts of the project on the various environmental attributes, in line with the MoEF&CC guidelines on Environmental Impact Assessment study and the same has been presented in the successive discussions.

4.2 IDENTIFICATION OF IMPACTING ACTIVITIES

In the inception of impact assessment stage of present study, proposed activities & components which can have probable impacts, have been identified from the project description. For ease of study, the activities have been distributed in three main phases of the proposed project viz. Construction & commissioning phase, Operation phase and Decommissioning phase. The activities are then categorised under the relevant phase. It is noted that proposed plant site is in seismic zone-3

(moderate zone) & cyclone zone. The details of the identified impacting activities & components of the construction & commissioning and operation phases are tabulated in table 4.1.

Table 4.1: Impacting Activities due to the Proposed Project

Sr. No.	Project Phase	Activities
1.	Construction & Commissioning Phase	1. Site preparation 2. Construction works – Shed, buildings & infrastructure development 3. Transportation of construction materials and operation of construction equipment & machineries. 4. Installation of the machineries, equipment, utilities & infrastructure facilities required for operation of the proposed project. 5. Allotment of work to local contract labors & workers
2.	Operational phase	1. Storage and transportation of raw materials, fuels& products, 2. Manufacturing of products, 3. Wastewater generation, treatment & Disposal 4. Utility Operations, 5. Haz./ Non-Haz. waste Management Activities 6. Temporary break-down & repairing of control equipment, 7. Greenbelt Development 8. Natural calamities: Natural disasters like earthquake & cyclone.
3.	Decommissioning phase	1. Dismantling of structures of the project components, cleaning of Reactors, vessels & tanks before decommissioning, disposal of wastewater generated from cleaning of vessel.

4.3 IDENTIFICATION OF ENVIRONMENTAL ATTRIBUTES

Impact assessment is an activity designed to identify and predict the impacts on the environment including human health & well-being, physical components and surrounding, taking into account the requirements of legislative policies. Environmental changes expected out of any physical development, can result in adverse and/ or positive end results.

The activities under execution of this project are likely to affect the environment in varying degrees. The relevant parts of the receiving environment have been subjectively singled out as ENVIRONMENTAL ATTRIBUTES and the impact due to various activities on these attributes have been studied. The typical set of environmental attributes and their relative importance adopted for the present study, have been presented at Table 4.2.

Table 4.2: Environmental Attributes

Sr. No.	Environmental Attributes	Relative Imp. (%)	Remarks
1.	Ambient env.	25	Relatively high importance due to proposed process, utility, & fugitive emission.
2.	Water env.	20	Relatively Medium importance as the water requirement for the proposed project will be met from Damanganga Canal Distry. Domestic effluent will be treated in STP & reused for gardening purpose. Industrial effluent will be treated in the ETP and RO-MEE system and recycled back for industrial purpose. The unit will be zero liquid discharge unit.
3.	Land env.	15	Relatively medium importance as the proposed project to be sited at NA land.
4.	Living space		
4.1	Human	20	Relatively medium importance as negative as well as

Sr. No.	Environmental Attributes	Relative Imp. (%)	Remarks
	(Socio-economic env.)		positive impacts are anticipated. Negative impacts are due to hazards associated with raw material storage. Positive impact is due to direct and indirect employment opportunity from the proposed project.
4.3	Other living entities (Ecological env.)	20	Relatively low importance due to presence of patches of reserve forest area within 10 km. of the project site and impact not anticipated in case of accidents.
	Total	100	

Table 4.3: Parameters of Environmental Attributes

Sr. No.	Environmental Attribute	Parameters
1	Ambient Environment	Air quality
		Noise Level
2.	Water Environment	Water quantity
		Water quality
		Hydrological Conditions
3.	Land Environment	Land use pattern
		Landcover
		Soil quality
4.	Socioeconomic environment	Traffic Movement
		Health and safety
		Employment
		Trade & Contract services
5.	Ecological environment	Terrestrial & Avian Ecology
		Aquatic Ecology

4.4 IDENTIFICATION OF IMPACTS

Identification of impacts involves possible anticipation of impact in terms of pollution or stress on environmental attributes due to the identified activities. With reference to the identified impacting activities of the construction & commissioning phase, operation phase, decommissiong phase and Natural calamities for the proposed project, probable impacts negative or positive on environmental attributes have been reported in the “Activity – Impact Matrix”. The outcome of the studies for identification of various impacts have been formulated in form of an “Activity-Impact” Matrix as presented in Table 4.4 for construction & commissioning phase and Table 4.5 for operation phase.

Table 4.4: The Activity – Impact Identification Matrix for Construction & Commissioning Phase

Environmental Parameters / Activities	Construction & Commissioning Phase			
	Construction works	Transportation of construction materials, equipment & machineries	Installation of the machineries, equipment, utilities & infrastructure	Allotment of work to local contract labour & workers
	(1)	(2)	(3)	(4)
Air quality	√	√	√	
Noise Level	√	√	√	
Water quantity	√			
Water quality	√			
Hydrogeological Conditions	√			
Land use pattern/ Landcover	√			
Topography	√			
Soil quality	√	√		
Traffic Movement		√		√
Health and safety	√	√	√	
Employment	√			√
Trade & Industries	√	√		
Terrestrial & Avian Ecology	√	√	√	
Aquatic Ecology	√		√	
Note: √ = Likely Positive/ Negative impacts on attributes.				

Table 4.5: The Activity – Impact Identification Matrix for Operation Phase

Environmental Parameters ↓ / Activities →	Operation Phase								
	Storage and transportation of raw materials, fuels & products.	Manufacturing of Products	Wastewater generation & treatment/ reuse	Utility Operations	Haz/ Non-Haz. waste Management Activities	Temporary breakdown & Repair of control equipment	Greenbelt Development	Natural Calamities	Decommissioning of project components
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	✓
Air quality	✓	✓		✓	✓	✓	✓	✓	✓
Noise Level	✓	✓	✓	✓	✓	✓	✓	✓	
Water quantity		✓	✓	✓		✓	✓	✓	✓
Water quality	✓	✓	✓	✓		✓		✓	
Hydrogeological Conditions				✓				✓	✓
Land use pattern/ Landcover		✓		✓		✓			✓
Topography								✓	✓
Soil quality	✓	✓	✓		✓	✓	✓	✓	✓
Traffic Movement	✓				✓			✓	✓
Health and safety	✓	✓	✓	✓	✓	✓	✓	✓	✓
Employment		✓						✓	✓
Trade & Industries	✓	✓			✓				✓
Terrestrial & Avian Ecology	✓	✓	✓	✓	✓	✓	✓	✓	✓
Aquatic Ecology	✓	✓	✓	✓	✓	✓		✓	✓
Note: √ = Likely Positive/ Negative impacts on attributes.									

4.5 PREDICTION OF IMPACTS & MITIGATION MEASURES

The identified environmental impacts in Section 4.4 belong to different components of the environment. All these impacts need to be aggregated to get a total score of the environmental impact of the proposed project. Such aggregation may however involve considerable subjectivity. In the following paragraphs, procedure of 'Quantitative Evaluation Matrix' is followed as it is a simple and reliable method. The criteria for evaluation of quantitative matrix are presented herewith:

(a) Negligible Impacts (Score ± 1): It signifies that the actions have some effect but it will not cause any quantifiable damage or benefit to the environmental parameters concerned.

(b) Moderate Impacts (Score ± 2): The activities and their environmental Impacts are judged to be slightly significant or significant but for short term, the score is assigned to be 2.

(c) Significant Impacts (Score ± 3): If the activities and their environmental Impacts are judged to be significant but reversible, the score is assigned to be 3.

(d) Highly Significant Impacts (Score ± 4): If the activities and their environmental Impacts are judged to be significant and irreversible, the score is assigned to be 4.

The (+) sign signifies positive impact and (-) sign signifies negative impact on the concerned environmental attributes. The environmental impact evaluation matrix for the proposed project,

without any mitigation measures and with the proposed mitigation measure for all the adverse impacts, have been formulated in subsequent sections. Their respective cumulative impact matrices are presented at Table 4.21& Table 4.22.

An attempt has been made to predict the significance and magnitude of the identified impacts using logical reasoning and available scientific knowledge. Use of mathematical tools/ models has also been made wherever possible.

The attribute wise details of the prediction of the significance and magnitude of the identified impacts are presented in subsequent sections.

4.5.1 AMBIENT ENVIRONMENT

Air quality & noise are attributes considered for ambient environment.

4.5.1.1 Ambient Air

- Process gas emission will be in terms of PM from Vapour Bag collector during manufacturing of carbon black.
- There will be chances of fugitive emission from the manufacturing process as well as from storage, handling & transportation of raw materials and product for the proposed project.
- Two boilers of 112 TPH & 72 TPH, one D.G. Set of 1000 kVA &2 nos. of dryer will be installed. Off-gas generated during carbon black manufacturing will be used as fuel in Boiler and dryer. LDO/HSD will be used as fuel in D.G. Sets (as stand by).
- DeSOx system FGD (Flue gas desulphurization) to control SO_2 emission & DeNOx system like SCR (Selective catalytic reduction)/ SNCR (Selective non-catalytic reduction) to control NO_2 emission will be installed as APCD with Common stack of boilers.
- Lime slurry scrubber will be installed as APCD to control SO_2 emission from common stack of dryer combustor & Vapour bag collector.
- It is assumed that PM emission will be reduced by 50% due to provision of FGDfrom Common stack of boilers.
- Adequate stack height will be provided for better dispersion of flue gas.

To evaluate the probable impacts of emission on air quality, modelling was conducted using the ISCST3 model for stack emissions from the plant and separately for emissions due to transportation. The air dispersion modelling report is attached as ***Annexure -10.***

Table 4.6: Identification of Impacts & Mitigation Measures for Ambient Air Environment

Impact	Mitigation Measures
Construction & commissioning phase	
• Increase in PM level due to dust generation during construction material handling, construction work etc. and windblown dust generated from stock piling of excavated materials	• Barricading should be provided to control transfer of dust outside premises. Also, water spraying should be undertaken during constructions.
• Increase in PM, NOx & CO generated from construction equipment & transportation vehicle from increased frequency of vehicular movement & dust generation due to spillage of construction materials from vehicle. However, this impact will be temporary.	• Idling of vehicles should be minimized. • Periodic maintenance of vehicles should be ensured. • The trucks carrying construction material should be covered to avoid spillage and fugitive emissions. • Transportation should be carried out using suitable vehicle having high carrying capacity in covered condition.
Operation phase	
Process Emissions: • Process emission in terms of particulate matters will be generated from Vapour Bag collector of the proposed project.	• Bag filter will be provided as APCM with stack of adequate height to each sections of plant viz. process bag collector, vapor bag collector.
Utility emissions: • Impact on local ambient air quality due to high emissions resulting in increase of pollutants (PM, SO_2& NOx) due to utility emission in case of absence of proper control. • The max GLC of pollutants after proposed project are as follows - **Without APCM:** PM –2.10 µg/m^3, SO_2–98.7 µg/m^3, NO_2–6.02 µg/m^3 & CO - 29.2 µg/m^3 - **With APCM:** PM –1.80 µg/m^3, SO_2–6.09 µg/m^3 & NO_2–1.86 µg/m^3	• The unit will be using Off-gases from manufacturing process for boilers for power generation& dryers. • It is suggested to install FGD (Flue gas desulphurization) to control SO_2 emission & SCR (Selective catalytic reduction)/ SNCR (Selective non-catalytic reduction) to control NO_2 emission will be installed as APCD with Common stack of boilers. • It is suggested, PM emission is also likely to be controlled with installation of FGD. • Lime slurry scrubber will be installed as APCD to control SO_2 emission from common stack of dryer combustor & Vapour bag collector. • Adequate stack height will be provided to utility stacks for better dispersion. • Also, the predicted levels of pollutants in the ambient air after proposed project are well below the National Ambient Air Quality Standards.

Impact	Mitigation Measures
Fugitive emissions: • Emission from Carbon black transportation, handling and storage. • Fugitive emissions from the storage & handling of hazardous chemicals may have significant impacts on ambient air quality and work zone and there by on human & ecological health due to temporary increase in level of PM.	• Entire process should be in closed system • All dust producing areas to be well connected to dedusting system. • Whole process plant will be DCS based closed system. • Proper interlocks should be programmed in the DCS to isolate any line or any section of the plant depending upon the location of the leak till the maintenance work to be completed. • Standby arrangement to be provided for critical equipment for periodic maintenance. • Periodic inspection and maintenance of pipes and pipe fittings to be carried out.
Vehicular emissions: • Impact on local air quality due to increased frequency of vehicular movement which may result in increase in PM, NOx & CO due to vehicular emission. The truck/ tanker trips during the operation phase will be around 200 truck trips per day. • Max GLC due to vehicular emission are as follows – PM10 – 0.245 µg/m^3, NOx – 0.646 µg/m^3 and CO – 0.277 µg/m^3	• Periodic maintenance of vehicles should be ensured. • Only vehicles with valid PUC certificate should be permitted to operate.
• Uncontrolled high emissions resulting in temporary increase of pollutants (PM, SO_2, NO_2& CO) due to temporary breakdown of control equipment or emergency conditions.	• Preventive maintenance should be done for avoiding breakdown. • Plant should be stopped, in case of breakdown.
• The Impact on air quality due to improper handling, storage and disposal of solid/ hazardous waste.	• Solid/ hazardous waste management should be done as per statutory requirements/guidelines.
• Positive impact on ambient air quality due to greenbelt development.	• Horticulturist to be engaged & survival rates of plant to be monitored.
• Impact on air quality due to natural disasters is partly attributed to significant increase in airborne pollutants caused by damage of storage & related facilities during earthquake & cyclone. • Dust generation due to earthworks and collapse during earthquake & cyclone.	• All safety measures to be provided and all required essential plans to be implemented as per RA & disaster management plan.
Decommissioning Phase	
• Impacts on air quality due to dust generation during demolition & plant dismantling work etc.	• The site should be barricaded, and water sprinkling arrangement should be provided to restrict & control the dust/fugitive emissions.

Impact	Mitigation Measures
• Level of toxic pollutants generated due to storage of chemical may also increase if pre-dismantling works like cleaning of reactors and tank is not done during decommissioning.	• It should be ensured that pre-dismantling works like cleaning of reactors and tank to be done before dismantling of structures. Decommissioning action plan for systematic dismantling should be prepared.

Table 4.7: The Activity – Impact Evaluation Matrix for Ambient Air Environment

Sr. No.	Project Aspects/ Activities	Without mitigation measures	With mitigation measures
1.	**Construction & Commissioning Phase**		
1.1	Construction works	-2	-1
1.2	Transportation of construction materials, equipment & machineries	-2	
1.3	Installation of the machineries, equipment, utilities & infrastructure	-1	
1.4	Allotment of work to local contract labours & workers		
	Sub-Total	**-7**	**-1**
2.	**Operation Phase**		
2.1	Storage and transportation of raw materials& products	-2	-1
2.2	Manufacturing of Products	-2	-1
2.3	Wastewater generation &treatment/ reuse		
2.4	Utility Operations	-3	-1
2.5	Haz/ Non-Haz. waste Management Activities	-2	-1
2.6	Temporary breakdown & Repair of control equipment	-3	-1
2.7	Greenbelt Development	+1	+1
2.8	Natural calamities	-4	-2
	Sub-Total	**-15**	**-6**
3.	**Decommissioning Phase**		
3.1	Decommissioning of project components	-4	-1
	Sub-Total	**-4**	**-1**
	Total	**-26**	**-8**

4.5.1.2 Noise Level

Noise is likely to be generated in the process area mainly from operation of heavy duty motors, and compressors in various sections of the manufacturing plant area. The compressors operation in utility area also result in high noise generation. Due to power plant operations, noise pollution can arise from turbine, compressor, etc.

Table 4.8: Identification of Impacts & Mitigation Measures for Noise Environment

Impact	Mitigation
Construction & commissioning phase	
• `Generation of noise due to construction equipment (like concrete mixture, crane, dumper, roller, bulldozers, DG set, etc), vehicular movement for transportation of construction material, equipment increases the ambient noise levels which may affect surrounding area.	• The construction site should be barricaded. • Covered machinery/ Silencer should be provided to construction equipment. Traffic management to be done properly to avoid undue noise generation during movement of construction equipment, men and material etc.
• Acute health issues like stress, headache, irritation, etc. may occur in employees involved with the activity due to installation of plant equipment and machinery. Impacts due to construction work will be short term & localized.	• Provision of PPEs (ear plugs, ear muffs) to all employees/labour involved near areas where there will be generation of loud noise.
Operation Phase	
• Increase in noise level due to vehicular movement and storage & loading/ unloading of raw materials & products, fuel, hazardous waste handling & management and transportation.	• Traffic Management to be done properly to avoid undue noise generation due to vehicle movement. • Preventive maintenance & lubrication of noise generating equipment should be carried out regularly
• Due to power plant operations, noise pollution is arising from turbine, compressor, generator room, etc.	• The major noise producing equipment such as turbine will be provided with acoustic enclosure. Pumps, fans, compressor, etc. equipment will be statically and dynamically balanced & All equipment operated within specified design parameters. • Noise control devices such as anti-vibration pads with flexible bellows will be provided wherever applicable.
• During utility operations noise is generated which may cause health issue in employees involved with the activity due to continuous exposure	• Provision of PPEs (ear plugs, ear muffs) to all employees/workers in high noise generating area. • Rotation of employees in the high noise area.
• Due to temporary breakdown of equipment & machinery, sudden increase of noise level may affect surrounding area.	• Preventive maintenance of noise generating equipment should be regularly carried out.
• Green belt development can act as a natural barrier for noise reduction.	• Dense greenbelt development around & within premises to be ensured in as much area as possible.
• During natural calamities like earthquake & cyclone chances of high noise generation due to collapse of building & sheds.	• All safety measures to be provided and all required essential plans to be implemented as per disaster management plan.
Decommissioning Phase	

Impact	Mitigation
• The generation of noise due to demolition of structure etc. may affect the workers. Also, source of temporary disturbance to local population.	• The site should be barricaded. Provision of PPEs (ear plugs, ear muffs) to all employees/labour involved in demolition activities where impact of noise will be maximum.

Table 4.9: The Activity – Impact Evaluation Matrix for Noise Environment

Sr. No.	Project Aspects / Activities	Without mitigation measures	With mitigation measures
1.	**Construction & Commissioning Phase**		
1.1	Construction works	-2	-1
1.2	Transportation of construction materials, equipment & machineries	-1	
1.3	Installation of the machineries, equipment, utilities & infrastructure	-2	-1
1.4	Allotment of work to local contract labours & workers		
	Sub-Total	**-5**	**-2**
2.	**Operation Phase**		
2.1	Storage and transportation of raw materials, fuels & products,	-2	
2.2	Manufacturing of Products	-2	-1
2.3	Wastewater generation & disposal / reuse		
2.4	Utility Operations	-2	-1
2.5	Haz/ Non-Haz. waste Management Activities	-2	
2.6	Temporary breakdown & Repair of control equipment	-3	
2.7	Greenbelt Development	+1	+1
2.8	Natural Calamities	-2	-1
	Sub-Total	**-12**	**-2**
3.	**Decommissioning Phase**		
3.1	Decommissioning of project components	-2	-1
	Sub-Total	**-2**	**-1**
	Total	**-19**	**-5**

4.5.2 WATER ENVIRONMENT

- Necessary water requirement for the proposed project will be fulfilled from Damanganga Canal Distry. Total water requirement for proposed project will be 3115 KLD. From which 2525 KLD will be fresh water & remaining 590 KLD will be recycled.
- The total domestic wastewater generated will be treated in STP. Treated water from STP will be used for gardening.
- Industrial wastewater generated from utility installations will be partly recycled for lime slurry preparation & remaining in Post-treatment RO (RO-2).
- Scrubber bleed-off along with plant washing will be diverted to ETP. Treated water from ETP will be recycled for plant washing & remaining will be diverted to Post-treatment RO (RO-2).
- ETP treated water along with remaining industrial wastewater will be diverted to RO.
- Reject from pre-treatment RO (RO-1) & Post-treatment RO (RO-2) will be diverted to MEE.
- Permeate from Post-treatment RO (RO-2) & Condensate from MEE will be recycled for non-potable & industrial use.
- Thus, the proposed project will zero liquid discharge system.

Table 4.10: Identification of Impacts & Mitigation Measures for Water Environment

Impact	Mitigation
Construction & Commissioning Phase	
• Impact on fresh water resource due to water consumption for curing of foundations, construction work & domestic purposes etc. However, considering Damanganga Canal Distry. as a source of water supply during construction work, impact on water quantity will be negligible.	• Optimal utilisation of water for construction & commissioning phase to be ensured.
• Likely impact in terms of water quality due to disposal of domestic wastewater without any treatment through increase in level of BOD, SS &COD in receiving water resources.	• Temporary sanitation facilities should be provided before starting construction work.
• Surface water runoff from site which may carry cement, sand etc. required for construction will cause increase in turbidity level of receiving water resource by contaminating the storm water line. • Soil contamination due to spillages of oil/chemicals, vehicle washing areas etc. can cause contamination of groundwater as secondary impact.	• Provision of proper bunds or concrete flooring at storage areas, and vehicle washing areas to be ensured to avoid surface and groundwater pollution by runoff/ spillage.
Operation Phase	
• The fresh water will be sourced from Damanganga Canal Distry. Hence, no impact on groundwater as groundwater will not be extracted.	Proponent should follow practice of optimal utilization of water during operation phase by providing fixed water distribution channel throughout the plant area with proper metering facilities.
• The positive impacts on water during the operation phase which reduces fresh water consumption.	--
• The surface runoff may be contaminated with carbon black particles from the storage areas. Contamination of storm water line, if the untreated effluent finds its way into storm water drains.	• Proper storm water drainage facilities should be provided to ensure that no contaminated stream from industrial activities will mix with storm water. • Closed storage area for carbon black should be provided and proper drains to be provided in plant area for diverting plant washing effluent to ETP.
• Accumulation of wastewater on land may occur due to sudden spillage/ leakage in case of breakdown of water treatment facility which will result contamination of ground water by seepage.	• Wastewater handling areas should have impervious flooring with garland drains/ dyke wall to prevent groundwater contamination as well as surface water runoff.
• Excessive spillage/ leakage of wastewater from broken pipeline/ crack in tank during earthquake may contaminate ground water.	• Holding tank of adequate capacity shall be provided to store untreated/ treated water. • Preventive maintenance to be done for avoiding breakdown. • Incase of emergency, production activities should be stopped.
Decommissioning Phase	

Impact	Mitigation
• Accumulation of generated wastewater due to decommissioning if not treated & disposed properly, may cause foul odour as well as health effects.	• It should be ensured that pre-dismantling works like treatment of wastewater & safe disposal to be done before decommissioning. • Decommissioning action plan for systematic dismantling should be prepared.

Table 4.11: The Activity – Impact Evaluation Matrix for Water Environment

Sr. No.	Project Aspects / Activities	Without mitigation measures			With mitigation measures		
		Water quantity	Water quality	Hydrogeological Conditions	Water quantity	Water quality	Hydrogeological Conditions
1.	**Construction & Commissioning Phase**						
1.1	Construction works	-2	-2		-2	-1	
1.2	Transportation of construction materials, equipment & machineries						
1.3	Installation of the machineries, equipment, utilities & infrastructure						
1.4	Allotment of work to local contract labours & workers						
	Sub-Total	**-2**	**-2**	**0**	**-2**	**-1**	**0**
2.	**Operation Phase**						
2.1	Storage and transportation of raw materials, fuels & products,		-1			-1	
2.2	Manufacturing of Products	-2			-1		
2.3	Wastewater generation & disposal / reuse		-2		-1	-1	
2.4	Utility Operations	-2	-1		-1		
2.5	Hazardous / Non-Hazardous waste Management Activities						
2.6	Temporary breakdown & Repair of control equipment	-2	-2		-1	-1	
2.7	Greenbelt Development	-1			-1		
2.8	Natural Calamities		-4	-3		-1	-2
	Sub-Total	**-8**	**-10**	**-3**	**-5**	**-4**	**-2**
3.	**Decommissioning Phase**						
3.1	Decommissioning of project components		-4			-1	
	Sub-Total	**0**	**-4**	**0**	**0**	**-1**	**0**
	Total	**-10**	**-16**	**-3**	**-7**	**-6**	**-2**

4.5.3 LAND ENVIRONMENT

- Currently, the proposed site is an open land and no major site preparation activities to be done which cause impact on land cover or topography of the surrounding area.
- The detail of the land use with respect to the total study area and the land use that can be affected by the impact of air pollution & risk scenarios are shown by superimposing the outputs of the dispersion models on the landuse map.

Table 4.12: Area Statistics of Landuse for SO_2Scenario

Legends	Landuse Area		Air Pollution Impact		Risk Scenario Impact	
	Area (km^2)	Area (%)	Area (km^2)	Area (%)	Area (km^2)	Area (%)
Agriculture	102.77	32.69	3.990	1.2692	0.017	0.0056
Canals	0.29	0.09	--	--	--	--
Creek	40.93	13.02	--	--	--	--
Fallowland	85.37	27.15	2.007	0.6383	--	--
Floodplains	1.04	0.33	--	--	--	--
Industries	9.16	2.91	--	--	--	--
National HW	0.49	0.16	--	--	--	--
Open Spaces	16.97	5.40	0.737	0.2344	0.045	0.0143
Quarries	0.73	0.23	0.138	0.0435	--	--
Railway	0.72	0.23	--	--	--	--
Rivers	6.45	2.05	0.024	0.0076	--	--
Roads	3.29	1.05	0.125	0.0399	--	--
Saltpans	0.22	0.07	--	--	--	--
Settlements	14.77	4.70	--	--	--	--
State HW	0.62	0.20	0.001	0.0003	--	--
Tree Clad Area	28.13	8.95	2.242	0.7133	--	--
Waterbodies	2.42	0.77	--	--	--	--
Grand Total	**314.38**	**100.00**	**9.263**	**2.9465**	**0.062**	**0.0199**

Figure 4.1: Contours of SO_2 GLC values without APCM overlaid on Landuse map

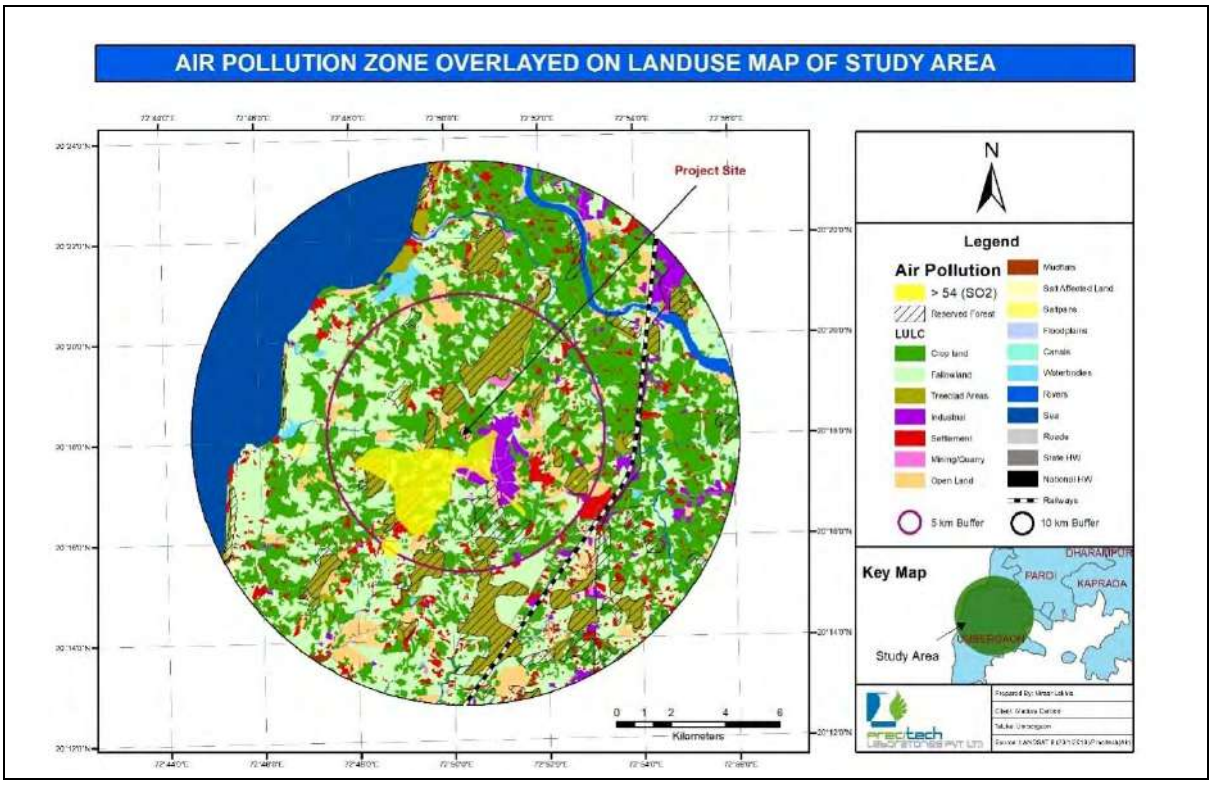


Figure 4.2: Risk Scenarios Overlaid on Landuse Map of Study Area

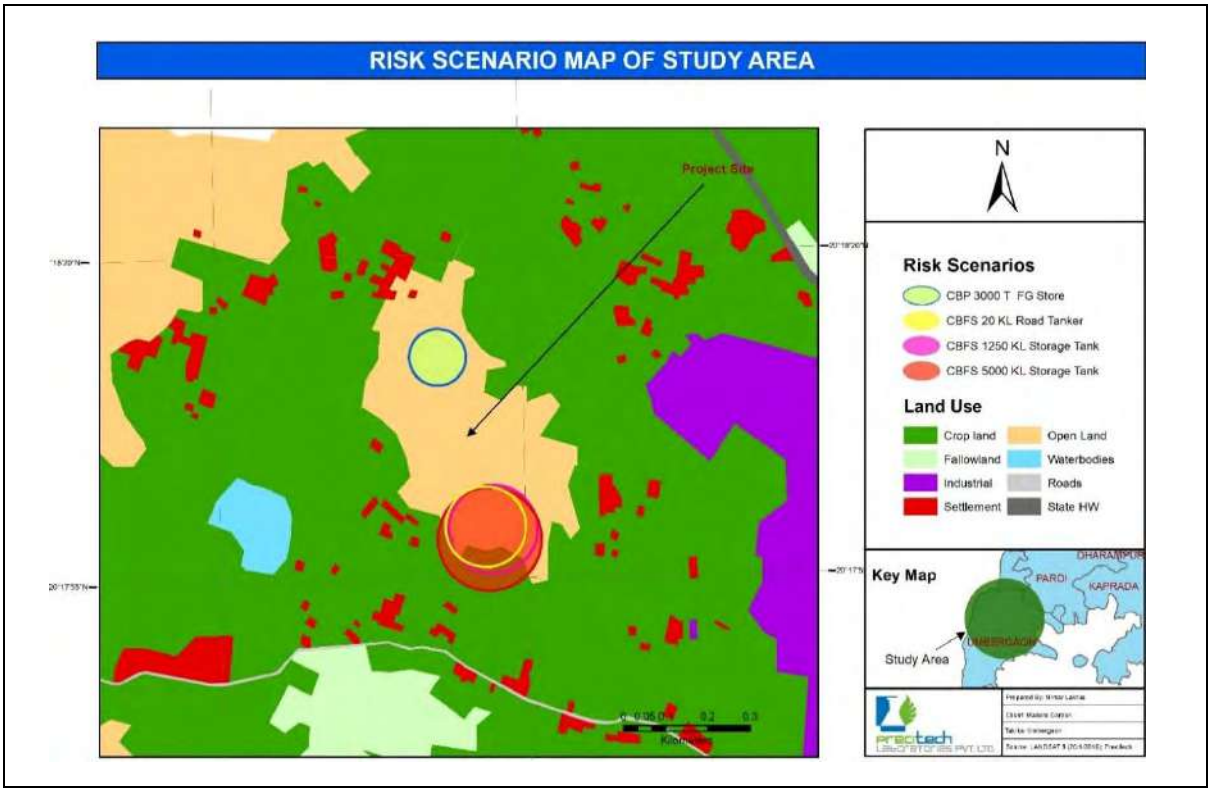


Table 4.13: Identification of Impacts & Mitigation Measures for Landuse/ Landcover & Topography

Impact	Mitigation
Construction & commissioning phase	
• The proposed site is currently uninhabited and an open land. NA permission is obtained for its utilization for industrial purpose. The utilisation of vacant land can be considered as beneficial impact.	--
• The excavation work, site levelling, foundation activity & construction work will generate debris/ solid waste and if not properly managed could affect the topography of the site. The construction impacts will be localized & confined to the site and no long term adverse impacts on topography are envisaged.	• Dedicated storage areas should be provided for storage of construction materials/ debris. • Construction waste should be collected, segregated, stored and disposed as per the 'Construction & Demolition Waste Management Rules, 2016'.
• Setting of proposed project can be considered as beneficial impact due to greenbelt development which will increase Treeclad area of the study area from 28.13 km^2 to 28.16 km^2.	• Adequate greenbelt within the company premises in about 24740 m^2 area (about 26.18% area of total land) and additionally outside of premises in around 7500 m^2 area should be provided.
Operation phase	
• The proposed project can have impact on landuse/ landcover due to operational activities mainly as secondary impacts arising due to air pollutants. Especially impacts on landcover may occur due to the Sulphur Dioxide emissions (in-case of failure of FGD/ DeSOx system) from the power boiler & dryer combustor. These impacts can result in loss of vegetation in forest and cultivable land in impact zone. • Total area that could be affected by the air pollution in absence of APCD is 9.263 km^2, which is 2.9465% of total study area.	• To prevent these impacts all necessary mitigation measures suggested for control of emission of SO_2 from boiler as well as dryer combustor operations shall be provided. • Regular maintenance of FGD/ DeSOx system to be carried out. • Operations should be stopped immediately in-case of failure of FGD/ DeSOx system.
• Total area that could be affected by the Risk Scenarios is 0.062 km^2, which is 0.0199% of total study area.	• All safety measures should be provided and all required essential plans should be implemented as per risk assessment & disaster management plan. • On site emergency plan & preparedness plan should be prepared and implemented to combat such situations.
• Development of greenbelt will have positive impact.	• Dense greenbelt development around & within premises to be ensured.
• Collapse of building & structures from earthquake will generate debris, if not properly managed could affect the aesthetics of the site.	• Generated waste if any during calamities should be disposed as per statutory requirements as early as possible. • All safety measures to be provided and all required essential plans to be implemented as per risk assessment & disaster management plan.
Decommissioning Phase	
• Clearance of site & demolition work will change the land cover. The demolition work will generate debris and if not properly managed could affect the topography of the site.	• Demolition waste should be collected, segregated, stored and disposed as per the statutory provisions.

Table 4.14: The Activity – Impact Evaluation Matrix for Landuse/ Landcover & Topography

Sr. No.	Project Aspects / Activities	Without mitigation measures		With mitigation measures	
		Landuse/ Landcover	Topography	Landuse/ Landcover	Topography
1.	**Construction & Commissioning Phase**				
1.1	Construction works		-1	+1	
1.2	Transportation of construction materials, equipment & machineries				
1.3	Installation of the machineries, equipment, utilities & infrastructure	-1			
1.4	Allotment of work to local contract labours & workers				
	Sub-Total	**-1**	**-1**	**+1**	**0**
2.	**Operation Phase**				
2.1	Storage and transportation of raw materials, fuels & products,	-1			
2.2	Manufacturing of Products				
2.3	Wastewater generation & disposal / reuse				
2.4	Utility Operations	-1			
2.5	Haz/ Non-Haz. waste Management Activities				
2.6	Temporary breakdown & Repair of control equipment	-1		+1	
2.7	Greenbelt Development	+1	+1	+1	+1
2.8	Natural Calamities		-4		
	Sub-Total	**-2**	**-4**	**+2**	**+1**
3.	**Decommissioning Phase**				
3.1	Decommissioning of project components	-1	-1		
	Sub-Total	**-1**	**-1**	**0**	**0**
	Total	**-4**	**-6**	**+3**	**+1**

Table 4.15: Identification of Impacts & Mitigation Measures for Soil Quality

Impact	Mitigation Measures
Construction & commissioning phase	
• Soil contamination may occur due exposure to solid waste like debris, spillage of concrete mixture containing additives and construction materials containing heavy metals, paints, coating, liners etc.	• Dedicated storage areas should be provided for storage of construction materials, chemicals, fuels, solid/construction and hazardous waste. • Construction waste to be disposed as per Construction & Demolition Rules 2016.
• Removal of top soil from movement of construction vehicles.	• Water sprinkling should be done regularly on unpaved areas.
• Accidental runoff of water from the construction site, sewage disposal on land may cause impact on soil quality. •	• Proper lining for making of concrete to control runoff of water & avoid soil contamination. The sewage will be managed using the temporary sanitation facilities during the construction phase.
• Good road network for transportation already exist at project site. However, in case of any spillage of construction materials during transportation, dust may generate.	• Transportation should be done in covered trucks.
Operation phase	
• Soil contamination may occur due to accidental spillage of hazardous materials. Hazards occurring due to storage & transportation of hazardous chemicals may also have significant impacts on soil quality.	• All the operations of material handling, storage and transportation should be done with utmost care and adequate storage & transfer facilities should be provided & maintained. • Chemical storage and handling areas should have impervious flooring with dyke walls/ garland drains to ensure that there is no contamination of soil.
• Leaching of improper disposal of inadequately treated or untreated effluent may increase level of toxic in soil. Such toxic loading in soil can result in low fertility of the soil of the contaminated area.	• Proper pollution control measures as suggested for water pollution should be provided.
• Improper storage & disposal of hazardous waste can also result in contamination of soil. Such contamination of soil may also result in increase in toxic compound level in the ground water due to percolation of the hazardous leachate from waste.	• Adequate storage area & proper disposal facilities for proper storage of hazardous/ Non-hazardous waste generated should be provided. • Impervious flooring to be provided in hazardous waste storage area to avoid soil contamination. • The hazardous waste carrying vehicles should be covered to prevent spillage or dusting.
• Sudden spillage/ leakage of materials, wastewater or hazardous waste, in case of breakdown may result in accumulation of materials, wastewater or hazardous waste on land which may impact soil quality. • However there will be no impact on soil of the study area located beyond the working area of the proposed project.	• Regular maintenance of pollution control measures to be done to minimise breakdown of control equipment. • In-case of emergency, production to be stopped.
• Beneficial impacts on soil quality as plantation help in improving soil	• Dense greenbelt development around & within premises to be provided.

Impact	Mitigation Measures
quality and bind soil particles.	• Improve soil quality by greenbelt maintenance
• Impact on soil quality due to collapse of structure, removal of topsoil, exposure of solid waste generation like debris due to earthquake.	• Demolition waste should be disposed as per statutory requirements as early as possible.
• Soil quality can be affected by leakage/ spillage of hazardous chemicals and their decomposition products caused by damage of storage & related facilities during earthquake. Soil erosion due to heavy rain.	• All safety measures to be provided and all required essential plans to be implemented as per risk assessment & disaster management plan.
Decommissioning Phase	
• Deterioration of soil quality due to demolition of structure, removal of topsoil, exposure of solid waste generation like debris.	• Demolition waste should be disposed as per statutory requirements.
• Contamination of soil quality due to spillage & leakage of materials if pre-dismantling works like cleaning of reactors and tanks are not done during decommissioning.	• It should be ensured that pre-dismantling works like cleaning of reactors and tank to be done before dismantling of structures.
• Direct disposal of tank cleaning wastewater on land also affects soil quality.	• Treatment of cleaning wastewater & safe disposal to be ensured before decommissioning. • Decommissioning action plan for systematic dismantling should be prepared.

Table 4.16: The Activity – Impact Evaluation Matrix for soil quality

Sr. No.	Project Aspects / Activities	Without mitigation measures	With mitigation measures
1.	**Construction & Commissioning Phase**		
1.1	Site preparation	-2	
1.2	Construction works	-2	
1.3	Transportation of construction materials, equipment & machineries	-1	
1.4	Installation of the machineries, equipment, utilities & infrastructure		
1.5	Allotment of work to local contract labours & workers		
	Sub-Total	**-5**	**0**
2.	**Operation Phase**		
2.1	Storage and transportation of raw materials, fuels & products,	-2	-1
2.2	Manufacturing of Products	-2	
2.3	Wastewater generation & treatment / reuse	-2	
2.4	Utility Operations		
2.5	Haz/ Non-Haz. waste Management Activities	-2	
2.6	Temporary breakdown & Repair of control equipment	-2	
2.7	Greenbelt Development	+1	+1
2.8	Natural Calamities	-4	-1
	Sub-Total	**-13**	**-1**
3.	**Decommissioning Phase**		
3.1	Decommissioning of project components	-2	-1
	Sub-Total	**-2**	**-1**
	Total	**-20**	**-2**

4.5.4 SOCIO-ECONOMIC ENVIRONMENT

- The proposed site is a NA land purchased from private owners. Hence, no displacement of any population is required for the proposed project. Therefore, detailed Social Impact Assessment studies or R&R action study has not been proposed.
- No disposal of liquid or solid waste outside premises.
- Utilization of sophisticated technology and high stack heights to control impacts of air pollution.
- Provision of proper boundary and thick tree cover to avoid disturbance to nearby habitation.
- Minor change in traffic pattern is envisaged due to transportation of materials for proposed project. Since the Project is well connected with the national highway and infrastructure is already available there will be no requirement of additional infrastructures.

4.5.4.1 ADEQUACY OF EXISTING ROAD NETWORK

There will be an increase in number of vehicles for transportation of raw-materials, products and fuel through the existing road network due to the proposed project. There will also be an increase in the number of vehicles for movement of additional man-power.

The additional traffic anticipated due to the proposed expansion is given in Table 4.17.

Table 4.17: Additional anticipated traffic due to the proposed project

Type of Vehicle	Additional Daily Traffic (Nos.)	Additional Hourly Traffic (Peak, Nos.)	Additional Hourly PCUs (Peak)
Hourly Traffic on Sarigam by pass Road (GIDC internal road)			
Two-wheeler	250	40	30
Three-wheeler	50	15	30
LMV	70	20	20
HMV	100	6	22
Cycle	45	23	23
Hourly Traffic on Bhilad to Sarigam Road			
Two-wheeler	250	20	15
Three-wheeler	50	15	30
LMV	70	15	15
HMV	100	6	22
Cycle	45	25	13

With present level of traffic and the anticipated increase due to the proposed project, adequacy of the road network, during the operation phase has been estimated by comparison with the recommendations stipulated by Indian Road Congress (IRC) in Table 4.18.

Table 4.18: Anticipated Peak Hour Traffic

Type of Vehicle	Existing Hourly Traffic (Peak Nos.)	Existing Traffic PCUs	Additional Hourly PCUs (Peak)	Total PCUs after Proposed Project
	A	**B**	**C**	**D**
Hourly Traffic on Sarigam by pass Road (GIDC internal road): Carrying Capacity- 2900 PCUs				
Two wheeler	205	154	30	184
Three wheeler	84	168	30	198
LMV	95	95	20	115
HMV	180	666	22	688
Cycles	28	14	23	37
Total	**592**	**1097**	**125**	**1221**
Hourly Traffic on Bhilad to Sarigam Road: Carrying Capacity- 1200 PCUs				
Two wheeler	148	111	15	126
Three wheeler	66	132	30	162
LMV	90	90	15	105
HMV	96	355	22	377
Cycles	23	12	13	24
Total	**423**	**700**	**95**	**794**

Note:
- As per the IRC guidelines, capacity of urban roads in plain areas; If % of total stream >10 PCU factor for: Two-wheeler = 0.75, Three-wheeler = 2.0, Car/Jeeps = 1.0, Truck/Buses/Tractors = 3.7, Cycle = 0.5
- **A** = Max. hourly vehicle movement, **B** = A x PCU Factor, **C** = PCU Factor x Additional Vehicles due to proposed project, **D** = B + C

- The maximum PCU on the Sarigam by pass Road (GIDC internal road) after the proposed expansion will be 1185.
- The maximum PCU on the approach road after the proposed expansion will be 802 (Bhilad to Sarigam Road).

As per IRC, the carrying capacity of Sarigam by pass Road (GIDC internal road) is 2900 PCU and the Bhilad to Sarigam Road is 1200 PCU. Thus, the existing road-network is capable to carry the additional traffic due to the proposed project.

Table 4.19: Identification of Impacts & Mitigation Measures for Socio-economic Environment

Impact	Mitigation Measures
Construction & commissioning phase	
• Impact on human health due to deterioration in local ambient environment quality due to increase in PM, NOx, CO & noise from construction work, fabrication work, vehicular movement for transportation of equipment. PM may cause lung disease, asthma, CO may block oxygen uptake, Nitrogen dioxide may give respiratory tract irritation and noise may give headache, stress etc.	• Barricading should be provided to control transfer of dust outside premises. Also, water spraying should be undertaken during constructions. • All requisite PPEs should be provided for safe execution of work. • Covered construction vehicles, PUC certified vehicles should be ensured. • Periodic preventive maintenance of transportation vehicles should be undertaken.
• Unsafe practices during construction work & installation of machineries, equipment & utilities can lead to accidents/ injury to workers.	• All employees / workers should be properly trained / supervised for their scope of work. • All requisite PPEs should be provided for safe execution of work. • Medical facilities to be in place for emergency.
• Beneficial impacts to economy & positive to economic environment as the proposed project will provide direct and indirect employment to the local population, which will have a positive impact. Approx. 150 workers will be benefited in terms of contractual employment due to the proposed project. This will marginally improve the quality of life of the people in the region.	• Preference for direct/contractual employment should be given to the locals based on their skills and aptitude. • Local contractors should be hired.
• Vehicular movement for the proposed project on Bhilad to Sarigam road and Sarigam bypass road to Madura Carbon India Ltd. can cause traffic congestion, if not managed properly.	• Traffic to be routed through GIDC bypass road and village road not to be disturbed. • Proper traffic management to be ensured.
Operational Phase	
• During operation phase, impacts on social environment may occur mainly due to pollution of environment, competing use of water resources, hazardous material handling & storage, hazards associated with proposed project, noise generation, traffic etc.	• The suggested mitigation measures for air, water, noise & hazardous waste to be provided and implemented.
• The traffic movement would increase marginally after the proposed project. However, the impacts on road network will not be major as the site is well connected with state & national highway network. However, the village road can cause disturbance to the local movement.	• Traffic to be routed through GIDC bypass road and village road not to be disturbed. • Proper traffic management to be ensured.

Impact	Mitigation Measures
• The improper storage and handling facilities of raw-materials & products may result in spillages, contamination or accidents and ultimately damage to the total environment including human health. • The risk assessment study indicates that by and large, the risks are confined within the factory boundary walls in case of fire, explosion and spillage of chemicals. - As per RA report, the maximum damage distance for flash fire is 19.95 m (3000 ppm). - The total damage and fatality zone due to pool fire up to 42.2 m, First degree burns in ten seconds upto 54.2 m and Causes pain if duration is longer than 20 seconds up to 122.64 m. - The heavy damage to plant & structure zone due to late explosion worth Case upto 11.29 m, Repairable damage to building and house upto 11.72 m and 10% glass damage & safe distance up to 122.64 m. in worst case scenario.	• All safety measures to be provided, and all required essential plans to be implemented for emission reduction from storage & handling, safety, disaster & emergency action as mentioned in RA Report for proposed expansion project.
• Beneficial impact by the proposed project as the direct employment opportunities will increase which will help in uplifting the economic status of the region. The proposed project will provide direct and indirect employment to the local population, which will have a positive impact. - During regular operations there is a potential to employ about 380 persons including Managers; Supervisors; Skilled workers and unskilled worker - During regular operations indirect unskilled employment for about 380 persons will also be generated.	• Preference for direct/contractual employment should be given to the locals based on their skills and aptitude.
• Local population will be benefited by the proposed project, as the indirect employment/trade opportunities will increase which will help in uplifting the economic status of the region for the following: - Transport sector: Vehicular movement at stretch to bring the raw material from 10 km radial distance from factory premises and finished goods to all over India as well export at international level; - Labour sector: Proposed employment generation from modernized project will create indirect employment opportunity on labour contract. - Automobile industries; since heavy vehicular movement is required for bring raw materials and out letting finished, will lead	• Social development program should be conducted as the part of CSR/ CER.

Impact	Mitigation Measures
to develop automobile industries in the nearby market.	
• Occupational health, employment & traffic movement will get affected due to collapse of structure, spillage of materials, and breakdown of pollution control measures due to earthquake & cyclone.	• Demolition waste should be disposed as per statutory requirements as early as possible. The proponent must participate regional Disaster Management Plan and industrial association.
• Earthquake can give impacts on occupational health if accidentally spilled material will be mixed with storm water & it gets mixed with water bodies.	• Plant should be immediately stopped in case of any natural emergency.
Decommission Phase	
• Risk to community health and occupational health due to dust and noise generation during dismantling.	• The site should be barricaded during dismantling activities. • Provision of PPEs (ear plugs, ear muffs) to all employees/labour involved near areas where there should be generation of loud noise.

Table 4.20: The Activity – Impact Evaluation Matrix for Socio-economic Environment

Sr. No.	Project Aspects / Activities	Without mitigation measures				With mitigation measures			
		Traffic Movement	Health & Safety	Employment	Trade & Industries	Traffic Movement	Health & Safety	Employment	Trade & Industries
1.	**Construction & Commissioning Phase**								
1.1	Construction works	-1	-2	+2	+2	-1	-1	+2	+2
1.2	Transportation of construction materials, equipment & machineries	-1	-1		+1	-1			+1
1.3	Installation of the machineries, equipment, utilities & infrastructure		-1						
1.4	Allotment of work to local contract labours & workers	-1		+2		-1		+2	
	Sub-Total	**-3**	**-4**	**+4**	**+3**	**-3**	**-1**	**+4**	**+3**
2.	**Operation Phase**								
2.1	Storage and transportation of raw materials, fuels & products,	-1	-3		+1	-1	-1		+1
2.2	Manufacturing of Products	-1	-2	+2	+1	-1	-1	+2	
2.3	Wastewater generation & disposal / reuse		-2				-1		
2.4	Utility Operations		-2				-1		
2.5	Haz/ Non-Haz. Waste Management Activities	-1	-2		+1	-1	-1		+1
2.6	Temporary breakdown & Repair of control equipment	-1	-3			-1	-1		
2.7	Greenbelt Development		+1				+1		
2.8	Natural Calamities	-3	-4	-2	-2	-1	-1	-1	-1
	Sub-Total	**-7**	**-16**	**0**	**+1**	**-5**	**-6**	**+1**	**+1**
3.	**Decommissioning Phase**								
3.1	Decommissioning of project components	-1	-2	+1	+1	-1	-1	+1	+1
	Sub-Total	**-1**	**-2**	**+1**	**+1**	**-1**	**-1**	**+1**	**+1**
	Total	**-11**	**-22**	**+5**	**+5**	**-9**	**-8**	**+6**	**+5**

4.5.5 ECOLOGICAL ENVIRONMENT

The proposed installation will be accommodated in NA land. Hence, issue of impacts on ecology due to siting of proposed expansion project is not envisaged.

There is no ecologically sensitive area within the buffer area of 10 km. except the considerable cultivated land, water bodies & patches of reserved forest.

Table 4.21: Identification of Impacts & Mitigation Measures for Ecological Environment

Impact	Mitigation
Construction & commissioning phase	
• Impacts of PM on local Terrestrial flora & fauna (terrestrial & aves) may occur due to dust generated during construction work.	• The construction site should be barricaded, and water sprinkling arrangement should be provided to restrict & control the dust emissions.
• Also, noise generated during construction phase may create discomfort & hearing problems to fauna (terrestrial & aves) dwelling in vicinity of the site. • Such impacts of dust & noise generation and transportation would occur only for short period and would be restricted within close vicinity of the project site devoid of any ecologically important habitat.	• Low noise generating construction equipment & vehicle to be utilized. • To control noise level provision of necessary mitigation like acoustic enclosures, housing of noise generating machineries in closed area/room, proper maintenance & lubrication should be ensured.
• During commissioning phase, impacts due to pollutant release in environment would be considerably higher for a specific period of commissioning time which may affect the terrestrial flora fauna especially due to gaseous emissions from utility, process & fugitive emissions. • Especially the uncontrolled emissions of SO_2 & CO will result in significantly higher GLC of about 99 µg/m^3 29.2 µg/m^3 respectively which will cause severe acidic and toxic ambient air. Such acidic and toxic air will result in extremely serious toxicity to flora and fauna of the affected area which may become lethal toxicity upon longer exposure of affected flora &/or Fauna to the polluted air. • In initial stage of this phase, effluent with high pollutant load may find its way to the aquatic habitat if not managed properly. This may result in considerable impacts on aquatic ecology like increase in Acidity, pH shift to acidic, eutrophication, increase in BOD & COD, and decrease in DO. All this chemical change in aquatic habitat may result in unexpected change in ecological balance of the habitat as well as mortality of many aquatic organisms.	• Adequate installation & operation of pollution control measures for air, water & hazardous waste should be provided before commissioning.
Operation phase	
• Impacts may occur on terrestrial flora (in case of exposure to toxic materials) and aquatic flora & fauna if accidental spillage of raw material/ product gets its path to nearby water body during transportation. • Issue of impacts on ecology is anticipated mainly due to the increased	• Proper transport practices and use of suitable covered vehicles should be done. • All safety measures should be provided and all required essential plans should be implemented for emission reduction from storage & handling, safety, disaster & emergency action as mentioned in RA Report for

Impact	Mitigation
particulate level (Carbon Black Powder) in air due to the proposed project. Such particulate may adversely affect the condition of nearby habitat due to the hindered photosynthetic activities as well as change in abiotic factors of the local ecology. The particulate especially the dust of Carbon Black may also result in acute/chronic/lethal toxicity in affected flora & fauna. • The transportation of materials may also result in minor impact on the flora and fauna of the transport route due to increase of PM, NOx & CO due to the automobile exhaust.	proposed expansion project.
• Uncontrolled emission of gaseous pollutants generated from utility, process & fugitive emission may create serious problem to flora & fauna as mentioned in section of commissioning phase. However as studied for controlled emission, the level of GLC of the pollutant will significantly reduce and hence no major threat to flora & fauna is envisaged. • Similarly, if the emitted pollutants settle in water body due to wet deposits it can have toxic effects on aquatic habit due to increase acidity of water due to wet-deposition of SO_2. The increase acidity may result in depletion of many aquatic species of the affected water bodies especially lentic ecosystem. The chances of such serious toxicity in lotic ecosystem are envisaged to be very lesser or negligible depending on the hydraulic capacity of the lotic habitat.	• FGD/ DeSOx system to control SO_2 emission & SCR (Selective catalytic reduction)/ SCNR (Selective non-catalytic reduction) to control NO_2 emission should be provided as APCD. • Bag filters should be provided to control process emissions. • Closed system should be provided. • Workplace monitoring should be carried at regular intervals
• The boiler operations & steam turbine would have very high noise generation (>90dBA), which is too high to cause hearing problems in animal exposed to it if the exposure in repeated.	• To control noise level, necessary mitigation like acoustic enclosures, housing of noise generating machineries in closed area/room, proper maintenance & lubrication should be implemented.
• Impacts on terrestrial flora & fauna due to accidental leakage of untreated wastewater on land resulting in contamination of soil and crop & vegetation which may get propagated in food chain. As mentioned above such impact would be very serious in case of it occurs in lentic habitats of the nearby /affected area.	• Utmost care should be taken for control of leakage & spillage.
• The toxic effects causing acute/chronic health issues or lethal toxicity may occur in flora & fauna (terrestrial & aves), aquatic flora & fauna and ecological habitat, only in case of improper storage and disposal of waste.	• Solid/hazardous waste management should be done as per statutory requirements/guidelines.

Impact	Mitigation
• All impacts mentioned for other activities would occur at higher or maximum level causing threat to terrestrial, avian during the period of breakdown of control equipment which gives uncontrolled release of pollutants. Especially the aves having route from the area affected by the high emission of SO_2 (98-99 µg/m^3) would be very serious in form of acute toxicity and sometime as lethal toxicity. Such impacts would be mostly acute &/or Chronic to many aves traveling in downwind path from the emission source which may eventually turn in lethality of the affected bird.	• Regular maintenance of pollution control measures should be done to minimise breakdown of control equipment. • Proper interlocking & standby arrangement system should be provided. • Manufacturing process to be stopped immediately incase of major breakdown till the control equipment is online.
• Beneficial impacts on terrestrial flora & fauna due to developing of greenbelt.	• Development & maintenance of three tier dense greenbelt around the periphery and within the premises shall be done by planting local species and maximum area shall be provided for greenbelt to meet the criteria of greenbelt in 33% of total project land area.
• During the catastrophic event in Feed stock storage area/tanks, sudden burn, death, serious injury to the flora & fauna are likely to occur within the radius of 50-150 m from incident area. Even the smoke emitted from fire in this area may result in lethality or acute toxicity in the flora and fauna up to long distance in downwind direction.	• Implementation of measures and emergency facilities as mentioned in DMP and Emergency action plan.
• During the tenure of natural disaster, major & highly significant impacts are likely to occur in term of toxic effects of the stored hazardous chemicals which may escape from storage facility due to failure/rupture. The toxic effects may vary from chemical to chemical as per their hazardous properties as given in table 7.2 of Chapter-7.	• Proper arrangements to be provided to reduce/elimination of chances of failure of hazardous chemical storage for prevention of escape of chemicals during natural disaster.
Decommissioning Phase	
• The impacts of decommissioning phase would be mainly due to change in air quality, disposal of untreated wastewater and high noise generation. The impacts would be similar to those mentioned in various activities of construction & commissioning phase as well as impacts of hazard in storage area.	• The site under decommissioning work shall be ensured with all necessary mitigation measures suggested for prevention of emission & water pollution. • Noise reduction measures should be provided.
• The toxic effects of air pollutant, wastewater and hazardous waste would be higher or maximum.	• All tanks and storage area should be cleaned properly and wastewater generated from these activities shall be treated prior to disposal. All solid/ hazardous wastes and chemicals should be disposed of through mode which are permitted as per regulatory provisions.

Table 4.22: The Activity – Impact Evaluation Matrix for Ecological Environment

Sr. No.	Project Aspects / Activities	Without mitigation measures		With mitigation measures	
		Terrestrial & Avian Ecology	Aquatic Ecology	Terrestrial & Avian Ecology	Aquatic Ecology
1.	**Construction & Commissioning Phase**				
1.1	Construction works	-2	-1		
1.2	Transportation of construction materials, equipment & machineries	-1			
1.3	Installation of the machineries, equipment, utilities & infrastructure	-3	-2		
1.4	Allotment of work to local contract labours & workers				
	Sub-Total	**-6**	**-3**	**0**	**0**
2.	**Operation Phase**				
2.1	Storage and transportation of raw materials, fuels & products,	-3	-3	-1	
2.2	Manufacturing of Products	-2	-2		
2.3	Wastewater generation & disposal / reuse	-2	-2		
2.4	Utility Operations	-3	-2		
2.5	Haz/ Non-Haz. waste Management Activities	-2	-1		
2.6	Temporary breakdown & Repair of control equipment	-3	-2	-1	
2.7	Greenbelt Development	+1		+1	
2.8	Natural Calamities	-4	-4	-2	-3
	Sub-Total	**-20**	**-18**	**-3**	**-3**
3.	**Decommissioning Phase**				
3.1	Decommissioning of project components	-2	-1	-1	
	Sub-Total	**-2**	**-1**	**-1**	**0**
	Total	**-28**	**-22**	**-4**	**-3**

Table 4.23: Cumulative Impact Matrix (without mitigation measures)

Environmental Attributes	Cumulative score for each parameter	Cumulative score for each attribute, Si	Relative Importance of each attribute, Wi (%)	Cumulative Significance, (Si x Wi) / 100
AIR		-45	25	-11.25
Air quality	-26			
Noise level	-19			
WATER		-39	20	-7.80
Water quantity	-10			
Water quality	-16			
Hydrogeological Conditions	-3			
LAND		-30	15	-4.50
Land use pattern/ Landcover	-4			
Topography	-6			
Soil quality	-20			
SOCIOECONOMIC		-23	20	-4.60
Traffic Movement	-11			
Health and safety	-22			
Employment	+5			
Trade & Industries	+5			
ECOLOGY		-50	20	-10.00
Terrestrial & Avian Ecology	-28			
Aquatic Ecology	-22			
			Cumulative Score:	**-38.15**

Table 4.24: Cumulative Impact Matrix (with mitigation measures)

Environmental Attributes	Cumulative score for each parameter	Cumulative score for each attribute, Si	Relative Importance of each attribute, Wi (%)	Cumulative Significance, (Si x Wi) / 100
AIR		-13	25	-3.25
Air quality	-8			
Noise level	-5			
WATER		-15	20	-3.00
Water quantity	-7			
Water quality	-6			
Hydrogeological Conditions	-2			
LAND		+2	15	+0.30
Land use pattern/ Landcover	+3			
Topography	+1			
Soil quality	-2			
SOCIOECONOMIC		-6	20	-1.20
Traffic Movement	-9			
Health and safety	-8			
Employment	+6			
Trade & Industries	+5			
ECOLOGY		-7	20	-1.40
Terrestrial Ecology	-4			
Aquatic Ecology	-3			
			Cumulative Score:	**-8.55**

As shown at Table 4.21 and Table 4.22 the cumulative value of significance of the project, in terms of the impacts on the environment, without mitigation measures and with mitigation measures works out to be, (-) 38.15 and (-) 8.55 respectively, which indicates that with the implementation of the mitigation measures, the negative impacts of the project can be reduced significantly.

5. Analysis of Alternatives

5.1 PURPOSE OF THE STUDY

The details with respect to alternatives for site selection & process for the proposed project has been summarized & provided in subsequent sections given below.

5.2 SITE ALTERNATIVES

M/s. Madura Carbon India Ltd. has proposed to setup a new manufacturing unit for manufacturing of Carbon Black & Power through Green Generation Technology, which, involves the production of Carbon Black @ 230000 TPA and Power @ 45 MW. For setting up of the proposed unit total 5 sites have been considered as mentioned in subsequent table. The alternative studies for these five sites have been undertaken with reference to the following criteria.

- Proximity to Prime industrial Areas
- Availability of necessary common Infrastructure/s & their Proximity
- Proximity to National Highway Network (NH)
- Proximity to Major Public Transport Centre (PTC)
- Necessity of Rehabilitation & Resettlement of affected community/People

Further, the site is also selected considering the need of the huge human resource, adequate land area, availability of adequate water resources etc. the details of other considered industrial areas and selected area are presented below. The score for each parameter has been given out of Ten (10) based on availability & condition of the Infrastructure as well as Economic benefit to company & local area. Suitability rank has been decided based on total score of 70 for each area.

Table 5.1: Analysis of Alternative Industrial Area considered

Sr. No.	Considered Sites	Dahej	Vapi GIDC	Sarigam GIDC	Fansa (Karajgam)*	Maroli *
1.	Land Availability and R&RR	7	3	5	9	8
2.	Power Supply& Availability	9	9	9	9	8
3.	Water Supply & Availability	9	10	10	9	8
4.	Proximity to NH & PTC	7	10	9	9	8
5.	Transport & Logistic Convenience	6	9	8	8	7
6.	Human Resource Management	5	7	9	10	7
7.	Proximity to Prime Industrial Area & other units of Company	5	10	9	9	7
8.	Availability & Proximity to Common Infrastructure/s	10	10	10	8	5
9.	Economic Benefit to Company	6	7	9	9	5
10.	Economic Benefit to Local Area	7	8	9	9	10
Total Assessment score		**71**	**83**	**87**	**88**	**73**
Suitability Assessment Share, %		**14.2 %**	**16.6 %**	**17.4 %**	**17.6 %**	**14.6 %**
Suitability Rank		**5**	**3**	**2**	**1**	**4**
Note: *indicates Sites near Sarigam GIDC						

As seen in above table, the sites in Dahej & Maroli Area are not found suitable mainly due to economic issue, issues of Human Resource Management, Transport & Logistic as well as proximity criteria. Based on the above analysis three areas Vaipi GIDC, Sarigam GIDC & Fansa (Karajgam) were considered for final selection of site for proposed project. The land availability in industrial zone of Vapi GIDC & Sarigam GIDC are enough but not in a single chunk (available plots are at far distance), whereas the land at Fansa (Karajgam) is available in a single chunk. Human resource in Sarigam GIDC & Fansa (Karajgam) Area is available in the local areas as the area has not significant availability of employment potential and numbers of family are in need of employment. Finally, the Sarigam GIDC has high economic benefit to company & local people, which is almost similar at Fansa (Karajgam) .Thus the Sarigam GIDC & Fansa (Karajgam) are most suited site but the required land area is not available in Sarigam GIDC. Hence, considering the availability of land in single chunk & other merits of the Sarigam area, Site at Fansa (Karajgam) near industrial zone of Sarigam has been selected for the proposed project. The Salient Feature of selected Sites are presented below:

- Sister concern unit of Madura Carbon India Ltd. is close to the GIDC Sarigam.
- Due to Sarigam industrial area, required skilled man power will be available easily.
- Location of site is approximately 6 km from NH48, which is very suitable for transportation of raw materials & finished products from proposed site.

Based on the above reasons, this location is most suitable for the proposed project.

5.3 PROCESS ALTERNATIVES

The company has adopted the best available technology for the proposed project and is very concerned and conscious about the product quality and equally about the environmental protection & resource conservation.

Carbon black is produced with the thermal decomposition method or the partial combustion method using hydrocarbons such as oil or natural gas as raw material.
The characteristics of carbon black vary depending on manufacturing process, and therefore carbon black is classified by manufacturing process. Carbon black produced with the furnace process, which is the most commonly used method now, is called “furnace black,” distinguishing it from carbon black, which is manufactured with other processes. There are four processes currently used to make carbon black:

A. Furnace Black Process

This method forms carbon black by blowing petroleum oil or coal oil as raw material (feedstock oil) into high-temperature gases to combust them partially. This method is suitable for mass production due to its high yield, and allows wide control over its properties such as particle size or structure. This is currently the most common method used for manufacturing carbon black for various applications from rubber reinforcement to colouring.

B. Channel Process

This method forms carbon black by bringing partially combusted fuel, which is generated with natural gas as raw material, into contact with channel steel (H-shaped steel) and then collecting the carbon black which results. There are yield and environment issues around this method, and therefore has lost the leading role as the mass production process to the furnace process. This method, however, provides carbon black with many functional groups on the surface, being used in some painting applications.

C. Acetylene Black Process

This process obtains carbon black by thermally decomposing acetylene gas. It provides carbon black with higher structures and higher crystallinity, and is mainly used for electric conductive agents.

D. Lampblack Process

This method obtains carbon black by collecting soot from fumes generated by burning oils or pine wood. This method has been used since the days before Christ, and is not suitable for mass production. However, it is used as raw material for ink sticks as it provides carbon black with specific color.

We will manufacture carbon black from furnace black process. The various proposed activities proposed and its benefits is given in Table 5.1.

Table 5.2: Benefits from Process

Particulars	Proposed technology	Remarks
Manufacturing process	The proposed project manufactures carbon black by thermal cracking or pyrolysis of CBFS. In the co-generation system, the tail gas will be used as fuel in the waste heat boiler for generating steam and remaining steam is used for production of electrical power & dryers. So, the co-generation plant generates electricity as by product.	The process technology is one of the most modern Technologies to produce trade & Carcass type of carbon black and also recover energy in the form of Steam & power.
Wastewater	• From manufacturing process there will not be any generation of wastewater. • The domestic wastewater generated will be treated in STP. Treated water from STP will be used for gardening. • Wastewater generated from industrial activities like blowdown from boiler for power generation & cooling tower will be recycled for lime slurry preparation. • Scrubber bleed-off alongwith plant washing will be diverted to ETP. Treated water from ETP will be recycled for plant washing & remaining will be diverted to post treatment (RO-2). • Blowdown from WHRU, remaining blowdown from boiler for power generation, DM plant regeneration & remaining ETP treated water will be diverted to post treatment RO (RO-2). Reject from RO-1 & RO-2 will be diverted to MEE. Permeate from RO & Condensate from MEE will be recycled for domestic & industrial use. • Thus, the proposed project will zero liquid discharge system.	The industrial wastewater generated will be treated in ETP, RO & MEE and treated water will be reused for industrial uses, Zero Liquid discharge will be achieved, no alternative are considered. For treating domestic sewage portable STP will be proposed and treated water will be used for gardening.

Particulars	Proposed technology	Remarks
Air pollution	• Boilers stack will be provided DeSOx/ DeNOx control systems for control PM, SO_2 & NO_2 and adequate stack height for proper dispersion of air pollutants in to the atmosphere to meet GPCB norms. • All manufacturing blocks (process section, drying section, etc.) will be provided with bag filters and adequate stacks for control of process gases. Dryer combustor & Vapour bag collector stacks will be attached with lime slurry scrubber to control SO_2.	• The emission criteria of the proposed plant will be designed to meet more stringent MoEF&CC norms and GPCB standards
Hazardous waste	For storage of hazardous waste will be properly separated and kept in covered elevated area with proper labeling and demarcation at the site before disposing to authorized dealers or TSDF site.	Necessary statutory clearances will be obtained from GPCB and membership from TSDF for disposal of hazardous waste.

(Source: Madura Carbon (India) Ltd.)

6. Environment Monitoring Plan

6.1 PRELUDE

Post-project environmental monitoring is an essential tool for ensuring effective implementation of environmental management plan & mitigation measures. It is also very essential to keep updating the environmental management system for effective conservation of environment along with ongoing project activities/ operation. The environment monitoring plan also gives an early indication, highlighting the need to strengthen the existing environmental management system to enable for improvement & conservation of various environmental attributes. It provides the status on the quality of environment and helps in providing guidance on which environmental attributes, the mitigation measures need to be improved. Hence, monitoring of critical parameters of environmental quality is very essential during the project operations to assess the changes in the environment.

The objectives of monitoring are delineated hereunder:

- Monitoring & tracking the effectiveness of Environment Management Plan.
- Assessment of the changes in environmental quality post project operations and plan additional mitigation measures, if any.

This chapter discusses various components & aspects of environmental monitoring plan designed for M/s. Madura Carbon (India) Ltd.

6.2 POST PROJECT ENVIRONMENT MONITORING PLAN

M/s. Madura Carbon (India) Ltd. will conduct self/ internal and third party/ external monitoring as per the schedule given in following table. The management should ensure timely & efficient execution of the monitoring plan tabulated below in table 6.1.

Table 6.1: Post Project Environment Monitoring Plan

Component	Parameter	Frequency
Waste water	pH, TSS, TDS, COD, BOD	Daily in-house
	pH, TSS, TDS, COD, BOD	Quarterly (treated and untreated) – Third Party
Ambient Air	PM_{10}, $PM_{2.5}$, SO_2, NO_2	Quarterly (Third Party)
Workplace monitoring	PM, VOC, Lux level	Quarterly (Third Party)
Stack monitoring	Process stack: PM, SO_2, NO_2	Quarterly (Third Party)
	Utility Stack: PM, SO_2, NO_2	
Noise monitoring	Noise pressure levels	Quarterly (Third Party)
Hazardous waste management and handling	Filing of annual returns in Form-4 for hazardous waste handling	Annually
	Maintaining records of transportation in Form-13	Regularly
Renewal Consents and Authorization	Obtaining consent to operate (and renewal) under Air act & Water Act and authorization under Hazardous Waste rules.	Before expiry
Environmental Audit Statement	Submission of compliance/audit statement in Form-V	Annually
Compliance of EC conditions.	Submission of compliance reports	Half yearly

(Source: Madura Carbon Black (India) Ltd.)

6.3 BUDGETARY PROVISION FOR EHS

The Capex for implementation of Environmental Management Systems will be Rs. 86.5 crores and Opex for environment protection & continual improvement will be Rs. 26.45 crores/annum.

Table 6.2: Budgetary Provisions for EHS in Capex planning (For Proposed Project)

Sr. No.	Purpose	Capital Cost in Crore (INR)
1.	ETP, STP, RO & MEE	11.5
2.	Air pollution control device	70.0
3.	Noise Control	0.5
3.	Safety instruments	4.2
4.	Greenbelt Development	0.3
	TOTAL	**86.5**

(Source: Madura Carbon Black (India) Ltd.)

Table 6.3: Budgetary Provisions for EHS in Opex planning

Sr. No.	Purpose	Recurring Cost (Crores per annum)
1.	ETP, STP, RO & MEE	19.40
2.	Air pollution control device	6.20
3.	Fees for Common disposal facilities	0.30
4.	Noise Control	0.10
5.	Env. Monitoring expenses	0.03
6.	Safety instruments maintenance	0.10
7.	Environment & safety training	0.02
8.	Occupational Health & Medical surveillance	0.10
9.	Green belt maintenance	0.20
	TOTAL	**26.45**

(Source: Madura Carbon Black (India) Ltd.)

7. Additional Studies

7.1 PRELUDE

The additional studies as per the generic structure of the EIA report provided in the Appendix III of the EIA Notification 2006 and it subsequent amendments include the following:

- Public Consultation.
- Social Impact Assessment. Resettlement & Rehabilitation (R&R) Action Plans.
- Risk assessment.

The requirements of the above for the current proposed project are discussed in the subsequent sub-sections under respective heading.

7.2 PUBLIC CONSULTATION

Public consultation is applicable to the proposed project as per the ministry of Environment & Forest, Government of India, New Delhi, vide its application no. SO 1533 dated 14thSeptember' 2006.

The public Hearing was conducted on 19/07/2019 at 11:30 hrs. At Survey no. 3705, 3708, 3719, 3725, 3738, 4108, 4110, 4318, Village: Fansa (Karajgam), Taluka: Umbergaon, Dist.: Valsad, Gujarat. A summarized table showing salient points highlighting issues raised by the participants & issues raised by the concerned persons having plausible stake in Environment and responded by the representatives of applicant during the Public Hearing along with the additional measures, if any proposed after the PH is provided in below.

Table 7.1: Points raised during public hearing

Sr. No.	Key Issues	Reply during PH	Additional Measures Proposed	Budget to be allocated
1.	Air pollution from proposed carbon black manufacturing plant	• Adequate stack height will be provided. • The overall system will be closed system to control emissions below permissible norms. Plant will be based on fully automated (DCS) system. An automatic leakage detection system will be installed for piping to prevent any leakage. Bag-filters will be a part of the process for collection of Carbon Black and separation from tail gas. The offgas generated during the manufacturing of carbon black will be used as fuel in boilers and dryers. • The air dispersion modelling is carried out for predicting the increase in levels of PM, SO2 and NOx emissions in the surrounding area due to the proposed project. Results derived from the same are well within the prescribed limit of National Ambient Air Quality Standards Parameters.	• DeSOx & DeNOx system will be installed to control SO_2 & NO_2 emission.	• Capital cost for DeSOx – 20 Cr. • Capital cost for DeNOx – 5 Cr. • Operational cost for DeSOx – 3.1 Cr./annum • Operational cost for DeNOx – 1.1 Cr./annum
2.	The trees of surrounding area, land, farming land & vegetation of land will be affected by PM, SO_2 and NO_2 emission from the project.	• The emission of SO_2 and Particulate Matter will be under the rules and regulations. • Effect of the same on existing quality of ambient air will be within the stipulated limit after setting up of the plant.	• DeSOx & DeNOx system will be installed to control SO_2 & NO_2 emissions.	• Capital cost for DeSOx – 20 Cr. • Capital cost for DeNOx – 5 Cr. • Operational cost for DeSOx – 3.1 Cr./annum • Operational cost for DeNOx – 1.1 Cr./annum

Sr. No.	Key Issues	Reply during PH	Additional Measures Proposed	Budget to be allocated
3.	What will be the capacity of Boilers in Ton per hours and what pollutants will emit from it? What will be the potential of it? Which machineries will be required for its prevention?	• For the proposed project, one boiler of 112 TPH and the one boiler of 72 TPH will be installed. Off/ tail gas, which will be generated during the manufacturing of Carbon Black will be used as fuel, for the power generation. No coal will be used for the power plant. Adequate height will be provided to chimney. The emission from the chimney will be below prescribed norms.	• DeSOx & DeNOx system will be installed to control SO_2 & NO_2 emission.	• Capital cost for DeSOx – 20 Cr. • Capital cost for DeNOx – 5 Cr. • Operational cost for DeSOx – 3.1 Cr./annum • Operational cost for DeNOx – 1.1 Cr./annum
4.	Management of VOC & odour	• Plant will be based on fully automated (D.C.S) system. An Automatic leakage detection system will be installed. The off-gas generated during the manufacturing of Carbon Black will be used as fuel in boiler and dryer. Hence, there will be no odour generation from the plant.	--	--

Sr. No.	Key Issues	Reply during PH	Additional Measures Proposed	Budget to be allocated
5.	As Air, Water, noise and land is going to be polluted due to the manufacturing of Carbon Black, we are against this project.	In the proposed Carbon Black plant following measures will be taken to reduce pollution • **Air Pollution:** The overall system will be closed system to control emissions below permissible norms. Plant will be based on fully automated (DCS) system. An automatic leakage detection system will be installed. Bag-filters will be a part of the process for collection of Carbon Black and separation from off-gas. The off-gas generated during the manufacturing of carbon black will be used as fuel in boilers and dryers. • **Water Pollution:** Domestic effluent will be treated in STP and reused for gardening. The industrial effluent from washing will be treated in ETP and reused. Other effluents from utilities will be passed through RO-MEE system and reused. Hence, no effluent will be discharged outside premises. • **Noise Pollution:** It will be ensured that noise level will be kept below permissible norms within company premises by providing full enclosure to Turbine and installing DG Set equipped with acoustic enclosure. Regular maintenance will be carried out. Furthermore, the development of greenbelt around the premises will help in attenuation of noise. Thus, as per the above-mentioned mitigation measures, the people living in the surrounding area will not be affected due to the proposed project.	• **Air Pollution:** DeSOx & DeNOx system will be installed to control SO2 & NO2 emission. **Water Pollution:** • Water balance is revised in Final EIA report. • The total domestic wastewater generated will be treated in STP. Treated water from STP will be used for gardening. • Industrial wastewater generated from utility installations will be partly recycled for lime slurry preparation & remaining in RO-2. • Scrubber bleed-off along with plant washing will be diverted to ETP. Treated water from ETP will partly be recycled for plant washing & remaining will be diverted to RO-2. • ETP treated water alongwith remaining industrial wastewater will be diverted to RO. • Reject from pre-treatment RO & RO-2 will be diverted to MEE. • Permeate from RO & Condensate from MEE will be recycled for non-potable & industrial use.	• Capital cost for DeSOx – 20 Cr. • Capital cost for DeNOx – 5 Cr. • Operational cost for DeSOx – 3.1 Cr./annum • Operational cost for DeNOx – 1.1 Cr./annum • Capital cost for ETP & STP – 0.97 Cr. • Operational Cost –0.4 Cr./annum • Capital cost for RO & MEE – 10.5 Cr. Operational Cost – 19 Cr./annum

Sr. No.	Key Issues	Reply during PH	Additional Measures Proposed	Budget to be allocated
6.	Carbon Black feed will be used as the fuel for generating power of 13 MW, which is very dangerous for environment.	• Coal or Feed Stock will not be used for power plant but off-gas/ tail-gas generated during the manufacturing of carbon black will be used as fuel during regular operations. The chimney will be provided with adequate height. The emissions from the chimney will be as per the norms so that no damage will be done.	--	--
7.	Reserve forests will be destroyed. Due to removal of forest, chances of rising heat levels in hilly areas will be increased due to removal of forests	• The company has obtained NOC Certificate from the Forest Department. All necessary measures for pollution mitigation will be implemented so that there will be no negative impact on the reserve Forest.	• DeSOx & DeNOx system will be installed to control SO_2 & NO_2 emission.	• Capital cost for DeSOx – 20 Cr. • Capital cost for DeNOx – 5 Cr. • Operational cost for DeSOx – 3.1 Cr./annum • Operational cost for DeNOx – 1.1 Cr./annum
8.	Air quality will get polluted due to the establishment of M/s. Madura Carbon India Ltd. Our residential area is just 10-20 feet away from the proposed project. The godown are supposed to be made for storing the waste generation. So, due to these arrangements, the tribal community of the surrounding area are going to be affected. The fertile land is also there within this area.	• There is no residential area located in 10-20 ft. distance from the proposed plant site. The solid waste will be stored properly within the plant premises under sheds & disposed as per the guidelines.	--	--

Sr. No.	Key Issues	Reply during PH	Additional Measures Proposed	Budget to be allocated
9.	What is $PM_{2.5}$ & what is its Impact on the surrounding area?	• $PM_{2.5}$ is a size of a particle. If particulates less than 2.5 micron would be inhaled then it can affect the lungs, this is why National Ambient Air Quality Standards are set by Indian government. Limit for 60 $\mu g/m^3$ is set for the particulate matter flying in the air. • To ensure control of particulate matter, plant will be based on fully automated (DCS) system. An automatic leakage detection system will be installed. Bag-filters will be a part of the process for collection of Carbon Black and separation from tail gas. The overall system will be closed system to control emissions below permissible norms.	--	• Capital cost for Bag Filter – 45 Cr. • Operational Cost –2 Cr./annum
10.	Name of monitoring location's and the details	• Details of monitoring locations are provided in reply.	--	--
11.	High water requirement & source of fresh water in terms of competitive users and regarding rainwater harvesting.	• The water requirement will be fulfilled from the industrial quota from Damanganga Canal Distry. • Rainwater will be harvested in collection tank through roof top harvesting.	--	• Capital cost for rainwater harvesting – 0.35 Cr.

Sr. No.	Key Issues	Reply during PH	Additional Measures Proposed	Budget to be allocated
12.	Wastewater characteristics, ETP scheme & mode of disposal	• ETP will be of 30 KLD capacity having primary & tertiary treatment. Secondary treatment will be carried out in STP only. • Blow down water will go to the RO plant. Reject of RO plant will be evaporated in MEE and remaining water will be reused.	• Since water balance is revised in Final EIA report with addition of DeSOx system the revised capacity of ETP will be 90 KLD. • The total domestic wastewater generated will be treated in STP. Treated water from STP will be used for gardening. • Industrial wastewater generated from utility installations will be partly recycled for lime slurry preparation & remaining in RO-2. • Scrubber bleed-off along with plant washing will be diverted to ETP. Treated water from ETP will partly be recycled for plant washing & remaining will be diverted to RO-2. • ETP treated water alongwith remaining industrial wastewater will be diverted to RO. • Reject from pre-treatment RO & RO-2 will be diverted to MEE. Permeate from RO & Condensate from MEE will be recycled for non-potable & industrial use.	• Capital cost for ETP & STP – 0.97 Cr. • Operational Cost –0.4 Cr./annum • Capital cost for RO & MEE – 10.5 Cr. • Operational Cost – 19 Cr./annum

Sr. No.	Key Issues	Reply during PH	Additional Measures Proposed	Budget to be allocated
13.	Point regarding water balance diagram	• Detailed water balance is explained in the reply.	Water balance is further revised in Final EIA report. • The total domestic wastewater generated will be treated in STP. Treated water from STP will be used for gardening. • The total domestic wastewater generated will be treated in STP. Treated water from STP will be used for gardening. • Industrial wastewater generated from utility installations will be partly recycled for lime slurry preparation & remaining in RO-2. • Scrubber bleed-off along with plant washing will be diverted to ETP. Treated water from ETP will be recycled for plant washing & remaining will be diverted to RO-2. • ETP treated water alongwith remaining industrial wastewater will be diverted to RO. • Reject from pre-treatment RO & RO-2 will be diverted to MEE. • Permeate from RO & Condensate from MEE will be recycled for non-potable & industrial use.	--
14.	Connecting road to the company passed through village & related traffic issues	• The route will be diverted & connectivity will be through GIDC road.	--	--

Sr. No.	Key Issues	Reply during PH	Additional Measures Proposed	Budget to be allocated
15.	The need of the fuel - Feed Stock (Carbon Feed Stock) from local suppliers, will be beneficial for the poor and middle class people of the taluka – is just a virtual offer.	• The Feed Stock will be purchased from local market meaning national market. Feed Stock will be purchased from IOCL Vadodara or Reliance Jamnagar. Due to this, there will be requirement of transportation.	--	--
16.	• The land is not NA land. It is agriculture land. • The land is 73AA and covered under PESA act.	• The land for the proposed project is owned by the company and permission has been obtained for non-agricultural use viz. industrial purpose. • No land which comes under 73-AA is taken for the proposed project.		--
17.	What preventive measures will be taken for reducing noise pollution? It is not clear.	• It will be ensured that noise level will be kept below permissible norms within company premises by providing full enclosure to Turbine and installing DG Set equipped with acoustic enclosure. Regular maintenance will be carried out, during plant operations. Furthermore, the development of greenbelt around the premises will help in attenuation of noise.	--	• Capital cost for Noise Reduction Measures – 0.4 Cr. • Operational Cost for Noise Reduction Measures –0.1 Cr./annum
18.	The generated Carbon black may affect lungs of human due to its inhalation. The respiratory system gets affected and there are possibilities of disease like cancer.	• With implementation of all the process control measures, the level of carbon black in the air within the unit will be much lower than the permissible norms of workplace (OSHA-TWA. Thus, proper care will be taken that carbon black exposure will not cause any serious health problems in surrounding area.	--	• Capital cost for APCM – 45 Cr. • Operational Cost – 2 Cr./annum

7.3 RESETTLEMENT & REHABILITATION ACTION PLAN

The proposed project is to be established on uninhibited land. Hence, no displacement of any population is required for the proposed project. Therefore, detailed Social Impact Assessment studies or R&R action study has not been proposed.

7.4 RISK ASSESSMENT & DISASTER MANAGEMENT PLAN

7.4.1 OBJECTIVE

The main objectives of the Risk Assessment (RA) study is to determine damage due to major hazards having damage potential to life & property and provide a scientific basis to assess safety level of the facility.

The principle objective of this study was to identify major risks in the manufacture of chemical, agrochemical and intermediates products and storage of hazardous chemical at site and to evaluate on-site & off-site consequences of identified hazard scenarios. Pointers are then given for effective mitigation of hazards in terms of suggestions for effective disaster management, suggesting minimum preventive and protective measures & change of practices to ensure safety.

7.4.2 DETAILS OF STORAGE OF HAZARDOUS MATERIALS

The details of the storage of materials is given in Table 7.2 and their physical and chemical properties delineated in Table 7.3.

Table 7.2: Details of Storage of Materials

Sr. No.	Name	Source	Means of transportation	Means of storage	Storage Location	Max. Qty. to be stored at any given time i.e. storage capacity
Product						
1	Carbon Black	--	Trucks	Bulk Bags & Paper Bags	Ware House	3000 T
Raw Materials						
1	Feed Stock	Import & Indian Market	Tankers	6 x 5000 kL (Tanks) 6 x 1250 kL (Tanks)	Tank Farm	37500 kL
2	Molasses	Local	Tankers	60 kL (Tank)	Tank	60 kL
3	Potassium Nitrate	Local	Truck	Bags	In Store	3 T
Note: Feed Stock (Feed Stock/ Furnace Oil).						

Table 7.3: Physical and Chemical Properties of the Materials, Compatibilities & Special Hazard

Sr. No.	Name Of Chemical	Hazard	Flash Point ^{0}c	BP ^{0}c	LEL %	UEL %	Sp.Gr. 20 ^{0}c	VP	VD	Solubility With Water At 20 ^{0}c	NFPA H F R	Hazardous Combustion Product	TLV ppm	IDLH ppm	LC-50 mg/m^3	Target Organs	Carcinogen-icity	Antidote	MSIHC Classification
1.	Carbon Black Feed Stock (Feed Stock)	Combustible	>100	>270	NA	NA	NA	NA	1.10 - 1.30 g/cm^3 @20° C	Immiscible with water	-	Acrid smoke and fumes	NA	NA	NA	Eye, Skin, Lungs, central nervous system.	Yes	No specific Antidote	NA
2.	Furnace oil	F	66	185 – 500	1%	5%	0.9	<1	3-5	Insoluble	2 2 0	CO, CO_2, SO_2	10 mg/ m^3	NA	NA	Skin and eye contact, inhalation Ingestion	No	No specific Antidote	Sch. I, Part I
3.	Molasses	F	NC	106	Smoulders when directly heated in flame		0.47	None	Na	Highly soluble	0 1 0	CO, CO_2	NA	NA	LD-50 >11500 mg/kg	No	No	No specific Antidote	NA
4.	Potassium Nitrate CAS: 7757-79-1	H	NA	NA	NA	NA	2100 kg/m^3 / density	NA	3	soluble	1 0 0	No Flammable	NA	NA	NA	No	No	No specific Antidote	NA
5.	Carbon black Powder CAS: 1333-86-4	F	< 141 ° F	Sublimes	NA	NA	1.8-2.1	NA	1.7 – 1.9 g/ml	insoluble	1 1 3	Carbon monoxide (CO), carbon dioxide, and oxides of sulfur	NA	1750.0 mg/m 3	NA	inhalation, skin and/or eye contact	Yes	No specific Antidote	NA

F	:	FIRE	H	:	HEALT HEALTHHAZARD CLASS
E	:	EXPLOSIVE	BR	:	BURNING RATE
BP	:	BOILING POINT	C	:	CORROSIVE
UEL	:	UPPER EXPLOSIVE LIMIT	STEL	:	SHORT TERM EXPOSURE LIMIT
E	:	EVAPORATION RATE	ppm	:	PARTS PER MILLION
NFPA	:	NATIONAL FIRE PROTECTION ASSOCIATION-usa	VD	:	VAPOUR DENSITY
N.L.	:	NOT LISTED	F	:	FIRE HAZARD CLASS

T	:	TOXIC	TLV	:	THRESHOLD LIMIT VALUE
R	:	REACTIVE	N.A.	:	NOT AVAILABLE
LEL	:	LOWER EXPLOSIVE LIMIT	R	:	REACTIVE HAZARD
SP.GR	:	SPECIFIC GRAVITY			

7.4.3 PRECAUTION TO BE TAKEN DURING STORAGE

A. For above ground storage tank farm:

- MS storage tank should be provided as per IS code.
- Dyke wall should be provided to storage tank.
- Level gauge should be provided with low level high level provided.
- Fire hydrant monitor with foam trolley facility should be provided.
- FLP type pump should be provided.
- Double static earthing should be provided to storage tank.
- Double Jumper clip should be provided to all pipeline flanges.
- Road tanker unloading procedure should be prepared and implemented.
- Lightening arrestor, PPEs should be provided.
- Safety shower, eye washer should be provided.
- NFPA labelling system should be adopted for storage tanks.

B. For Ware House Safety Measures:

- FLP type light fittings should be provided.
- Proper ventilation should be provided in Godown.
- Proper label and identification board /stickers should be provided in the storage area.
- Provision for separate dispensing room with local exhaust and static earthing should be made.
- Materials should be stored as per its compatibility study and separate area should be made for flammable, corrosive and toxic chemical drums storage.
- Smoking and other spark, flame generating items should be banned from the Gate.

C. For Carbon Black Powder Ware House Safety Measures:

- Fixed electrical fitting should be provided. Lighting should be installed between racks above the gangways & away from material storage to avoid heating to storage goods.
- Electrical fitting should be tested periodically (i.e. electrical load thermo graphic temperature measurement, mechanical integrity of cables, physical condition of cable & other electrical appliances / installation.)
- BT reach truck battery charging station should be provided outside of ware house.
- Appropriate passage, gangways should be provided.
- Fire detection system (Beam Detector) should be provided.
- Adequate portable fire extinguishers should be installed at noticeable position & kept easily accessible.
- Fire hydrant system should be provided.
- Auto sprinkler system should be provided on individual racks compartments at Ware House: this system should independent system having Separate Pumps with separate piping from Pump House to Ware House, it consists of automatic operated sprinkler on suitable temperature °C.
- Fire Alarm System: Automatic fire detection & alarm system consists of Fire Detectors, Addressable Manual Call Points (MCP) & Hooters Beam Detectors Ware House) should be provided at strategic locations and connected by cable to central control panel at ECC with repeater panel at DCS Control Room.
- Emergency exit route should be provided.
- A warehouse should be used exclusively for storage activities. Loose chemical handling should not be allowed.
- In case of maintenance work, Ignition sources should be controlled by hot work permit system.

- Natural & Eco ventilator should be provided.
- Proper drainage system should be provided for used fire water.

Table 7.4: Transportation, Unloading and handling procedure for Feed Stock & Molasses etc.

Sr. no.	Activity	Type of possible hazard	Procedures.
1	Transportation of Feed Stock & Molasses etc.by road tanker.	Leakage, Spillage, fire, explosion, Toxic release	• Training should be provided to driver and cleaner regarding the safe driving, hazard of Flammable chemicals, emergency handling, use of SCBA sets. • TREM card should be kept with TL. • Fire extinguishers - should be kept with TL. • Flame arrestor - should be provided to TL exhaust. • Instructions - should not be given to stop road tanker in populated area. • Clear Hazard Identification symbol and emergency telephone number - should be displayed as per HAZCHEM CODE. • Appropriate PPEs - should be kept with TL.
2	Feed Stock & Molasses etc. Road tanker unloading at site.	Leakage, Spillage, fire, explosion, toxic release	• Priority - given to Tanker to immediately enter the storage premises at site and will not be kept waiting near the gate or the main road. • Security person should check Licence, TREM CARD, Fire extinguisher condition; SCBA set condition, Antidote Kit, required PPEs as per SOP laid down. • Store officer should take sample as per sampling SOP from sampling point. • After approval of QC department unloading procedure - allowed be started. **Following precautions - adopted during unloading** • Wheel stopper - should be provided to TL at unloading platform. • Static earthing - provided to road tanker. • Tanker unloading procedure - followed according to check list and implemented. • Flexible SS hose connection - done at TL outlet line. • The quantity remaining in the hose pipeline - drained to a small underground storage tank, which - subsequently transferred by nitrogen pressure to the main storage tank thus ensuring complete closed conditions for transfer from road tanker. • All TL valves - closed in TL. • Finally earthing connection and wheel stopper - removed. • Only day time unloading - permitted.
3	Feed Stock & Molasses etc. Storage tank safety	Leakage, Spillage, Fire, Explosion, Toxic release.	• SS storage tank - provided as per IS code. • Dyke wall - provided to storage tank. • Level transmitter - provided with low level high level auto cut-off provision. • Vent - connected to water trap and vent of

Sr. no.	Activity	Type of possible hazard	Procedures.
			water trap - provided with flame arrestor. • Water sprinkler system - provided to storage tank. • Fire hydrant monitor with foam attachment facility - provided. • Dumping / Drain vessel/alternate vessel - provided to collect dyke wall spillage material. • FLP type pump - provided. • Nitrogen blanketing - provided to storage tank. • Double static earthing - provided to storage tank. • Double Jumper clip - provided to all Solvent handling pipeline flanges.
4	Feed Stock & Molasses etc transfer from storage tank to Day tank	Leakage, Spillage due to Line rupture, Flange Gasket failure, Fire, Explosion, Toxic release.	• Double mechanical seal type FLP type pump - provided. • Double on / off switch will be provided at tank farm and process area near day tank. Pump auto cut off with day tank high level to be provided. • Flame arrestor - provided on day tank vent. • Over flow - provided for additional safety and it - connected to main storage tank. • NRV - provided on pump discharge line. • Double Jumper clip - provided to all solvent handling pipeline. • Double static earthing - provided to day tank.
5	Feed Stock & Molasses etc from Day tank to reactor.	Leakage, Spillage due to Line rupture, Flange Gasket failure, Fire, Explosion, Toxic release.	• Gravity transfer. • Total quantity of day tank material - charged in to reactor at a time. • NRV - provided on day tank outlet line. • Static earthing - provided to storage tank. • Double Jumpers - provided to pipeline flanges.

7.4.4 PROPOSED SAFETY MEAUSRE

DO's and DON'T's for strengthening HSE

DO's:-

- Wash affected part immediately with plenty of water, if affected by hazardous substance
- Take the patients affected by toxic vapour to well-ventilated area.
- In case of vapour inhalation/gas poisoning, immediately render first aid to the patient and then move the patient to First Aid Centre.
- In case of emergency everyone should try to reach at Assembly point. Move in direction perpendicular to direction of gas leakage.
- In case of emergency all (except emergency staff) should reach at nearest assembly point.
- In case of vapour inhalation/gas poisoning, immediately render first aid to the patient and then move to First Aid Centre.
- Use ear plug/muff in high noise area.
- Work permit system to be followed before starting any hot work, vessel entry or working at height.

- Barricade and mark hazardous/unsafe area
- Ensure use of safety belt while working at height.
- Electrical cables should be protected from water and from attack by corrosive substances.
- Maintain good housing keeping, it will eliminate many unnecessary hazards.
- Protruding nail should be pulled out or bent over.
- All aisles, passage ways and stairways should be maintained, clean and unobstructed.
- Employees must know the locations of fire extinguisher and places of “fire exists”.
- During emergency be calm and do not get panicky.

DON’T’s:-

- Smoking or carry cigarettes/ bidies, match box, lighter, mobile phone or any instruments etc. in the plant/battery limit area to be strictly prohibited.
- Unauthorized entry into battery limits of every plant is prohibited.
- Moving in the plant area without wearing safety helmet and safety shoes should not be permitted.
- Wearing of loose garments, ornaments etc. in the plant area.
- Cotton waste, paper, oil etc. should not be left in plant area.
- Do not follow shortcuts, use proper roads, pathways, wherever provided.
- Do not wear chappals or slippers in the plant.
- No automobile vehicle should be allowed to enter in the plant area without muffler or exhaust.
- Chewing of tobacco, betel nut, chewing gum and other such items are not allowed in any of process utility area.

Table 7.5: Details of firefighting arrangements

Department wise List of fire extinguishers with mapping if available	Fire load calculation will be done before fire extinguishers procurements and will be installed as per fire load and type of fire requirements in all areas of the plant.
Fire hydrant system	Fire hydrant system will be installed as per NFPA/TAC norms. Proposed drawing is provided in detailing report.
Sprinkler system	Sprinkler system will be installed in tank farm area and also will be installed automatic sprinkler system with other suitable storage area.
Manual call point	MCP will be installed in plant.
Static earthing automation with pump	Static earthing relay will be provided at road tanker unloading point/ ramp.
Double static earthing provision in plant to each and every equipment, tanks, reactors and powder handling equipment.	Will take care for double static earthing provision to all equipment.
Fire and safety Organization	A well-established full flagged HSE organization set up will be available at site from project level.
Smoke detectors and gas detectors	Smoke detectors and gas detectors (LEL % based) will be installed in drum storage area and tank farm area.
Fire department	Full flagged fire department will round the clock and firefighting staff will be employed.
Fire prevention	Fire prevention steps will be adopted at design level and all built in safety measures will be installed at plant.
Environment control plan.	Total close process adopted for process. Vent condenser and scrubber provided for toxic gas/vapour emission control.

7.4.5 HAZARD IDENTIFICATION & CONSEQUENCE ANALYSIS

The details of probable hazards and consequences analysis for the probable hazards associated with the hazardous materials of the proposed project are described below.

7.4.5.1 HAZARD IDENTIFICATION

Risk assessment process rests on identification of specific hazards, hazardous areas and areas vulnerable to effects of hazardous situations in facilities involved in processing and storage of chemicals.

In fact the very starting point of any such assessment is a detailed study of materials handled & their physical / chemical / thermodynamic properties within the complex at various stages of manufacturing activity. Such a detailed account of hazardous materials provides valuable database for identifying most hazardous materials, their behaviour under process conditions, and their inventory in process as well as storage and hence helps in identifying vulnerable areas within the complex.

Hazards posed by particular installation or a particular activity can be broadly classified as fire and explosive hazards and toxicity hazards. Whether a particular activity is fire and explosive hazard or toxicity hazard primarily depends on the materials handled and their properties.

7.4.5.2 IDENTIFICATION OF HAZARDOUS AREA

A study of process as given in chapter 3 of the report indicates the following:

- All Plants and products will batch process plant.
- All hazardous liquid raw materials will charged in reactor by pumping, vacuum, gravity or by nitrogen pressure, etc. Powder raw materials will be charged through hoper in reaction tank.
- No inventory of any chemicals in process area.

Various products and raw materials used in the manufacturing processes are listed in Table-7.1 along with mode/type of storage & storage conditions. It can be readily seen that raw materials even though hazardous in nature, will be used in small quantities & storage quantities will also be kept very low at process plant. Most of hazardous chemicals are stored in dedicated Explosive licence premises. Hazardous properties are provided in Table-7.3, Occupational health impact to employees and emergency action plan and its antidotes provided in Table-7.14.

Hazardous material release scenarios can be broadly divided into 2 categories

I) Catastrophic failures which are of low frequency and

II) Ruptures and leaks which are of relatively high frequency.

Releases from failure of gaskets, seal, rupture in pipelines and vessels fall in the second category whereas catastrophic failure of vessels and full bore rupture of pipelines etc. fall into the first category.

Table 7.6: Typical failure frequencies

Item	Mode of failure	Failure frequencies
Atmospheric storage	Catastrophic failure Significant leak	10-9 /yr 10-5 /yr
Process Pipelines		
< = 50 mm dia	Full bore rupture Significant leak	8.8 x 10-7 /m.yr 8.8 x 10-6 /m.yr
> 50 mm <=150mm dia	Full bore rupture Significant leak	2.6 x 10-7 /m.yr 5.3 x 10-6 /m.yr
< 150 mm dia	Full bore rupture Significant leak	8.8 x 10-8 /m.yr 2.6 x 10-6 /m.yr
Hoses	Rupture	3.5 x 10-2 /m.yr

Table 7.7: Estimated Frequencies of Vapour Cloud Explosion

(1) Caused by **failure** of:	**Frequency**	**Units**
Pressure vessel	1E-5	occ/plant.yr
Special pipeline	1E-5 to 1E-4	occ/plant.yr
Normal pipeline	1E-4 to 1E-3	occ/plant.yr
Pump: normal duty	1E-2	occ/plant.yr
Pump: severe duty pump	1E-1	occ/plant.yr
Reciprocating Compressor	1E-1	occ/plant.yr
(2) Caused by **leak** from:		
Batch reactor	1E-2 to 1E-1	occ/plant.yr
Tanker filling hose	1E-2 to 1E-1	occ/plant.yr

Table 7.8: Failure rates for pressure storage

Event	**Frequency or Probability**
Catastrophic failure of vessel: • Complete failure • Failure equivalent to 6in nozzle	 3E-6 occ/vessel.yr 7E-6 occ/vessel.yr
Fracture in liquid line: • Pipework • Fittings	 3E-7 occ/m.yr 5E-6 occ/item.yr
Release due to overfilling	1E-4 occ/vessel.yr
Fracture of vapour line	3E-6 occ/m.yr
Serious leak (1kg/s): • 6in pipework • 3in pipework • Flange • Pump seal	 6E-6 occ/m.yr 6E-5 occ/m.yr 3E-4 occ/m.yr 5E-3 occ/m.yr
Release in course of draining or sampling (1.5kg/s) • Release per operation • Draining operations • Sampling operations • Failure to recover during draining • Failure to recover during sampling	 1E-4 (release/operation) 50 occ/yr 100 occ/yr P=1E-1 P=1E-2

Evaluation of Process Areas:

All raw material and finished product will be stored in tank farm area and drum storage area and required material will be charged in process through pump and in close circuit. Considering this, the risk analysis and consequences studies are concentrated on below area.

(a) Feed Stock Road Tanker Unloading point.
(b) Feed Stock Tank Farm Storage Area.
(c) Carbon black storage area

7.4.5.3 MODES OF FAILURE

- Liquid release due to catastrophic failure of storage vessel or road tanker.
- Liquid release through a hole/crack developed at welded joints/flanges / nozzles / valves etc.
- Vapour release due to exposure of liquid to atmosphere in the above scenarios.

Table 7.9: Estimated Events and their causes

Event		Causes
Tank on fire	-	Catastrophic failure of tank + Ignition availability
Pool fire	-	Failure of liquid outlet line + Ignition availability
Fire Ball/BLEVE	-	Catastrophic failure of road tanker/ storage tank
Flash Fire	-	Vapour generation due to substrate and wind
UVCE	-	Vapour cloud generation and about 15 % of total vapour mass Above the UEL-LEL % Ignition availability
Toxic gas dispersion	-	Toxic Gas release due to catastrophic failure of tonner/bullet/Tanks and ignition not available within LEL- UEL range.

Considering the quantity of storages & nature of Toxic nature and Flammable storage, following scenarios were taken up for detailed analysis & safe distances computed:

Failure cases considered for consequence analysis are representative of worst-case scenarios. Probability of occurrence of such cases is negligible (less than 1 x 10-6 per year) because of strict adherence to preventive maintenance procedures within the complex. General probabilities for various failure is provided in Table-7.7, 7.8 and 7.9, but consequences of such cases can be grave & far reaching in case such systems fail during life history of the company. Hence such scenarios are considered for detailed analysis. It is to be noted however that such situations are not foreseeable or credible as long as sufficient measures are taken. Also, consequence analysis studies help us evaluate emergency planning measures of the Company.

7.4.5.4 IMPACT CRITERIA

Consequence assessment is conducted to understand the impact of identified scenarios in terms of Thermal radiation (Jet fire, Flash Fire), Explosion (vapour cloud explosion- UVCE). A range of potential consequences are assessed for each of the release scenarios identified. This step identifies the fatality probability, based on hazard type and caused by each release case, to personnel at a range of distances.

Estimate of damage or impact caused due to thermal radiation, explosion overpressure and toxic effects is generally based on the published literature on the subject. The actual potential consequences from these likely impacts can then be visualized by superimposing the damage effect zones on the proposed layouts and identifying the elements within the project which might be adversely affected, should one or more hazards materialize in practice. The damage criteria used in the present study is described in the following sections.

7.4.5.5 DAMAGE CRITERIA/ LEVEL OF CONCERN

Damage effects vary with different scenarios. Calculations for various scenarios are made for the above failure cases to quantify the resulting damages.

The results are translated in term of injuries and damages to exposed personnel, equipment, building etc.

Tank on fire /Pool fire due to direct ignition source on tank or road tanker or catastrophic failure or leakage or damage from pipeline of storage facilities or road tanker unloading arm, can result in heat radiation causing burns to people depending on thermal load and period of exposure.

All such damages have to be specified criteria for each such resultant effect, to relate the quantifier damages in this manner, damage criteria are used for Heat Radiation.

Table 7.10: Practical Significance of Radiation Intensity

Heat Radiation (kW/m^2)	Damage to Equipment	Damage to People
1.2	Solar Heat at Noon	
1.6	---	Minimum Level of pain threshold
2.0	PVC insulated cables damaged	---
4.0	**---**	**Causes pain if duration is longer than 20 seconds. Blistering is unlikely.**
4.5	---	Blistering of skin
6.0	---	First degree burn
9.5	---	Pain threshold reached after 8 seconds. Second degree burns after 20 seconds.
12.0	---	Initiation of secondary fires
12.5	**Minimum energy to ignite wood with a flame; Melts plastic tubing.**	**First degree burns in ten seconds. 1% Fatality in 20 sec, 30% Fatality in 30 seconds.**
16.0	---	Severe burns after 5 seconds.
21.2	---	1% Fatality in 10 seconds, with protection of clothing
25.0	Minimum energy to ignite wood at indefinitely long exposure without a flame.	100 % Fatality in 1 (one) minute.
27	--	Third degree burns (30secs)
30.0	Damage to plant & machinery	--
37.5	**Severe damage to plant**	**100 % Fatality**

7.4.5.6 EXPLOSION / OVER PRESSURE

In case of vapour cloud explosion, two physical effects may occur:

- A flash fire over the whole length of the explosive gas cloud;
- A blast wave, with typical peak overpressures circular around ignition source.

Table 7.11: Practical Significance of Overpressure

Overpressure (bar)	Mechanical Damage to Equipment	Damage to People
0.2068	Heavy damage to plant & structure	Fatality probability = 1 for humans indoor as well as outdoor > 50% eardrum damage > 50% serious wounds from flying objects
0.1379	Repairable damage to building and house	1% death > 1% eardrum damage > 1% serious wounds from flying objects
0.02068	10% glass damage, Safe distance	---

7.4.5.7 EFFECTS OF RELEASE OF HAZARDOUS SUBSTANCES

Hazardous substances may be released as a result of failures / catastrophes, causing possible damage to the surrounding area. In the following discussion, an account is taken of various effects of release of hazardous substances and the parameters to be determined for quantification of such damages.

In case of release of hazardous substances the damages will depend largely on source strength. The strength of the source means the volume of the substance released. The release may be instantaneous or semi-continuous. In the case of instantaneous release, the strength of the source is given in kg and in semi-continuous release the strength of the source depends on the outflow time (kg/s.).

In order to fire the source strength, it is first necessary to determine the state of a substance in a vessel. The physical properties, viz. Pressure and temperature of the substance determine the phase of release. This may be gas, gas condensed to liquid and liquid in equilibrium with its vapour or solids.

Instantaneous release will occur, for example, if a storage tank fails. Depending on the storage conditions the following situations may occur.

The source strength is equal to the contents of the capacity of the storage system.

In the event of the instantaneous release of a liquid a pool of liquid will form. The evaporation can be calculated on the basis of this pool.

Fire

Tank on Fire/Pool Fire:

In the event of the instantaneous release of a liquid a pool of liquid will form. The evaporation can be calculated on the basis of this pool.

The heat load on object outside a burning pool of liquid can be calculated with the heat radiation model. This model uses average radiation intensity, which is dependent on the liquid. Account is also taken of the diameter-to-height ratio of the fire, which depends on the burning liquid. In addition, the heat load is also influenced by the following factors:

- Distance from the fire
- The relative humidity of the air (water vapour has a relatively high heat-absorbing capacity)
- The orientation i.e. horizontal/vertical of the objective irradiated with respect to the fire.

Flash Fire:

The vapour / gas release from a pool would disperse under the influence of the prevailing wind; with material concentration in air reducing with distance. At a particular location downwind, the concentration will drop below its lower flammable level (LFL) value. If ignited within the flammable envelope, the mass of the material available between the LFL and ½ LFL will be likely to burn as a flash fire; rapidly spreading through the cloud from the point of ignition back to the source of release.

Although flash fires are generally low intensity transitory events, the burning velocity is quite high and escape following ignition is not possible. Flash fires often remain close to the ground, where most ignition sources are present. It is assumed that personnel caught inside a flash fire will not survive while those outside suffer no significant harm. If other combustible material is present within the flash fire it is also likely to ignite and a secondary fire could result.

Explosion:

Late Explosion (UVCE):

The magnitude of the vapour cloud explosion is dependent on the size of the gas cloud that has formed and the degree of congestion in the area, as these determine the acceleration of the flame front.

The TNO GAMES model is used for modelling of vapour cloud explosions, as the model incorporates the characteristics of the explosion, such as the type of fuel, its reactivity, the effect of obstacles in the congested region, etc. Turbulence is the governing factor in blast generation, which could intensify combustion to the level that will result in an explosion. Obstacles in the path of vapour cloud or when the cloud finds a confined area, as under the bullets, often create turbulence. Insignificant level of confinement will result in a flash fire. The VCE will result in overpressures.

It may be noted that VCEs have been responsible for very serious accidents involving severe property damage and loss of lives. Vapour Cloud Explosions in the open area with respect to Pure Methane is virtually impossible due to their lower density.

7.4.6 CONSEQUENCE ANALYSIS

In the risk analysis study, probable damages due to worst case scenarios were quantified and consequences were analysed with object of emergency planning. Various measures taken by the company and findings of the study were considered for deciding acceptability of risks.

Table 7.12: The catastrophic/ rupture failure and Maximum Credible Loss Scenarios (MCLS) identified for plant base on above criteria.

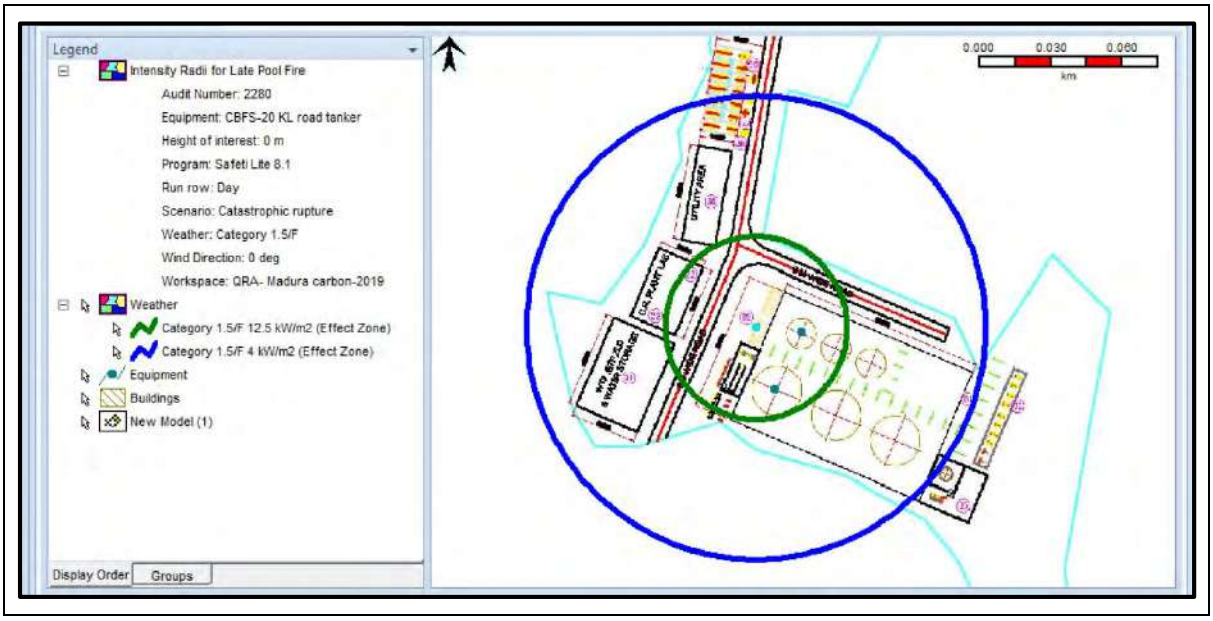
Sec. No.		Scenario Description	Storage Condition (A/G or U/G)	Material	Equipment	Capacity KL/MT	Operating Pressure Kg/cm^2& temperature ^{0}C
1		Feed Stock - 20 KL Road Tanker Catastrophic rupture	A/G	Feed Stock	Road Tanker	20 KL	ATP
	1.1	Pool Fire					
2		Feed Stock - 20 KL Road Tanker unloading Hose 100% FBR					
	2.1	Pool Fire					
3		Feed Stock - 5000 KL Storage Tank Catastrophic rupture	A/G	Feed Stock	Storage Tank	5000 KL	ATP
	3.1	Pool Fire					
	3.2	Late Explosion Worth Case					
4		Feed Stock - 5000 KL Storage Tank 25 mm Leak					
	4.1	Pool Fire					
5		Feed Stock - 5000 KL Storage Tank 10 mm Leak					
	5.1	Pool Fire					
6		Feed Stock - 1250 KL Storage Tank Catastrophic rupture	A/G	Feed Stock	Storage Tank	1250 KL	ATP
	6.1	Pool Fire					
	6.2	Late Explosion Worth Case					
7		Feed Stock - 1250 KL Storage Tank 25 mm Leak					
	7.1	Pool Fire					
8		Feed Stock - 1250 KL Storage Tank 10 mm Leak					
	8.1	Pool Fire					
9		Carbon Black - 3000 T FG Store	Ware House	Carbon Black	Bags	37500 T	ATP
	9.1	Fire in warehouse					
	9.2	Dust Explosion					

Table 7.13: Consequence Results

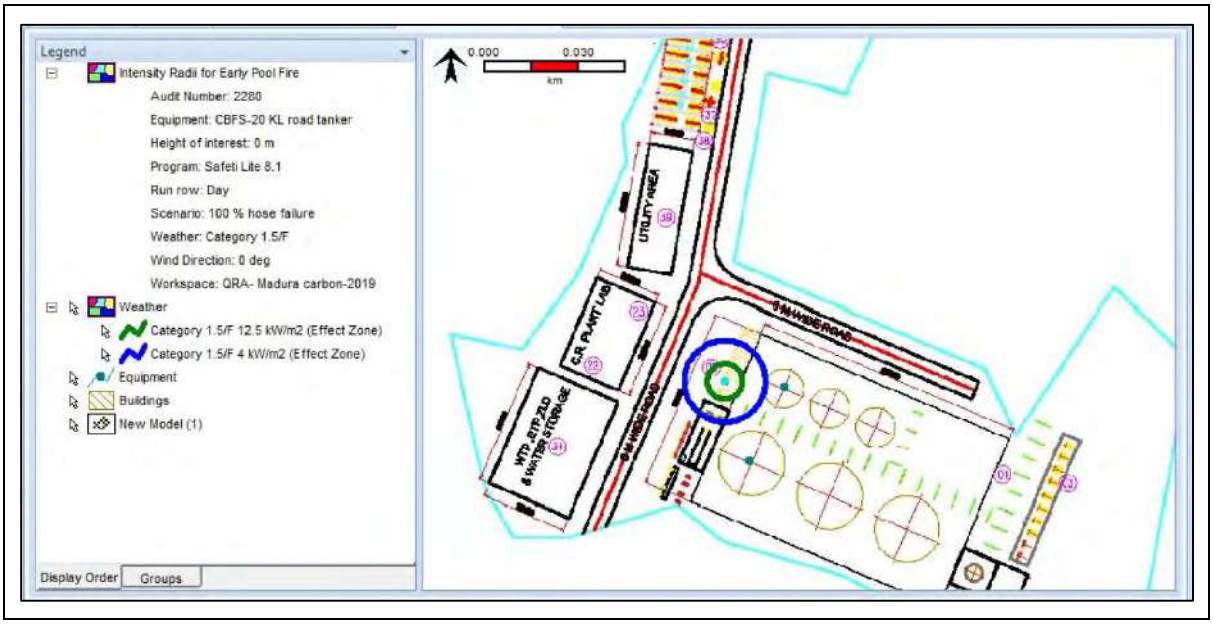
Sce. No	Scenario	Geographical Co-ordinates	Failure Case	Pool Fire Radiation Intensity (Kw / M^2)			Flash Fire Fraction		Late Explosion Worth Case (Bar)		
				37.5	12.5	4.0	6000 ppm	3000 ppm	0.2068	0.1379	0.02068
1.	Feed Stock - 20 KL Road Tanker	20°17'58.39"N, 72°50'21.35"E	Catastrophic Rupture	NR	37.81	95.63	NR	5.81	NR	NR	NR
			Unloading Hose 100 % FBR	NR	5.58	12.87	NR	NR	NR	NR	NR
2.	Feed Stock - 5000 KL Storage Tank	20°17'57.97"N, 72°50'21.84"E	Catastrophic Rupture	NR	49.63	122.64	NR	19.95	11.29	11.72	18.89
			25 mm Leak	NR	33.62	82.75	NR	4.93	NR	NR	NR
			10 mm Leak	NR	15.63	39.72	NR	NR	NR	NR	NR
3.	Feed Stock - 1250 KL Storage Tank	20°17'58.75"N, 72°50'22.17"E	Catastrophic Rupture	NR	41.33	105.1	NR	13.69	11.15	11.13	17.91
			25 mm Leak	NR	31.41	79.02	NR	4.61	NR	NR	NR
			10 mm Leak	NR	14.93	38.31	NR	NR	NR	NR	NR
4.	Carbon Black Product - 3000 T FG Store	20°18'12.11"N, 72°50'17.96"E	Warehouse Fire	42.2	54.2	67.6	--	--	4.87	6.02	28.96

7.4.6.1 CONSEQUENCE CONTUORS

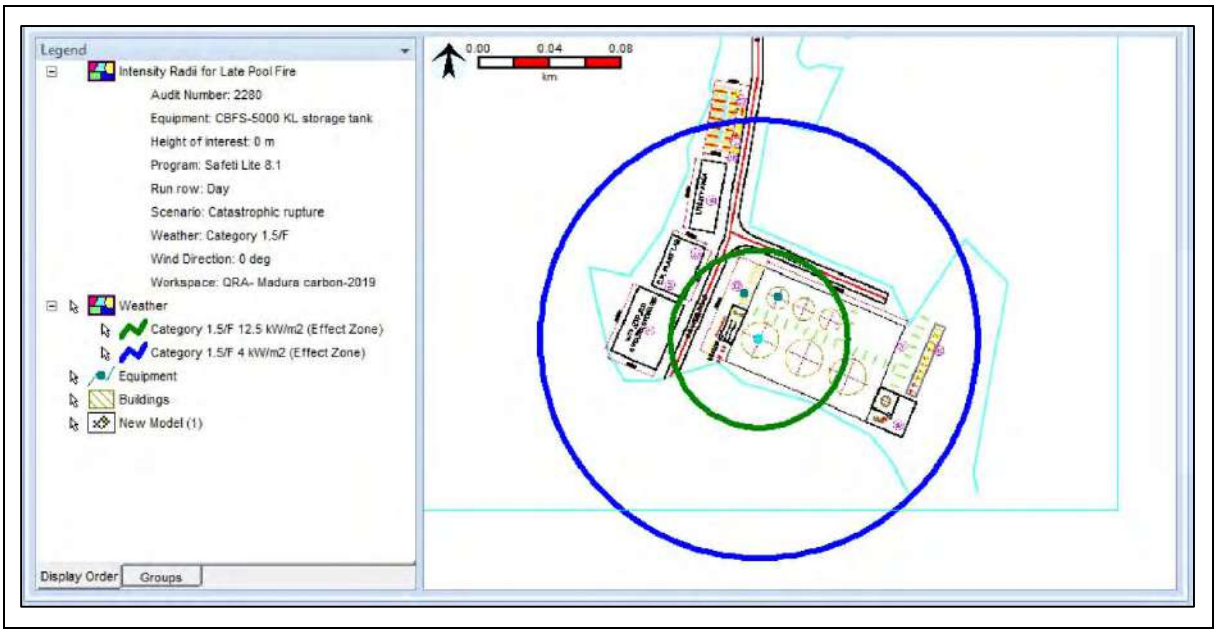
Scenario 1.1: Feed Stock - 20 KL Road Tanker Catastrophic rupture: Pool Fire



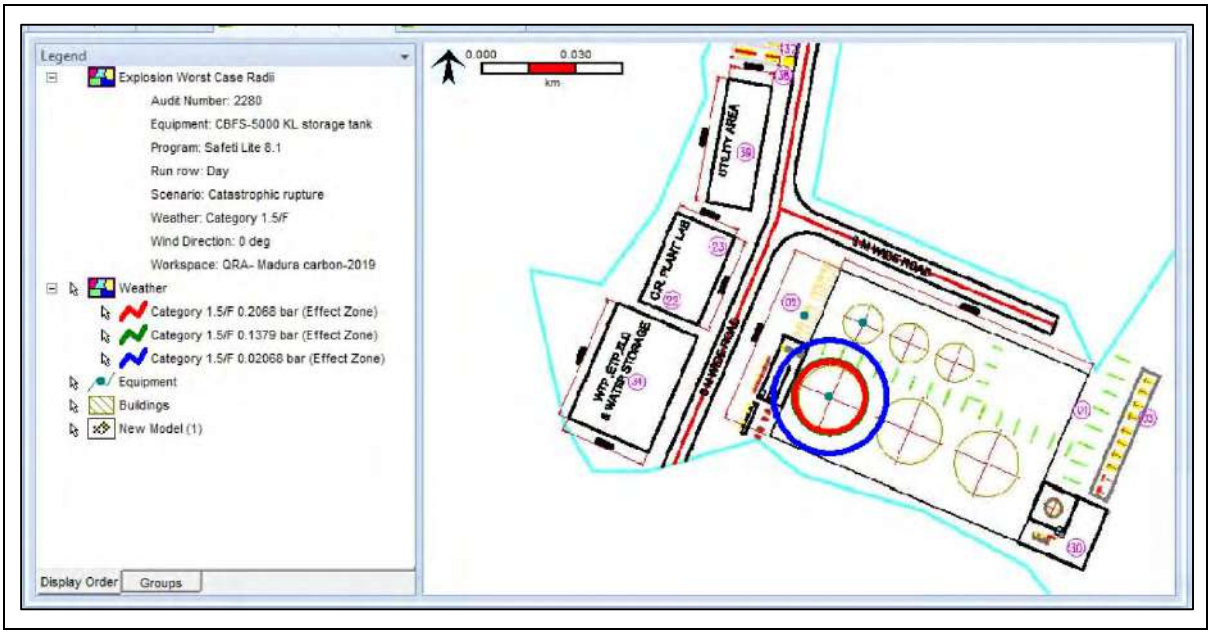
Scenario 2.1: Feed Stock - 20 KL Road Tanker unloading Hose 100% FBR: Pool Fire



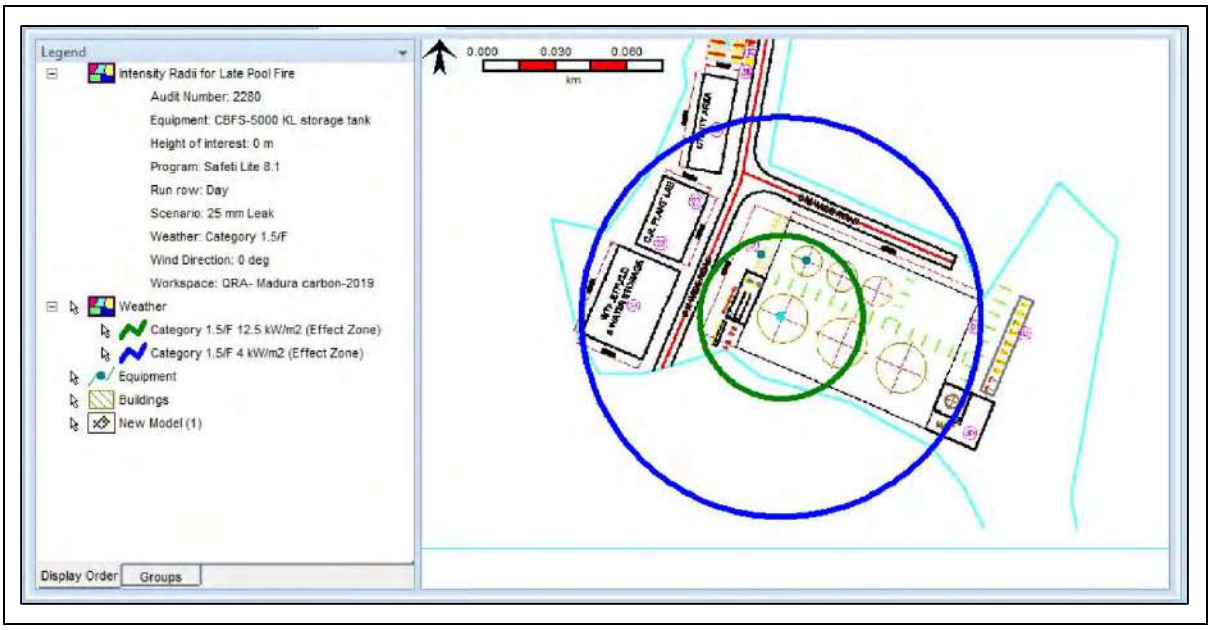
Scenario 3.1: Feed Stock - 5000 KL Storage Tank Catastrophic rupture: Pool Fire



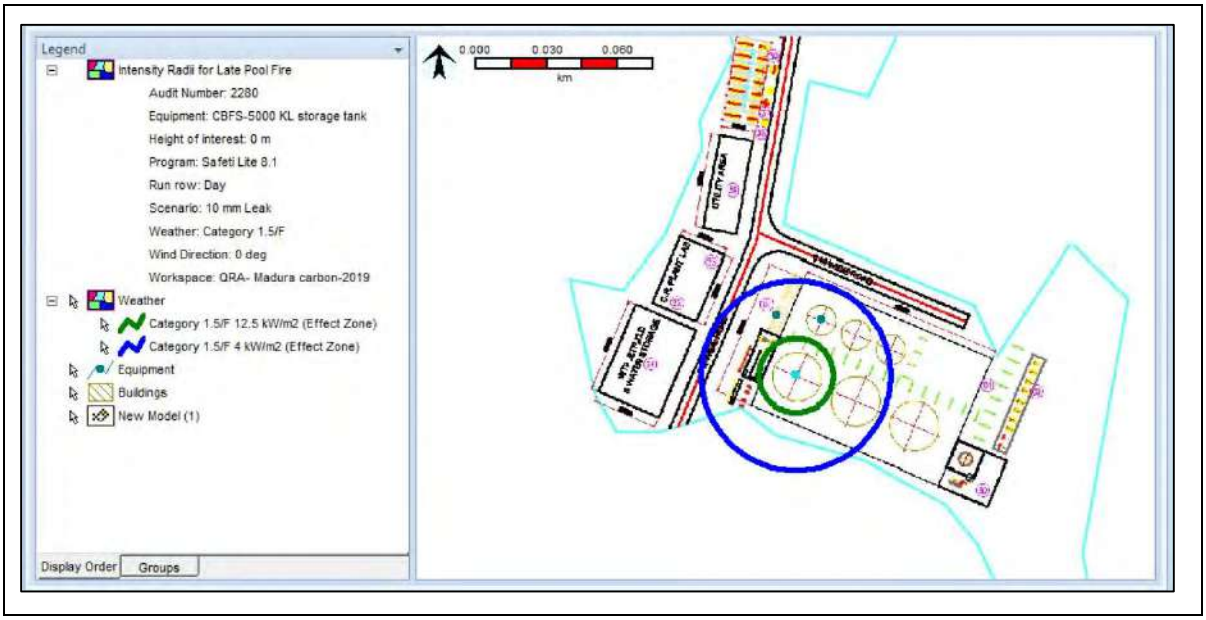
Scenario 3.2: Feed Stock - 5000 KL Storage Tank Catastrophic rupture : Late Explosion Worth Case



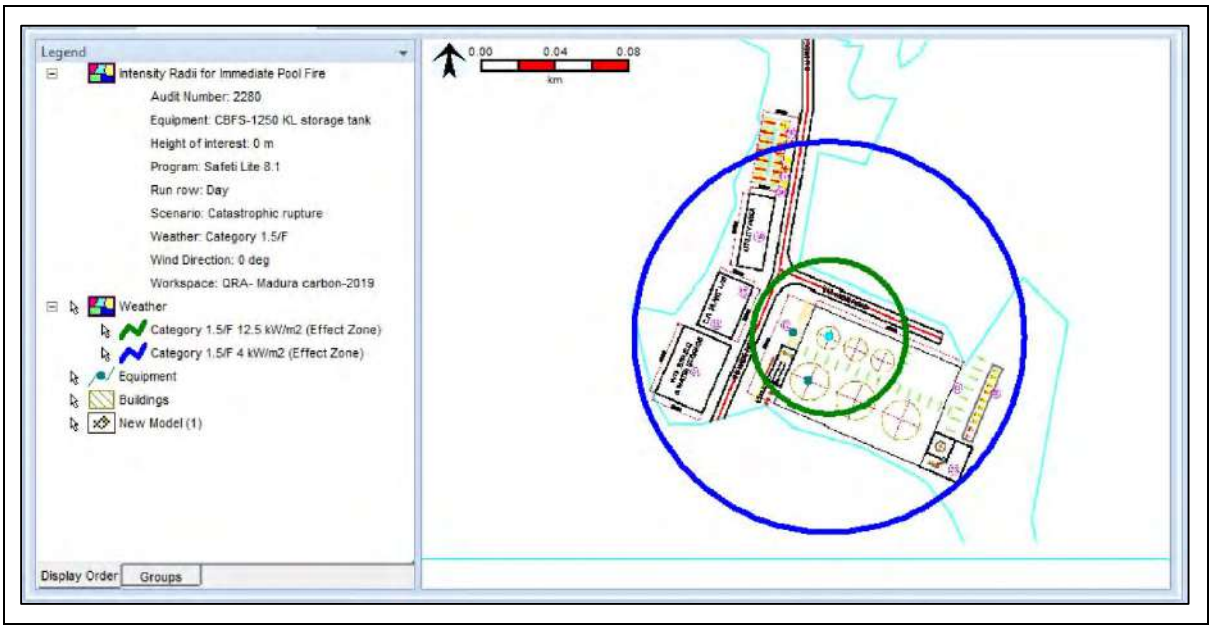
Scenario 4.1: Feed Stock - 5000 KL Storage Tank 25 mm Leak: Pool Fire



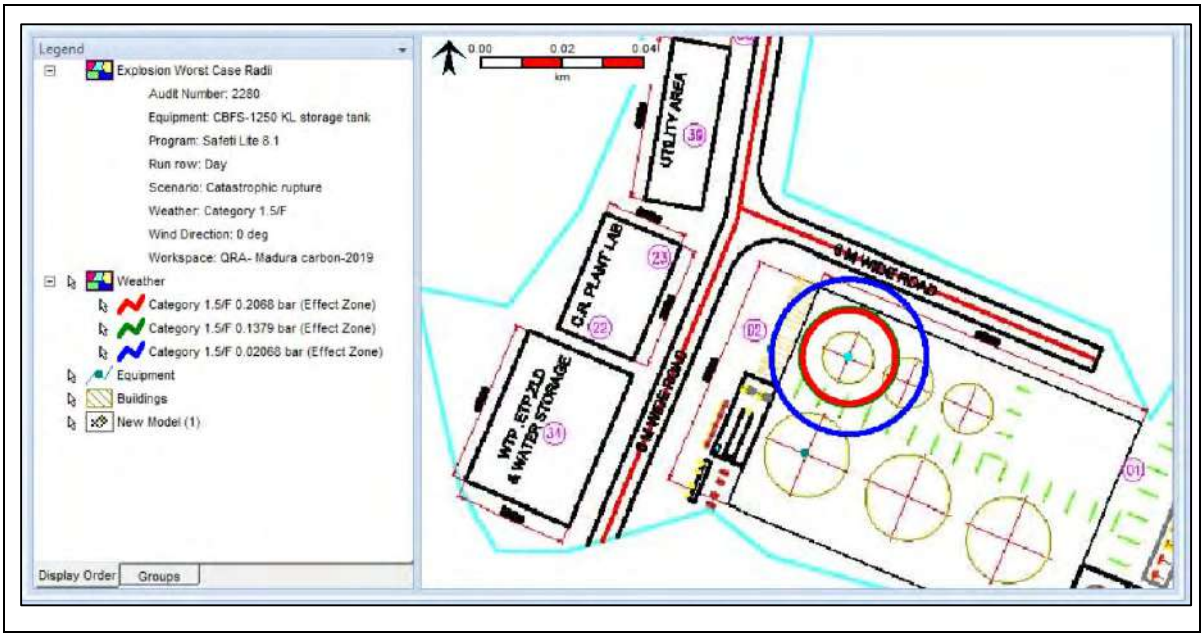
Scenario 5.1: Feed Stock - 5000 KL Storage Tank 10 mm Leak : Pool Fire



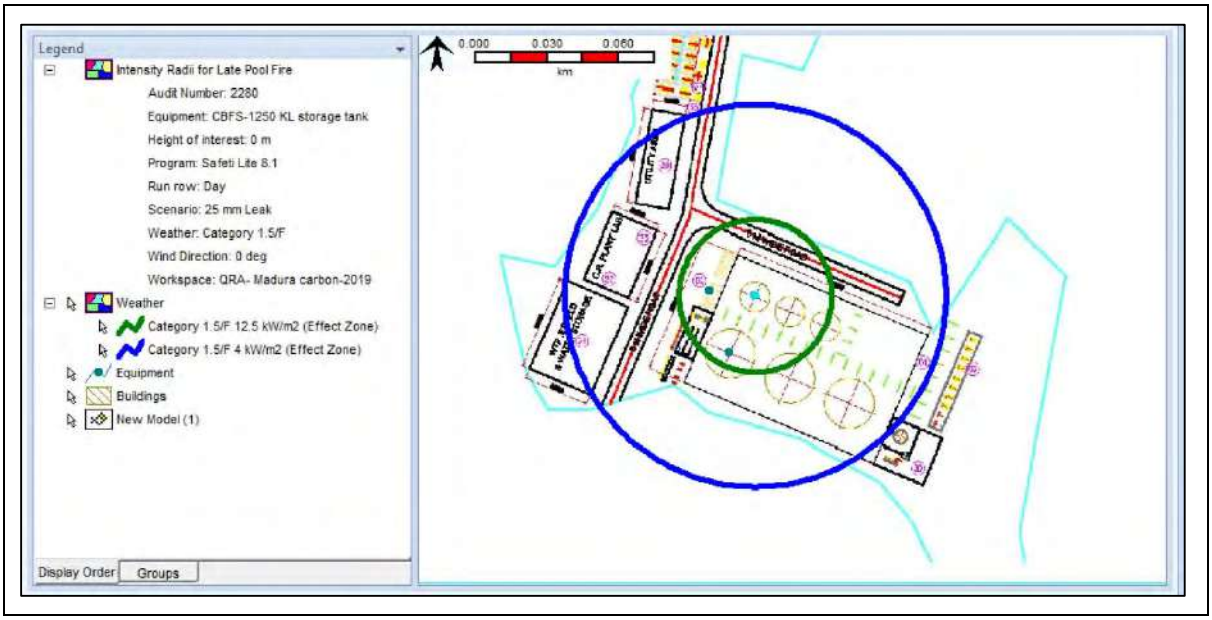
Scenario 6.1: Feed Stock - 1250 KL Storage Tank Catastrophic rupture: Pool Fire



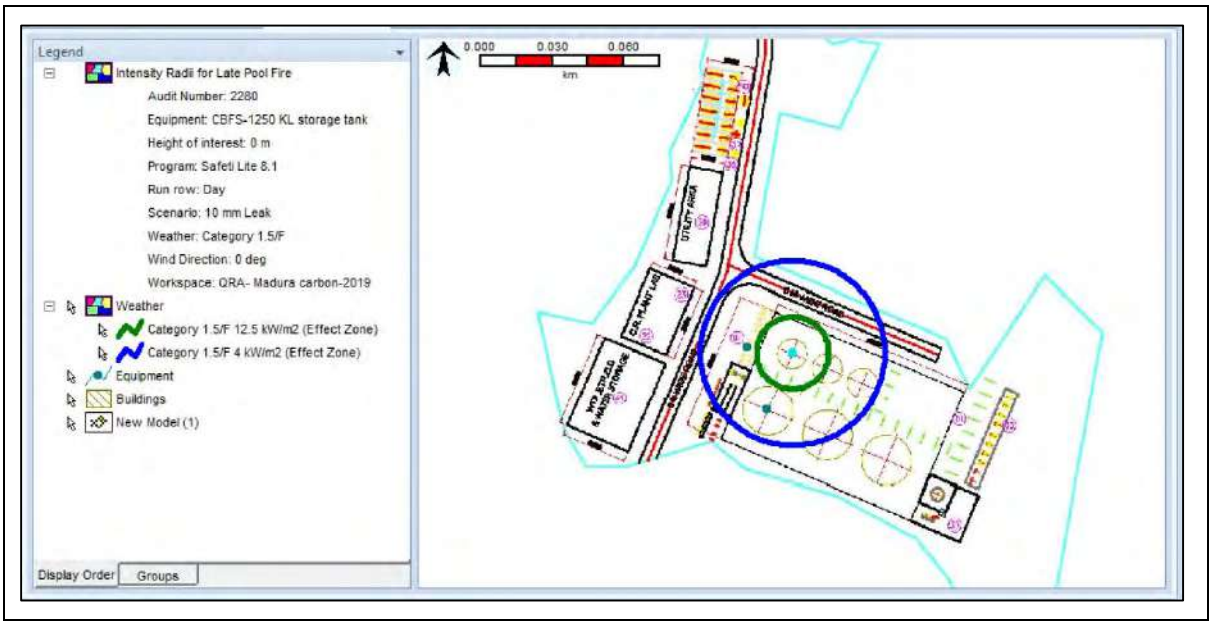
Scenario 6.2: Feed Stock - 1250 KL Storage Tank Catastrophic rupture: Late Explosion Worth Case



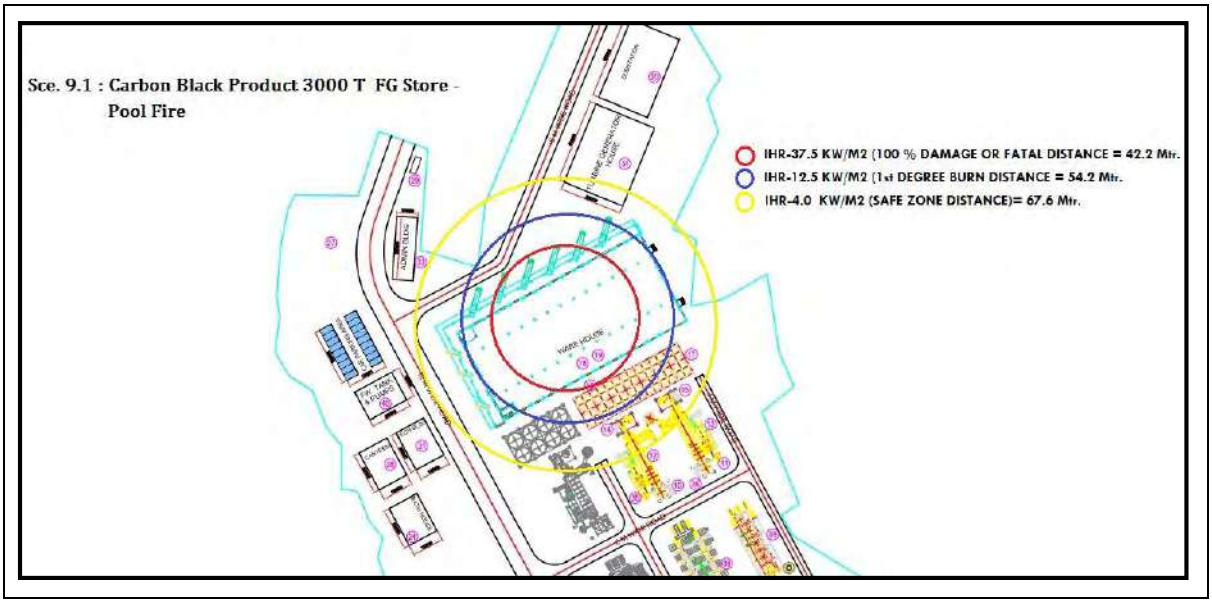
Scenario 7.1: Feed Stock - 1250 KL Storage Tank 25 mm Leak : Pool Fire



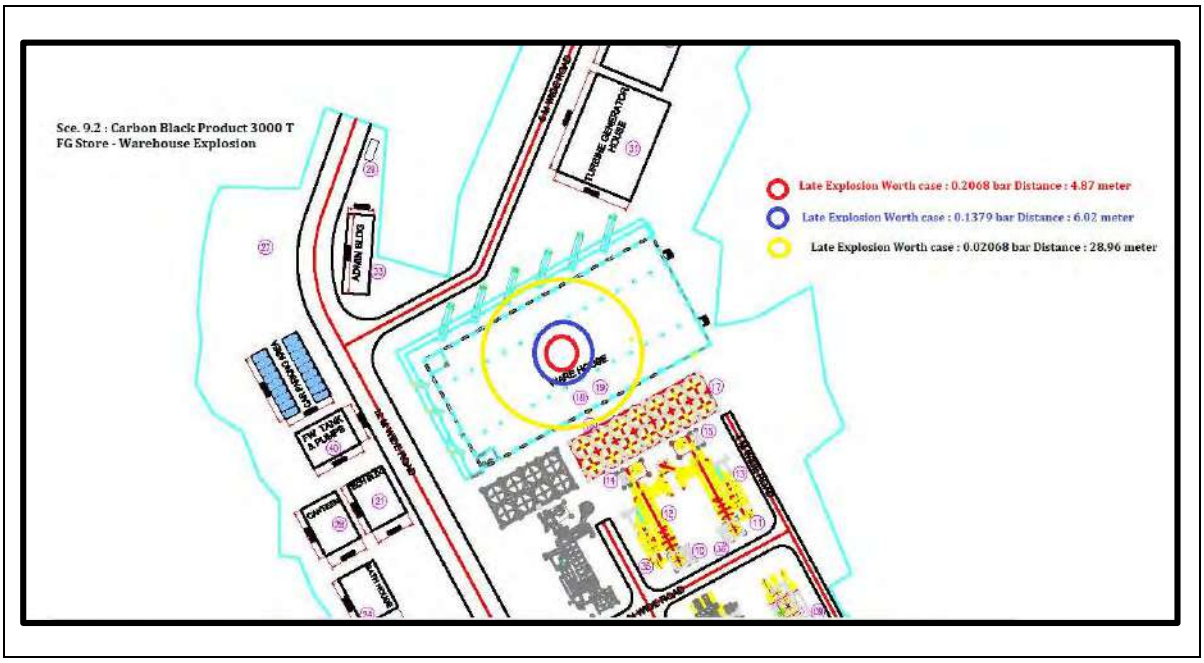
Scenario 8.1: Feed Stock - 1250 KL Storage Tank 10 mm Leak: Pool Fire



Scenario 9.1: Carbon Black Product 3000 T FG Store – Fire



Scenario 9.2: Carbon Black Product 3000 T FG Store - Warehouse Explosion



7.4.7 CONCLUSION

Flash Fire Cases

Flash Fire is usually dispersion case, where the extent of cloud until the flammability limits (LEL, UEL) is measured. The important factor in measuring the extent of cloud is atmospheric stability & wind speed. As the wind speed increases, the cloud tends to move further down & gets diluted which results in lower quantity of material in the flammability limits i.e. lower strength of flash fire. The highest damage distances for flash fire are for isolatable is Scenario 3 Feed Stock - 5000 KL Storage Tank Catastrophic rupture at 1.5F weather condition. The maximum damage distance for Flash Fire is **19.95 meter** (3000 ppm) – 1.5F of whether condition. UFL is defined as burning zone, which means people caught within the burning zone are exposed to a fatality rate of 100%.

Pool Fire

As can be seen from the results of the summary of the Quantitative Risk Analysis study, the maximum Fatality distances of scenarios upto **42.2 m** at **37.5 kW/m^2**, **54.2 meter** at **12.5kW/m^2** and **122.64 meter** at **4 kW/m^2**.

Late Explosion worth case - UVCE

As can be seen from the results of the summary of the Quantitative Risk Analysis study, the maximum Fatality distance of scenarios upto **11.29 m** at **0.2068 bar**, **11.72 m** at **0.1379 bar** and **28.96 m** at **0.02068 bar**.

7.4.8 RECOMMENDATIONS

On site emergency plan & preparedness plan to be prepared and implemented to combat such situations. To minimize the consequential effects of the risk scenarios, following steps are recommended.

- Plant should meet provisions of the Manufacture, storage & Import of Hazardous Chemicals Rules, 1986 & the factories Act, 1948.
- Process hazard analysis and HAZOP study will be conducted for each process and recommendation to be implemented.
- Proposed safety measures shall be implemented at commissioning stage as per provided in report.
- Explosive licence and other statutory norms shall be incorporated in plant construction.
- Process parameter and safety shall be considered as a built in safe system.
- All new employees shall be trained for safe operation, handling and storage of hazardous process and material.
- Emergency plan shall be prepared as per QRA hazardous scenarios and periodic On Site Emergency, Mock Drills should be conducted, in order to train the staff and make them mentally prepare to tackle emergency.
- Emergency handling facilities like hydrant system sprinkler system, Gas and smoke detectors, firefighting equipment, SCBA sets, etc. should be installed at initial stage of the construction and maintained in a tip top condition round the clock.
- Fire & Safety organization setup to be plan for better plant safety.
- HSE management system shall be prepared and implemented at early stage of the plant commissioning.
- Permit to work system shall be implemented on 100 % basis for hazardous work to be carried out in the plant.
- Induction safety course should be prepared and training of all new employees before starting duties in plant should be made compulsory.
- Safety organizational setup to be plan at construction level and HSE department staff to be employed for system setup for proposed facilities.

- Double Static earthing and electrical earthing needs to be provided to all equipment of the plant and earth pit testing to be carried out once in a six months.
- Safe operating procedure to be prepared for hazardous process and material handling process.

7.4.9 OCCUPATIONAL HEALTH & SAFETY

- In process there is no any high noise, high heat stress and low level illumination exposure to workers.
- Manual material handling only the causes of musculo-sketal disorders (MSD), backache, pain in minor and major joints, fatigue etc. following measure have been taken to avoid above mentioned ill health effect to workers.
- Below 25 kgs weight will be handling by a worker if required to do so.
- Material handling lorry-cart, drum handling trolley, fork lift, stacker, etc. will be used for material handling.
- Training will be carried out for Manual material handling.
- Ergonomics study will be carried out before commissioning of the plant and correct material flow, Process flow of work place will be designed.

Following activities will be carried out for Occupational health of the workers.

- Treatment part (OPD) for both company and contractor employees.
- Occupational related problems will be studded like ergonomic issues and control measures
- Prevention part- Pre medical examination and periodical medical examination for operators, helpers, chemists.
- Profile active (Health Awareness programme)

Table 7.14: Occupational health impact on employees, control measures, action plan if accident occur and its Antidotes

Sr. No.	Chemical	Occupational health impact on employees	Measures to keep exposure below TLV/ PEL	EMP for STEL & IDLH
A	B	C	D	E
1.	Feed Stock	Prolonged exposure to the preparation may cause serious health effects. Known or suspected carcinogen for humans	Store in cool, clean, ventilated, fireproof storage area. Keep away from heat, spark, open flame and incompatible materials, (strong oxidizing agents). Protect containers against physical damages.	Flush eyes with plenty of water for at least 10 minutes. Remove contaminated clothing. Wash affected skin with soap and water. If inhaled, remove victim to fresh air. Give artificial respiration. If breathing has stopped. If ingested, have victim drink water or milk. Do not induce vomiting. Obtain medical attention immediately.
2.	Potassium Nitrate CAS: 7757-79-1	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention. Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately if symptoms occur. Move to fresh air. Get medical attention immediately if symptoms occur. If not breathing, give artificial respiration Do not induce vomiting. Obtain medical attention	Use personal protective equipment. Ensure adequate ventilation. Avoid dust formation. Avoid contact with skin, eyes and clothing. Avoid release to the environment. See Section 12 for additional ecological information.	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment
3.	Carbon Black Powder CAS number: 1333-86-4	Carbon black may form an explosible dust-air mixture if dispersed. Carbon black can burn or smolder at temperatures greater than 400ºC (>752ºF) releasing hazardous products such as carbon monoxide (CO), carbon dioxide, and oxides of	Take affected persons into fresh air. If necessary, restore normal breathing through standard first aid measures. Wash skin with mild soap and water. If symptoms persist,	Effective engineering practices, good housekeeping practices, and effective dust removal systems are necessary to minimize carbon black emissions and resultant build-up on horizontal and vertical surfaces. Fugitive carbon black emissions should be minimized and housekeeping practices should be instituted.

Sr. No.	Chemical	Occupational health impact on employees	Measures to keep exposure below TLV/ PEL	EMP for STEL & IDLH
		sulfur. May cause reversible mechanical irritation. May cause mechanical irritation, soiling, and drying of skin. No cases of sensitization in humans have been reported. Dust may be irritating to the respiratory tract	seek medical attention. Rinse eyes thoroughly with large volumes of water keeping eyelids open. If symptoms develop, seek medical attention. Do not induce vomiting. If conscious, give several glasses of water. Never give anything by mouth to an unconscious person	Use foam, carbon dioxide (CO_2), dry chemical, or water fog. A fog spray is recommended if water is used. Do not use high pressure media which could cause the formation of a potentially explosible dust-air mixture. Wear full protective firefighting gear, including selfcontained breathing apparatus (SCBA). Wet carbon black produces very slipper walking surfaces.

M/s. Madura Carbon (India) Ltd. will conduct the pre-medical and periodical health examinations of workers/employees. The details for conducting the medical health check-up are given as below:

- For pre- medical health check-up industry will require detail of his/her previous occupation
- Name of Person: his/her personal information like age, date of birth, sex, residential address, father/husbands name, family doctor address, emergency contact no, blood group.
- Details of family history, personal history, past history like allergy, birth defects, psychological disorder, [for person: smoking, alcohol, other addiction, marital status, no of children and their health status.]

Following will be the common test parameters for both pre- medical and periodical health check-up:

- Height
- Weight
- Pulse rate
- Blood pressure
- Blood group
- Respiration: rate, rhythm, type
- Anaemia
- Pallor
- Skin condition
- Temperature
- Fatigability
- Sweating
- Sleep
- Urination
- Appearance
- Build
- Nutrition
- Nose
- Throat
- Tonsils
- Teeth
- Gums
- Tongue
- Lips
- Nails
- Thyroid
- Any other abnormality

7.4.10 DISASTER MANAGEMENT PLAN

An onsite emergency in the industries involving hazardous processes or hazardous installations in the plant is one such situation that has potential to cause serious injury or even loss of life. It may cause extensive damage to property and serious disruption in the work area. It effects are usually, confined to factory or in several departments of factory premises. An emergency begins when operator at the plant or in charge of storage plant cannot cope up with a potentially hazardous incident, which may turn into an emergency.

A. Onsite/Off Site Emergency Plan

7.4.10.1 Objectives of on-site emergency plan:

A quick and effective response at during an emergency can have tremendous significance on whether the situation is controlled with little loss or it turns into a major emergency. Therefore, purpose an emergency plan is to provide basic guidance to the personnel for effectively combating such situations to minimize loss of life, damage to property and loss of property. An objective of Emergency Planning is to maximize the resource utilisation and combined efforts towards emergency operations are as follows:

DURING AN EMERGENCY

- To increase thinking accuracy and to reduce thinking time.
- To localize the emergency and if possibly eliminates it.
- To minimize the effects of accident on people and property.
- To take correct remedial measures in the quickest time possible to contain the incident and control it with minimum damage.
- To prevent spreading of the damage in the other sections.
- To mobilize the internal resources and utilize them in the most effective way
- To arrange rescue and treatment of causalities.

DURING NORMAL TIME

- To keep the required emergency equipment in stock at right places and ensure the working condition.
- To keep the concerned personnel fully trained in the use of emergency equipment.
- To give immediate warning tooth surrounding localities in case of an emergency situation arising.
- To mobilize transport and medical treatment of the injured.
- To get help from the local community and government officials to supplement manpower and resources.
- To provide information to media & Government agencies, Preserving records, evidence of situation for subsequent emergency etc.

SCOPE OF OSEP

This OSEP is prepared for industrial emergencies like fires, explosions, toxic releases, and asphyxia and does not cover natural calamities and societal disturbances related emergencies (like strikes, bomb threats, civil commission's etc.)

ELEMENTS OF ONSITE EMERGENCY PLAN

The important elements to be considered in plan are:

- Emergency organization
- Emergency Facilities.
- Roles and Responsibilities of Key Personnel and Essential Employee.
- Communications during Emergency

- Emergency Shutdown of Plant & Control of situation.
- Rescue Transport & Rehabilitation.
- Developing Important Information.

METHODOLOGY

The consideration in preparing Emergency Plan will be included the following steps:

- Identification and assessment of hazards and risks.
- Identifying, appointment of personnel & Assignment of Responsibilities.
- Identification and equipping Emergency Control Centre.
- Identifying Assembly, Rescue points Medical Facilities.
- Formulation of plan and of emergency sources.
- Training, Rehearsal & Evaluation.
- Action on Site.

Earlier, a detailed Hazard Analysis and Risk Assessment was carried out on hazards and their likely locations and consequences are estimated following the standard procedure. However, the causing factors for above discussed end results may be different and causing factors are not discussed in this plan.

EMERGENCIES IDENTIFIED

Emergencies that may be likely at bulk fuel storage area, process plant, cylinder storage area, and drum storage shed, and autoclave reactor area. There are chances of fire and explosive only.

OTHERS

Other risks are earthquake, lightning, sabotage, bombing etc., which are usually, not in the purview of management control.

EMERGENCY ORGANISATION

Plant organization is enclosed. Based on the plant organization, which includes shift organization, an Emergency Organization is constituted towards achieving objectives of this emergency plan. Plant Manager is designated as Overall in Charge and is the Site Controller. The following are designated as Incident Controllers for respective areas under their control. Shift in charge Engineer (Plant Operations) is designated at Incident Controller for all areas of plant.

EMERGENCY FACILITIES

EMERGENCY CONTROL CENTRE (ECC)

It is a location, where all key personnel like Site Controller, Incident Controller etc. can assemble in the event of onset of emergency and carry on various duties assigned to them.

Plant Manager's Office is designated as Emergency Control Centre. It has P&T telephone as well as internal telephones, ECC is accessible from plant located considerably away from process plant, Storage's and on evaluation of other locations, Plant Manager's Room find merit from the distance point of view, communication etc.

FACILITIES PROPOSED TO BE MAINTAINED AT EMERGENCY CONTROL CENTRE (ECC)

The following facilities and information would be made available at the ECC

- Latest copy of Onsite Emergency Plan and off sites Emergency Plan (as provided by District Emergency Authority).
- Intercom Telephone.
- P&T Telephone.
- Telephone directories (Internal, P&T)
- Factory Layout, Site Plan
- Plans indicating locations of hazardous inventories, sources of safety equipment, hydrant layout, location of pump house, road plan, assembly points, vulnerable zones, escape routes.
- Hazard chart.
- Emergency shut-down procedures.
- Nominal roll of employees.

- List and address of key personnel
- List and address of Emergency coordinators.
- List and address of first aides,
- List and address of first aid firefighting employees,
- List and address of qualified Trained persons.

7.4.10.2 Facilities/Systems

FIRE FIGHTING FACILITIES

- Internal hydrant system
- Portable extinguishers

FIRE PROTECTION SYSTEMS

These systems are proposed to protect the plant by means of different fire protection facilities and consist of

- Hydrant system for exterior as well as internal protection of various buildings/areas of the plant.
- Portable extinguishers and hand appliances for extinguishing small fires in different areas of the plant.
- Water cum foam monitor to be provided in bulk fuel storage area.
- Fire water pumps.
- Two (2) independent motor driven pumps each of sufficient capacity and head are proposed for the hydrant systems which is capable to extinguish Fire or cooling purpose.

HYDRANT SYSTEM

Adequate number of fire hydrants and monitors will be provided at various locations in and around the buildings and other plant areas. The hydrants will be provided on a network of hydrant mains drawing water from the hydrant pump, which starts automatically due to drop of pressure in the event of operating the hydrant valves. We are suggesting you go for TAC approved hydrant system for foolproof safety and benefit from fire policy premium.

E**MERGENCY ESCAPES**

The objective of the emergency escape is to escape from the hazardous locations, to the nearest assembly point or the other safe zone, for rescue and evacuation.

ASSEMBLY POINT

Assembly point is location, where, persons unconnected with emergency operations would proceed and await for rescue operation.

WIND SOCK

Wind socks for knowing wind direction indication would be provided at a suitable location to visible from many locations. It is proposed to install windsocks at plant and Administration Building so as to be visible from different locations in the plant.

EMERGENCY TRANSPORT

Emergency Ambulance would be stationed at the Administration Office and round the clock-driver would be made available for emergency transportation of injured etc. However, the other vehicles of the company also would be available for emergency services.

EMERGENCY COMMUNICATION

There are two kinds of communication system provided

(a) Regular P&T phones with intercom facility.

(b) Mobile phone

WARNING/ALARM/COMMUNICATION OF EMERGENCY

The emergency would be communicated by operating electrical siren for continuously for five minutes with high and low pitch mode.

EMERGENCY RESPONSIBILITIES:

Priority of Emergency Protection

- Life safety
- Preservation of property
- Restoration of the normalcy

MUTUAL AID

While necessary facilities are available and are updated from time to time, sometimes, it may be necessary to seek external assistance; it may be from the neighbouring factories or from the State Government as the case may be.

MOCK DRILL

In spite of detailed training, it may be necessary to try out whether, the OSEP works out and will there be any difficulties in execution of such plan. In order to evaluate the plan and see whether the plan meets the objectives of the OSEP, occasional mock drills are contemplated. Before undertaking the drill, it would be very much necessary to give adequate training to all staff members and also information about possible mock drill. After few pre-informed mock drills, few UN-informed mock drills would be taken. All this is to familiarize the employees with the concept and procedures and to see their response. These scheduled and unscheduled mock drills would be conducted during shift change, public holidays, in night shift etc. To improve preparedness once in 6 months and performance is evaluated and Site Controller maintains the record. Incident Controller (IC) coordinates this activity.

7.4.10.3 SCENARIOS BASED EMERGENCY ACTION PLAN

Table 7.15: Possible Emergency: - Heavy Spillage of Feed Stock from road tanker

Location: Feed Stock road tanker unloading point	
Scenario considered: Heavy spillage of product from the road tanker unloading hose	
Hazard Consequence: (1) Hydrocarbon vapour generated and run in down wind direction. (2) Fire and explosion.	
Possible Causes: (1)Connecting hose disconnected from the flange and 100 % release of material from valve. (2) Rupture of unloading hose. (3) Leaking from flange gasket (4) Fire in spill collection drum.	
Action to be taken	**Action by**
Raised alarm immediately for warning the people if large spillage observed.	First observer/driver/ cleaner/operator
Do not entre in spillage are.	All employees
Stop all hot work in this area.	Operator
Call fire and Safety department	Operator
Close valve immediately if it is safe to do.	Operator
Cordon the area immediately.	Driver cleaner
Do not touch any electrical switches in spillage area.	All team members
Stop all activities in tank farm area.	IC
Evacuate nonessential persons from the affected area immediately.	Rescue team
Evacuate the surrounding area up to 200 meter in all direction.	Rescue team
Try to control situation at dept. level with available resources & full PPEs.	IC
Identify the spillage material and refer MSDS for control plan.	IC
Inform the Site main Controller (EMC) in detail.	IC
Take decision to Declare onsite emergency.	EMC
Efforts to be made to prevent spreading of Feed Stock to a large area by containing it in a small area by temporary arrangements or by diverting the spreading oil to a low lying area away from strategic plant areas.	Fire and spill control team

Start to spread AFFF foam on spilled material to control evaporation rate.	Fire team
Do not drain spilled material in any trench or sump.	Fire team
Ensure search and rescue and causalities receive attention.	Rescue team
Administer first aid to the victim.	First Aid team
Make arrangement to send injured person/s to Hospital.	First Aid team
If off site emergency situation occur –Inform to following agencies: Request for Mutual aiders, local authorities like – DISH office, Collectorate office, Disaster management cell, Police, fire brigade, nearby hospital, local GPCB office	EMC
Remedial measures to prevent recurrence of such incident: • Tanker unloading procedure to be prepared and implemented strictly. • Sampling method to be prepared and implemented. • Wheel stopper to be provided. • Static earthing with interlocking shall be provided. • Leakage proof connection hose to be done before starting the unloading. • No spillage of Feed Stock to be allowed in tank farm area. • All fire fighting equipment to be kept in good working condition. • 200 Lit AFFF foam drum to be kept ready in tank farm area for fire fighting. • All employees in area to be trained for fire fighting and such scenarios base emergencies. • Strict supervision of whole activity responsibility to be define. • LEL % base gas detection system to be provided and maintained in good working condition. • Emergency telephone number list to be displayed in this area. • In case of emergency – action plan and communication chart to be displayed in this area. • Remaining Feed Stock collection crude method of road tanker run forward and backward practices to be stopped immediately. Such crude method will lead road tanker disaster.	

Table 7.16: Possible Emergency: Unconfined pool fire due to heavy spillage of Feed Stock from road tanker unloading hose

Location: Feed Stock Unloading point	
Scenario considered: Heavy spillage of product from the road tanker unloading hose and it got fire. (Unconfined pool fire)	
Hazard Consequence: (1) Unconfined Pool fire (2) In case of Feed Stock if the liquid does not catch fire, Feed Stock can evaporate and if the vapor cloud in its movement in the direction of wind, meets any source of ignition, it may result in a vapor cloud explosion.	
Possible Causes: Immediate ignition available.	
Action to be taken	**Action by**
Raise fire siren or shouting Fire…Fire….Fire…	First Observer
Evacuate the area immediately.	All employees in this area
Inform the area incharge.	First observer
Inform IC in detail.	Department employee
Affected area to be cordoned off.	Security team
Call fire department immediately and help them for fire fighting.	IC
Try to control situation at department level with available resources with full PPEs.	Department fire fighting team.
If it is found uncontrollable condition by department level inform EMC for onsite emergency situation.	IC
Declare on site emergency if required.	EMC
Start fire hydrant system or water hose rill and spray water on nearby	Fire team

tank farm area for cooling purpose.	
Use foam fire extinguishers for firefighting of Feed Stock fire.	Fire team
Do not enter in fire prone area.	All team member
If the fire is not controlled, Emergency may be declared and on site emergency plan to be brought into action and services from outside agencies to be requisitioned, if considered necessary.	EMC
If fire found uncontrollable condition call fire brigade and mutual aider for help.	EMC and all dept. head.
All hazardous activates stop at site.	EMC
Ensure search and rescue and causalities receive attention.	Rescue team
Administer first aid to the victim.	First Aid team
Make arrangement to send injured person/s to Hospital. And inform victim's family.	Administration team
If off site emergency situation occur –Inform to following agencies. Request for Mutual aiders, local authorities like – DISH office, Collectorate office, Disaster management cell, Police, fire brigade, nearby hospital, local GPCB office.	EMC
Remedial measures to prevent recurrence of such incident: • Tanker unloading procedure to be prepared and implemented strictly. • Sampling method to be prepared and implemented. • Wheel stopper to be provided. • Static earthing with interlocking shall be provided. • Leakage proof connection hose to be done before starting the unloading. • No spillage of Feed Stock to be allowed in tank farm area. • All fire fighting equipment to be kept in good working condition. • 200 Lit AFFF foam drum to be kept ready in tank farm area for fire fighting. • All employees in area to be trained for fire fighting and such scenarios base emergencies. • Strict supervision of whole activity responsibility to be defined. • LEL % base gas detection system to be provided and to be maintained in good working condition. • Emergency telephone number list to be displayed in this area. • Incase of emergency – action plan and communication chart to be displayed in this area. • Remaining Feed Stock collection crude method of road tanker run forward and backward practices to be stopped immediately. Such crude method will lead road tanker disaster.	

Table 7.17: Possible Emergency: Leak from flanges, valves, during transfer from/to main tank

Location: Pipeline network	
Scenario considered: Spillage	
Hazard Consequence: Fire, spillage, corrosion, burn effect on human.	
Possible Causes: Gasket failure, corrosion, improper maintenance.	
Action to be taken	**Action by**
Detect the source of leakage.	Maintenance team
If the leakage is found significant then isolate branch of line & stop the flow.	Maintenance team
Stop the loading /unloading operation in the Tank.	Maintenance team
Bring the portable fire extinguishers near to the area of leakage	Maintenance team
Ensure operation of the fire pump	Fire team
Incase of major leakage follow action plan as per spill control plan.	-
Remedial measures to prevent recurrence of such incident: Proper PMS system prepared and implemented.	

Table 7.18: Possible Emergency: Major electrical fire in HT/LT panel, cable trench, cable tray, electrical equipment

Location: Plant Area	
Scenario considered: Fire in panel, cable, cable trench, electrical equipment like motor, etc.	
Hazard Consequence: Fire	
Possible Causes: Electrocution and flashing due to short circuit or over load	
Action to be taken	**Action by**
Raise fire siren or shouting Fire…Fire….Fire…	First observer
Evacuate the area immediately.	Non essential workers.
Inform the area in charge.	Department employee
Inform IC in detail.	Department employee
OFF electrical supply in fire porn area.	Electrical head
Call fire department immediately and help them for fire fighting.	Department employee
Try to control situation at department level with available resources with full PPEs.	Department fire fighting team.
If it is found uncontrollable condition by department level inform EMC for onsite emergency situation.	IC
Declare on site emergency if required.	EMC
Start fire hydrant system and spray water on fire.	Fire team
Do not enter in fire prone area. Due to toxic gas liberate in cable fire.	All team member
Remove combustible and flammable material from the fire site.	Rescue team
If fire found uncontrollable condition call fire brigade and mutual aider for help.	EMC
All hazardous activates stop at site.	EMC and all dept. head
Ensure search and rescue and causalities receive attention.	Rescue team
Administer first aid to the victim.	First aid team
Make arrangement to send injured person/s to Hospital. And inform victim's family.	Administration team
If off site emergency situation occur –Inform to following agencies. Request for Mutual aiders, local authorities like – DISH office, Collectorate office, Disaster management cell, Police, fire brigade, nearby hospital, local GPCB office.	EMC
Remedial measures to prevent recurrence of such incident 1. Safety measures taken at design level and facilities installed as per requirements and electrical load. 2. Double earthing provided to all electrical equipments. 3. Rubber met provided near electrical panels and switches. 4. All safety measures taken at design stage. 5. Magger test and earthing continuity test regularly carried out and log sheet maintained. 6. All electrical hazardous condition known to all concern dept. 7. Appropriate fire fighting arrangement is provided to control electrical fire.	

Table 7.19: Possible Emergency: Earth Quack

Location: Whole plant	
Scenario considered: Earth quack	
Hazard Consequence: Building, structure collapse	
Possible Causes: Natural calamities	
Action to be taken	**Action by**
Do not panic. Raise alarm.	First observer
Evacuate building /plant immediately.	All employees
Avoid standing near to windows, external walls.	All employees
Stand near the columns or duck under sturdy furniture.	All employees
Assemble at emergency assembly point.	All employees
Take head count	HR dept.
Activate plant emergency plan as situation demands.	EMC
Assess situation and initiate shut down of plants (if required)	EMC and plant head
Initiate search & rescue (if required)	Rescue team
Provide first aid to victims. Remove casualties Key persons to report to site	First aid team
Assess damage	Key personals
Undertake restorative measures & repairs	Engg. team
Remedial measures to prevent recurrence of such incident 1. Planning & Preparedness 2. Constitute Emergency Response Team 3. Identify control centres 4. Control centres to be equipped with 5. Communication facilities 6. Emergency vehicles/ equipment 7. List of emergency contacts & suppliers 8. Medical facilities	

Table 7.20: Possible Emergency: Floods

Besides this, flooding of plants during monsoon due to clogging of storm water drains/ outlets may also take place. The plan to deal with floods can be divided in following stages

Location: Whole plant	
Scenario considered: Floods	
Hazard Consequence: Floods	
Possible Causes: Natural calamities	
Action to be taken	**Action by**
Stop all field activities.	IC
Stop all permits to work.	IC
Remain indoor observant to • Detect any damage to equipment or buildings. • Detect development of unsafe conditions. • Maintain communication with Emergency Control Center.	IC and employees
Respond to emergency call	
Audit plant area(s) for damage assessment Implement fire preventive measures Undertake restorative measures & repairs Restart the plant(s)	Engineering team
Remedial measures to prevent recurrence of such incident **Check** 1. All storm water drains & outlets are cleaned & de-choked. **Constitute**	

2. Plant Emergency Response Team comprising of (at least) one engineer, one HSE member, two operators & one Electrician. 3. Civil & Mechanical support team (including supply of spares). **Maintain** 4. Inventory of emergency items such as torches, ropes, lines, wire, tarpaulins, plastic sheets, tool kits, duct tapes, assorted gears & sand bags etc. 5. Food stock, water, blankets & bedding and medicines for distribution. **Obtain & circulate** 6. Advance forecast warnings to be continuously updated. 7. Mobilize emergency response team 8. Release non-essential personnel 9. Initiate shut down of plants(s) if required 10. Audit plant safety measures 11. Implement preventive & precautionary measures especially 12. Hot equipment to be cooled down. 13. Exposed machinery & equipment to be coated with grease. 14. Open flames should be extinguished.

Table 7.21: Possible Emergency: Cyclonic Storms / Hurricane

Cyclonic storms/ hurricanes are intense depressions, which develop in tropical latitudes and are often the cause of very high winds and seas. The wind blows around the center of a tropical storm in a spiral flow inward, anti-clockwise in Northern Hemisphere and clockwise in Southern Hemispheres. Plan for tackling cyclonic storm/ hurricane can be broadly divided in following stages:

Location: Whole plant	
Scenario considered: Cyclonic Storms/ Hurricane	
Hazard Consequence: Cyclonic Storms/ Hurricane	
Possible Causes: Natural calamities	
Action to be taken	**Action by**
Mobilize emergency response team	IC
Release non-essential personnel	IC
Initiate shut down of plants(s) if required	IC and employees
Stop field activities. Stop all permits to work.	IC
Remain indoor observant to • Detect any damage to equipment or buildings. • Detect development of unsafe conditions. Maintain communication with Emergency Control Center.	Engineering team
Remedial measures to prevent recurrence of such incident 1. Inventory of emergency items such as torches, ropes, lines, wire, tarpaulins, plastic sheets, tool kits, duct tapes, assorted gears & sand bags etc. 2. Food stock, water, blankets & bedding and medicines for distribution. 3. Implement preventive & precautionary measures	

Table 7.22: Possible Emergency: Bomb Threat

All telephone calls and emails threatening harm to people or property, such as bomb threats, should be taken seriously.

Location: Whole plant	
Scenario considered: Bomb Threat	
Hazard Consequence: Fatality and injury to employees	
Possible Causes: --	
Action to be taken	**Action by**
If the threat is by Email **Contact immediately your site Security & Crisis Management Leader / EHS Leader or Emergency Response Team and report that you have received a threatening e-mail.**	E-mail receiver
1. Be calm. 2. Contact the C M Leader/EHS Manager/ IC/ Functional Leader if you have received the call and give all information regarding the call or Email. 3. Evacuate immediately through the nearest exit after hearing the alarm and announcement, 4. Shut down critical operation. 5. Do not disturb any thing while evacuating. 6. Follow evacuation procedure and reach the designated assembly point. 7. Do not run or dash. 8. Keep the doors & windows open.	IC and employees
WHAT TO DO IF YOU RECEIVE A BOMB THREAT ON YOUR TELEPHONE. Contact immediately your site Security & Crisis Management Leader / EHS Leader or Emergency Response Team and report that you have received a threatening Phone	
Question to Ask: 1. when is it going to occur (or explode)? Where is the harmful item (or bomb) right now? 2. What kind of item (or bomb) is it? 3. What does it look like? 4. Why did you place the item (or bomb)? 5. Where are you calling?	Call Recipient
Things to note: 1. Apparent sex, age, and maturity of the caller. 2. Peculiarities of voice or speech 3. Speech impediment, foreign accent, regional flavor, signs of intoxication, irrationality, and “pet phrases,” or their mannerisms. 4. Listen for background noises	Call Recipient
What to do if…You observe Suspicious Behavior: 1. Description of the suspicious behavior. 2. Description of person(s). 3. Make/Year of vehicle (if applicable). 4. Color of vehicle. 5. License plate number and State. 6. Time 7. Vehicle’s location and/or direction of travel. 8. Vehicle in restricted areas without proper identification. 9. Passengers taking photographs or video of any part of the facility.	Observer
1. Inform Site Shift Manager & Security	Observer/ Call Recipient
2. Inform all personnel to provide information regarding any unidentified or suspicious objects/ persons	Observer/ Call Recipient

3. Intensify vigilance & patrolling	Security head
4. Initiate bomb search	Security head
5. If any suspicious object is detected, inform Police Commissioner for arranging bomb disposal squad	EMC
6. Make arrangement to minimize effects	EMC
7. Make arrangement for evacuation	EMC
8. Liaise with police	EMC
9. If bomb recovered/ no untoward incident occurs restore normalcy.	EMC
If blast occurs 1. Activate concerned plant(s) emergency plan – tackle fire/ toxic leakage/ structural collapse etc. Assess damage. 2. Take restorative measures. 3. Liaise with authorities (police, insurance etc.).	EMC
Remedial measures to prevent recurrence of such incident 1. Security system is provided. 2. CCTV camera provided in all areas of the plant. 3. Without photo ID no one can enter in premises. 4. Vehicles are checked at main gate thoroughly for suspicious material during entry of vehicle.	

Table 7.23: Possible Emergency: Industrial Unrest

Industrial relation between personnel and management may deteriorate because of any reason. Problems, which may arise due to industrial unrest, include.

Dharna/ Strike/ Hunger strike	Unofficial gatherings/ Gate meetings/ Forceful entry
Work to rule/ Go slow/ Disobedience	Gherao/ Rasta rook
Intimidation & Use of force	Support from local & criminal elements

In such a scenario, to ensure smooth operation of plant(s), protection of lives and property, well-coordinated effort is needed from all concerned. Plan to deal with industrial unrest can be broadly divided in following stages:

Location: Whole plant	
Scenario considered: Industrial Unrest	
Hazard Consequence: Unofficial gatherings/ Gate meetings/ Forceful entry Gherao/ Rasta rook Support from local & criminal elements	
Possible Causes: Industrial Unrest	
Action to be taken	**Action by**
Any employee noticing or heard about the Civil Disturbance immediately call EHS / Security department to give the information.	First victim
Don't allow to enter any unknown person in the site	Security team
Strengthen security at sensitive points	Security team
Ensure protection lives & property	Security team
Intensify vigilance & patrolling	Security team
Assemble in designated Safe Assembly point.	All employees
Brief to Site main controller and Crisis management Leader.	First victim
Join your group at assembly point and present yourself for headcount to head count coordinator.	All employees
Communicate to ECC/ Emergency team for missing or trapped employees.	Victim /IC
Give this information to site main controller/ EHS dept./ Manufacturing Head.	Victim /IC
Maintain law & order	EMC
Ask help form nearest police station.	EMC
Assess damage (if any)	EMC
Restore normalcy	EMC

8. Project Benefits

8.1 PROJECT BENEFITS

M/s. Madura Carbon (India) Ltd. is proposing a project for manufacturing of carbon black & power generation through offgas generated during manufacturing of carbon black. The proponent has planned the project with a capital cost of about Rs. 440 Crore. The manpower requirement for the proposed project shall be locally fulfilled; employment generation will lead to additional benefits to social infrastructure. Hence, it will not result in influx of people to the region, and no load anticipated on the existing amenities in the region.

The company will conduct social welfare activities which include the funding & contribution for public infrastructure/facilities development, maintenance & improvement on as & when required basis. Thus, the project will have considerable indirect benefits to the public physical infrastructures.

The project benefits from proposed project are summarised as below -

- Large demand of carbon black due to serious shortfall in domestic market & increased prices, many small & medium scale rubber industries are closing down. The new project will bridge the gap between demand & supply.
- There will be reduction in the total load on the electricity department due to power generation from waste gas.
- Considerable employment & trade opportunities in India.
- Considerable benefit to public infrastructure of this region.
- The company will carry out the social development activities in surrounding area.

8.2 EMPLOYMENT OPPORTUNITIES

Further the Village Panchyat members, teachers and other members in Focus group discussion pointed out the pattern employment among working population as indicated in table 8.1.

Table 8.1 Status of Pattern of employment of working population in sample villages (%)

Sample Village	Cultivator /Farmer	Agriculture Labour	Casual Labour	Petty Business	Service Sector	
					Skilled	Unskilled
Fansa	10	20	10	10	10	40
Tumb	15	10	15	25	5	30
Tadgam	10	15	10	15	5	45
Namdha	12	13	15	15	10	35
Dholar	10	20	20	25	5	20
Deva Pardi	20	15	10	15	3	37
Average	**13**	**16**	**13**	**18**	**6**	**35**

The above table shows that the rural area is still with the agriculture sector while in urban area and the villages near urban areas are largely engaged in the service sector. The casual labour fluctuate in between agriculture and industrial sector.

In the proposed industrial set up of the company, out of total 760, about 400 individuals to be employed as permanent employees and approximately 360 individuals are to be retained on contract as temporary employee with manpower contractors.

8.3 OTHER TANGIBLE/ INTANGIBLE BENEFITS

The company will contribute to indirect taxes, which will lead to the economic benefit to the nation. The raw materials & finished goods will be moved by truck & tankers, which provides indirect employment to people engaged in this sector.

Total CER budget of company will be Rs. 660 Lakhs, which will be spent in 10 years for social welfare & upliftment of local villagers based on their timely demand & needs. Based on their annual demand per villages, 84.3% of the CER fund will be utilized to develop rural infrastructure and rest 15.7% will be used to supply items to improve and strengthen various rural service sectors in the villages. These all together will result in appreciable benefits to the local people, local public infrastructure/facility development/improvement and other social benefits.

9. Environmental Cost Benefit Analysis

As per EIA Notification 2006, this chapter of the 'Environmental Cost Benefit Analysis' is applicable only if it is recommended at the Scoping stage. However, as per the TORs issued by (EAC), the Environmental Cost Benefit Analysis is not asked for and hence has not been prepared.

10. Environment Management Plan

10.1 PRELUDE

The primary purpose of an Environmental Management Plan (EMP) is to address the administrative aspects of the project for ensuring that mitigation measures are implemented and their effectiveness monitored. It delineates the mitigation measures in brief and assigns responsibilities and timeframe for effective implementation of the mitigation measures. EMP is also a step towards sustainable industrial development concept.

10.2 OBJECTIVES OF EMP

The major objectives of this EMP are:

- To comply with all the conditions of the regulations / applicable laws stipulated by MoEF&CC, Central Pollution Control Board(CPCB) and Pollution Control Committee (PCC)
- To control and remediate wastewater, emission & solid/hazardous waste posing adverse impacts on environment by adopting / installing appropriate pollution control measures / equipment.
- To plan & implement environmental conservation & protection measures for achieving the stipulated environmental standards and to improve the environment management practices.
- To improve workplace conditions for employees and neighbouring environment.
- To eliminate / reduce the possibility of potential hazard due to operations.
- To make budgetary provision and allocation of funds for effective implementation of environment management system.
- To encourage and inspire employees & contractor to plan, act and contribute towards environmental conservation, protection & improvement in the daily operations.
- To contribute significantly towards sustainable development by resource conservation and waste minimization practices.

M/s. Madura Carbon (India) Ltd.has the potential for environmental pollution during the Construction commissioning & operational phase of the project, the environmental impacts could be mitigated by installation of pollution control equipment and adopting pollution control/abatement measures.

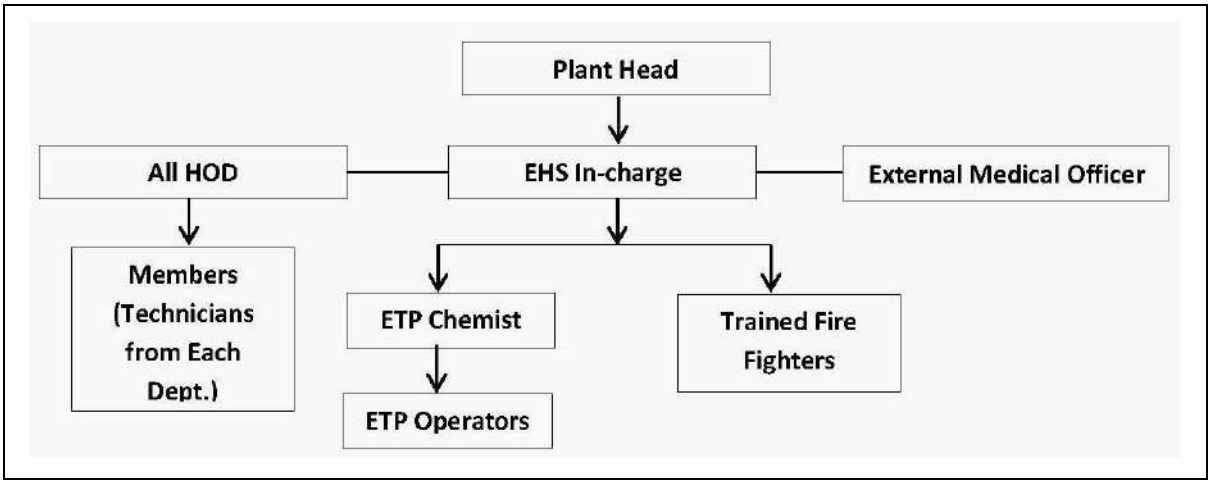
The Environmental Management Plan for the proposed projects has been presented in the subsequent sections of this Chapter with necessary discussions.

10.3 EHS MANAGEMENT DEPARTMENT

Apart from having an EMP, it is also necessary to have a permanent organizational set-up (such as an Environmental, Health and Safety [EHS] Department) to ensure effective implementation of EMP.

The setup of the EHS Department is given in in Figure 10.1. The EHS Department will be responsible to plan, implement and monitor the environmental performance of the proposed project.

Figure 10.1: Organogram of EHS Cell



(Source: Madura Carbon (India) Ltd.)

The EHS cell has a responsibility and accountability for the following actions

- To perform regular checks on areas requiring compliance and ensure that all legal compliances are met at all times.
- Effectively monitor the performance of the pollution control equipment, emissions from the sources and the quality of surrounding environment in accordance with the monitoring program.
- Observing, inspecting & regulating the safety measures inside the plant campus.
- Maintaining the records of all data, documents and information in line within the legislative requirement and regularly furnish the monitoring compliance reports to the statutory authorities.
- Identifying employee training needs on Environment, Safety and Health.
- Organizing, monitoring and checking effectiveness of training programs.
- The Environment Department monitors and ensures the environmental performance and compliance to the proposed projects.
- The Environment Department is responsible for implementing and maintaining environment

10.4 AIR POLLUTION & CONTROL MANAGEMENT

Considering the planned & implemented mitigation measures & probable impacts, EMP is delineated below for Air pollution control Management.

Table 10.1: EMP for Air Emission Control

Env. Issue	Mitigation measure	Implementation & Responsibility	Monitoring & Records
Construction & Commissioning Phase			
Temporary increased emissions from construction & commissioning operations	*Structural measure:* • Adequately designed enclosed area for reduction of particulate during construction materials storage & handling • Barricading around the construction site to prevent particulate emission from construction works • Provision of water sprinkling system in construction area for suppression of dust. • Proper fuel supply to the utilities	• During construction, • Construction Head	--
	Procedural measure:		

Env. Issue	Mitigation measure	Implementation & Responsibility	Monitoring & Records
	• Regular water sprinkling to be done on earthen road, bricks/block stock, stock piles of excavated earthen materials/ soil to maintain adequate moisture for prevention of dusting. • Regular wetting curtains around construction site to maintain adequate moisture to trap the particulates arising from construction works. • Wherever & whenever possible & available, ready Mix Concrete & other readily available construction materials should be used to prevent air borne particulates. • Properly designed method & practices of transportation, storage & handling of materials should be established and maintained along with necessary facilities to reduce airborne particle of materials. • Proper ventilation & other condition in storage area to be ensured and all materials to be stored in suitable packing to prevent contamination of air due to particulates & volatile emissions from storage area. • All construction equipment, machineries & utilities to be maintained on regular basis to reduce emission. • PUC certificate of all vehicles engaged in construction work to be ensured. • Engines of Idle machineries, equipment, vehicles to be turned off when not in use. • Prior to commissioning of plant, completeness of structural measures including fuels supply system should be ensured. • Adequate fuel supply should be ensured prior to commission & throughout the commissioning of utilities. • Stack Monitoring to be done during the commissioning phase on regular basis to prevent high emission from utilities. • Proper functioning of allied facilities of utilities to be ensured before the commissioning of plant. • Provision of necessary PPEs for employees engaged in activities of storage, transportation & handling of materials as well as construction & commissioning operations.	• During construction, • Plant /Construction Head • EHS In-charge	• Water consumption records, • Ambient and stack air monitoring records • PUC Certificate
Operation Phase			
Stationary emissions	*Structural measure:* • Bag collector to be installed for PM	• During	--

Env. Issue	Mitigation measure	Implementation & Responsibility	Monitoring & Records
(from boiler, dryer & VBC)	reduction as a part of process equipment line. • Closed loop system, DCS & interlocking should be ensured. • Stacks of adequate height & internal diameter to be provided for efficient dispersion of emission from proposed utilities. • Sampling port & monitoring point should be provided on all stacks. • Provision of ID fan with utilities/ stack to maintain desired velocity of exit gas, if required. • Provision of preventive maintenance facilities for Stacks, Utilities, Storage area/vessels, pipelines etc. • Safety arrangements, facilities & equipment to prevent accidental emissions. • Flare stack for emergency release of off-gas. • DeSOx system & SCNR/ SCR as APCD for SO_2& NO_2 reduction respectively. • Provision of adequate process safety controls.	Operation • Plant Manager • EHS in charge	
	Procedural measure: • Optimum air-fuel ratio (AFR) in the utilities as per specifications should be ensured throughout operation period. • Un-interrupted functioning of FD/ID fans, if provided, should be ensured. • Flare operation for emergency. • Un-interrupted & efficient functioning of DeSOx system, SCNR/ SCR & Bag collector should be ensured. • Regular monitoring should be done as per the Environmental Monitoring Plan & CC&A for checking efficiency of control equipment. • SOPs for start-up, shutdown and operation & maintenance procedures for utilization to be established and maintained. • Adequate greenbelt coverage, around the plant. • Proper implementation of safety procedures and efficient use of safety arrangements, facilities & equipment to prevent accidental emissions. • Provision for necessary PPEs for employee. • Display board should be displayed at gate showing air emission details.	• During operations, • Maintenance personnel & Plant In-charge	• Stack monitoring & ambient air monitoring • Records of Stack monitoring & ambient air monitoring
Fugitive emissions	*Structural measure:* • Adequately designed storage area with	• During	--

Env. Issue	Mitigation measure	Implementation & Responsibility	Monitoring & Records
	efficient air change ratio, handling & transport facilities should be provided for raw materials, products & lime. • Specially designed closed tankers trucks for transportation. • Pneumatic conveyor/ transfer system. • Dedusting system with bag filter & AHU	construction, • Plant in-charge • Construction Head	
	Procedural measure: • Properly designed method & practices of transportation, storage & handling of materials should be established and maintained along with necessary facilities to reduce airborne particle of materials. • Proper ventilation & other condition in storage & production area should be ensured and all materials must be stored in suitable packing to prevent contamination of air due to particulates & volatile emissions from storage area. • Closed materials charging, and sampling practices to be established & ensured. • SOPs for start-up, shut down, operation & maintenance procedures should be established & maintained in all relevant area of works. • Proper implementation of safety procedures and efficient use of safety arrangements, facilities & equipment to be ensured at all time of operation to prevent accidental release of materials & fuels as well as prevent fire hazard. • Provision for necessary PPEs for employee engaged with hazard prone area • Material carrying trucks should be covered.	• During operations, • Plant in-charge • EHS in charge	• Stack, ambient air & work place monitoring • Records of Stack, ambient air & work place monitoring • Regular occupation health check-up for all employee • Records of occupation health check-up
Vehicular emissions	*Structural measure:* • Internal roads to be paved using concrete or asphalt • Low emission vehicles to be preferred for transportation • Air to fuel ratio should be maintained.	• During construction, • Construction Head	
	Procedural measure: • Requirement of PUC to be compulsory for all vehicle engaged in proposed project activities • Checking of PUC certificate for validity & emission level in exhaust of all entering vehicles.	• During operations, • EHS In-charge • Security person	• PUC certificate of entering vehicles

(Source: Precitech Laboratories Pvt. Ltd. &M/s. Madura Carbon (India) Ltd.)

10.5 WATER & WASTEWATER MANAGEMENT

Considering the planned & implemented mitigation measures & probable impacts, EMP is delineated below for water & wastewater management.

Table 10.2: EMP for Water & Wastewater Management

Env. Issue	Mitigation measure	Implementation time & Responsibility	Monitoring & Records
Construction & commissioning Phase			
Load on resources by consumption of water	*Structural measure:* • Fresh Water Storage Tank. • Earthen bund/barriers around the construction sites/areas. • Proper material storage area, if required, properly lined with impervious materials.	• During construction & Commissioning • Construction Head	--
	Procedural measure: • Optimization of water consumption by avoiding unusual runoff from construction activity area. • Possible maximum use of ready mix concrete & other readily available construction materials to reduce water requirement. • Proper arrangement & maintenance and regular inspection of water supply line to prevent leak from pipes & taps/ valves.	• During construction & Commissioning • Construction Head	--
Wastewater Management & Prevention of water pollution	*Structural measure:* • Temporary sanitation facilities until Provision of STP. • Adequate structural facilities bunds/ garland drains for prevention of any kind of contaminated runoff from construction area causing impacts outside premises- storm water drain along unit's boundary to prevent runoff outside of premises. • Adequate drinking water supply facilities for construction personal.	• During construction & Commissioning • Construction Head	--
	Procedural measure: • Ensuring availability & proper utilization of sanitation facilities. • Ensure proper disposal of sewage through temporary sanitation facilities till installation of STP. • Treatment of sewage through STP, and facilities to reuse treated wastewater from STP for greenbelt development only and regular checking & maintenance for prevention of leak & overflow. • Regular inspection & management for prevention of any kind of contaminated runoff from construction area. • Earthen/Temporary bunds/barriers to prevent runoff.	• During construction & Commissioning • Construction Head	• Water consumption records
Operation Phase			
Load on	*Structural measure:*	• During	

Env. Issue	Mitigation measure	Implementation time & Responsibility	Monitoring & Records
resources by consumption of water	• In-house fresh water storage facilities. • Metering facilities for water consumption. • Adequately designed cooling tower/ system with optimized cooling water requirement & evaporative losses. • Rainwater harvesting system: Allocation of maximum possible Roof-top area with conduits & storm water pipelines/drainage for RHW. • Treated wastewater recycling/reuse system.	Operations, • Utilities in-charge, • EHS In-charge • ETP Chemist	
	Procedural measure: • Reduce wastage in domestic activities by preventing leak/spill from pipes, taps/ valves etc. • Regular inspection, control & necessary maintenance for reduction of evaporation loss and blow down from cooling system. • Optimization of COC in cooling system. • Minimization of steam losses from boiler & steam lines and process. • Measurement of harvested rain water quantity and optimization of withdrawal of fresh water with respect to available water in storage facility.	• During Operations, • Utilities in-charge, • EHS In-charge • ETP Chemist	• Records of Water consumption at each unit, wastewater recycling/reuse quantity
Wastewater Treatment & discharge/ reuse/ recycle and prevention of water pollution	*Structural measure:* • Adequate ETP, RO & MEE for treatment of industrial effluent. • STP for domestic effluent. • Effluent pipelines & other facilities of wastewater collection & treatment manufactured from suitable materials. • Properly designed chemicals & hazardous waste storage area with properly lined impervious flooring. • Proper Stream Segregation pipelines/channels for Wastewater collection & treatment. • Proper sanitation facilities with septic tank/ soak pit system for domestic wastewater discharge. • Provision of adequate storm water drainage lines.	• During construction & Commissioning • Construction Head	•
	Procedural measure: • Wastewater generated from the project should be segregated at source and treated in ETP &RO followed by MEE resulting Zero Liquid Discharge and treated water should be completely reused in plant. • The waste water from Non-potable uses to be treated in STP and it is to be reused for gardening to reduced fresh water demand.	• During operations, • EHS In-charge ETP chemist/ operator, • Plant / Department In-charges	• Records of water consumption, effluent generation, and effluent discharge/reuse/recycle • Monitoring

Env. Issue	Mitigation measure	Implementation time & Responsibility	Monitoring & Records
	• Efficient operation of ETP, RO & MEE. • Regular quality assessment of raw & treated effluent to evaluate efficiency of ETP, RO & MEE. • Regular quality assessment of permeate from RO before recycle/reuse. • Reduction of water consumption by recycling & reuse of treated water in to cooling make-up and continuous attempts to reduce wastewater generation. • Prevention of mixing of any contaminated stream with storm water drainage • Regular maintenance of wastewater pipelines, ETP, RO and allied facilities for maintaining optimum efficiency of wastewater treatment & recycling as well as to prevent leak & spill of untreated effluent. • Hazardous materials & wastes to be stored in designated storage area with impervious lining to prevent contamination of water • Maintenance of good housekeeping to avoid contamination of storm water • Display board should be displayed at gate showing water & waste water related details.		of water characteristics, treated and untreated effluent characteristics

(Source: Precitech Laboratories Pvt. Ltd. & M/s. Madura Carbon (India) Ltd.)

10.6 HAZARDOUS SOLID WASTE MANAGEMNET

Considering the planned & implemented mitigation measures & probable impacts, EMP is delineated below for Hazardous / Non - Hazardous Waste Management.

Table 10.3: EMP for Hazardous & Solid Waste Management

Env. issue	Mitigation measure	Timing & Responsibility	Monitoring & Records
Construction & Commissioning Phase			
Construction waste management.	*Structural measure:* • A separate designated storage area for each category of wastes and excavated earthen material/soil with proper sign boards & placards. • Proper handling & transportation system for construction wastes & stock piles of earthen materials.	• During construction, • Construction Head	--

	Procedural measure: • Proper storage of construction & other waste and excavated earthen material/soil in their designated storage area. • Use of excavated soil for landscaping & greenbelt development. • Construction & demolition solid waste should be collected, segregated, stored and disposed as per the Construction & Demolition Waste Rules, 2016.	• During construction, • Construction Head	• Records of construction & demolition waste generation & disposal
Operation Phase			
Hazardous/ Non-Hazardous waste management	*Structural measure:* • Provision of designated storage area as per MoEF&CC/CPCB guidelines to be provided with sign boards/labels for each category of hazardous & non-hazardous wastes generated from the unit. • Proper Handling & Transportation system /facilities for hazardous/non-hazardous wastes. • Filter Press of STP & MEE sludge and Sludge packing/bagging area. • Gypsum sludge dewatering area and Sludge packing/bagging area.	• During operation, • Plant In-charge • ETP In-charge	---
	Procedural measure: • Hazardous waste should be segregated at source. • Proper storage of all hazardous wastes in their designated storage area viz. o ETP sludge, MEE salt & Sludge from APCM in 'sludge storage area' within Hazardous waste storage facility. o Scrubber bleed liquour in scrubber area. o Used oil in well labelled drums in/near utility area. o Discarded containers bags in Scrape Material stores. • Transportation of hazardous waste to the TSDF should be governed as per the guidelines and accompanied with Form-13. • Stock of the hazardous waste to be maintained in Form-3 and annual returns of the disposal of hazardous wastes to be submitted in Form- 4. • Proper handling, loading & unloading of waste should be monitored during waste handling, storage & transportation to avoid spillage/leak causing contamination of soil / environment • Adequate utilization of non-toxic/non-hazardous wastes and reusable/ recyclable waste (especially empty containers & bags and used oil) should be ensured by promoting recycler or end-users of products derived from such wastes	• All time during operation • Plant Manager • EHS In-charge	• Periodic Records maintenance of waste generation, collection & disposal

Env. issue	Mitigation measure	Timing & Responsibility	Monitoring & Records
	• Disposal of hazardous wastes at approved TSDF/CHWIF to be ensured with manifest only. • Display board should be displayed at gate showing hazardous waste related details.		

(Source: Precitech Laboratories Pvt. Ltd. & M/s. Madura Carbon (India) Ltd.)

10.7 NOISE CONTROL

Considering the planned & implemented mitigation measures & probable impacts, EMP is delineated below for Noise Control.

Table 10.4: EMP for Noise Control

Env. Issue	Mitigation measure	Timing & Responsibility	Monitoring & Records
Construction & Commissioning Phase			
Noise	*Structural measure:* • Noise generating equipment like motors, pumps etc. should be mounted on sturdy concrete foundations with rubber padding to reduce vibrations. • All rotating equipment or part thereof should be dynamically balanced. • Suitable barrier around the construction site wherever/ whenever required to reduce noise level outside the project premises. • Adequate greenbelt should be developed to help in attenuation of noise.	• During construction, • Construction Head	--
	Procedural measure: • Regular lubrication & preventive maintenance should be done to reduce noise generation. • Ear plugs/muff should be provided to all construction workers/employees at place of high noise levels. • All vehicles should maintain speed limit inside the premises & loud horns & unusual acceleration of engine should be prohibited.	• During construction, • Construction Head	• Vehicle movement records
Operation Phase			

Env. Issue	Mitigation measure	Timing & Responsibility	Monitoring & Records
Noise	*Structural measure:* • Noise generating equipment like turbine, pump, motors, compressors, blower, etc. should be mounted on sturdy concrete foundations with proper & suitable rubber padding to reduce vibrations & thereby noise generation. • Pumps, fans, compressor, etc. equipment should be statically and dynamically balanced. • Safety blow off valves, i.e. discharge pipes, relief valves, etc. will be equipped with silencers. • Adequate greenbelt should be developed and maintained around high noise area as well as plant premises to help in attenuation of noise.	• During construction, • Construction Head	--
	Procedural measure: • Regular lubrication & preventive maintenance should be done to reduce vibration & noise generation. • Use of PPE like ear plugs and ear muffs to be made compulsory near the high noise generating machines. Moreover, the personnel to be provided breaks in their working hours, with the continuous exposure not increasing three (3) hours. • All vehicles should maintain speed limit inside the premises and unusual acceleration of engine & loud horns should be prohibited. • Periodic monitoring of noise levels as per post-project monitoring plan should be done on regular basis.	• During operations, • EHS In-charge • Maintenance personnel	• Noise Monitoring • Noise level monitoring records • Equipment maintenance records • Vehicle movement records

(Source: Precitech Laboratories Pvt. Ltd. & M/s. Madura Carbon (India) Ltd.)

10.8 SOCIOECONOMICS & SOCIAL WELFARE

EMP detailed below for Socioeconomic & Social Welfare is planned considering the planned, suggested & implemented mitigation measures & probable impacts as well as to ensure maximum beneficial impacts of the project.

Table 10.5: EMP for Socioeconomic & Social Welfare

Env. Issue	Mitigation measure	Timing & Responsibility	Monitoring & Records
Construction & Commissioning Phase			
	Structural measure: • Properly developed Road for transportation connecting GIDC bypass & NH-48. • All necessary structural mitigation measures suggested/planned for control of air & water pollution, waste management and noise control and safety & emergency management to be provided.	• During Construction. • Construction Head	• Installation Details with specification & maintenance manual for pollution control technology/facility/devices
	Procedural measure: • Regular monitoring of stack for Emission & Ambient air quality as per monitoring plan. • Disposal of untreated effluent & waste on land or in water bodies shall not be done • Manufacturing operation shall be stopped during period of failure of pollution control system & equipment. • Noise level outside premises shall not exceed stipulated standards for industrial area • Proper safety measures & emergency management plan to prevent impacts of major hazards on nearby locality & agricultural /commercial area. • Adequate traffic management for ensure transportation through highway networks & main approach road only. Traffic to be routed through GIDC bypass road and village road not to be disturbed. • Employment Planning shall be done for direct/contractual employment to the locals based on their skills and aptitude with preference. • Minimum 70-80% of the total employment shall be done through hiring local people which will ensure the highest beneficial impact to local people.	• During operations, • HR/ PR manager/officer • Local public representative/NGO	• Environmental monitoring as per plan • Records of Budgetary provisions & expenditures for Social activities as per CER/CSR plan

Env. Issue	Mitigation measure	Timing & Responsibility	Monitoring & Records
	• Social management plan defines how upliftment of weaker section and community development to be done. It improves the quality of life of inhabitants of potentially affected areas directly. • Social development programme can be done on basis of CER Plan (as appended) and CSR (as per applicability of Law) • Contribution in the activities of local panchayats & other NGO for upliftment of rural community & development of social infrastructure.		

10.9 CORPORATE ENVIRONMENT RESPOSIBILITY

The project ia a greenfield project. The total cost of the project is estimated to be near Rs.440 crore and thus it falls in 1.5% slab category as per the CER circular dtd. 01st May 2018. So the total CER budget will be Rs. 660 Lakhs as indicated in Table 10.6.

Table 10.6: CER Budget Classification

Sr.	Budget Items Variables	Green Project Cost in Cr (INR)	Green Project Cost in Lakhs (INR)
A	Total Cost of the Project	440.00	4400,000,000
B	1.5% CER Budget of the A	6.60	6,60,00000
C	Per annum CER budget*	0.66	6600000
D	Per village CER budget**	0.055	5,50,000
* The same amount to be utilized for each year till 10 consecutive years ** The same amount to be utilized in one village for each year for 12 villages.			

Owing to the commencement of the current project, the management of the company has decided to incur CER budget for next 10 years. So the CER budget for one year comes around Rs. 0.66 Crore/year. This amount would be disbursed according to the need of the community in development programs among 12 villages for the next 10 years. So the per annum CER budget comes around Rs.5.5 Lakhs/village.

The demand of the villages was asked through Sarpanch/Talati. Based on their annual demand per villages, 84.3% of the CER fund will be utilized to develop rural infrastructure and rest 15.7% will be used to supply items to improve and strengthen various rural service sectors in the villages. The demand analysis along five years are indicated in table 10.7.

On doing further analysis for demand in the community, it was found that the demand for Rural Education Institutions accounts 41%, followed by Rural Health Institutions 19.3%, and Total Sanitation Programme accounts 13% from the CER funds per annum. The villagers are more concerned to the village green environment and thus 8.8% of CER fund are reserved for beatification of Ponds, village cross road etc. The old constructed rural institutions also demand 3.2% of CER funds related to supply of furniture and about 3.8% CER funds is allocated for LED street lights for the villages. The details of the demands for the five years are indicated in table 10.7.

Table 10.7: Demand wise CER Planning & Allocation of funds

Sr. No	Demand of Villages	Budget allocation (cost in INR)					
		1st Year	2nd Year	3rd Year	4th Year	5th Year	Total
1	Strengthening School Infrastructure	2550000	2550000	2550000	2550000	2550000	12750000
2	Strengthening Anganwadi Infrastructure	1200000	1200000	1200000	1200000	1200000	6000000
3	Construction of HH toilet	800000	800000	800000	800000	800000	4000000
4	Strengthening Green Environment	800000	800000	800000	800000	800000	4000000
5	Rain Water harvesting as a part of PM's Jalshakti Abhiyan	550000	550000	550000	550000	550000	2750000
6	Village Street lights LED Bulb	300000	300000	300000	300000	300000	1500000
7	Renovation Work of building	100000	100000	100000	100000	100000	500000
8	Supply of Furniture to rural Institutions	200000	200000	200000	200000	200000	1000000
9	Strengthening Village Gram Panchayat	100000	100000	100000	100000	100000	500000
	Total	**6600000**	**6600000**	**6600000**	**6600000**	**6600000**	**33000000**

NOTE:
1. Each year there would be slight variation in the budget amount owing to the market value of the items used
2. However, the management reserves the right to alter the budget owing to the local demand and according to the requirement as per the need and time.
3. Owing to the cost of the demanded items, it is within the rights of the management of the company to decide – whether the allocation of the CER Funds is utilized 5 years or looking the severity of the demand could be utilized in one year or in any way deemed fit the management.
4. Since the demand is not consistent, the above table shows planning of five years only. After Five years management may decide to undergo for the fresh Need Assessment study.

10.10 PROTECTION & CONSERVATION ECOLOGY

Considering the planned, suggested & implemented mitigation measures & probable impacts, EMP is delineated below for Conservation of Ecology.

Table 10.5: EMP for Conservation of Ecology

Env. issue	Mitigation measure	Implementation & Responsibility	Monitoring & Records
Construction & Commissioning Phase and Operation Phase			
Ecological Conservation &Protection	*Structural measure:* • Enclosed storage area for reduction of particulate emission. • Proper arrangement for materials storage & handling to prevent emissions from construction site/ operation area. • Water Sprinkling system. • Nursery, materials storage area & Irrigation system for greenbelt development.	• During construction, • Construction Head	• Water consumption records

Env. issue	Mitigation measure	Implementation & Responsibility	Monitoring & Records
	• Stacks of adequate height & internal diameter to be provided to proposed utilities. • DeSOX & DeNOx systems for control of emission from project. • All necessary structural mitigation measures suggested/planned for control of air & water pollution, waste management and noise control and safety & emergency management to be provided.		
	Procedural measure: • Regular monitoring of stack for Emission & Ambient air quality as per monitoring plan. • No disposal of effluent & waste on land or in water bodies outside premises. • No operation to ensure no emission from project during period of failure of DeSOx system & other APCD. • No venting of off gases from flare stack if the ignition or flame is not operational. • No operation to ensure no emission from project during period of failure of Carbon Black dust collection system of process. • Noise level outside premises should not exceed stipulated standards for industrial area. • Proper safety measures & emergency management plan to prevent impacts of major hazards on ecology. • Transportation to be through highway networks & Sarigam GIDC road. • Regular horticultural practices and replantation (if required) for maintenance of healthy greenbelt in & around premises throughout the project life. • Proper & efficient implementation of mitigation measures & EMP suggested for Air, Water & Noise environment. • Contribution in the activities of local forest department & other NGO for protection, conservation & development of forest area.	• During operations, • Maintenance personnel • ETP In-charge	• Stack & Noise level monitoring • Records of Stack & Noise level monitoring

(Source: Precitech Laboratories Pvt. Ltd. & M/s. Madura Carbon (India) Ltd.)

10.11 GREENBELT DEVELOPEMENT

The Company will develop the green belt area within the company premises in about 24740 m^2 area (about 26.18% area of total land) after the proposed project. In addition to this additional greenbelt outside of premises in consultation with local forest department & gram panchayats should be done in around 7500 sq.mt area to fulfil the requirement of total greenbelt of the project. Following guidelines has been suggested to be followed by the company for greenbelt development & maintenance.

Guidelines for Greenbelt Development

- Design and development of greenbelt should be in adherence to industry-specific requirements and prevalent climatic conditions.
- Company should ensure healthy & dense greenbelt throughout the project life.
- Company should ensure greenbelt development & maintenance in the area required to comply with regulatory provisions and conditions of Environmental &other clearance.
- Company, if required, should allocate more area for Greenbelt and develop dense evergreen vegetative cover in this area.
- Company should follow CPCB guidelines for development & maintenance of greenbelt area
- Company should ensure regular irrigation & fertilization of greenbelt area as required timely
- Company should ensure re-plantation in greenbelt area depending upon the survival rate of planted vegetation to maintain greenbelt. The survival rate should be ensured above 80% for plantation and replantation.
- Company should plant trees with density of minimum about 2000-2500 trees per hectare considering the canopy size for developing the greenbelt area.
- Indigenous species with fast growth to be only selected or form the base of selection as Green Belt can come in view as fast as possible.
- Company should plant local species of trees & shrub for greenbelt development
- The tress should be planted in three tier pattern so as to ensure that the entire area gets covered and ensures effective pollution abatement. For this, management should ensure that plantation of trees & shrubs should include mixture of lower, higher and middle canopy structure, which should be mixed appropriately / proportionately / uniformly.
- The plantation should also include fruit bearing trees/ species which should be uniformly distributed which can act as dwelling place for variety of birds and other fauna and form a breeding ground for them. The tree products should have acceptable characteristics to suit local customs and traditions flowering Herbs & shrubs species.
- The selected species should be evergreen and with high foliage. Deciduous species should be avoided as far as possible.

It is suggested to plant the following species:

Table 10.6: List of Species

Sr. No.	Common Name	No. of trees
Trees		
1	Neem	As required
2	Badam	As required
3	Pipal	As required
4	Aasopalav	As required
5	Seesam	As required
6	Gulmohar	As required
7	Arjun	As required
8	Sal	As required
9	Karanj	As required
10	Indian Mahogany	As required
11	Vad	As required
12	Coconut/ Plum Tree	As required
13	Other indigenous evergreen species of different canopy type & size	
Shrub		
1	Acalypha	As required

Sr. No.	Common Name	No. of trees
2	Daranta Gold	As required
3	Ixora	As required
4	Thuja	As required
5	Jasmine	As required
6	Jasud	As required
7	Other evergreen High Foliage Shrub of different height & canopy cover	As required
Note: Total 5000 trees are required for greenbelt within premises & 2000-2500 trees are required for greenbelt outside premises.		

- Care should be taken to plant ample trees along the road side, boundary wall as well as within the plant premises. It should enable proper balance of atmosphere both outside the campus by absorbing noise and gaseous pollutants of the road side movement of vehicles and also absorption of noise and emissions within the premises of the plant.
- Company should follow the following five-year comprehensive greenbelt development program after that the company should keep following the prevailing practices of greenbelt management.

1st Year Plan

- Company should provide all necessary facilities for irrigation of greenbelt in good condition and necessary maintenance of irrigation facilities should be done regularly.
- If required company should develop one in-house nursery and saplings storage area within its premises.
- Company should also analyses the internal land use of proposed unit for allocation of greenbelt within premises. While planning this, company should also focus on plantation in boundary area with maximum possible width.
- Company should regularly assess survival rate of planted trees & shrub and if required necessary re-plantation should be done to ensure healthy & dense greenbelt area in its premises.
- For plantation, if required, company should acquire saplings from local private/government (Forest & Other) nursery
- Company should do fertilization as required for healthy & dense greenbelt development.
- Company should also execute greenbelt development and plantation in forest and non-forest area outside its premises in consultation with forest Department and other local authority as per the plan described below.

2nd to 5th Year Plan

- Company should maintain all necessary facilities for irrigation of greenbelt in good condition and necessary maintenance of irrigation facilities should be done regularly
- Company should regularly assess survival rate of planted trees & shrub and if required necessary re-plantation should be done to ensure healthy & dense greenbelt area in within premises.
- Company should ensure survival rate above 80% to ensure adequate greenbelt and canopy cover in 35% of its total area at any time.
- For plantation, if required, company should acquire saplings from local private/government (Forest & Other) nursery
- Company should do fertilization as required for healthy & dense greenbelt development

Management Period

- The properly designed greenbelt area, irrigation facilities, Sapling storage & maintenance area and storage for greenbelt development resources/tools etc. should be provided in construction phase prior to commissioning of plant operation. The necessary structural maintenance should be done throughout the extent of operation phase.

- The greenbelt development guidelines and five-year program should be initiated with inception of construction phase of project and should be implemented & practiced as routine throughout the project life.

Budgetary Provision

- **1st Year: 30 Lakhs**
- **2nd Year Onwards: Rs. 20 Lakhs /year**

Responsible Authority

Project Proponent, Project manager, accounting head/manager, Site Officer & engineers, any professional & Contractors/contract labour hired, concern local authority engaged in plantation by company in area other than its premises.

10.12 RAIN WATER HARVESTING

The rainwater harvesting program can help in many ways starting from conservation of natural resources to prevention of soil erosion. Rainwater is very helpful to industry in terms of saving of economy of water consumption.

The rainwater harvesting program will be conducted by providing water storage tank for collection of rainwater from roof of Plant Area & Road and Paved area. The rainwater harvesting system compromises of various stages – transporting rainwater through pipes or drains, filtration, and storage in tanks for reuse or recharge. For the purpose, drainage line for collection of rainwater during the monsoon will be installed & the collected water will be used to meet the water requirement of the industry. Proponent has decided to conduct rainwater harvesting and for the purpose, drainage lines for collection of rainwater will be installed on some selected building roofs & Road and Paved area. The collected rain water will be used for industrial uses.

There are 5 components in a rainwater harvesting system namely catchment, conveyance, filtration, storage & reuse.

A. Water Conservation Strategies:

Following approaches on water conservation will be adopted by the company to conserve water in these areas:

- Zero discharge of effluent.
- Reuse/ recycling of treated water available.
- Adequate storage facilities for fresh water consumption
- Metering facilities on fresh water
- Rainwater harvesting in Road and Paved area and Rooftop rainwater harvesting

B. Design Parameters for Rainwater Harvesting:

a. Average rainfall intensity
b. Catchment area
c. Run-off co-efficient
d. Rain water storage tank

a. Average rainfall intensity: The average rainfall of the area is 1874.6 mm (IMD). Nearest rainfall data is collected from Climatological tables of Observatories in India (1981 - 2010), IMD) at Valsad Observatory.

b. Catchment Area:

- Total Land Area – 94499 m^2
- Rooftop of building/ sheds - 13321 m^2

- Road/ paved area – 11139 m^2

c. Run-off co-efficient:
- Rooftop of building/ sheds - 0.85
- Road/ paved area – 0.65

d. Storing waters through Harvesting Structures: Rainwater can be stored effectively into storage pond of 50000 m^3 capacity.

C. Roof top rainwater harvesting

For the roof top rain water harvesting system adequate size piping will be installed around the roof to collect the rainwater. The pipeline installed at roof top will provide dual intensity rain water harvesting filters so that leaves or any other solid waste/debris is prevented from entering the pit. By-pass arrangement will also be provided before the collection chamber to reject the first showers. After filtering the collected rain water will be diverted to reuse/ recycle in plant.

Table 10.7: Details of Rainwater harvesting

Particular	Roof top Area	Road paved
Potential catchment area- (m^2) **(A)**	13321.00	11139
Run off co-efficient **(B)**	0.85	0.65
Effective Catchment (m^2) **(C)=(A x B)**	13322.85	7240.87
Total avg. annual rainfall (m), **(D)**	1.8746	1.8746
Annual harvesting potential (in m^3 per annum) **(E) = (C x D)**	**21225.81**	**13573.74**

(Source: Madura Carbon (India) Ltd.)

After the implementation of this Rooftop Rainwater harvesting scheme, approximately 34800 m^3 per annum rainwater can be harvested using Rainwater collection tank

10.13 CLEANER PRODUCTION APPROACH

Optimization, energy conservation and reduce/ reuse /recycle of waste are the principal approaches of Cleaner production activities. With adequate implementation of necessary & suitable actions of cleaner production approaches, cost of production as well as pollution potential of the manufacturing process can be reduced significantly.

Unit will generate power (green power) by utilizing off gases generated during manufacturing process of carbon black.

Hazardous wastes like discarded containers/drum/bags & spent used oils will be recycled through appropriate arrangements as per GPCB/CPCB guidelines.

Besides these action in process & materials storage & handling operations, following action are recommended for reuse/recycling of waste & wastewater as well as conservation of natural resources and energy.

- Unit will generate power (Green power) by utilizing off gases generated during manufacturing process of carbon black.
- Heat recovery in process for in WHRU boilers, air pre-heater & CBFS pre-heater.
- The power generation from offgas will reduce power consumption cost as well as e reduction in the total load on the electricity department.
- There will not be any generation of wastewater from manufacturing process.
- Permeate from RO and condensate from MEE will be reused in plant.
- Reuse of FGD bleed off to lime slurry scrubber as makeup water.

- Direct or indirect reuse/recycling of used oil & empty containers.
- Use of gravity instead of pumps for transferring liquid materials and wastewater wherever possible.
- Use of energy efficient motors, power tools, lighting facilities and other electrical equipment.
- Proper thermal insulation for pipelines of chillers, hot fluid lines and other facilities wherever heat or cooling loss is anticipated.
- Use of CFL/LED in administrative & office area should be preferred.
- Natural light should be used in maximum possible area instead of electrical lighting.
- Use of photosensitive switches for road & open area lightings if possible.
- Rainwater harvesting should be carried out.

11. Summary & Conclusion

11.1 PROJECT DESCRIPTION

M/s. Madura Carbon (India) Ltd. is to be located at Survey no. 3705, 3708, 3719, 3725, 3738, 4108, 4110, 4318, Village: Fansa (Karajgam), Taluka: Umbergaon, Dist.: Valsad. The proposed project is for production of the manufacturing of Carbon Black along with power generation (green power). The power will be generated by utilizing the off-gases generated from the Carbon Black manufacturing process. The list of products is given in table 11.1.

Table-11.1: List of proposed products

Sr. No.	Name of the Product	CAS No.	Quantity	End use of Product
1.	Carbon Black	1333-86-4	230000 TPA	Reinforcing material & filler in rubber products
2.	Power Generation (Green Power)	--	45 MW	Power consumption

(Source: Madura Carbon (India) Ltd.)

11.2 RESOURCE REQUIREMENTS

The resource requirements of the proposed project are as below:

Table 11.2: Resource Requirement

Resource type	Requirement	Source
Land	94499 m^2	• NA land
Raw-materials	Feed Stock is the major raw material. Molasses & Potassium Nitrate are used as additives.	• The raw materials required will be available locally and will also be imported.
Water	**Total: 3115 KLD (Fresh – 2525 KLD + Recycle – 590 KLD)** • Domestic: 50 KLD • Gardening: 100 KLD • Industrial: 2965 KLD	• Damanganga Canal Distry.
Power	13 MW	• Power Plant & DGVCL
Fuel	Off-gas generated from the carbon black manufacturing process, HSD & FO (aux. fuel)	• Local market/ Imported
Man-power	760 persons	• Man-power will be employed from local areas.

(Source: Madura Carbon (India) Ltd.)

11.3 POLLUTION POTENTIAL & MITIGATION MEASURES

The summarized statement for proposed pollution load is provided in the following table.

Table 11.3: Pollution Load Statement

Pollution Load	Remarks/ Mitigation
Wastewater	
Total: 630 KLD • Domestic: 45 KLD • Industrial: 585 KLD	• Total 630 KLD wastewater (w/w) will be generated from plant operations. Out of which, 45 KLD will be domestic w/w & 585 KLD will be industrial w/w. • The domestic w/w will be treated in STP. Treated water from STP will be used for gardening. • Industrial Wastewater will mainly be generated from industrial activities like boiler blowdown @55 KLD, Cooling blowdown @60 KLD, Plant washing @30 KLD, DeSOx system blowdown @60 KLD, DM plant regeneration @20 KLD and miscellaneous @360 KLD. • The boiler & cooling blowdown @100 KLD will be directly recycle in DeSOx system for lime slurry preparation. • DeSOx blowdown along with plant washing @90 KLD will be diverted to ETP. Part of treated water from ETP @29 KLD will be recycled for plant washing & remaining treated water from ETP @ 60 KLD along with remaining blowdown from boiler & DM plant regeneration @15 KLD & 20 KLD respectively, will be diverted to Post-treatment RO (RO-2). • Reject from Pretreatment RO (RO-1)@ 360 KLD & Post-Treatment RO (RO-2) @15 KLD will be diverted to MEE. Permeate from RO-2 @80 KLD & Condensate from MEE @337 KLD will be recycled for domestic & industrial use. • Thus, as described above, out of 630 KLD of total waste water @590 KLD will be recycled back and @40 KLD will be losses/ uses during treatment.
Air emissions	
Utility Emissions: • Boiler – 112 TPH • Boiler – 72 TPH • Dryer – 2 nos. • DG set – 1000 kVA	• Off-gas generated during manufacturing of Carbon Black will be used as fuel in boiler & dryer. HSD will be used as fuel in DG Set. • DeSOx system like FGD (Flue gas desulphurization) to control SO_2 emission & DeNOx system like SCR (Selective catalytic reduction)/ SNCR (Selective non-catalytic reduction) to control NO_2 emission will be installed as APCD with Common stack of boilers. • Lime slurry scrubber will be installed as APCD to control SO_2 emission from common stack of dryer combustor & Vapour bag collector. • Adequate chimney height will be provided. • Good housekeeping will be maintained in the plant.
Process Emissions: Process emissions will be generated in the	• Bag filter will be used as APCM to control PM emission.

Pollution Load	Remarks/ Mitigation
from of PM from vapour bag collector. **Fugitive Emissions:** • Loading/ unloading and storage of raw materials and finished products • Raw material storage tank • Flange joints of pipeline, pump & motors. • Handling of raw material bags in storage area • Warehouse storing drums and bags	• Entire process to be in closed system • All dust producing areas to be well connected to dedusting system. • Whole process plant to be DCS based closed system. • Proper interlocks to be programmed in the DCS to isolate any line or any section of the plant depending upon the location of the leak till the maintenance work is completed. • Standby arrangement to be provided for critical equipment for periodic maintenance. • Periodic inspection and maintenance of pipes and pipe fittings to be carried out. • Dedusting System (with Polyester bags) will be provided as APCM with storage silo, packing area & bucket elevator.
Hazardous & Solid waste	
• ETP waste (Cat. 35.3): 50 T/annum • MEE Salt (Cat. 37.3): 150 T/annum • Scrubber Bleed Liquor (Cat. 35.1): 21900 T/annum • Sludge from APCM (Cat. 37.1): 43625 T/annum • Oily Cotton Waste (Cat. 5.1): 2T/annum • Spent Used Oil (Cat. 5.1): 100 T/annum • Discarded Containers (Cat. 33.1): 5 T/annum	• The Hazardous wastes will be handled, stored & transported as per CPCB/ MoEF Guidelines • ETP sludge & MEE salt will be disposed to TSDF site • Sludge from APCM will be sold to cement/ gypsum board manufacturers. • Scrubber Bleed Liquor will be treated in In-house ETP. • Oily cotton waste will be incinerated at CHWIF. • Spent used oil & Discarded Containers will be sold to registered re-processor.
Noise	
Expected levels • Within company premises Day time <75 dB(A) Night time <70 dB(A)	• Regular maintenance will be carried out. • Turbine & DG set will be provided with acoustic enclosures. • Ear plugs and ear muff will be provided to workers. • The Company will develop sufficient greenbelt in and around the premises, for reducing the noise generation.

((Source: Madura Carbon (India) Ltd.)

11.4 BASELINE ENVIRONMENTAL STATUS

The baseline monitoring for meteorology, ambient air quality, water quality, noise levels, soil quality, hydrogeological aspects, ecological environment, land use/ land cover and socio-economic studies has been carried out by Precitech Laboratories Pvt. Ltd.

Table 11.4: Baseline status of the study area

<table>
<tr><th>Environmental parameter</th><th>Details</th></tr>
<tr><td>Physiography</td><td>
• The area is situated in the southernmost part of the Gujarat, which is adjacent to coastal area in western side and hill area in eastern side.
• Interstate boundary of Dadra & Nagar Haveli and Gujarat is situated in eastern side which is approximately 8-9 km.
• Interstate boundary of Daman & Diu (UT) and Gujarat is situated in northern side which is approximately 7-8 km.
• Interstate boundary of Maharashtra and Gujarat is situated in Southeast side which is approximately 9 km.
</td></tr>
<tr><td>Meteorology</td><td>
Primary data has been collected by installing weather station at 1 location during the study period. MM5 processed micro-meteorological data obtained from Denvilabs for the period of Oct-Dec-18 have been utilized for dispersion modelling.
• Temperature: Avg. Max. = 29.46^{o}C, Avg. min. = 18.05^{o}C, Avg. = 37.95^{o}C.
• Relative Humidity: Max. RH = 79%, Min. RH = 14%, Avg. RH = 64%.
• Rainfall: No rainfall recorded during the study period.
• Wind pattern: Pre-dominant Direction: NE, Avg. Wind Speed: 2.77 m/s.
</td></tr>
<tr><td>Ambient Air Quality</td><td>
Ambient air quality has been monitored at 10 locations for PM_{10}, $PM_{2.5}$, SO_2, NO_2, Hg, TVOC, CO, HC as methane and HC as non-methane. Range of values recorded in the study area during Oct'18-Dec'18.
• Concentration of PM_{10} ranged from 60 µg/m^3 to 89 µg/m^3.
• Concentration of $PM_{2.5}$ ranged between 16 µg/m^3 to 38 µg/m^3.
• Concentration of SO_2 ranged between 9 µg/m^3 to 22 µg/m^3.
• Concentration of NO_2 ranged between 10 µg/m^3 to 26 µg/m^3.
• Concentration of Hg was below detectable range. i.e. <5 µg/m^3.
• Concentration of TVOC ranged from 0.017 mg/m^3 to 0.047 mg/m^3.
• Concentration of CO ranged from 0.110 mg/m^3 to 1.18 mg/m^3.
• Concentration of HC as Methane ranged from 0.98ppm to 5.92ppm.
• Concentration of HC as None Methane was below detectable range. i.e. <0.5 ppm.
Minimum AQI in Baseline Area at 10 locations are in range of 60-76 and maximum AQI in Baseline Area at 10 locations are in range of 78-89. It seems that quality of Air is satisfactory. It may however cause minor breathing discomfort to sensitive people.
</td></tr>
<tr><td>Noise Level</td><td>
• Range of recorded values during Oct'18-Dec'18:
<table>
<tr><th rowspan="2">Areas</th><th colspan="2">L_{eq} range</th></tr>
<tr><th>Day time</th><th>Night time</th></tr>
<tr><td>Industrial area</td><td>69.9 dB(A)</td><td>62.9 dB(A)</td></tr>
<tr><td>Commercial area</td><td>62.3-66.1 dB(A)</td><td>54.9-58 dB(A)</td></tr>
<tr><td>Residential area</td><td>48-52 dB(A)</td><td>41-43.6 dB(A)</td></tr>
<tr><td>Silence zone</td><td>42.8 dB(A)</td><td>37.4 dB(A)</td></tr>
</table>
• Observed noise values were well within the prescribed noise standards of CPCB. However, in commercial area noise level were observed higher than the prescribed standards.
</td></tr>
</table>

Environmental parameter	Details
Water Resources & Quality	• 8 surface water samples have been taken from rivers and ponds falling in the study area. • 8 nos. of ground water samples have been taken from ground water sources from sorrounding villages within the study area. • *Surface water quality:* • All parameters of Damanganga Canal (SW1), Darotha River (SW2), Karanjgam pond (SW3), Manda pond (SW4), Sarigam Pond (SW5), Damanganga river near NH. 8 (SW6), fall under class A, However, due to lower DO and higher BOD these samples fall under Class E as per classification of inland surface water standards. • In sample of Damanganga River near Zari causeway (SW7), Parameter like Color, TDS, COD, BOD, Total Hardness, Chloride and Sodium were found high in range. This may be due to close proximately to tidal zone and influence of outfall of industrial treated water and domestic wastewater in the river. • In Valvada pond (SW8) sample COD, BOD, and coliforms value were found high in range it may be due to domestic activities like bathing washing etc. • *Ground water quality:* • It can be observed that in the majority of the study area, TDS level, total hardness, and total alkalinity crossed the desirable limits. However, the levels of all parameters are found well within the permissible limits as per IS: 10500:2012 Drinking Water Standards. • In case of water sample of Maroli village, Magnesium is found slightly higher than the desirable limits. However, all parameters have been found within the permissible limits as per IS: 10500:2012 Drinking Water Standards. • Also the Total Coliform and Faecal Coliform in all the ground water samples have been found to be absent.
Land use/ Land cover pattern.	• Agriculture area covers around 32.69% • Tree clad area in the study area is around 8.95%. • Settlements occupies around 4.7%. • 2.91% comes under industrial zone.
Ecological Layout	• The zone of Umbergaon Taluka shows fair richness in plant biodiversity having more of annual and perennial herbaceous vegetation. The small hillocks existing in the perimeter of the proposed project site are already degraded forest patches and mainly comprised of planted trees and shrubs. • There are no protected areas (national park/ wildlife sanctuary) within 10 km from project site. The nearest patch of Reserved/ Protected forest is around 800m from project site.
Socio economic layout	• A total of 60 villages/towns fall fully or partially in the radial distance of 10 km from the project site of M/s Madura Carbon India Ltd. Among these, 65% villages/towns fall in Umberagon taluka and 5% falls in Paradi taluka of Valsad district in Gujarat. Further, 13% of villages are found in UT Daman, 5% of villages falls in UT of DNH-Silvassa and 1% in Talasari taluka of Thane district in Maharashtra. • Educational facilities in the study area are good with primary schools available in all the villages and a Secondary school available within 10 km distance from any village.

11.5 ANTICIPATED IMPACTS AND MITIGATION MEASURES

11.5.1 Air environment

(a) During construction and commissioning phase

- The main source of dust emissions during the construction phase will be from excavation during foundation, levelling of surfaces after foundation works, transportation of construction materials and workers etc. Water sprinkling and barricading should be done to reduce dust emission. However, the overall impact of these emissions will be short term, reversible, localised and is not expected to contribute significantly to ambient air quality.

(b) During operation phase

- The predicted level of criteria pollutants in the ambient air are well below the limits as prescribed under the National Ambient Air Quality Standards (NAAQS, 2009) and hence the impacts in terms of change in prevailing ambient air quality status can be acceptable for the proposed project with installation and efficient operations of APCM like DeSOx & DeNOx system.
- Process gas emission in terms of PM from Vapour Bag collector during manufacturing of carbon black is proposed to be controlled by provision of bag filter.
- Fugitive emissions likely to occur during storage, handling & transferring of raw materials, lime & products. Proper interlocks will be programmed in the DCS to isolate any line or any section of the plant depending upon the location of the leak till the maintenance work will be completed. Closed handling system will be provided to reduce fugitive emissions.

11.5.2 Noise environment

(a) During construction and commissioning phase

- Construction activities such as operation of construction equipment, transportation of equipment, man and material etc. are likely to cause an increase in the ambient noise levels. However, the incremental noise generated will be localised & temporary.

(b) During operation phase

- The major noise generating sources from the proposed project would be boilers, fans, pumps, cooling towers, steam turbine, etc. From the modelling studies, carried out for the prediction of ambient noise due to the proposed project, it was observed that the incremental noise levels from the proposed project will not have any appreciable impact outside the plant boundary.

11.5.3 Water environment

(a) During construction and commissioning phase

- The water requirement for proposed project will be fulfilled by Damanganga Canal Distry. The total water required will be well within the sanctioned capacity by Damanganga Canal Distry.
- There will be no impact on ground water level as groundwater will not be abstracted.
- Temporary sanitation facilities will be provided by the company before starting construction work for handling the domestic wastewater generation. Thus, it has been manifested that there will be no significant impacts on water in terms of water quality during construction phase.

- During commissioning phase, temporary impacts on water are mainly anticipated because of water consumption & wastewater generation. It is suggested to commission the project only after provision for management of wastewater from the commissioning phase.

(b) During operation phase

- The impact on water quantity will be negligible as the source of water is Damanganga Canal Distry
- Necessary water requirement for the proposed project will be fulfilled from Damanganga Canal Distry.
- Total water requirement for proposed project will be 3115 KLD. From which 2525 KLD will be fresh water & remaining 590 KLD will be recycled.
- The total domestic wastewater generated will be treated in STP. Treated water from STP will be used for gardening.
- Industrial wastewater generated from utility installations will be partly recycled for lime slurry preparation & remaining in RO-2.
- Scrubber bleed-off along with plant washing will be diverted to ETP. Treated water from ETP will partly be recycled for plant washing & remaining will be diverted to RO-2.
- ETP treated water along with remaining industrial wastewater will be diverted to RO.
- Reject from pre-treatment RO & RO-2 will be diverted to MEE. Permeate from RO & Condensate from MEE will be recycled for non-potable & industrial use.
- Thus, with optimizing the water consumption & efficient wastewater management, no major adverse impacts on the water environment is envisaged due to the proposed project.

11.5.4 Land environment

(a) During Construction and Commissioning phase

- The proposed site is currently uninhabited and an open land. NA permission is obtained. The utilisation of vacant land can be considered as beneficial impact.
- The excavation work, filling of foundation activity & construction work will generate debris and if not properly managed could affect the topography of the site. Construction solid waste should be collected, segregated, stored and disposed as per the 'Construction & Demolition Waste Management Rules, 2016'.

(b) During Operation phase

- All necessary mitigation measures suggested for control of PM, SO_2 & NO_2 emissions generated from project must be provided to ensure that there are no secondary impacts on leaves of plants & tree of the surrounding area, further resulting in loss or reduction in vegetation area as a long term impact.
- Development of dense greenbelt should be ensured to generate positive impact.

11.5.5 Soil quality

(a) During Construction and Commissioning phase

- The improper disposal of construction waste may cause impact on the top soil layer. Hence, Construction waste should be disposed as per Construction & Demolition Rules 2016. Excavated top soil to be utilized for greenbelt development.

- Proper lining should be provided for making of concrete to control runoff of water & avoid soil contamination due to exposure of solid waste generation like debris, spillage of concrete mixture containing additives and construction materials containing heavy metals, paints, coating, liners etc.

(b) During Operation phase

- All the operations of material handling, storage and transportation should be done with utmost care and adequate storage & transfer facilities should be provided and maintained to ensure that no soil contamination occurs occur due to accidental spillage of hazardous materials.
- Improper storage & disposal of hazardous waste may increase the level of toxic compound in soil. Adequate storage area & proper disposal facilities for proper storage of hazardous/ Non-hazardous waste generated to be provided. Liners to be provided in hazardous waste storage area to avoid soil contamination. The hazardous waste carrying vehicles to be covered to prevent spillage or dusting.

11.5.6 Socio-economic environment

(a) During Construction and Commissioning phase

- The project proposed on uninhibited land. Hence, no resettlement and rehabilitation (R&R) is required.
- The local residents will be employed contractually as per their skill and aptitude.
- All the necessary health and sanitation facilities will be provided at the construction site.
- The social impacts during construction phase are likely to create direct and indirect employment including business opportunities for the local people, which will improve their economic conditions and quality of life.

(b) During Operation phase

- Impacts on social environment are likely to occur mainly due to the pollution potentials of the project, competing use of water resources, air emission, hazardous material handling & storage, hazards associated with hazardous chemical & operations of the project, noise generation, traffic load on local approach road.
- The water will be supplied through Damanganga Canal Distry. There will be no discharge of effluent outside of company premises, unit will be ZLD.
- The emissions generated due to proposed project will be controlled by installation and proper operations of APCM like DeSOx & DeNOx system.
- The hazardous materials & waste will be managed efficiently in line with statutory requirements for hazardous substance transportation, handling, storage & use as well as hazardous waste handling, storage, transportation & disposal.
- All safety measures and required essential plans should be provided and implemented for safety, disaster & emergency action, as mentioned in RA Report for proposed project.
- All necessary mitigation measures suggested for noise control should be provided to reduce the impacts of noise generation due to proposed project.
- Existing road network is adequate to cater additional traffic load due to proposed project.
- Approximately 760 nos. of people are expected to benefit from direct employment for the project.
- Social development program should be conducted as the part of CER activities.
- Beneficial impacts on employment & contract services are likely due to indirect employment in transportation activities.

- Thus, the impacts on socio-economic environment would not be major, if suggested EMP is implemented.

11.5.7 Ecological environment

(a) During Construction and Commissioning phase

- The project site is currently open land. No felling of trees is required. Hence, issue of impacts on ecology due to siting of proposed project is not envisaged.
- Minor disturbance on local flora and fauna are anticipated due to air emissions and noise generated during construction activities. However, these impacts would be short-term, localised and would be restricted within project site.

(b) During Operation phase

- To ensure there will be no major impacts on ecology, proponent should provide all other mitigation measures as suggested for prevention of pollution of air, water, land/ soil and noise.
- Appropriate air pollution control systems like DeSOx & DeNOx system to be installed to meet the emission standards stipulated for PM, SO_2 and NOx by State Pollution Control Board. Required stack heights to be provided to ensure adequate dispersion and reduce impacts on surrounding forest area.
- Since, the high noise generation from turbine can impact the local faunal species, it is suggested to provide the effective noise control & noise attenuation measures.
- All safety measures will be provided, and all required essential plans will be implemented for emission reduction from storage & handling, safety, disaster & emergency action as mentioned in RA Report for proposed project.
- Contribution should be made to ecological welfare & forest development activities conducted by Govt. Organization, NGOs and other such organizations.
- Regular monitoring of Valued Environmental Components as per Environmental Monitoring Programs designed for the project should be carried out.

11.6 POST PROJECT MONITORING PLAN

As a part of EIA study, a post-project monitoring plan has been prepared and necessary suggestion & guidelines for post project monitoring are provided therein. The capital cost for proposed project will be Rs. 440 crores. The Capex for implementation of Environmental Management Systems will be Rs. 86.5 crores and Opex for environment protection & continual improvement will be Rs. 26.45 crores/ annum.

Post project monitoring plan covers sampling & analysis of water, air, emission, wastewater, noise, hazardous wastes. The environmental compliance report should be prepared and submitted as per the regulatory guidelines.

11.7 ADDITIONAL STUDIES

The Risk Assessment study involving consequence analysis related to fire/ toxic dispersion due to storage/ handling of product and raw material has been carried out. Accordingly, a Disaster Management Plan has been prepared. The suggestions cited in RA report should be implemented for fire & explosion hazard prevention, emergency management, other potential occupational health hazard prevention, safety gear etc. A safety & environment management cell has been designated to manage the responsibilities delineated in the EMP

The project is proposed on uninhibited land. Therefore, R&R study has not been conducted for the proposed project.

Public consultation is applicable to the proposed project as per the ministry of Environment & Forest, Government of India, New Delhi, vide its notification no. SO 1533 dated 14th September '2006.

The public Hearing was conducted on 19/07/2019 at 11:30 hrs. at proposed project site. A summarized table showing salient points highlighting issues raised by the participants & issues raised by the concerned persons having plausible stake in Environment and responded by the representatives of applicant during the Public Hearing along with the additional measures, if any proposed after the PH is provided in chapter-7, table 7.1.

11.8 PROJECT BENEFITS

The proposed product manufacturing in the country will be very economical compared to imports of the same and also the export of the same will earn extra revenue generation for our country. The proposed products have huge demand in the domestic as well as international market. From the proposed project, employment opportunities will be generated directly as well as indirectly. Local people will be benefited from the proposed project. Approximately 760 people will be employed from the proposed project.

The construction and commissioning phase will require a substantial man-power and resources. The unit proposes to employ local contractual services for the same. Hence, with the growth in the economic conditions the project may lead to growth in the social stature & improvement of the quality of life in the surrounding area.

The total cost of the project is Rs. 440 crores and about 1.5% (Rs. 6.6 crores) have been allocated for CER Programs. The entire amount would be spending in 10 years with an average cost of per year for development programs come around Rs 0.66 crores.

11.9 ENVIRONMENT MANAGEMENT PLAN

Environmental Management Plan has been formulated as a part of the EIA study. The major issues of predicted impacts of proposed expansion project have been considered for delineation of necessary action plan. The EMP has been formulated considering all necessary mitigation measures to prevent/ minimize/ eliminate the environmental impacts as well as to delineate implementation schedule and responsibilities. Necessary action plans for ecological conservation & welfare, social upliftment by CER, greenbelt development, energy efficiency & conservation and resources conservation through “Cleaner Production Activities” have been covered in the EMP prepared for the proposed project.

11.10 CONCLUSION

As evaluated in chapter-4, the cumulative value of significance of the project, in terms of the impacts on the environment, without mitigation measures and with mitigation measures works out to be, (-) 38.15 and (-) 8.55 respectively, which indicates that with the implementation of the mitigation measures, the negative impacts of the project can be reduced significantly.

The proponent of the project has agreed to proceed in line with the EIA agency’s comments and suggestions to mitigate the adverse impacts to the most techno-economically viable extent.

12. The EIA Team

12.1 EIA CONSULTANT ORGANIZATION

M/s. Precitech Laboratories Pvt. Ltd. is a firm engaged in the field of environmental engineering, testing/monitoring & consultancy services since 1991. Rooted at Vapi, it has its branches in Ankleshwar, Dahej, Rajkot and Ahmedabad.

Precitech Laboratories Pvt. Ltd. holds the following recognitions:

- Recognized Environmental Laboratory under EPA Act – 1986 by MoEF&CC.
- Recognized Environmental Auditors (Schedule-II) with the GPCB.
- Certification by BS OHSAS 18001-2007
- Accredited EIA Consultant Organization from QCI, NABET.
- Accredited Testing Laboratory by NABL (ISO/IEC 17025:2005)

Moreover, the entire team of M/s. Madura Carbon Black (India) Ltd., Sarigam has contributed to the proposed project and extended their kind courtesy by way of sharing their data relevant to the project. Precitech Laboratories Pvt. Ltd. is thankful for their inputs & support through the current study.

12.2 PROJECT TEAM FOR EIA STUDY

The Precitech team consists of qualified & experienced personnel in the fields of Environment Engineering, Mechanical Engineering, Chemical Engineering, Environmental Science, Geology, Microbiology, Botany and Chemistry.

Moreover, Precitech Laboratories Pvt. Ltd. also has the privilege of being associated with various technical experts in various fields and utilizing their services as and when required.

The project team for the present study is listed in Table 12.1.

Table 12.1: Project team for EIA study

Sr. No.	Name	Designation	Qualification
Project team from M/s. Precitech Laboratories Pvt. Ltd.			
1	Dr. H. M. Bhatt	Chairman & Managing Director	Ph. D. (Chem.)
2	Dr. Siddharth Pathak	Sr. Manager	Ph. D. (Experimental Biology-Ecology)
3	Mr. Yogesh Joshi	Sr. Mgr.-Technical	M. Sc. (Chem.)
4	Mr. Ketan Lakhani	Sr. Mgr.-Technical	M. Sc. (Chem.)
5	Mr. Rujul Bhatt	Env. Scientist	M. Sc. (Env. Sci.), PDIS
6	Mr. Prashant Bhidkar	Manager-Laboratory	M. Sc. (Env. Sci.), Adv. Diploma in Ind. Safety
7	Mr. Amit Tandel	Sr. Manager-Project	M. Sc. (Chem.)
7	Mr. Dhanajay Pandey	Project Engineer	B. E. (Chemical)
8	Ms. Megha Sharma	Chemical Engineer	B. E. (Chemical)
9	Ms. MaitriRana	Trainee Environment Engg.	B. E. (Environment)
10	Ms. Tanvi Rathod	Trainee Environment Engg.	B. E. (Environment)
11	Mr. PolinThakor	FAE (SE)	M. S. W.
12	Ms. Ravina Gore	Microbiologist	B. Sc. (Microbiology),
13	Ms. Anushya Patel	Senior Chemist	M. Sc. (Chemistry)
14	Mr. Sanjay Joshi	Field Officer	H.S.C.
15	Mr. BhupendraDesle	Field Officer	H.S.C.
Technical Associates			
17	Dr. Hemalkumar Naik (HN Eco erecter)	Ecology expert	M.Sc. Ph.D. (Aquatic Biology)

Sr. No.	Name	Designation	Qualification
18	Mr. Nirzar Lakhia	Landuse, Geology and Hydrology & Groundwater	M.Sc. (Geology), PGD (Geo-informatics)
19	Dr. Harshit Sinha	Socio-economic expert	M.Sc. (Geography) Ph.D. (Geography)
20	Anil Choumal	Risk and Hazards	B. E. (Chemical)
21	DipakChanchad	Risk and Hazards	M.Sc (Chemistry)

(Source: Precitech Laboratories Pvt. Ltd.)

Annexure

A 1 A R

No.IA-J-11011/266/2018-IA-II(I)

Goverment of India

Minister of Enviroment,Forest and Climate Change

Impact Assessment Division

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Indira Paryavaran Bhavan,
Vayu Wing,3rd Floor,Aliganj,
Jor Bagh Road,New Delhi-110003
06 Apr 2019

To,

M/s MADURA CARBON INDIA LTD
1, Janki Centre, Off-Veera Desai Road, Andheri west, Mumbai-400053,
Mumbai City-400053
Maharashtra

Tel.No.022-26730890; Email:vipankalra@hotmail.com

Sir/Madam,

This has reference to the proposal submitted in the Ministry of Environment, Forest and Climate Change to prescribe the Terms of Reference (TOR) for undertaking detailed EIA study for the purpose of obtaining Environmental Clearance in accordance with the provisions of the EIA Notification, 2006. For this purpose, the proponent had submitted online information in the prescribed format (Form-1) along with a Pre-feasibility Report. The details of the proposal are given below:

1. Proposal No.:	IA/GJ/IND2/76156/2018
2. Name of the Proposal:	Proposed project by manufacturing of Carbon Black
3. Category of the Proposal:	Industrial Projects - 2
4. Project/Activity applied for:	5(e) Petrochemical based processing (processes other than cracking &
5. Date of submission for TOR:	05 Mar 2019

In this regard, under the provisions of the EIA Notification 2006 as amended, the Standard TOR for the purpose of preparing environment impact assessment report and environment management plan for obtaining prior environment clearance is prescribed with public consultation as follows:

5(e): STANDARD TERMS OF REFERENCE FOR CONDUCTING ENVIRONMENT IMPACT ASSESSMENT STUDY FOR PETROCHEMICAL BASED PROCESSING (PROCESSES OTHER THAN CRACKING & REFORMATION AND NOT COVERED UNDER THE COMPLEXES)PROJECTS AND INFORMATION TO BE INCLUDED IN EIA/EMP REPORT

A. STANDARD TERMS OF REFERENCE

1) Executive Summary

2) Introduction

i. Details of the EIA Consultant including NABET accreditation

ii. Information about the project proponent

iii. Importance and benefits of the project

3) Project Description

i. Cost of project and time of completion.

ii. Products with capacities for the proposed project.

iii. If expansion project, details of existing products with capacities and whether adequate land is available for expansion, reference of earlier EC if any.

iv. List of raw materials required and their source along with mode of transportation.

v. Other chemicals and materials required with quantities and storage capacities

vi. Details of Emission, effluents, hazardous waste generation and their management.

vii. Requirement of water, power, with source of supply, status of approval, water balance diagram, man-power requirement (regular and contract)

viii. Process description along with major equipments and machineries, process flow sheet (quantative) from raw material to products to be provided

ix. Hazard identification and details of proposed safety systems.

x. Expansion/modernization proposals:

e. Copy of all the Environmental Clearance(s) including Amendments thereto obtained for the project from MOEF/SEIAA shall be attached as an Annexure. A certified copy of the latest Monitoring Report of the Regional Office of the Ministry of Environment and Forests as per circular dated 30th May, 2012 on the status of compliance of conditions stipulated in all the existing environmental clearances including Amendments shall be provided. In addition, status of compliance of Consent to Operate for the ongoing Iexisting operation of the project from SPCB shall be attached with the EIA-EMP report.

f. In case the existing project has not obtained environmental clearance, reasons for not taking EC under the provisions of the EIA Notification 1994 and/or EIA Notification 2006 shall be provided. Copies of Consent to Establish/No Objection Certificate and Consent to Operate (in case of units operating prior to EIA Notification 2006, CTE and CTO of FY 2005-2006) obtained from the SPCB shall be submitted. Further, compliance report to the conditions of consents from the SPCB shall be submitted.

4) Site Details

i. Location of the project site covering village, Taluka/Tehsil, District and State, Justification for selecting the site, whether other sites were considered.

ii. A toposheet of the study area of radius of 10km and site location on 1:50,000/1:25,000 scale on an A3/A2 sheet. (including all eco-sensitive areas and environmentally sensitive places)

iii. Details w.r.t. option analysis for selection of site

iv. Co-ordinates (lat-long) of all four corners of the site.

v. Google map-Earth downloaded of the project site.

vi. Layout maps indicating existing unit as well as proposed unit indicating storage area, plant area, greenbelt area, utilities etc. If located within an Industrial area/Estate/Complex, layout of Industrial Area indicating location of unit within the Industrial area/Estate.

vii. Photographs of the proposed and existing (if applicable) plant site. If existing, show photographs of plantation/greenbelt, in particular.

viii. Landuse break-up of total land of the project site (identified and acquired), government/ private - agricultural, forest, wasteland, water bodies, settlements, etc shall be included. (not required for industrial area)

ix. A list of major industries with name and type within study area (10km radius) shall be incorporated. Land use details of the study area

x. Geological features and Geo-hydrological status of the study area shall be included.

xi. Details of Drainage of the project upto 5km radius of study area. If the site is within 1 km radius of any major river, peak and lean season river discharge as well as flood occurrence frequency based on peak rainfall data of the past 30 years. Details of Flood Level of the project site and maximum Flood Level of the river shall also be provided. (mega green field projects)

xii. Status of acquisition of land. If acquisition is not complete, stage of the acquisition process and expected time of complete possession of the land.

xiii. R&R details in respect of land in line with state Government policy

5) Forest and wildlife related issues (if applicable):

i. Permission and approval for the use of forest land (forestry clearance), if any, and recommendations of the State Forest Department. (if applicable)

ii. Landuse map based on High resolution satellite imagery (GPS) of the proposed site delineating the forestland *(in case of projects involving forest land more than 40 ha)*

iii. Status of Application submitted for obtaining the stage I forestry clearance along with latest status shall be submitted.

iv. The projects to be located within 10 km of the National Parks, Sanctuaries, Biosphere Reserves, Migratory Corridors of Wild Animals, the project proponent shall submit the map duly authenticated by Chief Wildlife Warden showing these features vis-à-vis the project location and the recommendations or comments of the Chief Wildlife Warden-thereon

v. Wildlife Conservation Plan duly authenticated by the Chief Wildlife Warden of the State Government for conservation of Schedule I fauna, if any exists in the study area

vi. Copy of application submitted for clearance under the Wildlife (Protection) Act, 1972, to the Standing Committee of the National Board for Wildlife

6) Environmental Status

i. Determination of atmospheric inversion level at the project site and site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall.

ii. AAQ data (except monsoon) at 8 locations for PM10, PM2.5, SO2, NOX, CO and other parameters relevant to the project shall be collected. The monitoring stations shall be based CPCB guidelines and take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests.

iii. Raw data of all AAQ measurement for 12 weeks of all stations as per frequency given in the NAQQM Notification of Nov. 2009 along with - min., max., average and 98% values for each of the AAQ parameters from data of all AAQ stations should be provided as an annexure to the EIA Report.

iv. Surface water quality of nearby River (100m upstream and downstream of discharge point) and other surface drains at eight locations as per CPCB/MoEF&CC guidelines.

v. Whether the site falls near to polluted stretch of river identified by the CPCB/MoEF&CC, if yes give details.

vi. Ground water monitoring at minimum at 8 locations shall be included.

vii. Noise levels monitoring at 8 locations within the study area.

viii. Soil Characteristic as per CPCB guidelines.

ix. Traffic study of the area, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.

x. Detailed description of flora and fauna (terrestrial and aquatic) existing in the study area shall be given with special reference to rare, endemic and endangered species. If Schedule-

I fauna are found within the study area, a Wildlife Conservation Plan shall be prepared and furnished.

xi. Socio-economic status of the study area.

7) Impact and Environment Management Plan

i. Assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. In case the project is located on a hilly terrain, the AQIP Modelling shall be done using inputs of the specific terrain characteristics for determining the potential impacts of the project on the AAQ. Cumulative impact of all sources of emissions (including transportation) on the AAQ of the area shall be assessed. Details of the model used and the input data used for modelling shall also be provided. The air quality contours shall be plotted on a location map showing the location of project site, habitation nearby, sensitive receptors, if any.

ii. Water Quality modelling - in case of discharge in water body

iii. Impact of the transport of the raw materials and end products on the surrounding environment shall be assessed and provided. In this regard, options for transport of raw materials and finished products and wastes (large quantities) by rail or rail-cum road transport or conveyor-cum-rail transport shall be examined.

iv. A note on treatment of wastewater from different plant operations, extent recycled and reused for different purposes shall be included. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the prescribed standards of discharge under E(P) Rules.

v. Details of stack emission and action plan for control of emissions to meet standards.

vi. Measures for fugitive emission control

vii. Details of hazardous waste generation and their storage, utilization and management. Copies of MOU regarding utilization of solid and hazardous waste in cement plant shall also be included. EMP shall include the concept of waste-minimization, recycle/reuse/recover techniques, Energy conservation, and natural resource conservation.

viii. Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 2009. A detailed plan of action shall be provided.

ix. Action plan for the green belt development plan in 33 % area i.e. land with not less than 1,500 trees per ha. Giving details of species, width of plantation, planning schedule etc. shall be included. The green belt shall be around the project boundary and a scheme for greening of the roads used for the project shall also be incorporated.

x. Action plan for rainwater harvesting measures at plant site shall be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources.

xi. Total capital cost and recurring cost/annum for environmental pollution control measures shall be included.

xii. Action plan for post-project environmental monitoring shall be submitted.

xiii. Onsite and Offsite Disaster (natural and Man-made) Preparedness and Emergency Management Plan including Risk Assessment and damage control. Disaster management plan should be linked with District Disaster Management Plan.

8) Occupational health

i. Plan and fund allocation to ensure the occupational health & safety of all contract and casual workers

ii. Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations give the details of the same. Details regarding last month analyzed data of above mentioned parameters as per age, sex, duration of exposure and department wise.

iii. Details of existing Occupational & Safety Hazards. What are the exposure levels of hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,

iv. Annual report of heath status of workers with special reference to Occupational Health and Safety.

9) Corporate Environment Policy

i. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.

ii. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.

iii. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.

iv. Does the company have system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism shall be detailed in the EIA report

10) Details regarding infrastructure facilities such as sanitation, fuel, restroom etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase.

11) Enterprise Social Commitment (ESC)

i. Adequate funds (at least 2.5 % of the project cost) shall be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan shall be included. Socio-economic development activities need to be elaborated upon.

12) Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof shall also be included. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, details thereof and compliance/ATR to the notice(s) and present status of the case.

13) 'A tabular chart with index for point wise compliance of above TOR.

B. SPECIFIC TERMS OF REFERENCE FOR EIASTUDIES FOR PETROCHEMICAL BASED PROCESSING (PROCESSES OTHER THAN CRACKING & REFORMATION AND NOT COVERED UNDER THE COMPLEXES)

1. Details on requirement of raw material,itssource of supplyandstorageattheplant.
2. Completeprocessflowdiagram for all products with material balance.
3. Details on requirement of auxiliary chemicals, solvents, catalysts, reactors and utilities to support the unit processes.
4. Brief description of equipments for various process.
5. Details of proposed source- specific pollution control schemes and equipments to meet the national standards.
6. Detailson VOC emission control system from vents, stacks, fugitive emissions and flare management, etc.
7. Details on proposed LDAR protocol.
8. Ambient air quality should include hydrocarbon (methane and non methane), VOCand VCM (if applicable).
9. Risk Assessment & Disaster Management Plan
   - — Identification of hazards
   - — Consequence Analysis
   - — Measures for mitigation of risk.

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Annexure – 1 (b): Point wise ToR Compliance

Sr. No.	Awarded ToR	Compliance
Standard ToR		
1.	Executive Summary	Executive Summary is given in Chapter 11, Page No. 11.1 to 11.10 of the Final EIA Report..
2.	Introduction	
i.	Details of the EIA Consultant including NABET accreditation	• Please refer "Declaration by Expert" for the details of EIA consultant. • Please refer ***Annexure-14*** of Final EIA report for NABET certificate.
ii.	Information about the project proponent	• The information on the project proponent is given in Chapter 1, Section 1.4, Page No. 1.1 to 1.2 of the Final EIA Report.
Iii.	Importance and benefits of the project	• The importance and benefits of the project is given in Chapter 8, Page No. 8.1 to 8.2 of Final EIA Report.
3.	Project Description	
i.	Cost of project and time of completion.	• The cost of project is given in Chapter 2, Section 2.4.8, Page No. 2.6 to 2.7 of Final EIA Report. • The construction of the project will commence after obtaining Environmental Clearance& consent to Establish (CTE).
ii.	Products with capacities for the proposed project.	• The list of products along with the production capacities Chapter 2, Section 2.1, Table 2.1, Page No. 2.1 of Final EIA Report.
iii.	If expansion project, details of existing products with capacities and whether adequate land is available for expansion, reference of earlier EC if any.	• The proposed project is new green field project. • The list of products along with the production capacities Chapter 2, Section 2.1, Table 2.1, Page No. 2.1 of Final EIA Report.
iv.	List of raw materials required and their source along with mode of transportation.	• The list of raw materials required is given in Chapter 2, Section 2.4.4, Page No. 2.5 of Final EIA report.
v.	Other chemicals and materials required with quantities and storage capacities	• The list of raw materials required is given in Chapter 2, Section 2.4.4, Page No. 2.5 of Final EIA report.
vi.	Details of Emission, effluents, hazardous waste generation and their management.	• The details of effluents, emissions & hazardous waste generation and its management is given in Chapter 2, Sections 2.6.1, 2.6.2 & 2.6.4, Page No 2.9 to 2.17 of Final EIA report.
vii.	Requirement of water, power, with source of supply, status of approval, water balance diagram, man-power requirement (regular and contract)	• The detail of water requirement with source of supply is given in Chapter 2, Section 2.4.7, Page No. 2.6 of Final EIA report. • The water balance diagram is furnished in Chapter 2, Section 2.6.1.2, Figure No. 2.5, Page No 2.10 of Final EIA report. • The detail of power requirement along

Sr. No.	Awarded ToR	Compliance
		with source of supply is given in Chapter 2, Section 2.4.5, Page No. 2.5 of Final EIA report. • The details of manpower requirement are given in Chapter 2, Section 2.4.6, Page No. 2.5 to 2.6 of Final EIA report.
viii.	Process description along with major equipments and machineries, process flow sheet (quantative) from raw material to products to be provided	• The process details are provided as ***Annexure-5*** of Final EIA Report. • Details of major equipment and machineries are given in Chapter 2, Section 2.4.3, Page No. 2.4 to 2.5 of Final EIA Report.
ix.	Hazard identification and details of proposed safety systems.	• The detail of hazard identification is given in Chapter 7, Section 7.4.5, Page No. 7.18 to 7.22 of Final EIA Report. • The detail of proposed safety systems is given in Chapter 7, Section 7.4.4, Page No. 7.14 to 7.16 of Final EIA Report.
x.	Expansion/modernization proposals:	
e.	Copy of all the Environmental Clearance(s) including Amendments thereto obtained for the project from MOEF/SEIAA shall be attached as an Annexure. A certified copy of the latest Monitoring Report of the Regional Office of the Ministry of Environment and Forests as per circular dated 30thMay, 2012 on the status of compliance of conditions stipulated in all the existing environmental clearances including Amendments shall be provided. In addition, status of compliance of Consent to Operate for the ongoing existing operation of the project from SPCB shall be attached with the EIA-EMP report.	• The proposed project is new green field project.
f.	In case the existing project has not obtained environmental clearance, reasons for not taking EC under the provisions of the EIA Notification 1994 and/or EIA Notification 2006 shall be provided. Copies of Consent to Establish/No Objection Certificate and Consent to Operate (in case of units operating prior to EIA Notification 2006, CTE and CTO of FY 2005-2006) obtained from the SPCB shall be submitted. Further, compliance report to the conditions of consents from the SPCB shall be submitted.	
4.	Site Details	
i.	Location of the project site covering village, Taluka/Tehsil, District and State, Justification for selecting the site, whether other sites were considered.	• The details on location of project site is given in Chapter 2, Section 2.1.1, Table 2.2, Page No. 2.1 to 2.2 of Final EIA Report. • The justification for selection of site is given in Chapter 5, Section 5.2, Page No. 5.1 to 5.2 of Final EIA Report
ii.	A toposheet of the study area of radius of	• The toposheet of project site is given in

Sr. No.	Awarded ToR	Compliance
	10km and site location on 1:50,000/1:25,000 scale on an A3/A2 sheet. (including all eco-sensitive areas and environmentally sensitive places)	Chapter 3, Section 3.3.1, Figure 3.2, and Page No. 3.5 of Final EIA Report.
iii.	Details w.r.t. option analysis for selection of site	• The details with respect to analysis for selection of site is given in Chapter 5, Section 5.2, Page No. 5.1 to 5.2 of Final EIA Report.
iv.	Co-ordinates (lat-long) of all four corners of the site.	• The co-ordinates of site are given in Chapter 2, Section 2.1.1, Table 2.2, and Page No. 2.1 of Final EIA Report.
v.	Google map-Earth downloaded of the project site.	• The google earth image showing the location of the project site is given in Chapter 2, Section 2.1.1, Figure 2.1, Page No. 2.2 of Final EIA Report.
vi.	Layout maps indicating existing unit as well as proposed unit indicating storage area, plant area, greenbelt area, utilities etc. If located within an Industrial area/Estate/Complex, layout of Industrial Area indicating location of unit within the Industrial area/Estate.	• The layout map for proposed unit is given in Chapter 2, Section 2.3, Figure No. 2.2, Page No. 2.3 to 2.4 of Final EIA Report.
vii.	Photographs of the proposed and existing (if applicable) plant site. If existing, show photographs of plantation/greenbelt, in particular.	• The photographs of the proposed plant site is given in ***Annexure–12*** of Final EIA report.
viii.	Landuse break-up of total land of the project site (identified and acquired), government/ private - agricultural, forest, wasteland, water bodies, settlements, etc shall be included. (not required for industrial area)	• The area break-up statement of the site land is given in Chapter 2, Section 2.3, Table no. 2.3, Page No. 2.4 of Final EIA Report
ix.	A list of major industries with name and type within study area (10km radius) shall be incorporated. Land use details of the study area	• The list of major industries within the study area is given in ***Annexure - 2*** of Final EIA Report. • The land use detail of the study area is given in Chapter 3, Section 3.8, Page No. 3.28 to 3.30 of Final EIA Report.
x.	Geological features and Geo-hydrological status of the study area shall be included.	• The geological feature of study area is given in Chapter 3, Section 3.3.2, Page No. 3.5 to 3.6 of Final EIA Report. • The geo-hydrological status of the study area is given in Chapter 3, Section 3.4.1, Page No. 3.10 to 3.11 of Final EIA Report.
xi.	Details of Drainage of the project up-to 5km radius of study area. If the site is within 1 km radius of any major river, peak and lean season river discharge as well as flood occurrence frequency based on peak rainfall data of the past 30 years. Details of Flood Level of the project site and maximum Flood Level of the river shall also be provided. (mega green field projects)	• The details of drainage pattern around the project site up to 10 km radius of study area is given in Chapter 3, Section 3.4.1, Page No. 3.10 to 3.11 of Final EIA Report. • There is no major river located within 1 km radius around project site. The river Darotha is approximately 5 km away from site in east direction.
xii.	Status of acquisition of land. If acquisition is not complete, stage of the acquisition process	• The land acquisition documents are attached as ***Annexure-3*** of Final EIA

Sr. No.	Awarded ToR	Compliance
	and expected time of complete possession of the land.	Report.
xiii.	R&R details in respect of land in line with state Government policy	• The project is proposed on uninhibited land. Therefore, R&R study has not been conducted for the proposed project.
5.	Forest and wildlife related issues (if applicable):	
i.	Permission and approval for the use of forest land (forestry clearance), if any, and recommendations of the State Forest Department. (if applicable)	• Not applicable. The project is proposed on uninhibited land. • Please refer ***Annexure – 4*** for NOC & authenticated map from forest department.
ii.	Landuse map based on High resolution satellite imagery (GPS) of the proposed site delineating the forestland (in case of projects involving forest land more than 40 ha)	• Not applicable. The proposed project will be located on NA land. • The land use detail of the study area is given in Chapter 3, Section 3.8, Page No. 3.28 to 3.30 of Final EIA Report.
iii.	Status of Application submitted for obtaining the stage I forestry clearance along with latest status shall be submitted.	• Not applicable. The project is proposed on uninhibited land.
iv.	The projects to be located within 10 km of the National Parks, Sanctuaries, Biosphere Reserves, Migratory Corridors of Wild Animals, the project proponent shall submit the map duly authenticated by Chief Wildlife Warden showing these features vis-à-vis the project location and the recommendations or comments of the Chief Wildlife Warden-thereon	• There is no national park, sanctuaries biosphere reserves, migratory corridors of wild animals within 10 km of the radial periphery of project site.
v.	Wildlife Conservation Plan duly authenticated by the Chief Wildlife Warden of the State Government for conservation of Schedule I fauna, if any exists in the study area	• Wildlife conservation plan is given in ***Annexure-8*** of Final EIA Report. • Since, the project site is not falling within the Wildlife zone, authentication is not obtained
vi.	Copy of application submitted for clearance under the Wildlife (Protection) Act, 1972, to the Standing Committee of the National Board for Wildlife	• Not applicable. The project is proposed on uninhibited land.
6.	Environmental Status	
i.	Determination of atmospheric inversion level at the project site and site-specific micrometeorological data using temperature, relative humidity, hourly wind speed and direction and rainfall.	• The morning and afternoon mixing heights required, were determined by referring to the maps for 'Post monsoon season' from the IMD publication - Atlas of hourly mixing height and assimilative capacity of atmosphere in India. • The site specific meteorological data is given in Chapter 3, Section 3.5, Page No. 3.18 to 3.20 of Final EIA Report.
ii.	AAQ data (except monsoon) at 8 locations for PM10, PM2.5, SO2, NOX, CO and other parameters relevant to the project shall be collected. The monitoring stations shall be based CPCB guidelines and take into account the pre-dominant wind direction, population zone and sensitive receptors including	• The AAQ data monitored at 8 locations for all the parameters mentioned in NAAQS (2009) is given in Chapter 3, Section 3.6, Page No. 3.20 to 3.26 of Final EIA Report.

Sr. No.	Awarded ToR	Compliance
	reserved forests.	
iii.	Raw data of all AAQ measurement for 12 weeks of all stations as per frequency given in the NAQQM Notification of Nov. 2009 along with - min., max., average and 98% values for each of the AAQ parameters from data of all AAQ stations should be provided as an annexure to the EIA Report.	• The AAQ data monitored is given in Chapter 3, Section 3.6, Page No. 3.20 to 3.26 of Final EIA Report.
iv.	Surface water quality of nearby River (100m upstream and downstream of discharge point) and other surface drains at eight locations as per CPCB/MoEF&CC guidelines.	• The unit will be zero liquid discharge unit. • The surface water quality in the study area is given in Chapter 3, Section 3.4.3, Page No. 3.15 to 3.18 of Final EIA Report.
v.	Whether the site falls near to polluted stretch of river identified by the CPCB/MoEF&CC, if yes give details.	• Not applicable • The unit will be zero liquid discharge unit. • The surface water quality in the study area is given in Chapter 3, Section 3.4.3, Page No. 3.15 to 3.18 of Final EIA Report.
vi.	Ground water monitoring at minimum at 8 locations shall be included.	• The monitored ground water quality in the study area is given in Chapter 3, Section 3.4.2, Page No. 3.11 to 3.15 of Final EIA Report.
vii.	Noise levels monitoring at 8 locations within the study area.	• The noise level monitored in the study area is given in Chapter 3, Section 3.7, Page No. 3.26 to 3.28 of Final EIA Report.
viii.	Soil Characteristic as per CPCB guidelines.	• The soil characteristics determined in the study area is given in Chapter 3, Section 3.3.4, Page No. 3.6 to 3.10 of Final EIA Report.
ix.	Traffic study of the area, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.	• The traffic studies indicating the type and frequency of vehicle for transportation of materials is given in Chapter 3, Section 3.11, Page No. 3.36 to 3.37. • The details of additional traffic due to proposed project is given in Chapter 4, Section 4.5.4.1, Page No. 4.23 to 4.24 of Final EIA Report.
x.	Detailed description of flora and fauna (terrestrial and aquatic) existing in the study area shall be given with special reference to rare, endemic and endangered species. If Schedule-I fauna are found within the study area, a Wildlife Conservation Plan shall be prepared and furnished.	• The details of terrestrial flora in the study area, is given in Chapter 3, Section 3.9.3, Page No. 3.31 of Final EIA Report respectively. • The details of terrestrial fauna in the study area, is given in Chapter 3, Section 3.9.4, Page No. 3.31 of Final EIA Report respectively. • The details of aquatic ecology in the study area is given in Chapter 3, Section 3.9.5, Page No. 3.31 to 3.32 of Final EIA Report. • The wildlife conservation plan for Schedule-I species is attached as ***Annexure - 8.***

Sr. No.	Awarded ToR	Compliance
xi.	Socio-economic status of the study area.	• The socio-economic status of the study area is given in Chapter 3, Section 3.10, Page Nos. 3.32 to 3.36 of Final EIA Report.
7.	Impact and Environment Management Plan	
i.	Assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. In case the project is located on a hilly terrain, the AQIP Modelling shall be done using inputs of the specific terrain characteristics for determining the potential impacts of the project on the AAQ. Cumulative impact of all sources of emissions (including transportation) on the AAQ of the area shall be assessed. Details of the model used and the input data used for modelling shall also be provided. The air quality contours shall be plotted on a location map showing the location of project site, habitationnearby, sensitive receptors, if any.	• The assessment of GLC's of pollutants from the stack emissions based on the site specific meteorological features along with the air quality contours is given in ***Annexure-10*** of Final EIA Report. • The cumulative impact of all sources of emissions on the AAQ of the area is given in in ***Annexure-10*** of Final EIA Report. • The transportation modeling studies along with air quality contours is given in ***Annexure-10*** of the Final EIA Report.
ii.	Water Quality modelling - in case of discharge in water body	• Not applicable. The unit will be zero liquid discharge unit. • The surface water quality in the study area is given in Chapter 3, Section 3.4.3, Page No. 3.15 to 3.18 of Final EIA Report.
iii.	Impact of the transport of the raw materials and end products on the surrounding environment shall be assessed and provided. In this regard, options for transport of raw materials and finished products and wastes (large quantities) by rail or rail-cum road transport or conveyor-cum- rail transport shall be examined.	• Product from the company will be transported to various consumers through tempo/trucks/tankers by road. • Total no. of vehicles required for transportation of raw materials and products in existing operations is 100 truck/tanker per day. • Adequacy of the existing road network is given in Chapter 4, Section 4.5.4.1, Page No. 4.23 to 4.24 of Final EIA Report.
iv.	A note on treatment of wastewater from different plant operations, extent recycled and reused for different purposes shall be included. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the prescribed standards of discharge under E(P) Rules.	• The detail of water requirement with source of supply is given in Chapter 2, Section 2.4.7, Page No. 2.6 of Final EIA report. • The water balance diagram is furnished in Chapter 2, Section 2.6.1.2, Figure No. 2.5, Page No 2.10 of Final EIA report. • Details of waste water generation, stream wise characteristics and treatment reuse/recycle is furnished in Chapter 2, Section 2.6.1.3, Page No 2.11 to 2.12 of Final EIA report.
v.	Details of stack emission and action plan for control of emissions to meet standards.	• Details of air emission and control measures are furnished in Chapter 2, Section 2.6.2, Page No 2.14 to 2.16 of Final EIA report. • Detailed EMP for Air pollution and control is furnished in Chapter 10, Section 10.4,

Sr. No.	Awarded ToR	Compliance
		Page No 10.2 to 10.5 of Final EIA report.
vi.	Measures for fugitive emission control	• Details of fugitive emission are furnished in Chapter 2, Section 2.6.2.3, Page No 2.15 to 2.16 of Final EIA report. • Detailed EMP for Air pollution and control is furnished in Chapter 10, Section 10.4, Page No 10.2 to 10.5 of Final EIA report.
vii.	Details of hazardous waste generation and their storage, utilization and management. Copies of MOU regarding utilization of solid and hazardous waste in cement plant shall also be included. EMP shall include the concept of waste-minimization, recycle/reuse/recover techniques, Energy conservation, and natural resource conservation.	• Details of hazardous waste generation and its disposal method is furnished in Chapter 2, Section 2.6.4, Page No 2.17 of Final EIA report. • Detailed EMP on of Hazardous and Non-hazardous waste management and recycle/reuse/recover techniques, Energy conservation, and natural resource conservation is furnished in Chapter 10, Section 10.6, Page No 10.8 to 10.9 of Final EIA report.
viii.	Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 2009. A detailed plan of action shall be provided.	• There will be no fly ash generation from the proposed project.
ix.	Action plan for the green belt development plan in 33 % area i.e. land with not less than 1,500 trees per ha. Giving details of species, width of plantation, planning schedule etc. shall be included. The green belt shall be around the project boundary and a scheme for greening of the roads used for the project shall also be incorporated.	• Green belt development and 5 year action plan is furnished in Chapter 10, Section 10.11, Page No 10.15 to 10.17 of Final EIA report.
x.	Action plan for rainwater harvesting measures at plant site shall be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources.	• Action plan for rainwater harvesting is furnished in Chapter 10, Section 10.12, Page No 10.17 to 10.18 of Final EIA report.
xi.	Total capital cost and recurring cost/annum for environmental pollution control measures shall be included.	• Total capital cost and recurring cost/annum for environmental pollution control measures is furnished in Chapter 6, Section 6.3, Page No. 6.1 to 6.2 of Final EIA report.
xii.	Action plan for post-project environmental monitoring shall be submitted.	• Action plan for post-project environmental monitoring is furnished in Chapter 6, Section 6.2, Page No.6.1 of Final EIA report.
xiii.	Onsite and Offsite Disaster (natural and Man-made) Preparedness and Emergency Management Plan including Risk Assessment and damage control. Disaster management plan should be linked with District Disaster Management Plan.	• The details of onsite and offsite emergency plan are furnished in Chapter 7, Section 7.10, Page No. 7.37 to 7.47 of Final EIA report.
8	Occupational health	
i.	Plan and fund allocation to ensure the occupational health & safety of all contract and	• Regular health check-up will be carried out for workers through approved

Sr. No.	Awarded ToR	Compliance
	casual workers	medical officer/doctor. • Induction training and periodical training as per sec-111 A will be provided and record will be maintained. • Total capital cost and recurring cost/annum for environmental pollution control measures and occupational health & safety is furnished in Chapter 6, Section 6.3, Page No. 6.1 to 6.3 of Final EIA report.
ii.	Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations give the details of the same. Details regarding last month analyzed data of above mentioned parameters as per age, sex, duration of exposure and department wise.	• The proposed project is new project for manufacturing of carbon clack & power generation (green power). Hence, last month details of medical examination of employees are not available. • Details of occupational & safety hazards and control measures are furnished in Chapter 7, section 7.4.9, Page No. 7.33 to 7.36 of the Final EIA report.
iii.	Details of existing Occupational & Safety Hazards. What are the exposure levels of hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL. what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,	• Details of occupational & safety hazards and control measures are furnished in Chapter 7, section 7.4.9, Page No. 7.33 to 7.36 of the Final EIA report.
iv.	Annual report of health status of workers with special reference to Occupational Health and Safety.	• The periodical health examination of the employees will be carried out & records for same will be maintained. The list of parameters for periodical medical checkup is given in chapter-7, Section 7.4.9, Page No. 7.33 to 7.36 of EIA Report.
9.	Corporate Environment Policy	
i.	Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.	• The proposed project is new green field project. The environment policy will be developed in operation phase of project.
ii.	Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms /conditions? If so, it may be detailed in the EIA.	• The proposed project is new green field project. The environment policy will be developed in operation phase of project.
iii.	What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.	• Separate EHS management Cell will be established which will responsible to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of “EHS management cell” is given in Chapter 10, Section No. 10.3, Page No. 10.1 to 10.2 of the FinalEIA report.
iv.	Does the company have system of reporting of	• Separate EHS management Cell will be

Sr. No.	Awarded ToR	Compliance
	non-compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism shall be detailed in the EIA report	established which will responsible to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of "EHS management cell" is given in Chapter 10, Section No. 10.3, Page No. 10.1 to 10.2 of the Final EIA report.
10.	Details regarding infrastructure facilities such as sanitation, fuel, restroom etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase.	• The infrastructure facilities such as sanitation and restroom will be provided to labourers during construction phase & truck drivers during operation phase.
11.	Enterprise Social Commitment (ESC)	
i.	Adequate funds (at least 2.5 % of the project cost) shall be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan shall be included. Socio-economic development activities need to be elaborated upon.	• Details on proposed CER activities is provided at chapter-10, Section 10.8, Page No. 10.11 to 10.13 of the Final EIA report.
12.	Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof shall also be included. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, details thereof and compliance/ATR to the notice(s) and present status of the case.	• There is no pending litigation or any direction/ order passed by any court of Law against
13.	A tabular chart with index for point wise compliance of above TOR.	• Point wise compliance of above TORis given in ***Annexure - 1 (b)***of the Final EIA report.
Specific ToR		
1.	Details on requirement of raw material, its source of supply and storage at the plant.	• The list of raw materials required is given in Chapter 2, Section 2.4.4, Page No. 2.5 of Final EIA report.
2.	Complete process flow diagram for all products with material balance.	• The process details are provided as ***Annexure-5*** of Final EIA report. • Details of major equipment and machineries are given in Chapter 2, Section 2.4.3, Page No. 2.4 to 2.5 of Final EIA Report.
3.	Details on requirement of auxiliary chemicals, solvents, catalysts, reactors and utilities to support the unit processes.	• The list of raw materials required is given in Chapter 2, Section 2.4.4, Page No. 2.5 of Final EIA report. • Details of major equipment and machineries are given in Chapter 2, Section 2.4.3, Page No. 2.4 to 2.5 of Final EIA Report.
4.	Brief description of equipment for various process.	Details of major equipment and machineries are given in Chapter 2, Section 2.4.3, Page No. 2.4 to 2.5 of Final EIA Report.
5.	Details of proposed source- specific pollution	• Details of air emission and control

Sr. No.	Awarded ToR	Compliance
	control schemes and equipments to meet the national standards.	measures are furnished in Chapter 2, Section 2.6.2, Page No 2.14 to 2.16 of Final EIA report. • Detailed EMP for Air pollution and control is furnished in Chapter 10, Section 10.4, Page No 10.2 to 10.5 of Final EIA report.
6.	Details on VOC emission control system from vents, stacks, fugitive emissions and flare management, etc.	• Details of fugitive emission and control measures are furnished in Chapter 2, Section 2.6.2.3, Page No 2.15 to 2.16 of Final EIA report. • Details of flare management system are furnished in Chapter 2, last para of Section 2.5, Figure 2.4, Page No 2.8 of Final EIA report. • Detailed EMP for Air pollution and control is furnished in Chapter 10, Section 10.4, Page No 10.2 to 10.5 of Final EIA report.
7.	Details on proposed LDAR protocol.	• Details of proposed LDAR protocol are furnished in Chapter 2, Section 2.6.3, Page No 2.16 of Final EIA report.
8.	Ambient air quality should include hydrocarbon (methane and non-methane), VOC and VCM (if applicable).	• The AAQ data monitored at 8 locations for all the parameters mentioned in NAAQS (2009) is given in Chapter 3, Section 3.6, Page No. 3.21 to 3.26 of Final EIA Report.
9.	Risk Assessment & Disaster Management Plan • Identification of hazards • Consequence Analysis • Measures for mitigation of risk.	• The details of Risk Assessment & Disaster Management Plan is furnished in Chapter 7, Section 7.4, Page No. 7.1 to 7.47 of Final EIA Report.

Annexure-2: List of Nearby Industries

Sr. No.	Name of Industries
1	AARTI CABLE & COMPOUNDS PVT. LTD.
2	AARTI DRUGS LTD.
3	AARTI DRUGS LTD. UNIT NO 2
4	AARTI INDUSTRIES LTD UNIT 2
5	AASU PLASTICS PVT. LTD.
6	ABHILASH K DHIMMAR
7	ABT ENTERPRISES
8	ACE CHEMIE (INDIA)
9	ADDVANCE RUBBER INDUSTRIES
10	ADIT CONTAINER PVT. LTD.
11	ADIT INDUSTRIES
12	ADIT PHARMA PVT. LTD.
13	AFFLATUS GRAVURES PVT. LTD.
14	AGARWAL MINERALS
15	AHURA MAZDA MFG. CO. PVT. LTD.
16	AHURA MAZDA MFG. CO. PVT. LTD.
17	AJANTA GAMES
18	AKSHAY J SHETH
19	ALCHEMIE INDUSTRIES
20	ALICON PHARMACEUTICAL PVT. LTD.
21	ALLIED ENGINEERS & FABRICATORS.
22	ALWYN ALLOYS PVT. LTD.
23	AMAR PLASTIC PRODUCTS
24	AMBICA PLASTICS
25	AMECHEMI INDUSTRIES
26	ANAND PLASTICS
27	ANCHOR ORGANIC
28	ARBA METAL
29	ARCELOR CHEMICALS PVT. LTD.
30	ARIHANT GOLD PLAST PVT. LTD.
31	ARIHANT RUBBER INDUSTRIES
32	ARIHANTANAM LIFE CARE PVT. LTD.
33	ARIHANTANAM LIFE CARE PVT. LTD.
34	ARKIL CHEM PVT. LTD.
35	ARKIL CHEM PVT. LTD.
36	ARTEE GRAPHITE PVT. LTD.
37	ARTKRAFT STATIONERY PVT. LTD.
38	ARTKRAFT STATIONERY PVT. LTD.
39	ASHAPURA CORPOTATION
40	ASHIRWAD TUBE INDUSTRIES
41	ASIAN PAINTS INDUSTRIAL COATINGS LTD.

Sr. No.	Name of Industries
42	AVARAN PACKAGING
43	BAIJUL PHARMA PVT. LTD.
44	BALAJI INDUSTRIES
45	BALAJI INDUSTRIES
46	BEST KNITTING MILLS PVT. LTD.
47	BHANU WATERPROOF PACKAGING
48	BHARAT RATI LAL SHAH
49	BHILAD CHEMICALS PVT. LTD.
50	BHOOMI INDUSTRIES
51	BIOQUEST INTERNATIONAL PVT. LTD.
52	BIOSYNTH INDUSTRIES
53	BOON METAL & ALLOYS CORPORATION
54	BOON METAL & ALLOYS CORPORATION UNIT NO 2
55	CALIBRE CHEMICALS PVT. LTD.
56	CALIRON CHEMICALS PVT. LTD.
57	CANON LAMINATORS PVT. LTD.
58	CHEMI FILTER CORPORATION
59	CITIZEN PRESSING WORKS
60	CLEAR MIPAK PACKAGING SOLUTIONS LTD(UNIT PPMF)
61	CLEAR MIPAK PACKAGING SOLUTIONS LTD(UNIT -SARIGAM)
62	CONCARE COATING & CHEMICALS
63	CONCARE TECHNOLOGIES
64	CONVEX IMAGING & CHEMICALS PVT. LTD.
65	COROMANDEL INTERNATIONAL LTD.
66	COSMOS TWISTERS PVT. LTD.
67	COSTWOLD ARCHITECTURAL PRODUCTS (I) PVT. LTD.
68	CROWN RUBBER PRODUCTS
69	CYTECH COATINGS PVT. LTD.
70	CYTECH COATINGS PVT. LTD.- UNIT II
71	D D PAREEKH
72	DASHMESH RUBBER
73	DATT INDUSTRIES PVT. LTD.
74	DEEPAK JADISH AGARWAL
75	DE-LITE WRITING INSTRUMENTS CO.
76	DEVSAGAR INDUSTRIES
77	DHANA SINGH SYNTHETICS PVT. LTD.
78	DHAVAL PHOSPHATE
79	DHRUVI INDUSTRIES
80	DHYEYA INDUSTRIES
81	DIBISHREE ENGINEERING & FABRICATION
82	DIMA PRODUCTS
83	DOVE FISHNET INDUSTRIES
84	DURAND FORMS (INDIA) PVT. TLD.

Sr. No.	Name of Industries
85	DURGESH FIBRES
86	EKTA ENGINEERING CORPOTATION
87	EMPIRE LEAD REFINERIES PVT. LTD.
88	ESJAY ENTERNATIONAL PVT. LTD.
89	ESSAR ENTERPRISES
90	EXCEL ADHESIVE TAPES PVT. LTD.
91	EXCEL INDUSTRIES
92	FERROX CHEMICALS PVT LTD
93	FILTRA EXIM PVT. LTD.
94	FINE INDUSTRIES
95	G M KNITTING INDUSTRIES PVT. LTD.
96	GALAXY PHARMA
97	GANESH CHEMICAL INDUSTRIES
98	GAYATRI SHAKTI PAPER & BOARDS LTD
99	GEE VEE EXPORTS PVT. LTD
100	GEL POLY PACK
101	GINGLOW ENGRAVERS PVT. LTD.
102	GIRNAR SYNTHERICS & POLYMER
103	GLEAM ENGINEERING
104	GLOBE PLASTIC NET
105	GOLD COIN POLYPACK PVT LTD
106	GOLDEN CHMICALS PVT. LTD.
107	GOODEARTH AGROCHEM PVT. LTD.
108	GOPAL KRISHNA PAPERS PVT. LTD.
109	GOPI INDUSTRIES
110	GREEN VIEW INDUSTRIES
111	GREENTEX & CO. PVT. LTD.
112	GUARD PAPER CONVENTERS
113	GUJARAT ACRYLICS
114	GUJARAT BALAJI INDUSTRIES
115	GUJARAT PAPER PRODUCTS PVT. LTD.
116	GUJARAT TWIST NET PLANT
117	GUJWOOL GLASSFIBRE COMPOSITES
118	H K ENGINEERIGN WORKS
119	H K INDUSTRIES
120	H K THAKRAR & ASSOCIATES (HENI CHEMICAL IND.
121	HARANAM SYNTHETIC PVT. LTD.
122	HARD CASTLE WAUD MFG. CO. LTD.
123	HARDCASTLE PETROFER PVT. LTD.
124	HARSH PACKAGING
125	HARSHIL INDUSTRIES
126	HEENA INDUSTRIES
127	HEENA INDUSTRIES

Sr. No.	Name of Industries
128	HEM ROLLING MILLS PVT. LTD.
129	HENA CHEM
130	HERCULAR PIGMENTS PVT. TLD.
131	HI- TEC RUBBER INDUSTRIES
132	HIGH PURITY LABORATORY CHEMICALS PVT. LTD.
133	HIND POLY PACK UNIT-2
134	HINDUSTAN CHEMICAL CORPORATION
135	HIREN ENG. WORKS
136	HIRNAV POLY PACK PVT. LTD.
137	HITARTH SHIRISH DESAI
138	HITECH LITHO PVT. LTD.
139	HOME AGRO INDUSTRIES LTD.
140	IKD INDUSTRIES
141	INDUSTRIAL CHEMICALS & PAINTS
142	INTEGRATED PESTICIDES PVT. LTD.
143	J B CHEM INDUSTRIES
144	J J TEXTILES PVT. LTD.
145	JACOB METALS & ALLOYS PVT. LTD.
146	JAI CORP LTD.
147	JAI GURUKRUPA CONTRUCTION
148	JAI PHARMA LTD.
149	JALARAM CHEMICALS
150	JAS CHEMICAL INDSUTRIES
151	JAS CHEMICAL INDSUTRIES UNIT 2
152	JAS CHEMICAL INDSUTRIES UNIT 3
153	JAYSHREE PLASTIC INDUSTRIES
154	JBF INDUSRIES LTD.
155	JEEVAN CHEMICALS INDUSTREIS
156	JEEVAN CHEMICALS PVT. LTD.
157	JET BATTERIES PVT. LTD.
158	JETKING RUBBER INDUSTRIES
159	JETKING RUBBER INDUSTRIES
160	JR FIBERGLASS INDUSTIRES PVT. LTD.
161	JRM ENGINEERING
162	JUGGERNAUT AUTO INDUSTRIES
163	JWALA POLYPLAST ENGINEERING PVT. LTD.
164	JYOTI INDUSTRIES
165	K. R. INDUSTRIES
166	KALPATARU ORGANICS PVT. LTD.
167	KALPESH SYNTHETICS PVT. LTD.
168	KALYANI INDUSTRIES PVT. LTD.
169	KAPOTEX INDUSTRIES PVT. LTD
170	KARAM PETROLUM PRODUCTS PVT. LTD.

Sr. No.	Name of Industries
171	KAYCEE INDUSTRIES
172	KEAUM ORGANICS PVT. LTD.
173	KHUSHI CHEMICALS
174	KHYATI INDUSTRIES
175	KI PACKAGING
176	KISHAN INDUSTRIES
177	KOEL COLOUR PVT. LTD.
178	KOMAK INDUSTRIES
179	KOMAL CHEMICALS
180	KONARK FIXTURES LTD.
181	KONARK SYNTHETICS LTD.
182	KRISH CHEMICALS PVT. LTD.
183	KRISHE CHEM
184	KRISHNA CHEMICAL INDUSTRIES
185	KRISHNA INDUSTRIES
186	KRISHNA KRISHNA FURNISHING PVT. LTD
187	KRISHNA PLAST
188	KRYSTAL PHARMA PVT. LTD.
189	KUMKUM INDUSTRIES
190	KUNAL CONCHEM PVT. LTD.
191	L. N. CHEMICAL INDUSTRIES PVT. LTD.
192	L. N. CHEMICAL INDUSTRIES PVT. LTD.
193	L. S. CHEMICALS AND PHARMACEUTICALS
194	LAB - CARE DIAGNOSTIS (I) PVT. LTD.
195	LALJI MULJI TRANSPORT
196	LAMI FAB INDUSTRIES
197	LAXMAN PLASTICS PVT. LTD.
198	LAXMI INDUSTRIES
199	LAXMI POLY ADDITIVES
200	LAXMI STEEL & FABRICATORS
201	LEELA POLY PLAST INDIA PVT. LTD.
202	LUCKY CHEMICALS
203	M. R. TWISTING WORKS
204	M. V. PLASTICS
205	M-3 EXTRUSION
206	MAC INDUSTRY
207	MACLEODS PHARMACEUTICALS LTD.
208	MADURA INDUSTRIAL TEXTILES LTD.
209	MAHESHWAR PLASTIC
210	MAHESHWARI PLASTICS
211	MAMTA TEX DYES (SAMBA) PVT. LTD.
212	MANDHANA POLYMERS PVT. LTD.
213	MANISHKUMAR J. BORANA

Sr. No.	Name of Industries
214	MARIT ORGANICS LTD.
215	MARS CONS CHEM
216	MARU AGRO TECH
217	MARUTI INDUSTRIES
218	MAYKA PACKAGING SOLUTIONS
219	MCON RASAYAN
220	MEHTA PETRO REFINERIES LTD.
221	METAL REFINERY INTERANATIONAL PVT. LTD.
222	MICRO INDUSTRIES
223	MID-LAM BOARDS
224	MISSION VIVACARE LTD.
225	MITHWANI METALS PVT. LTD.
226	MITTAL INDUSTRIES
227	MODIFOAM PROCESSING INDUSTRY
228	MR. DILIPBHAI H. BHANDARI
229	MUKESH ENGINEERING WORKS
230	MUNDRA VENTURES PVT. LTD.
231	MUTSUFUKU COMPOUND PVT. LTD.
232	N R AGARWAL INDUSTRIES LTD. SARIGAM
233	N.R.G ALLOYS INCORPORATION
234	NAKODA METALS INDUSTRIES PVT. LTD.
235	NANDRATAN FOUNDRY & ENG. WORKS P. LTD.
236	NARAYAN REFINERIES PVT. LTD.
237	NARMADA SYNTHETICS & POLYMER
238	NATRAJ INDUSTRIES
239	NATRAJ INDUSTRIES
240	NAVAGRAHA PRINT & PACK CO. PVT. LTD.
241	NAVARANG PAINTS
242	NAVYOG PACKGING
243	NEHA SELES AGENCY
244	NEMCHAND JAIN
245	NERAL PAPER MILLS PVT. LTD.
246	NETCO METAL INDUSTRIES
247	NEW TECH POLYCHEM PVT. LTD.
248	OM PLASTICS
249	OM TITANATES
250	OMCO POLYPLAST INDUSTRIES PVT. LTD.
251	ORACLE HOME TEXTILES LTD.
252	ORACLE PHARMA
253	ORIGAMI PRINTING & PACKAGING
254	P. R. K. INDUSTRIES
255	PACIFIC CHEMICALS
256	PARAMOUNT ADHESIVE TAPES PVT. LTD.

Sr. No.	Name of Industries
257	PARAMOUNT ADHESIVE TAPES PVT. LTD.
258	PAREEK MENDINGS
259	PARIRANG INDUSTRIES
260	PARTH AGENCY
261	PARTH TEXTILES
262	PARVATI INDUSTRIES
263	PAWAN INTERCHEM INDUSTRIES
264	PAWAN PACKAGING
265	PENTACHEM INDUSTRIES
266	PERFECT ENVIRO CONTROL SYSTEMS LTD.
267	PERFECT HEAT PRODUCT & PLASTICS
268	PERFECT TRANSFORMERS
269	PERFECT TRANSFORMERS
270	PERFOMANCE POLYMERS
271	PERMA CONSTRUCTION AIDS PVT LTD UNIT 2
272	PERMA CONSTRUCTION AIDS PVT. LTD.
273	PHARMA CHEMICALS INDUSTRIES
274	PHARMA CHEMICALS INDUSTRIES
275	PHARMA-CELL
276	PHIDOM CHEMICALS
277	PIONEER EMBRODERIES LTD.
278	PLATINA OIL FIELD PVT. LTD.
279	PLENTY PLASTICS PVT. LTD.
280	POL IFIL RUBBER PRODUCTS
281	POLYCHEM INDUSTRIES
282	POLYMER ROTO INKS
283	POLYMER ROTO INKS
284	POLYSOL INDUSTRIES
285	POLYSOL INDUSTRIES UNIT-2
286	POLYSOL INDUSTRIES UNIT-3
287	POOJA PHOSPHO CHEM
288	POPULAR ELECTRONIC STORES
289	PRABHAT ELESTOMERS PVT. LTD
290	PRAKASH CHEMICAL & FARTILIZERS
291	PRAMUKH PAPER PRODUCTS PVT. LTD.
292	PRAVINA PHARMA CHEM PRODUCTS
293	PREMER MEDICARE CORPORATION
294	PRESTIGE PROCESS
295	PRIMO PLAST
296	PRIMO PLAST UNIT 2
297	PRIMO PLAST UNIT 3
298	PRITHVI INDUSTRIES
299	PUSHPAK PHARMA

Sr. No.	Name of Industries
300	R D INDUSTRIES
301	R D METAL COMPANY
302	R S ENGINEERING
303	RAHIMATULLA NAIEM KHAN
304	RAINBOW PROCESS
305	RAJ BORAX LTD
306	RAJGURU ENTERPRISES PVT. LTD.
307	RAJNI VED
308	RAMCO INDUSTRIES
309	RAMESH HEMRAJ BHANUSHALI
310	RAMESH PRODUCTS
311	RASHTRIYA METAL INDUSTRIES LTD.
312	RATNUMS INDUSTRIES
313	RAVI METALS
314	RAVINDRA SINGH MADAN
315	RAVINDRA SINGH MADAN
316	RELIABLE STEEL
317	RELIANCE RUBBER INDUSTRIES
318	RHEAL HOME DÉCOR PVT. LTD.
319	RICHA INDUSTRIES
320	RIKO FORGE PVT. LTD.
321	RISHI PLAST
322	RISHIKA PACKAGING
323	RISHIKA PACKAGING
324	RISHIKA PACKAGING
325	RISHIKA PACKAGING
326	ROLEX WRITING INSTRUMENTS
327	RONAK CHEMICALS
328	RONAK INDUSTRIES
329	RONAK METAL INDUSTRIES
330	ROYAL PLASTIC INDUSTRIES
331	S H ENGINEERING WORKS
332	S M CHEMICALS
333	S N ENGINEERING & CHEMICALS
334	S N ENGINEERING & CHEMICALS UNIT 2
335	S N ENGINEERING & CHEMICALS UNIT 4
336	S P EXTRUSSION PVT LTD
337	S R POLYMERS
338	S. P. DRUG CO.
339	SABOO PACKAGING PVT. LTD.
340	SACHIN S. AGARWAL
341	SACHIN S. AGARWAL
342	SACHIY INDUSTRIES

Sr. No.	Name of Industries
343	SAFE FISH NET IND.
344	SAI AGROCHEM INDUSTRIES
345	SAI INDUSTRIES
346	SAI INDUSTRIES (PLOT L-104/15)
347	SAI INDUSTRIES (PLOT L-720/1)
348	SAI PLASTIC
349	SAM INDUSTRIES
350	SANDHYA DYE & CHEMICALS
351	SANDHYA INDUSTRIAL CHEMICALS
352	SANJAY BALAWANT DESAI
353	SANTDHYA PLASTICIZERS & CHEMICALS
354	SARIGAM CONTAINERS PVT. LTD.
355	SARIGAM INDUSTRIAL PRODUCT UNIT-3
356	SARIGAM INDUSTRIAL PRODUCTS
357	SARIGAM INDUSTRIAL PRODUCTS
358	SARIGAM INDUSTRIAL PRODUCTS UNIT-2
359	SARIGAM POLYMERS PVT. LTD.
360	SARIGRAM OXYTRADE PVT. LTD.
361	SATIN COULORS & COATING
362	SATINDARPAL SINGH MADAN
363	SATINDRAPAL RUBBER PRODUCT PVT. LTD.
364	SATYANARAYAN PLASTIC
365	SDA PRODUCTS
366	SEVEN STAR INDUSTRIES
367	SEVEN-11 INDUSTRIES
368	SHARDA TEXTILES
369	SHAURYA ENTERPRISES
370	SHAURYA ENTERPRISES
371	SHEKAM FASTENERS
372	SHETH METAL PVT LTD
373	SHIV CHEM
374	SHIV CHEM INDUSTRIES
375	SHIV CHEMICAL INDUSTRIES
376	SHIV ENTERPRISES
377	SHIV INTERNATIONAL LTD.
378	SHIV SHAKTI WOOD INDUSTRIES
379	SHIVAM CHEMICALS
380	SHIVAM INSUTRIES
381	SHIVAM TEXTILES & PROOFING INDUSTRIES
382	SHREE ASHAPURA INDUSTRIES
383	SHREE BAULNATHE ENTERPRISES
384	SHREE BHAGYODAY INDUSTRIES
385	SHREE ENGINEERING COMPANY

Sr. No.	Name of Industries
386	SHREE GANESHWARA DYECHEM
387	SHREE GHANSHYAM INDUSTRIES
388	SHREE GITANJALI PACKWELL
389	SHREE HARI ENGINEERING WORKS
390	SHREE MAA PHARMACHEM LTD
391	SHREE MUSHKAN POLY PLAST PVT. LTD.
392	SHREE OZONE ENGINEERING PVT. LTD.
393	SHREE POLY PLAST
394	SHREE SAI KRUPA ENTERPRISES
395	SHREE SAI RUBBER PRODUCTS
396	SHREE SAI RUBBER PRODUCTS
397	SHREE SAINATH ENTERPRISES
398	SHREE TRIKUR INDUSTRIES
399	SHREE VARDHAN INDUSTRIES
400	SHREE VARDHAN INDUSTRIES
401	SHREE VARNDA VEER FABRICATORS
402	SHREE VINAYAK INDUSTRIES
403	SHREEJI CHEMICAL
404	SHREEJI ENTERPRISES
405	SHREEJI INDUSTRIES
406	SHREEJI PETROCHEM
407	SHRI DAMODAR YARN MFG. CO. PVT LTD.
408	SHRI DAMODAR YARN MFG. CO. PVT LTD.
409	SHRI DAMODAR YARN MFG. PVT. LTD
410	SHRI HITARTH SHIRISH DESAI
411	SHRI HITARTH SHIRISH DESAI
412	SHRI KIRAN SAW MILL
413	SHRI R. U. JADEJA (BAPU)
414	SHRI RAJESH V. PATEL
415	SHRI SAI INDUSTRIES
416	SHUBH SYNTHETICS
417	SHV ENERGY PVT. LTD.
418	SIDDHI ENTERPRISES
419	SIDDHI VINAYAK GARMENT PROCESSORS
420	SIDDHI VINAYAK RICE & PULSE MILLS
421	SINGHMA INDUSTRIES
422	SOHAM ENGINEERING
423	SOMATIC PHARMA SALTS
424	SOMNATH PLASTICS
425	SONA PHOSPHATES LTD.
426	SSG YARN PVT. LTD.
427	STANDARD EQUIPMENT&ENGINEERING WORKS
428	SUDARSHAN MINCHEM LTD

Sr. No.	Name of Industries
429	SUDHIR INDUSTRIES
430	SUGAM HEALTH CARE
431	SUGANA IMPEX PVT. LTD.
432	SUJAS LEATHER CLOTH MFG. CO. P. LTD.
433	SUMIT S. AGARWAL
434	SUN INDUSTRIES
435	SUN INDUSTRIES UNIT-2
436	SUNNY ENGINEERS
437	SUNRISE METALLIC (I) PVT. LTD.
438	SUNWAYS LABORATORIES PVT. LTD.
439	SUPER POLYPLAST
440	SUPERSHIL CHEMICALS (I) PVT. LTD.
441	SUPREME INDUSTRIES
442	SUPREME PLASTIC FABRICATORS
443	SURYA HERBAL ORGANICS
444	SWADESHI TEXTILES PVT. LTD.
445	SWADESHI TEXTILES PVT. LTD. UNIT 2
446	SWADESHI TEXTILES PVT. LTD. UNIT 4
447	SWEET OM
448	SYSTEMATIC STEEL INDUSTRIES LTD.
449	TAJ PLASTIC PROCESS
450	TECHFORM ENGINEERING
451	TECHNO TARP & POLYMERS PVT. LTD.
452	TECHNO TECH AQUA INDUSTRIES
453	THE ROLL COMPANY
454	THREE G FLUOROPOLYMERS PVT. LTD.
455	THURSDAY CHEMICALS
456	TINA CHEM INDUSTRIES
457	TIRUPATI CHEMICALS
458	TIRUPATI PLAST
459	TORAY KUSUMGAR ADVANCED TEXTILES PVT. LTD.
460	TRILOK PACK & ADHESIVES
461	TRIO CHEMICALS & ALLIED PRODUCTS
462	TRISTAR INTERMEDIATES PVT. LTD.
463	TRISTAR INTERMEDIATES PVT. LTD.UNIT-2
464	TRITON GRAPHITE
465	TULSI CHEM INSUTRIES
466	TWINKLE CHEMEQUIP
467	UDIT CHEMICALS
468	UMIYA INDUSTRIES
469	UNIFORM SYNTHETICS
470	UNIVERSAL MEDICARE PVT. LTD.
471	URMIL INDUSTRIES

Sr. No.	Name of Industries
472	USHA ENTERPRISES
473	UTTAM INDUSTRIES
474	V. M. INDUSTRIES (INDIA)
475	VAL ORGANICS PVT. LTD.
476	VALIANT ORGANICS PVT. LTD.
477	VALSAD POLYMERS PVT LTD
478	VARUN INDUSTRIES
479	VEER METAL INDUSTRIES PVT. LTD.
480	VELLOILS LUBRICANT & PETROCHEM LTD
481	VEN PETROCHEM & PHARMA (I) PVT. LTD.
482	VENUS PHARMA CHEM
483	VERITAS INDUSTRIES (P) LTD.
484	VIKAS INDUSTRIES
485	VIMAL ROLLING MILL
486	VINAYAK CHEMICAL INDUSTRIES
487	VINAYAK INDUSTRIES
488	VIRAJ ENGINEERING
489	VISHAL STEELS
490	XL ALUGRAPHICS PVT. LTD.
491	YASH ENTERPRISES
492	YASH ENTERPRISES (NEELKAMAL GOENKA)
493	YASHWANT SINGH YADAV
494	YESH ENTERPRISES
495	YESH ENTERPRISES (UNIT 2)
496	YOGESHWAR TEMBER MART
497	ZAIN TUBE INDUSTRIES
498	ZEN CONTAINERS
499	ZENITH SPECIALITY PVT. LTD.

કલેકટર અને જિલ્લા મેજિસ્ટ્રેટની કચેરી, વલસાડ

નવી કલેકટર કચેરી, તિથલ રોડ, વલસાડ - ૩૯૬૦૦૧

ફોન નંબર : ૦૨૬૩૨-૨૪૪૨૭૪/૨૪૪૨૭૯ ઇ-મેઇલ : collector-val@gujarat.gov.in

હુકમ નં. 11/25/05/001/2019/૨૦૭૪-૪૫

તા. 09/04/2019

વંચાણે લીધા :-

(૧) અરજદારશ્રી Madura Carbon India Ltd
રહે. Unit-1 Janki Center, Veera Desai road, Andheri (west), Mumbai-400028 ની તા. 16/03/2019 ની ઓનલાઇન અરજી તથા સોગંદનામુ

(૨) મુંબઇ જમીન મહેસૂલ કાયદો ૧૮૭૯ ની કલમ - ૪૮, ૫૬, ૬૬ તથા ૬૭

(૩) ગુજરાત જમીન મહેસૂલ નિયમો, ૧૯૭૨ ના નિયમ ૮૧, ૧૦૦, ૧૦૧, ૧૦૨

(૪) સરકારશ્રીના મહેસૂલ વિભાગનાં ઠરાવ નં. બખપ/૧૦૦૬/૪૨૫/૬ તા.૦૧/૦૭/૨૦૦૮

(૫) સરકારશ્રીના મહેસૂલ વિભાગનાં પરિપત્ર ક્રમાંક: બખપ/૧૦૨૦૧૮/૩૨૭/૬ તા.૦૮/૦૫/૨૦૧૮

(૬) સરકારશ્રીના મહેસૂલ વિભાગના ઠરાવ ક્રમાંક: એસ/ટીપી/૧૨૨૦૯/૭૬૯/૧૧/હ.૧ તા. ૩૧/૦૩/૨૦૧૧

(૭) iRCMS પોર્ટલ પરની કેસ વિગત

હુકમ :-

વંચાણે લીધેલ ક્રમ (૧) ની અરજી તથા સોગંદનામા થી અરજદારશ્રી Madura Carbon India Ltd એ મોજે ફણસા તા. ઊમરગામ જિ. વલસાડ ના સરવે/બ્લોક નં. 3705 ના ક્ષેત્રફળ 3,491.00 ચો.મી. ની જમીન અંગે ગુજરાત જમીન મહેસૂલ અધિનિયમ-૧૮૭૯ ની કલમ-૬૫ હેઠળ બિનખેતીના હેતુ માટે પરવાનગી આપવા વિનંતી કરેલ છે.

સવાલવાળી જમીનના ગામ નમૂના નં. ૭/૧૨ માં કબજેદારોની વિગત નીચે મુજબ છે.

સરવે/બ્લોક નંબર ટી.પી. નંબર એફ.પી. નંબર	માંગણીનું ક્ષેત્રફળ (ચો.મી.)	કબજેદારોના નામ (ખાતા નં. 1787)	જમીનનો સત્તાપ્રકાર (૭/૧૨ મુજબ)
સરવે/બ્લોક નં. : 3705 જુનો સરવે/બ્લોક નં. : 363/3/૧ ટી.પી. નં. : --- એફ.પી. નં.: ---	3,491.00	મદુરા કાર્બન ઈન્ડીયા લી. ના ડાયરેક્ટર ગૌતમ વિપન કાલરા	જુની શરત (જુ.શ)

વસુલ કરવામાં આવેલ કરવેરાની વિગત નીચે મુજબ છે.

કરની વિગત	સદર	માંગણીનું ક્ષેત્રફળ (ચો.મી.)	દર રૂ. પ્રતિ ચો.મી.	કુલ રકમ રૂ.
રૂપાંતર કર	569-0035-00-800-01	3,491.00	8.00	27,928.00
વિશેષ ધારો	570-0035-00-101-01	3,491.00	0.15	523.65
લોકલ ફંડ	574-0029-00-103-01	3,491.00	0.15	523.65
શિક્ષણ ઉપકર	575-0045-00-108-01	3,491.00	0.15	523.65
માપણી ફી	577-0029-00-106-01	3,491.00	---	1,800.00
			કુલ રૂ.	31,298.95

ઉપર્યુકત તમામ હકીકતો ધ્યાને લઇ મોજે ફણસા તા. ઊમરગામ જિ. વલસાડ ના સરવે/બ્લોક નં. 3705 ના ક્ષેત્રફળ 3,491.00 ચો.મી. ની જમીનને નીચે જણાવેલ શરતોને આધિન ગુજરાત જમીન મહેસૂલ અધિનિયમ-૧૮૭૯ ની કલમ-૬૫ હેઠળ બિનખેતી હેતુ માટે પરવાનગી આપવા આથી હુકમ કરવામાં આવે છે.

શરતો : -

(૧) આ હુકમ મળ્યેથી બે માસમાં "એમ" નમૂનામાં સનદ પ્રાપ્ત થશે.

(૨) જિલ્લા ઇન્સ્પેકટરશ્રી, જમીન રેકર્ડની કચેરીમાં માપણી ફી જમા કરાવેલ છે. જેથી માપણી કરી / કરાવી આ હુકમ અનુસારે તેમજ મંજૂર થયેલ પ્લાન મુજબ દુરસ્તી પત્રક તૈયાર કરવાનું / કરાવવાનું રહેશે અને દુરસ્તી પત્રકનો મહેસૂલી દફ્તરે અમલ થયા બાદ જ પ્રશ્નવાળી બિનખેતીની જમીન / પ્લોટનું રજી. દસ્તાવેજથી થયેલ વેચાણ વ્યવહારના અમલ માટે નોંધ પાડવાની રહેશે.

(૩) અરજદારે પ્રતિ વર્ષે ખેતી સિવાયનો ધારો (વિશેષધારો) દર પ્રતિ ચો.મી. ના રૂ. 0.15 પ્રમાણે રૂ. 523.65 તેમજ નિયમ પ્રમાણે લોકલ ફંડ તથા શિક્ષણ સેસ ભરવો પડશે જે અંગેનો દર વખતોવખત ફેરફારને પાત્ર રહેશે.

(૪) વલસાડ નગર નિયોજક કચેરી એ મંજૂર કરેલા પ્લાન મુજબ બાંધકામ કરવાનું રહેશે અને હુકમ થયા તારીખથી ત્રણ વર્ષમાં બાંધકામ પૂર્ણ કરવાનું રહેશે.

(૫) સરકારશ્રીના મહેસૂલ વિભાગના ઠરાવ નં. બખપ/૧૦૯૩/૧૦૫૨/૬ તા. ૧૩/૦૯/૧૯૯૩ માં ઠરાવ્યા મુજબ સહીયારા / કોમન પ્લોટ અને રસ્તાની જમીન સોસાયટીની માલિકીની અથવા સર્વે પ્લોટ હોલ્ડરની સહીયારી માલિકીની ગણાશે તે ઉપર મુળ માલિકનો કોઇ હક્ક રહેશે નહિ.

(૬) સરકારશ્રીના મહેસૂલ વિભાગના તા. ૦૭/૦૮/૧૯૯૧ ના પરિપત્ર નં. બખપ-૧૦૯૧/૧૭૫૬/૬ ની જોગવાઇ મુજબ બિન અધિકૃત બાંધકામ બાબત બાંધકામ નિયંત્રણ કરતી સંબંધિત મહાનગરપાલિકા / શહેરી વિસ્તાર સત્તા મંડળએ ધોરણસરનાં પગલાં લેવાના રહેશે.

(૭) સદર જમીનમાંથી પેટ્રોલીયમ / પાણીની કે અન્ય કોઇપણ પ્રકારની પાઇપલાઇન પસાર થતી હશે તો તે સંદર્ભે વિકાસ પરવાનગી આપનાર ઓથોરિટીએ સંબંધિતોનું ના-વાંધા પ્રમાણપત્ર મેળવી વિકાસ પરવાનગી આપવાની રહેશે.

(૮) સરકારશ્રીનાં મહેસૂલ વિભાગનાં તા. ૦૧/૦૭/૨૦૦૮ ના ઠરાવ નં. બખપ/૧૦૦૬/૪૨૫/૬ માં જણાવેલ નીચે મુજબની શરતોનું પાલન કરવાનું રહેશે.

૧. જિલ્લા ઇન્સ્પેકટરશ્રી, જમીન રેકર્ડ દ્વારા ઇસ્યુ કરાયેલ માપણી શીટ કે જેના ઉપર મૂળ ટિપ્પણની હદ પણ દર્શાવેલ હોવી જોઇએ. રજૂ કરાયેલ પ્લાન તથા લે-આઉટ પ્લાન સક્ષમ કક્ષાએ મંજૂર કરાયેલ હોવી જોઇએ.

૨. બાંધકામ શરૂ કરતા પહેલા બાંધકામનાં નકશા સક્ષમ અધિકારી પાસે મંજૂર કરાવવાના રહેશે. પરંતુ અરજદાર બિનખેતી પરવાનગી મેળવ્યા વગર આવા બાંધકામની રજા ચિઠ્ઠી મેળવી શકશે નહિ.

૩. શહેરી વિસ્તાર જયાં ટાઉન પ્લાનિંગ સ્કીમ મંજૂર થઇ ગઇ છે ત્યાં જી.ડી.સી.આર. અને ઝોનિંગના નિયમો અનુસાર બાંધકામ કરવાનું રહેશે.

૪. મંજૂર થયેલ નકશા મુજબ આરોગ્ય અને સ્વાસ્થ્યની દ્રષ્ટિએ ગંદા પાણીનાં નિકાલની જોગવાઇ કરવાની રહેશે.

૫. અરજદારે રિબન ડેવલપમેન્ટ રુલ્સ નીચે જે તે રસ્તાનો પ્રકાર ધ્યાને લઇ રસ્તાના મધ્યબિંદુથી બાંધકામ વચ્ચે અંતર જાળવવાનું રહેશે અન્યથા અરજદારની જવાબદારી થશે.

૬. ફ્લોર, મિલ, સિનેમા/ ટુરિંગ સિનેમા/ થિયેટર માટે બિનખેતી પરવાનગીના કામે જિલ્લા મેજિસ્ટ્રેટની જરૂરી મંજૂરી મેળવી આગળની કાર્યવાહી કરવાની રહેશે.

૭. પેટ્રોલ, ડીઝલ, કેરોસીન, સી.એન.જી., એલ.પી.જી. પંપ નાંખવા માટે બિનખેતી પરવાનગીના કામે બાંધકામ શરૂ કરતાં પહેલા જિલ્લા મેજિસ્ટ્રેટની જરૂરી મંજૂરી મેળવી આગળની કાર્યવાહી કરવાની રહેશે.

૮. ઇન્ડિયન એક્ષપ્લોઝિવ એકટ અન્વયે મેગેનિઝ, ફાયર વર્કસ, દારૂખાના માટે બિનખેતીની કાર્યવાહી કરતા પહેલા જિલ્લા મેજિસ્ટ્રેટની જરૂરી મંજૂરી મેળવી આગળની કાર્યવાહી કરવાની રહેશે.

૯. સવાલવાળી જમીન જો રેલવે હદની નજીક હોય તો રેલવેની હદથી નિયમ મુજબ જગ્યા છોડી બાંધકામ કરવાનું રહેશે.

૧૦. સવાલવાળી જમીન ઉપરથી અથવા બાજુમાંથી વીજળી ગ્રિડના તાર/ હાઇટેન્શન પાવર અગર થાંભલા આવેલ હોય ત્યારે તે અન્વયે લાગુ પડતા નિયમોનું પાલન કરવા અને તે મુજબ બાંધકામ કરવાનું રહેશે.

૧૧. બિનખેતી માંગવામાં આવી હોય તેવી જમીન જો એરોડ્રામ આસપાસ નિયમ મુજબની ત્રિજયામાં આવતી હોય ત્યારે બાંધકામની ઉંચાઇ તથા એરોડ્રામની દ્રષ્ટિએ જરૂરી એવુ ના-વાંધા પ્રમાણપત્ર સિવિલ એવિએશન ખાતા પાસેથી મેળવવાનું રહેશે અને સિવિલ એવિએશન ખાતાના નિયમોનું પાલન કરવાનું રહેશે.

૧૨. ઓ.એન.જી.સી. ના કુવાની નજીકમાં આવેલ જમીનના કિસ્સામાં અરજદારે સંબંધિત નિયમોનું પાલન કરવાનું રહેશે.

૧૩. નર્મદા કેનાલ/ અન્ય સિંચાઇ કેનાલની નજીકમાં આવેલ જમીનની બાબતમાં અરજદારે સૂચિત બાંધકામ માટે જાળવવાના થતાં અંતર અંગેના નિયમોનું પાલન કરવાનું રહેશે.

૧૪. અરજદારે/ જયાં જરૂરી હોય ત્યાં કેન્દ્ર સરકાર કે રાજય સરકારના કાયદા નીચે રક્ષિત સ્મારક (Protected Monuments) તરીકે જાહેર કરેલ પ્રાચીન સ્મારકથી નિયમ મુજબનું અંતર જાળવવાની પ્રવર્તમાન જોગવાઇઓનું પાલન કરવાનું રહેશે.

(૯) પ્રશ્નવાળી જમીનમાં નગરપાલિકા/ મહાનગરપાલિકા/ શહેરી વિકાસ સત્તા મંડળ દ્વારા જે શરતોએ પરવાનગી આપવામાં આવશે તે શરતોનું પાલન તથા બાંધકામ કરવાનું રહેશે.

(૧૦) આ જમીનમાં વરસાદી પાણીના ભુગર્ભ વહન/ સંચય માટે દર મકાન/ બહુમાળી મકાન દીઠ એકના દરે ચા. જમીનમાં ઉપર પરકોલેટીંગ બોરવેલની વ્યવસ્થા અચુક કરવાની રહેશે તથા વરસાદી પાણીના નિકાલની વ્યવસ્થા કરીને બાંધકામ કરવાનું રહેશે.

(૧૧) પ્રશ્નવાળી જમીનમાં સ્થળે થયેલ બાંધકામ સ્થાનિક સ્વરાજની સંસ્થાના નિયમોનુસાર નહિ હોય તો સ્થાનિક સ્વરાજની સંસ્થા નિયમોનુસાર કાર્યવાહી કરી શકશે. તેમાં આ હુકમથી બાધ આવશે નહિ.

અરજદારે ઉપરોકત શરતોનું પાલન કરવાનું રહેશે. જો તેમાં નિષ્ફળ જશે તો શરતભંગ ગણી સક્ષમ અધિકારી કાયદેસરની કાર્યવાહી કરશે.

(૧૨) ઉપરની કોઇપણ શરતનો ભંગ થયેથી જમીન મહેસૂલ કાયદાની કલમ-૬૭ મુજબ શિક્ષાત્મક પગલા લેવામાં આવશે તેમજ બીજી કોઇપણ શિક્ષાને પાત્ર હશે તો તેને બાધ આણ્યા સિવાય કે જે ફરમાવવાનું યોગ્ય લાગે તે પ્રમાણે દંડ અથવા આકાર લઇ સદરહુ જમીનનો કબજો કબજેદાર પાસે ચાલુ રહેવા દઇ શકાશે.

(૧૩) ઉપરોકત શરતોમાં ગમે તે મજકૂર હોય તેમ છતાં, કલેકટરશ્રી સદરહુ હુકમ વિરૂધ્ધ બાંધેલા અથવા વધારાના કોઇપણ મકાન અથવા ઇમલાને કલેકટરશ્રીએ, આ અર્થે જે મુદત ઠરાવી હોય તે મુદત દરમિયાન તેવી રીતે ખસેડવામાં ન આવે કે સૂચવ્યા મુજબ ફેરફાર ન કરવામાં આવે તો તેમ કરવામાં જે ખર્ચ થાય તે કબજેદાર પાસેથી જમીન મહેસૂલની બાકી તરીકે વસુલ કરવાને મુખત્યાર છે.

વધુમાં ઉપર્યુક્ત શરતોને આધીન અરજદાર દ્વારા રજુ થયેલ સોગંદનામાની વિગતોમાં તેઓ દ્વારા જાહેર કરેલી હકીકતોને આધારે સવાલવાળી જમીનના બિનખેતી ઉપયોગ માટે પરવાનગી આપવામાં આવે છે.

COLLECTOR કલેકટર VALSAD DISTRICT

16/11/19

(સી આર ખરસાણ)
કલેકટર, વલસાડ

આર.પી.એ.ડી.

પ્રતિ,

Madura Carbon India Ltd
Unit-1 Janki Center
Veera Desai road
Andheri (west)
Mumbai-400028

નકલ રવાના:-

૧. નગર નિયોજકશ્રી, વલસાડ નગર નિયોજક કચેરી
૨. મામલતદારશ્રી તા. ઉમરગામ જિ. વલસાડ (હુકમનો અમલ ગામ દફતરે રેકર્ડ ઓફ રાઈટ્સ મુજબ કરાવવા સારૂ.)
૩. જિલ્લા ઈન્સ્પેકટરશ્રી જમીન રેકર્ડ જિ. વલસાડ
૪. નાયબ કલેકટર, પારડી
૫. તલાટી કમ મંત્રીશ્રી, ફણસા
૬. તાલુકા વિકાસ અધિકારીશ્રી, ઉમરગામ

* આ હુકમની ઇ-ધરા કેન્દ્ર, ઉમરગામ માં નોંધ નંબર 7010 થી મોજે.- ફણસા તા.- ઉમરગામ જિ.- વલસાડ માં નોંધ થયેલ છે.

કલેકટર અને જિલ્લા મેજિસ્ટ્રેટની કચેરી, વલસાડ

નવી કલેકટર કચેરી, તિથલ રોડ, વલસાડ - ૩૯૬૦૦૧

ફોન નંબર : ૦૨૬૩૨-૨૪૪૨૭૪/૨૪૪૨૭૯ ઇ-મેઇલ : collector-val@gujarat.gov.in

હુકમ નં. 10/25/05/001/2019/2071-77

તા. 09/04/2019

વંચાણે લીધા :-

(૧) અરજદારશ્રી Madura Carbon India Ltd

રહે. Unit 1 banking center, Beers desai road, Andheri (west), Mumbai-400028 ની તા. 16/03/2019 ની ઓનલાઇન અરજી તથા સોગંદનામુ

(૨) મુંબઇ જમીન મહેસૂલ કાયદો ૧૮૭૯ ની કલમ - ૪૮, ૫૬, ૬૬ તથા ૬૭

(૩) ગુજરાત જમીન મહેસૂલ નિયમો, ૧૯૭૨ ના નિયમ ૮૧, ૧૦૦, ૧૦૧, ૧૦૨

(૪) સરકારશ્રીના મહેસૂલ વિભાગનાં ઠરાવ નં. બખપ/૧૦૦૬/૪૨૫/૬ તા.૦૧/૦૭/૨૦૦૮

(૫) સરકારશ્રીના મહેસૂલ વિભાગનાં પરિપત્ર ક્રમાંક: બખપ/૧૦૨૦૧૮/૩૨૭/૬ તા.૦૮/૦૫/૨૦૧૮

(૬) સરકારશ્રીના મહેસૂલ વિભાગના ઠરાવ ક્રમાંક: એસ/ટીપી/૧૨૨૦૯/૭૬૯/૧૧/હ.૧ તા. ૩૧/૦૩/૨૦૧૧

(૭) iRCMS પોર્ટલ પરની કેસ વિગત

COLLECTOR કલેકટર વલસાડ VALSAD DISTRICT

હુકમ :-

વંચાણે લીધેલ ક્રમ (૧) ની અરજી તથા સોગંદનામા થી અરજદારશ્રી Madura Carbon India Ltd એ મોજે ફણસા તા. ઊમરગામ જિ. વલસાડ ના સરવે/બ્લોક નં. 3708 ના ક્ષેત્રફળ 945.00 ચો.મી. ની જમીન અંગે ગુજરાત જમીન મહેસૂલ અધિનિયમ-૧૮૭૯ ની કલમ-૬૫ હેઠળ બિનખેતીના હેતુ માટે પરવાનગી આપવા વિનંતી કરેલ છે.

સવાલવાળી જમીનના ગામ નમૂના નં. ૭/૧૨ માં કબજેદારોની વિગત નીચે મુજબ છે.

સરવે/બ્લોક નંબર ટી.પી. નંબર એફ.પી. નંબર	માંગણીનું ક્ષેત્રફળ (ચો.મી.)	કબજેદારોના નામ (ખાતા નં. 1787)	જમીનનો સત્તાપ્રકાર (૭/૧૨ મુજબ)
સરવે/બ્લોક નં. : 3708 જુનો સરવે/બ્લોક નં. : 363/3/૪ ટી.પી. નં. : --- એફ.પી. નં.: ---	945.00	મદુરા કાર્બન ઈન્ડીયા લી. ના ડાયરેક્ટર ગૌતમ વિપન કાલરા	જુની શરત (જુ.શ)

વસુલ કરવામાં આવેલ કરવેરાની વિગત નીચે મુજબ છે.

કરની વિગત	સદર	માંગણીનું ક્ષેત્રફળ (ચો.મી.)	દર રૂ. પ્રતિ ચો.મી.	કુલ રકમ રૂ.
રૂપાંતર કર	569-0035-00-800-01	945.00	8.00	7,560.00
વિશેષ ધારો	570-0035-00-101-01	945.00	0.15	141.75
લોકલ ફંડ	574-0029-00-103-01	945.00	0.15	141.75
શિક્ષણ ઉપકર	575-0045-00-108-01	945.00	0.15	141.75
માપણી ફી	577-0029-00-106-01	945.00	---	1,800.00
			કુલ રૂ.	9,785.25

ઉપર્યુકત તમામ હકીકતો ધ્યાને લઇ મોજે ફણસા તા. ઊમરગામ જિ. વલસાડ ના સરવે/બ્લોક નં. 3708 ના ક્ષેત્રફળ 945.00 ચો.મી. ની જમીનને નીચે જણાવેલ શરતોને આધિન ગુજરાત જમીન મહેસૂલ અધિનિયમ-૧૮૭૯ ની કલમ-૬૫ હેઠળ બિનખેતી હેતુ માટે પરવાનગી આપવા આથી હુકમ કરવામાં આવે છે.

શરતો : -

(૧) આ હુકમ મળ્યેથી બે માસમાં "એમ" નમૂનામાં સનદ પ્રાપ્ત થશે.

(૨) જિલ્લા ઇન્સ્પેકટરશ્રી, જમીન રેકર્ડની કચેરીમાં માપણી ફી જમા કરાવેલ છે. જેથી માપણી કરી / કરાવી આ હુકમ અનુસાર તેમજ મંજૂર થયેલ પ્લાન મુજબ દુરસ્તી પત્રક તૈયાર કરવાનું / કરાવવાનું રહેશે અને દુરસ્તી પત્રકનો મહેસૂલી દફતરે અમલ થયા બાદ જ પ્રશ્નવાળી બિનખેતીની જમીન / પ્લોટનું રજી. દસ્તાવેજથી થયેલ વેચાણ વ્યવહારના અમલ માટે નોંધ પાડવાની રહેશે.

(૩) અરજદારે પ્રતિ વર્ષે ખેતી સિવાયનો ધારો (વિશેષધારો) દર પ્રતિ ચો.મી. ના રૂ. 0.15 પ્રમાણે રૂ. 141.75 તેમજ નિયમ પ્રમાણે લોકલ ફંડ તથા શિક્ષણ સેસ ભરવો પડશે જે અંગેનો દર વખતોવખત ફેરફારને પાત્ર રહેશે.

(૪) વલસાડ નગર નિયોજક કચેરી એ મંજૂર કરેલા પ્લાન મુજબ બાંધકામ કરવાનું રહેશે અને હુકમ થયા તારીખથી ત્રણ વર્ષમાં બાંધકામ પૂર્ણ કરવાનું રહેશે.

(૫) સરકારશ્રીના મહેસૂલ વિભાગના ઠરાવ નં. બખપ/૧૦૯૩/૧૦૫૨/ક તા. ૧૩/૦૯/૧૯૯૩ માં ઠરાવ્યા મુજબ સહીયારા / કોમન પ્લોટ અને રસ્તાની જમીન સોસાયટીની માલિકીની અથવા સર્વે પ્લોટ હોલ્ડરની સહીયારી માલિકીની ગણાશે તે ઉપર મુળ માલિકનો કોઇ હકક રહેશે નહિ.

(૬) સરકારશ્રીના મહેસૂલ વિભાગના તા. ૦૭/૦૮/૧૯૯૧ ના પરિપત્ર નં. બખપ-૧૦૯૧/૧૭૫૬/ક ની જોગવાઇ મુજબ બિન અધિકૃત બાંધકામ બાબતે બાંધકામ નિયંત્રણ કરતી સંબંધિત મહાનગરપાલિકા / શહેરી વિસ્તાર સત્તા મંડળએ ધોરણસરનાં પગલાં લેવાના રહેશે.

(૭) સદર જમીનમાંથી પેટ્રોલીયમ / પાણીની કે અન્ય કોઇપણ પ્રકારની પાઇપલાઇન પસાર થતી હશે તો તે સંદર્ભે વિકાસ પરવાનગી આપનાર ઓથોરિટીએ સંબંધિતોનું ના-વાંધા પ્રમાણપત્ર મેળવી વિકાસ પરવાનગી આપવાની રહેશે.

(૮) સરકારશ્રીનાં મહેસૂલ વિભાગનાં તા. ૦૧/૦૭/૨૦૦૮ ના ઠરાવ નં. બખપ/૧૦૦૬/૪૨૫/ક માં જણાવેલ નીચે મુજબની શરતોનું પાલન કરવાનું રહેશે.

૧. જિલ્લા ઇન્સ્પેકટરશ્રી, જમીન રેકર્ડ દ્વારા ઇસ્યુ કરાયેલ માપણી શીટ કે જેના ઉપર મૂળ ટિપ્પણની હદ પણ દર્શાવેલ હોવી જોઇએ. રજૂ કરાયેલ પ્લાન તથા લે-આઉટ પ્લાન સક્ષમ કક્ષાએ મંજૂર કરાયેલ હોવી જોઇએ.

૨. બાંધકામ શરૂ કરતા પહેલા બાંધકામનાં નકશા સક્ષમ અધિકારી પાસે મંજૂર કરાવવાના રહેશે. પરંતુ અરજદાર બિનખેતી પરવાનગી મેળવ્યા વગર આવા બાંધકામની રજા ચિઠ્ઠી મેળવી શકશે નહિ.

૩. શહેરી વિસ્તાર જયાં ટાઉન પ્લાનિંગ સ્કીમ મંજૂર થઇ ગઇ છે ત્યાં જી.ડી.સી.આર. અને ઝોનિંગના નિયમો અનુસાર બાંધકામ કરવાનું રહેશે.

૪. મંજૂર થયેલ નકશા મુજબ આરોગ્ય અને સ્વાસ્થ્યની દ્રષ્ટિએ ગંદા પાણીનાં નિકાલની જોગવાઇ કરવાની રહેશે.

૫. અરજદારે રિબન ડેવલપમેન્ટ રુલ્સ નીચે જે તે રસ્તાનો પ્રકાર ધ્યાને લઇ રસ્તાના મધ્યબિંદુથી બાંધકામ વચ્ચે અંતર જાળવવાનું રહેશે અન્યથા અરજદારની જવાબદારી થશે.

૬. ફલોર, મિલ, સિનેમા/ ટુરિંગ સિનેમા/ થિયેટર માટે બિનખેતી પરવાનગીના કામે જિલ્લા મેજિસ્ટ્રેટની જરૂરી મંજૂરી મેળવી આગળની કાર્યવાહી કરવાની રહેશે.

૭. પેટ્રોલ, ડીઝલ, કેરોસીન, સી.એન.જી., એલ.પી.જી. પંપ નાંખવા માટે બિનખેતી પરવાનગીના કામે બાંધકામ શરૂ કરતાં પહેલા જિલ્લા મેજિસ્ટ્રેટની જરૂરી મંજૂરી મેળવી આગળની કાર્યવાહી કરવાની રહેશે.

૮. ઇન્ડિયન એક્ષપ્લોઝિવ એકટ અન્વયે મેગેનિઝ, ફાયર વર્કસ, દારૂખાના માટે બિનખેતીની કાર્યવાહી કરતા પહેલા જિલ્લા મેજિસ્ટ્રેટની જરૂરી મંજૂરી મેળવી આગળની કાર્યવાહી કરવાની રહેશે.

૯. સવાલવાળી જમીન જો રેલવે હદની નજીક હોય તો રેલવેની હદથી નિયમ મુજબ જગ્યા છોડી બાંધકામ કરવાનું રહેશે.

૧૦. સવાલવાળી જમીન ઉપરથી અથવા બાજુમાંથી વીજળી ગ્રિડના તાર/ હાઇટેન્શન પાવર અગર થાંભલા આવેલ હોય ત્યારે તે અન્વયે લાગુ પડતા નિયમોનું પાલન કરવા અને તે મુજબ બાંધકામ કરવાનું રહેશે.

૧૧. બિનખેતી માંગવામાં આવી હોય તેવી જમીન જો એરોડ્રામ આસપાસ નિયમ મુજબની ત્રિજ્યામાં આવતી હોય ત્યારે બાંધકામની ઉંચાઇ તથા એરોડ્રામની દ્રષ્ટિએ જરૂરી એવુ ના-વાંધા પ્રમાણપત્ર સિવિલ એવિએશન ખાતા પાસેથી મેળવવાનું રહેશે અને સિવિલ એવિએશન ખાતાના નિયમોનું પાલન કરવાનું રહેશે.

૧૨. ઓ.એન.જી.સી. ના કુવાની નજીકમાં આવેલ જમીનના કિસ્સામાં અરજદારે સંબંધિત નિયમોનું પાલન કરવાનું રહેશે.

૧૩. નર્મદા કેનાલ/ અન્ય સિંચાઇ કેનાલની નજીકમાં આવેલ જમીનની બાબતમાં અરજદારે સૂચિત બાંધકામ માટે જાળવવાના થતાં અંતર અંગેના નિયમોનું પાલન કરવાનું રહેશે.

૧૪. અરજદારે/ જયાં જરૂરી હોય ત્યાં કેન્દ્ર સરકાર કે રાજય સરકારના કાયદા નીચે રક્ષિત સ્મારક (Protected Monuments) તરીકે જાહેર કરેલ પ્રાચીન સ્મારકથી નિયમ મુજબનું અંતર જાળવવાની પ્રવર્તમાન જોગવાઇઓનું પાલન કરવાનું રહેશે.

(૯) પ્રશ્નવાળી જમીનમાં નગરપાલિકા/ મહાનગરપાલિકા/ શહેરી વિકાસ સત્તા મંડળ દ્વારા જે શરતોએ પરવાનગી આપવામાં આવશે તે શરતોનું પાલન તથા બાંધકામ કરવાનું રહેશે.

(૧૦) આ જમીનમાં વરસાદી પાણીના ભુગર્ભ વહન/ સંચય માટે દર મકાન/ બહુમાળી મકાન દીઠ એકના દરે ... માં ઉપર પરકોલેટીંગ બોરવેલની વ્યવસ્થા અચુક કરવાની રહેશે તથા વરસાદી પાણીના નિકાલની વ્યવસ્થા કરીને બાંધકામ કરવાનું રહેશે.

(૧૧) પ્રશ્નવાળી જમીનમાં સ્થળે થયેલ બાંધકામ સ્થાનિક સ્વરાજની સંસ્થાના નિયમોનુસાર નહિ હોય તો સ્થાનિક સ્વરાજની સંસ્થા નિયમોનુસાર કાર્યવાહી કરી શકશે. તેમાં આ હુકમથી બાધ આવશે નહિ.

અરજદારે ઉપરોકત શરતોનું પાલન કરવાનું રહેશે. જો તેમાં નિષ્ફળ જશે તો શરતભંગ ગણી સક્ષમ અધિકારી કાયદેસરની કાર્યવાહી કરશે.

(૧૨) ઉપરની કોઇપણ શરતનો ભંગ થયેથી જમીન મહેસૂલ કાયદાની કલમ-૬૭ મુજબ શિક્ષાત્મક પગલા લેવામાં આવશે તેમજ બીજી કોઇપણ શિક્ષાને પાત્ર હશે તો તેને બાધ આણ્યા સિવાય કે જે ફરમાવવાનું યોગ્ય લાગે તે પ્રમાણે દંડ અથવા આકાર લઇ સદરહુ જમીનનો કબજો કબજેદાર પાસે ચાલુ રહેવા દઇ શકાશે.

(૧૩) ઉપરોકત શરતોમાં ગમે તે મજકૂર હોય તેમ છતાં, કલેકટરશ્રી સદરહુ હુકમ વિરૂધ્ધ બાંધેલા અથવા વધારાના કોઇપણ મકાન અથવા ઇમલાને કલેકટરશ્રીએ, આ અર્થે જે મુદત ઠરાવી હોય તે મુદત દરમિયાન તેવી રીતે ખસેડવામાં ન આવે કે સૂચવ્યા મુજબ ફેરફાર ન કરવામાં આવે તો તેમ કરવામાં જે ખર્ચ થાય તે કબજેદાર પાસેથી જમીન મહેસૂલની બાકી તરીકે વસુલ કરવાને મુખત્યાર છે.

વધુમાં ઉપર્યુક્ત શરતોને આધીન અરજદાર દ્વારા રજુ થયેલ સોગંદનામાની વિગતોમાં તેઓ દ્વારા જાહેર કરેલી હકીકતોને આધારે સવાલવાળી જમીનના બિનખેતી ઉપયોગ માટે પરવાનગી આપવામાં આવે છે.

COLLECTOR કલેક્ટર VALSAD DISTRICT

16/4/19

(સી આર ખરસાણ)
કલેકટર, વલસાડ

આર.પી.એ.ડી.

પ્રતિ,

Madura Carbon India Ltd
Unit 1 banking center
Beers desai road
Andheri (west)
Mumbai-400028

નકલ રવાના:-

૧. નગર નિયોજકશ્રી, વલસાડ નગર નિયોજક કચેરી
૨. મામલતદારશ્રી તા. ઊમરગામ જિ. વલસાડ (હુકમનો અમલ ગામ દફતરે રેકર્ડ ઓફ રાઈટ્સ મુજબ કરાવવા સારૂ.)
૩. જિલ્લા ઈન્સ્પેકટરશ્રી જમીન રેકર્ડ જિ. વલસાડ
૪. નાયબ કલેકટર, પારડી
૫. તલાટી કમ મંત્રીશ્રી, ફણસા
૬. તાલુકા વિકાસ અધિકારીશ્રી, ઊમરગામ

* આ હુકમની ઇ-ધરા કેન્દ્ર, ઊમરગામ માં નોંધ નંબર 7012 થી મોજે.- ફણસા તા.- ઊમરગામ જિ.- વલસાડ માં નોંધ થયેલ છે.

કલેકટર અને જિલ્લા મેજિસ્ટ્રેટની કચેરી, વલસાડ

નવી કલેકટર કચેરી, તિથલ રોડ, વલસાડ - ૩૯૬૦૦૧

ફોન નંબર : ૦૨૬૩૨-૨૪૪૨૭૪/૨૪૪૨૭૯ ઇ-મેઇલ : collector-val@gujarat.gov.in

હુકમ નં. 13/25/05/001/2019/2032-33

તા. 09/04/2019

વંચાણે લીધા :-

(૧) અરજદારશ્રી Madura Carbon India Ltd

રહે. Unit 1 banking center, Beers desai road, Andheri (west), Mumbai-400028 ની તા. 16/03/2019 ની ઓનલાઇન અરજી તથા સોગંદનામુ

(૨) મુંબઇ જમીન મહેસૂલ કાયદો ૧૮૭૯ ની કલમ - ૪૮, ૫૬, ૬૬ તથા ૬૭

(૩) ગુજરાત જમીન મહેસૂલ નિયમો, ૧૯૭૨ ના નિયમ ૮૧, ૧૦૦, ૧૦૧, ૧૦૨

(૪) સરકારશ્રીના મહેસૂલ વિભાગનાં ઠરાવ નં. બખપ/૧૦૦૬/૪૨૫/૬ તા.૦૧/૦૭/૨૦૦૮

(૫) સરકારશ્રીના મહેસૂલ વિભાગનાં પરિપત્ર ક્રમાંક: બખપ/૧૦૨૦૧૮/૩૨૭/૬ તા.૦૮/૦૫/૨૦૧૮

(૬) સરકારશ્રીના મહેસૂલ વિભાગના ઠરાવ ક્રમાંક: એસ/ટીપી/૧૨૨૦૯/૭૬૯/૧૧/હ.૧ તા. ૩૧/૦૩/૨૦૧૧

(૭) iRCMS પોર્ટલ પરની કેસ વિગત

COLLECTOR કલેકટર જિલ્લો વલસાડ VALSAD DISTRICT

હુકમ :-

વંચાણે લીધેલ ક્રમ (૧) ની અરજી તથા સોગંદનામા થી અરજદારશ્રી Madura Carbon India Ltd એ મોજે ફણસા તા. ઊમરગામ જિ. વલસાડ ના સરવે/બ્લોક નં. 3719 ના ક્ષેત્રફળ 17,910.00 ચો.મી. ની જમીન અંગે ગુજરાત જમીન મહેસૂલ અધિનિયમ-૧૮૭૯ ની કલમ-૬૫ હેઠળ બિનખેતીના હેતુ માટે પરવાનગી આપવા વિનંતી કરેલ છે.

સવાલવાળી જમીનના ગામ નમૂના નં. ૭/૧૨ માં કબજેદારોની વિગત નીચે મુજબ છે.

સરવે/બ્લોક નંબર ટી.પી. નંબર એફ.પી. નંબર	માંગણીનું ક્ષેત્રફળ (ચો.મી.)	કબજેદારોના નામ (ખાતા નં. 1788)	જમીનનો સત્તાપ્રકાર (૭/૧૨ મુજબ)
સરવે/બ્લોક નં. : 3719 જુનો સરવે/બ્લોક નં. : 479/૧/૧ ટી.પી. નં. : --- એફ.પી. નં.: ---	17,910.00	મદુરા કાર્બન ઈન્ડીયા લી. ના ડાયરેક્ટર ગૌતમ વિપન કાલરા	જુની શરત (જુ.શ)

વસુલ કરવામાં આવેલ કરવેરાની વિગત નીચે મુજબ છે.

કરની વિગત	સદર	માંગણીનું ક્ષેત્રફળ (ચો.મી.)	દર રૂ. પ્રતિ ચો.મી.	કુલ રકમ રૂ.
રૂપાંતર કર	569-0035-00-800-01	17,910.00	8.00	1,43,280.00
વિશેષ ધારો	570-0035-00-101-01	17,910.00	0.15	2,686.50
લોકલ ફંડ	574-0029-00-103-01	17,910.00	0.15	2,686.50
શિક્ષણ ઉપકર	575-0045-00-108-01	17,910.00	0.15	2,686.50
માપણી ફી	577-0029-00-106-01	17,910.00	---	2,400.00
			કુલ રૂ.	1,53,739.50

ઉપર્યુકત તમામ હકીકતો ધ્યાને લઇ મોજે ફણસા તા. ઊમરગામ જિ. વલસાડ ના સરવે/બ્લોક નં. 3719 ના ક્ષેત્રફળ 17,910.00 ચો.મી. ની જમીનને નીચે જણાવેલ શરતોને આધિન ગુજરાત જમીન મહેસૂલ અધિનિયમ-૧૮૭૯ ની કલમ-૬૫ હેઠળ બિનખેતી હેતુ માટે પરવાનગી આપવા આથી હુકમ કરવામાં આવે છે.

શરતો : -

(૧) આ હુકમ મળ્યેથી બે માસમાં "એમ" નમૂનામાં સનદ પ્રાપ્ત થશે.

(૨) જિલ્લા ઇન્સ્પેકટરશ્રી, જમીન રેકર્ડની કચેરીમાં માપણી ફી જમા કરાવેલ છે. જેથી માપણી કરી / કરાવી આ હુકમ અનુસારે તેમજ મંજૂર થયેલ પ્લાન મુજબ દુરસ્તી પત્રક તૈયાર કરવાનું / કરાવવાનું રહેશે અને દુરસ્તી પત્રકનો મહેસૂલી દફ્તરે અમલ થયા બાદ જ પ્રશ્નવાળી બિનખેતીની જમીન / પ્લોટનું રજી. દસ્તાવેજથી થયેલ વેચાણ વ્યવહારના અમલ માટે નોંધ પાડવાની રહેશે.

(૩) અરજદારે પ્રતિ વર્ષે ખેતી સિવાયનો ધારો (વિશેષધારો) દર પ્રતિ ચો.મી. ના રૂ. 0.15 પ્રમાણે રૂ. 2,686.50 તેમજ નિયમ પ્રમાણે લોકલ ફંડ તથા શિક્ષણ સેસ ભરવો પડશે જે અંગેનો દર વખતોવખત ફેરફારને પાત્ર રહેશે.

(૪) વલસાડ નગર નિયોજક કચેરી એ મંજૂર કરેલા પ્લાન મુજબ બાંધકામ કરવાનું રહેશે અને હુકમ થયા તારીખથી ત્રણ વર્ષમાં બાંધકામ પૂર્ણ કરવાનું રહેશે.

(૫) સરકારશ્રીના મહેસૂલ વિભાગના ઠરાવ નં. બખપ/૧૦૯૩/૧૦૫૨/ક તા. ૧૩/૦૯/૧૯૯૩ માં ઠરાવ્યા મુજબ સહીયારા / કોમન પ્લોટ અને રસ્તાની જમીન સોસાયટીની માલિકીની અથવા સર્વે પ્લોટ હોલ્ડરની સહીયારી માલિકીની ગણાશે તે ઉપર મુળ માલિકનો કોઇ હકક રહેશે નહિ.

(૬) સરકારશ્રીના મહેસૂલ વિભાગના તા. ૦૭/૦૮/૧૯૯૧ ના પરિપત્ર નં. બખપ-૧૦૯૧/૧૭૫૬/ક ની જોગવાઇ મુજબ બિન અધિકૃત બાંધકામ બાબતે બાંધકામ નિયંત્રણ કરતી સંબંધિત મહાનગરપાલિકા / શહેરી વિસ્તાર સત્તા મંડળએ ધોરણસરનાં પગલાં લેવાના રહેશે.

(૭) સદર જમીનમાંથી પેટ્રોલીયમ / પાણીની કે અન્ય કોઇપણ પ્રકારની પાઇપલાઇન પસાર થતી હશે તો તે સંદર્ભે વિકાસ પરવાનગી આપનાર ઓથોરિટીએ સંબંધિતોનું ના-વાંધા પ્રમાણપત્ર મેળવી વિકાસ પરવાનગી આપવાની રહેશે.

(૮) સરકારશ્રીનાં મહેસૂલ વિભાગનાં તા. ૦૧/૦૭/૨૦૦૮ ના ઠરાવ નં. બખપ/૧૦૦૬/૪૨૫/ક માં જણાવેલ નીચે મુજબની શરતોનું પાલન કરવાનું રહેશે.

૧. જિલ્લા ઇન્સ્પેકટરશ્રી, જમીન રેકર્ડ દ્વારા ઇસ્યુ કરાયેલ માપણી શીટ કે જેના ઉપર મૂળ ટિપ્પણની હદ પણ દર્શાવેલ હોવી જોઇએ. રજૂ કરાયેલ પ્લાન તથા લે-આઉટ પ્લાન સક્ષમ કક્ષાએ મંજૂર કરાયેલ હોવી જોઇએ.

૨. બાંધકામ શરૂ કરતા પહેલા બાંધકામનાં નકશા સક્ષમ અધિકારી પાસે મંજૂર કરાવવાના રહેશે. પરંતુ અરજદાર બિનખેતી પરવાનગી મેળવ્યા વગર આવા બાંધકામની રજા ચિઠ્ઠી મેળવી શકશે નહિ.

૩. શહેરી વિસ્તાર જયાં ટાઉન પ્લાનિંગ સ્કીમ મંજૂર થઇ ગઇ છે ત્યાં જી.ડી.સી.આર. અને ઝોનિંગના નિયમો અનુસાર બાંધકામ કરવાનું રહેશે.

૪. મંજૂર થયેલ નકશા મુજબ આરોગ્ય અને સ્વાસ્થ્યની દ્રષ્ટિએ ગંદા પાણીનાં નિકાલની જોગવાઇ કરવાની રહેશે.

૫. અરજદારે રિબન ડેવલપમેન્ટ રુલ્સ નીચે જે તે રસ્તાનો પ્રકાર ધ્યાને લઇ રસ્તાના મધ્યબિંદુથી બાંધકામ વચ્ચે અંતર જાળવવાનું રહેશે અન્યથા અરજદારની જવાબદારી થશે.

૬. ફ્લોર, મિલ, સિનેમા/ ટુરિંગ સિનેમા/ થિયેટર માટે બિનખેતી પરવાનગીના કામે જિલ્લા મેજિસ્ટ્રેટની જરૂરી મંજૂરી મેળવી આગળની કાર્યવાહી કરવાની રહેશે.

૭. પેટ્રોલ, ડીઝલ, કેરોસીન, સી.એન.જી., એલ.પી.જી. પંપ નાંખવા માટે બિનખેતી પરવાનગીના કામે બાંધકામ શરૂ કરતાં પહેલા જિલ્લા મેજિસ્ટ્રેટની જરૂરી મંજૂરી મેળવી આગળની કાર્યવાહી કરવાની રહેશે.

૮. ઇન્ડિયન એક્ષપ્લોઝિવ એકટ અન્વયે મેગેનિઝ, ફાયર વર્કસ, દારૂખાના માટે બિનખેતીની કાર્યવાહી કરતા પહેલા જિલ્લા મેજિસ્ટ્રેટની જરૂરી મંજૂરી મેળવી આગળની કાર્યવાહી કરવાની રહેશે.

૯. સવાલવાળી જમીન જો રેલવે હદની નજીક હોય તો રેલવેની હદથી નિયમ મુજબ જગ્યા છોડી બાંધકામ કરવાનું રહેશે.

૧૦. સવાલવાળી જમીન ઉપરથી અથવા બાજુમાંથી વીજળી ગ્રિડના તાર/ હાઇટેન્શન પાવર અગર થાંભલા આવેલ હોય ત્યારે તે અન્વયે લાગુ પડતા નિયમોનું પાલન કરવા અને તે મુજબ બાંધકામ કરવાનું રહેશે.

૧૧. બિનખેતી માંગવામાં આવી હોય તેવી જમીન જો એરોડ્રામ આસપાસ નિયમ મુજબની ત્રિજયામાં આવતી હોય ત્યારે બાંધકામની ઉંચાઇ તથા એરોડ્રામની દ્રષ્ટિએ જરૂરી એવુ ના-વાંધા પ્રમાણપત્ર સિવિલ એવિએશન ખાતા પાસેથી મેળવવાનું રહેશે અને સિવિલ એવિએશન ખાતાના નિયમોનું પાલન કરવાનું રહેશે.

૧૨. ઓ.એન.જી.સી. ના કુવાની નજીકમાં આવેલ જમીનના કિસ્સામાં અરજદારે સંબંધિત નિયમોનું પાલન કરવાનું રહેશે.

૧૩. નર્મદા કેનાલ/ અન્ય સિંચાઇ કેનાલની નજીકમાં આવેલ જમીનની બાબતમાં અરજદારે સૂચિત બાંધકામ માટે જાળવવાના થતાં અંતર અંગેના નિયમોનું પાલન કરવાનું રહેશે.

૧૪. અરજદારે/ જયાં જરૂરી હોય ત્યાં કેન્દ્ર સરકાર કે રાજય સરકારના કાયદા નીચે રક્ષિત સ્મારક (Protected Monuments) તરીકે જાહેર કરેલ પ્રાચીન સ્મારકથી નિયમ મુજબનું અંતર જાળવવાની પ્રવર્તમાન જોગવાઇઓનું પાલન કરવાનું રહેશે.

(૯) પ્રશ્નવાળી જમીનમાં નગરપાલિકા/ મહાનગરપાલિકા/ શહેરી વિકાસ સત્તા મંડળ દ્વારા જે શરતોએ પરવાનગી આપવામાં આવશે તે શરતોનું પાલન તથા બાંધકામ કરવાનું રહેશે.

(૧૦) આ જમીનમાં વરસાદી પાણીના ભુગર્ભ વહન/ સંચય માટે દર મકાન/ બહુમાળી મકાન દીઠ એકના દરે ચા ... માં ઉપર પરકોલેટીંગ બોરવેલની વ્યવસ્થા અચુક કરવાની રહેશે તથા વરસાદી પાણીના નિકાલની વ્યવસ્થા કરીને બાંધકામ કરવાનું રહેશે.

(૧૧) પ્રશ્નવાળી જમીનમાં સ્થળે થયેલ બાંધકામ સ્થાનિક સ્વરાજની સંસ્થાના નિયમોનુસાર નહિ હોય તો સ્થાનિક સ્વરાજની સંસ્થા નિયમોનુસાર કાર્યવાહી કરી શકશે. તેમાં આ હુકમથી બાધ આવશે નહિ.

અરજદારે ઉપરોકત શરતોનું પાલન કરવાનું રહેશે. જો તેમાં નિષ્ફળ જશે તો શરતભંગ ગણી સક્ષમ અધિકારી કાયદેસરની કાર્યવાહી કરશે.

(૧૨) ઉપરની કોઇપણ શરતનો ભંગ થયેથી જમીન મહેસૂલ કાયદાની કલમ-૬૭ મુજબ શિક્ષાત્મક પગલા લેવામાં આવશે તેમજ બીજી કોઇપણ શિક્ષાને પાત્ર હશે તો તેને બાધ આણ્યા સિવાય કે જે ફરમાવવાનું યોગ્ય લાગે તે પ્રમાણે દંડ અથવા આકાર લઇ સદરહુ જમીનનો કબજો કબજેદાર પાસે ચાલુ રહેવા દઇ શકાશે.

(૧૩) ઉપરોકત શરતોમાં ગમે તે મજકૂર હોય તેમ છતાં, કલેકટરશ્રી સદરહુ હુકમ વિરૂધ્ધ બાંધેલા અથવા વધારાના કોઇપણ મકાન અથવા ઇમલાને કલેકટરશ્રીએ, આ અર્થે જે મુદત ઠરાવી હોય તે મુદત દરમિયાન તેવી રીતે ખસેડવામાં ન આવે કે સૂચવ્યા મુજબ ફેરફાર ન કરવામાં આવે તો તેમ કરવામાં જે ખર્ચ થાય તે કબજેદાર પાસેથી જમીન મહેસૂલની બાકી તરીકે વસુલ કરવાને મુખત્યાર છે.

વધુમાં ઉપર્યુક્ત શરતોને આધીન અરજદાર દ્વારા રજુ થયેલ સોગંદનામાની વિગતોમાં તેઓ દ્વારા જાહેર કરેલી હકીકતોને આધારે સવાલવાળી જમીનના બિનખેતી ઉપયોગ માટે પરવાનગી આપવામાં આવે છે.

COLLECTOR કલેકટર VALSAD DISTRICT

૧૬/૫/૧૯

(સી આર ખરસાણ)
કલેકટર, વલસાડ

આર.પી.એ.ડી.

પ્રતિ,

Madura Carbon India Ltd
Unit 1 banking center
Beers desai road
Andheri (west)
Mumbai-400028

નકલ રવાના:-

૧. નગર નિયોજકશ્રી, વલસાડ નગર નિયોજક કચેરી
૨. મામલતદારશ્રી તા. ઉમરગામ જિ. વલસાડ (હુકમનો અમલ ગામ દફતરે રેકર્ડ ઓફ રાઈટ્સ મુજબ કરાવવા સારૂ.)
૩. જિલ્લા ઈન્સ્પેકટરશ્રી જમીન રેકર્ડ જિ. વલસાડ
૪. નાયબ કલેકટરશ્રી, પારડી
૫. તલાટી કમ મંત્રીશ્રી, ફણસા
૬. તાલુકા વિકાસ અધિકારીશ્રી, ઉમરગામ

* આ હુકમની ઇ-ધરા કેન્દ્ર, ઉમરગામ માં નોંધ નંબર 7011 થી મોજે.- ફણસા તા.- ઉમરગામ જિ.- વલસાડ માં નોંધ થયેલ છે.

કલેકટર અને જિલ્લા મેજિસ્ટ્રેટની કચેરી, વલસાડ

નવી કલેકટર કચેરી, તિથલ રોડ, વલસાડ - ૩૯૬૦૦૧

ફોન નંબર : ૦૨૬૩૨-૨૪૪૨૭૪/૨૪૪૨૭૯ ઇ-મેઇલ : collector-val@gujarat.gov.in

૩૬૫૦-૫૨

હુકમ નં. 236/25/05/001/2019

તા. 21/06/2019

વંચાણે લીધા :-

(૧) અરજદારશ્રી Madura Carbon India Ltd

રહે. Unit 1 Banking Center, Beers Desai Road, Andheri (West), Mumbai-400028 ની તા. 14/06/2019 ની ઓનલાઇન અરજી તથા સોગંદનામુ

(૨) મુંબઇ જમીન મહેસૂલ કાયદો ૧૮૭૯ ની કલમ - ૪૮, ૫૬, ૬૬ તથા ૬૭

(૩) ગુજરાત જમીન મહેસૂલ નિયમો, ૧૯૭૨ ના નિયમ ૮૧, ૧૦૦, ૧૦૧, ૧૦૨

(૪) સરકારશ્રીના મહેસૂલ વિભાગનાં ઠરાવ નં. બખપ/૧૦૦૬/૪૨૫/૬ તા.૦૧/૦૭/૨૦૦૮

(૫) સરકારશ્રીના મહેસૂલ વિભાગનાં પરિપત્ર ક્રમાંક: બખપ/૧૦૨૦૧૮/૩૨૭/૬ તા.૦૮/૦૫/૨૦૧૮

(૬) સરકારશ્રીના મહેસૂલ વિભાગના ઠરાવ ક્રમાંક: એસ/ટીપી/૧૨૨૦૯/૭૬૯/૧૧/હ.૧ તા. ૩૧/૦૩/૨૦૧૧

(૭) iRCMS પોર્ટલ પરની કેસ વિગત

હુકમ :-

વંચાણે લીધેલ ક્રમ (૧) ની અરજી તથા સોગંદનામા થી અરજદારશ્રી Madura Carbon India Ltd એ મોજે ફણસા તા. ઊમરગામ જિ. વલસાડ ના સરવે/બ્લોક નં. 3725 ના ક્ષેત્રફળ 17,236.00 ચો.મી. ની જમીન અંગે ગુજરાત જમીન મહેસૂલ અધિનિયમ-૧૮૭૯ ની કલમ-૬૫ હેઠળ બિનખેતીના હેતુ માટે પરવાનગી આપવા વિનંતી કરેલ છે.

સવાલવાળી જમીનના ગામ નમૂના નં. ૭/૧૨ માં કબજેદારોની વિગત નીચે મુજબ છે.

સરવે/બ્લોક નંબર ટી.પી. નંબર એફ.પી. નંબર	માંગણીનું ક્ષેત્રફળ (ચો.મી.)	કબજેદારોના નામ (ખાતા નં. 1787)	જમીનનો સત્તાપ્રકાર (૭/૧૨ મુજબ)
સરવે/બ્લોક નં. : 3725 જુનો સરવે/બ્લોક નં. : 479/૧ ટી.પી. નં. : --- એફ.પી. નં.: ---	17,236.00	મદુરા કાર્બન ઈન્ડીયા લી. ના ડાયરેક્ટર ગૌતમ વિપન કાલરા	જુની શરત (જુ.શ)

વસુલ કરવામાં આવેલ કરવેરાની વિગત નીચે મુજબ છે.

કરની વિગત	સદર	માંગણીનું ક્ષેત્રફળ (ચો.મી.)	દર રૂ. પ્રતિ ચો.મી.	કુલ રકમ રૂ.
રૂપાંતર કર	569-0035-00-800-01	17,236.00	8.00	1,37,888.00
વિશેષ ધારો	570-0035-00-101-01	17,236.00	0.15	2,585.00
લોકલ ફંડ	574-0029-00-103-01	17,236.00	0.15	2,585.00
શિક્ષણ ઉપકર	575-0045-00-108-01	17,236.00	0.15	2,585.00
માપણી ફી	577-0029-00-106-01	17,236.00	---	2,400.00
			કુલ રૂ.	1,48,043.00

ઉપર્યુકત તમામ હકીકતો ધ્યાને લઇ મોજે ફણસા તા. ઊમરગામ જિ. વલસાડ ના સરવે/બ્લોક નં. 3725 ના ક્ષેત્રફળ 17,236.00 ચો.મી. ની જમીનને નીચે જણાવેલ શરતોને આધિન ગુજરાત જમીન મહેસૂલ અધિનિયમ-૧૮૭૯ ની કલમ-૬૫ હેઠળ બિનખેતી હેતુ માટે પરવાનગી આપવા આથી હુકમ કરવામાં આવે છે.

શરતો : -

(૧) આ હુકમ મળ્યેથી બે માસમાં "એમ" નમૂનામાં સનદ પ્રાપ્ત થશે.

(૨) જિલ્લા ઇન્સ્પેકટરશ્રી, જમીન રેકર્ડની કચેરીમાં માપણી ફી જમા કરાવેલ છે. જેથી માપણી કરી / કરાવી આપેલ આધારે તેમજ મંજૂર થયેલ પ્લાન મુજબ દુરસ્તી પત્રક તૈયાર કરવાનું / કરાવવાનું રહેશે અને દુરસ્તી પત્રકનો મહેસૂલી દફતરે અમલ થયા બાદ જ પ્રશ્નવાળી બિનખેતીની જમીન / પ્લોટનું રજી. દસ્તાવેજથી થયેલ વેચાણ વ્યવહારના અમલ માટે નોંધ પાડવાની રહેશે.

(૩) અરજદારે પ્રતિ વર્ષે ખેતી સિવાયનો ધારો (વિશેષધારો) દર પ્રતિ ચો.મી. ના રૂ. 0.15 પ્રમાણે રૂ. ૨,૫૪૬.૦૦ તેમજ નિયમ પ્રમાણે લોકલ ફંડ તથા શિક્ષણ સેસ ભરવો પડશે જે અંગેનો દર વખતોવખત ફેરફારને પાત્ર રહેશે.

(૪) વલસાડ નગર નિયોજક કચેરી એ મંજૂર કરેલા પ્લાન મુજબ બાંધકામ કરવાનું રહેશે અને હુકમ થયા તારીખથી ત્રણ વર્ષમાં બાંધકામ પૂર્ણ કરવાનું રહેશે.

(૫) સરકારશ્રીના મહેસૂલ વિભાગના ઠરાવ નં. બખપ/૧૦૯૩/૧૦૫૨/ક તા. ૧૩/૦૯/૧૯૯૩ માં ઠરાવ્યા મુજબ સહીયારા / કોમન પ્લોટ અને રસ્તાની જમીન સોસાયટીની માલિકીની અથવા સર્વે પ્લોટ હોલ્ડરની સહીયારી માલિકીની ગણાશે તે ઉપર મુળ માલિકનો કોઇ હક્ક રહેશે નહિ.

(૬) સરકારશ્રીના મહેસૂલ વિભાગના તા. ૦૭/૦૮/૧૯૯૧ ના પરિપત્ર નં. બખપ-૧૦૯૧/૧૭૫૬/ક ની જોગવાઇ મુજબ બિન અધિકૃત બાંધકામ બાબતે બાંધકામ નિયંત્રણ કરતી સંબંધિત મહાનગરપાલિકા / શહેરી વિસ્તાર સત્તા મંડળએ ધોરણસરનાં પગલાં લેવાના રહેશે.

(૭) સદર જમીનમાંથી પેટ્રોલીયમ / પાણીની કે અન્ય કોઇપણ પ્રકારની પાઇપલાઇન પસાર થતી હશે તો તે સંદર્ભે વિકાસ પરવાનગી આપનાર ઓથોરિટીએ સંબંધિતોનું ના-વાંધા પ્રમાણપત્ર મેળવી વિકાસ પરવાનગી આપવાની રહેશે.

(૮) સરકારશ્રીનાં મહેસૂલ વિભાગનાં તા. ૦૧/૦૭/૨૦૦૮ ના ઠરાવ નં. બખપ/૧૦૦૬/૪૨૫/ક માં જણાવેલ નીચે મુજબની શરતોનું પાલન કરવાનું રહેશે.

૧. જિલ્લા ઇન્સ્પેકટરશ્રી, જમીન રેકર્ડ દ્વારા ઇસ્યુ કરાયેલ માપણી શીટ કે જેના ઉપર મૂળ ટિપ્પણની હદ પણ દર્શાવેલ હોવી જોઇએ. રજૂ કરાયેલ પ્લાન તથા લે-આઉટ પ્લાન સક્ષમ કક્ષાએ મંજૂર કરાયેલ હોવી જોઇએ.

૨. બાંધકામ શરૂ કરતા પહેલા બાંધકામનાં નકશા સક્ષમ અધિકારી પાસે મંજૂર કરાવવાના રહેશે. પરંતુ અરજદાર બિનખેતી પરવાનગી મેળવ્યા વગર આવા બાંધકામની રજા ચિઠ્ઠી મેળવી શકશે નહિ.

૩. શહેરી વિસ્તાર જયાં ટાઉન પ્લાનિંગ સ્કીમ મંજૂર થઇ ગઇ છે ત્યાં જી.ડી.સી.આર. અને ઝોનિંગના નિયમો અનુસાર બાંધકામ કરવાનું રહેશે.

૪. મંજૂર થયેલ નકશા મુજબ આરોગ્ય અને સ્વાસ્થ્યની દ્રષ્ટિએ ગંદા પાણીનાં નિકાલની જોગવાઇ કરવાની રહેશે.

૫. અરજદારે રિબન ડેવલપમેન્ટ રુલ્સ નીચે જે તે રસ્તાનો પ્રકાર ધ્યાને લઇ રસ્તાના મધ્યબિંદુથી બાંધકામ વચ્ચે અંતર જાળવવાનું રહેશે અન્યથા અરજદારની જવાબદારી થશે.

૬. ફ્લોર, મિલ, સિનેમા/ ટુરિંગ સિનેમા/ થિયેટર માટે બિનખેતી પરવાનગીના કામે જિલ્લા મેજિસ્ટ્રેટની જરૂરી મંજૂરી મેળવી આગળની કાર્યવાહી કરવાની રહેશે.

૭. પેટ્રોલ, ડીઝલ, કેરોસીન, સી.એન.જી., એલ.પી.જી. પંપ નાંખવા માટે બિનખેતી પરવાનગીના કામે બાંધકામ શરૂ કરતાં પહેલા જિલ્લા મેજિસ્ટ્રેટની જરૂરી મંજૂરી મેળવી આગળની કાર્યવાહી કરવાની રહેશે.

૮. ઇન્ડિયન એક્ષપ્લોઝિવ એકટ અન્વયે મેગેનિઝ, ફાયર વર્કસ, દારૂખાના માટે બિનખેતીની કાર્યવાહી કરતા પહેલા જિલ્લા મેજિસ્ટ્રેટની જરૂરી મંજૂરી મેળવી આગળની કાર્યવાહી કરવાની રહેશે.

૯. સવાલવાળી જમીન જો રેલવે હદની નજીક હોય તો રેલવેની હદથી નિયમ મુજબ જગ્યા છોડી બાંધકામ કરવાનું રહેશે.

૧૦. સવાલવાળી જમીન ઉપરથી અથવા બાજુમાંથી વીજળી ગ્રિડના તાર/ હાઇટેન્શન પાવર અગર થાંભલા આવેલ હોય ત્યારે તે અન્વયે લાગુ પડતા નિયમોનું પાલન કરવા અને તે મુજબ બાંધકામ કરવાનું રહેશે.

૧૧. બિનખેતી માંગવામાં આવી હોય તેવી જમીન જો એરોડ્રામ આસપાસ નિયમ મુજબની ત્રિજયામાં આવતી હોય ત્યારે બાંધકામની ઉંચાઇ તથા એરોડ્રામની દ્રષ્ટિએ જરૂરી એવુ ના-વાંધા પ્રમાણપત્ર સિવિલ એવિએશન ખાતા પાસેથી મેળવવાનું રહેશે અને સિવિલ એવિએશન ખાતાના નિયમોનું પાલન કરવાનું રહેશે.

૧૨. ઓ.એન.જી.સી. ના કુવાની નજીકમાં આવેલ જમીનના કિસ્સામાં અરજદારે સંબંધિત નિયમોનું પાલન કરવાનું રહેશે.

૧૩. નર્મદા કેનાલ/ અન્ય સિંચાઇ કેનાલની નજીકમાં આવેલ જમીનની બાબતમાં અરજદારે સૂચિત બાંધકામ માટે જાળવવાના થતાં અંતર અંગેના નિયમોનું પાલન કરવાનું રહેશે.

૧૪. અરજદારે/ જયાં જરૂરી હોય ત્યાં કેન્દ્ર સરકાર કે રાજય સરકારના કાયદા નીચે રક્ષિત સ્મારક (Protected Monuments) તરીકે જાહેર કરેલ પ્રાચીન સ્મારકથી નિયમ મુજબનું અંતર જાળવવાની પ્રવર્તમાન જોગવાઇઓનું પાલન કરવાનું રહેશે.

(૯) પ્રશ્નવાળી જમીનમાં નગરપાલિકા/ મહાનગરપાલિકા/ શહેરી વિકાસ સત્તા મંડળ દ્વારા જે શરતોએ પરવાનગી આપવામાં આવશે તે શરતોનું પાલન તથા બાંધકામ કરવાનું રહેશે.

(૧૦) આ જમીનમાં વરસાદી પાણીના ભુગર્ભ વહન/ સંચય માટે દર મકાન/ બહુમાળી મકાન દીઠ એકના દરે આ જમીનમાં ઉપર પરકોલેટીંગ બોરવેલની વ્યવસ્થા અચુક કરવાની રહેશે તથા વરસાદી પાણીના નિકાલની વ્યવસ્થા કરીને બાંધકામ કરવાનું રહેશે.

(૧૧) પ્રશ્નવાળી જમીનમાં સ્થળે થયેલ બાંધકામ સ્થાનિક સ્વરાજની સંસ્થાના નિયમોનુસાર નહિ હોય તો સ્થાનિક સ્વરાજની સંસ્થા નિયમોનુસાર કાર્યવાહી કરી શકશે. તેમાં આ હુકમથી બાધ આવશે નહિ.

અરજદારે ઉપરોકત શરતોનું પાલન કરવાનું રહેશે. જો તેમાં નિષ્ફળ જશે તો શરતભંગ ગણી સક્ષમ અધિકારી કાયદેસરની કાર્યવાહી કરશે.

(૧૨) ઉપરની કોઇપણ શરતનો ભંગ થયેથી જમીન મહેસૂલ કાયદાની કલમ-૬૭ મુજબ શિક્ષાત્મક પગલા લેવામાં આવશે તેમજ બીજી કોઇપણ શિક્ષાને પાત્ર હશે તો તેને બાધ આવ્યા સિવાય કે જે ફરમાવવાનું યોગ્ય લાગે તે પ્રમાણે દંડ અથવા આકાર લઇ સદરહુ જમીનનો કબજો કબજેદાર પાસે ચાલુ રહેવા દઇ શકાશે.

(૧૩) ઉપરોકત શરતોમાં ગમે તે મજકૂર હોય તેમ છતાં, કલેકટરશ્રી સદરહુ હુકમ વિરૂધ્ધ બાંધેલા અથવા વધારાના કોઇપણ મકાન અથવા ઇમલાને કલેકટરશ્રીએ, આ અર્થે જે મુદત ઠરાવી હોય તે મુદત દરમિયાન તેવી રીતે ખસેડવામાં ન આવે કે સૂચવ્યા મુજબ ફેરફાર ન કરવામાં આવે તો તેમ કરવામાં જે ખર્ચ થાય તે કબજેદાર પાસેથી જમીન મહેસૂલની બાકી તરીકે વસુલ કરવાને મુખત્યાર છે.

વધુમાં ઉપર્યુક્ત શરતોને આધીન અરજદાર દ્વારા રજુ થયેલ સોગંદનામાની વિગતોમાં તેઓ દ્વારા જાહેર કરેલી હકીકતોને આધારે સવાલવાળી જમીનના બિનખેતી ઉપયોગ માટે પરવાનગી આપવામાં આવે છે.

COLLECTOR
કલેકટર
VALSAD DISTRICT
વલસાડ

(સી આર ખરસાણ)
કલેકટર, વલસાડ

આર.પી.એ.ડી.

પ્રતિ,

Madura Carbon India Ltd
Unit 1 Banking Center
Beers Desai Road
Andheri (West)
Mumbai-400028

નકલ રવાના:-

૧. નગર નિયોજકશ્રી, વલસાડ નગર નિયોજક કચેરી
૨. મામલતદારશ્રી તા. ઉમરગામ જિ. વલસાડ (હુકમનો અમલ ગામ દફતરે રેકર્ડ ઓફ રાઈટ્સ મુજબ કરાવવા સારૂ.)
૩. જિલ્લા ઈન્સ્પેકટરશ્રી જમીન રેકર્ડ જિ. વલસાડ
૪. તલાટી કમ મંત્રીશ્રી, ફણસા
૫. તાલુકા વિકાસ અધિકારીશ્રી, ઉમરગામ
૬. નાયબ કલેકટરશ્રી, પારડી

* આ હુકમની ઇ-ધરા કેન્દ્ર, ઉમરગામ માં નોંધ નંબર 7052 થી મોજે.- ફણસા તા.- ઉમરગામ જિ.- વલસાડ માં નોંધ થયેલ છે.

કલેકટર અને જિલ્લા મેજિસ્ટ્રેટની કચેરી, વલસાડ

નવી કલેકટર કચેરી, તિથલ રોડ, વલસાડ - ૩૯૬૦૦૧

ફોન નંબર : ૦૨૬૩૨-૨૪૪૨૭૪/૨૪૪૨૭૯ ઇ-મેઇલ : collector-val@gujarat.gov.in

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હુકમ નં. 235/25/05/001/2019

તા. 21/06/2019

વંચાણે લીધા :-

(૧) અરજદારશ્રી Madura Carbon India Ltd

રહે. Unit 1 Banking Center, Beers Desai Road, Andheri (West), Mumbai-400028 ની તા. 14/06/2019 ની ઓનલાઇન અરજી તથા સોગંદનામુ.

(૨) મુંબઇ જમીન મહેસૂલ કાયદો ૧૮૬૯ ની કલમ - ૪૮, ૫૬, ૬૬ તથા ૬૭

(૩) ગુજરાત જમીન મહેસૂલ નિયમો, ૧૯૬૨ ના નિયમ ૮૧, ૧૦૦, ૧૦૧, ૧૦૨

(૪) સરકારશ્રીના મહેસૂલ વિભાગનાં ઠરાવ નં. બખપ/૧૦૦૬/૪૨૫/૬ તા.૦૧/૦૭/૨૦૦૮

(૫) સરકારશ્રીના મહેસૂલ વિભાગનાં પરિપત્ર ક્રમાંક: બખપ/૧૦૨૦૧૮/૩૨૭/૬ તા.૦૮/૦૫/૨૦૧૮

(૬) સરકારશ્રીના મહેસૂલ વિભાગના ઠરાવ ક્રમાંક: એસ/ટીપી/૧૨૨૦૯/૭૬૯/૧૧/હ.૧ તા. ૩૧/૦૩/૨૦૧૧

(૭) iRCMS પોર્ટલ પરની કેસ વિગત

હુકમ :-

વંચાણે લીધેલ ક્રમ (૧) ની અરજી તથા સોગંદનામા થી અરજદારશ્રી Madura Carbon India Ltd એ મોજે ફણસા તા. ઊમરગામ જિ. વલસાડ ના સરવે/બ્લોક નં. 3738 ના ક્ષેત્રફળ 4,037.00 ચો.મી. ની જમીન અંગે ગુજરાત જમીન મહેસૂલ અધિનિયમ-૧૮૬૯ ની કલમ-૬૫ હેઠળ બિનખેતીના હેતુ માટે પરવાનગી આપવા વિનંતી કરેલ છે.

સવાલવાળી જમીનના ગામ નમૂના નં. ૭/૧૨ માં કબજેદારોની વિગત નીચે મુજબ છે.

સરવે/બ્લોક નંબર ટી.પી. નંબર એફ.પી. નંબર	માંગણીનું ક્ષેત્રફળ (ચો.મી.)	કબજેદારોના નામ (ખાતા નં. 1787)	જમીનનો સત્તાપ્રકાર (૭/૧૨ મુજબ)
સરવે/બ્લોક નં. : 3738 જુનો સરવે/બ્લોક નં. : 481/૧/૧ ટી.પી. નં. : --- એફ.પી. નં.: ---	4,037.00	મદુરા કાર્બન ઈન્ડીયા લી. ના ડાયરેક્ટર ગૌતમ વિપન કાલરા	જુની શરત (જુ.શ)

વસુલ કરવામાં આવેલ કરવેરાની વિગત નીચે મુજબ છે.

કરની વિગત	સદર	માંગણીનું ક્ષેત્રફળ (ચો.મી.)	દર રૂ. પ્રતિ ચો.મી.	કુલ રકમ રૂ.
રૂપાંતર કર	569-0035-00-800-01	4,037.00	8.00	32,296.00
વિશેષ ધારો	570-0035-00-101-01	4,037.00	0.15	606.00
લોકલ ફંડ	574-0029-00-103-01	4,037.00	0.15	606.00
શિક્ષણ ઉપકર	575-0045-00-108-01	4,037.00	0.15	606.00
માપણી ફી	577-0029-00-106-01	4,037.00	---	1,800.00
			કુલ રૂ.	35,914.00

ઉપર્યુકત તમામ હકીકતો ધ્યાને લઇ મોજે ફણસા તા. ઊમરગામ જિ. વલસાડ ના સરવે/બ્લોક નં. 3738 ના ક્ષેત્રફળ 4,037.00 ચો.મી. ની જમીનને નીચે જણાવેલ શરતોને આધિન ગુજરાત જમીન મહેસૂલ અધિનિયમ-૧૮૬૯ ની કલમ-૬૫ હેઠળ બિનખેતી હેતુ માટે પરવાનગી આપવા આથી હુકમ કરવામાં આવે છે.

શરતો : -

(૧) આ હુકમ મળ્યેથી બે માસમાં "એમ" નમૂનામાં સનદ પ્રાપ્ત થશે.

(૨) જિલ્લા ઇન્સ્પેકટરશ્રી, જમીન રેકર્ડની કચેરીમાં માપણી ફી જમા કરાવેલ છે. જેથી માપણી કરી / કરાવી આધારે તેમજ મંજૂર થયેલ પ્લાન મુજબ દુરસ્તી પત્રક તૈયાર કરવાનું / કરાવવાનું રહેશે અને દુરસ્તી પત્રકનો મહેસૂલી દફ્તરે અમલ યા બાદ જ પ્રશ્નવાળી બિનખેતીની જમીન / પ્લોટનું રજી. દસ્તાવેજથી થયેલ વેચાણ વ્યવહારના અમલ માટે નોંધ પાડવાની રહેશે.

(૩) અરજદારે પ્રતિ વર્ષે ખેતી સિવાયનો ધારો (વિશેષધારો) દર પ્રતિ ચો.મી. ના રૂ. 0.15 પ્રમાણે રૂ. 606.00 તેમજ નિયમ પ્રમાણે લોકલ ફંડ તથા શિક્ષણ સેસ ભરવો પડશે જે અંગેનો દર વખતોવખત ફેરફારને પાત્ર રહેશે.

(૪) વલસાડ નગર નિયોજક કચેરી એ મંજૂર કરેલા પ્લાન મુજબ બાંધકામ કરવાનું રહેશે અને હુકમ થયા તારીખથી ત્રણ વર્ષમાં બાંધકામ પૂર્ણ કરવાનું રહેશે.

(૫) સરકારશ્રીના મહેસૂલ વિભાગના ઠરાવ નં. બખપ/૧૦૯૩/૧૦૫૨/ક તા. ૧૩/૦૯/૧૯૯૩ માં ઠરાવ્યા મુજબ સહીયારા / કોમન પ્લોટ્સ અને રસ્તાની જમીન સોસાયટીની માલિકીની અથવા સર્વે પ્લોટ હોલ્ડરની સહીયારી માલિકીની ગણાશે તે ઉપર મુળ માલિકનો કોઇ હકક રહેશે નહિ.

(૬) સરકારશ્રીના મહેસૂલ વિભાગના તા. ૦૭/૦૮/૧૯૯૧ ના પરિપત્ર નં. બખપ-૧૦૯૧/૧૭૫૬/ક ની જોગવાઇ મુજબ બિન અધિકૃત બાંધકામ બાબતે બાંધકામ નિયંત્રણ કરતી સંબંધિત મહાનગરપાલિકા / શહેરી વિસ્તાર સત્તા મંડળએ ધોરણસરનાં પગલાં લેવાના રહેશે.

(૭) સદર જમીનમાંથી પેટ્રોલીયમ / પાણીની કે અન્ય કોઇપણ પ્રકારની પાઇપલાઇન પસાર થતી હશે તો તે સંદર્ભે વિકાસ પરવાનગી આપનાર ઓથોરિટીએ સંબંધિતોનું ના-વાંધા પ્રમાણપત્ર મેળવી વિકાસ પરવાનગી આપવાની રહેશે.

(૮) સરકારશ્રીનાં મહેસૂલ વિભાગનાં તા. ૦૧/૦૭/૨૦૦૮ ના ઠરાવ નં. બખપ/૧૦૦૬/૪૨૫/ક માં જણાવેલ નીચે મુજબની શરતોનું પાલન કરવાનું રહેશે.

૧. જિલ્લા ઇન્સ્પેકટરશ્રી, જમીન રેકર્ડ દ્વારા ઇસ્યુ કરાયેલ માપણી શીટ કે જેના ઉપર મૂળ ટિપ્પણની હદ પણ દર્શાવેલ હોવી જોઇએ. રજૂ કરાયેલ પ્લાન તથા લે-આઉટ પ્લાન સક્ષમ કક્ષાએ મંજૂર કરાયેલ હોવી જોઇએ.

૨. બાંધકામ શરૂ કરતા પહેલા બાંધકામનાં નકશા સક્ષમ અધિકારી પાસે મંજૂર કરાવવાના રહેશે. પરંતુ અરજદાર બિનખેતી પરવાનગી મેળવ્યા વગર આવા બાંધકામની રજા ચિઠ્ઠી મેળવી શકશે નહિ.

૩. શહેરી વિસ્તાર જયાં ટાઉન પ્લાનિંગ સ્કીમ મંજૂર થઇ ગઇ છે ત્યાં જી.ડી.સી.આર. અને ઝોનિંગના નિયમો અનુસાર બાંધકામ કરવાનું રહેશે.

૪. મંજૂર થયેલ નકશા મુજબ આરોગ્ય અને સ્વાસ્થ્યની દ્રષ્ટિએ ગંદા પાણીનાં નિકાલની જોગવાઇ કરવાની રહેશે.

૫. અરજદારે રિબન ડેવલપમેન્ટ રુલ્સ નીચે જે તે રસ્તાનો પ્રકાર ધ્યાને લઇ રસ્તાના મધ્યબિંદુથી બાંધકામ વચ્ચે અંતર જાળવવાનું રહેશે અન્યથા અરજદારની જવાબદારી થશે.

૬. ફ્લોર, મિલ, સિનેમા/ ટુરિંગ સિનેમા/ થિયેટર માટે બિનખેતી પરવાનગીના કામે જિલ્લા મેજિસ્ટ્રેટની જરૂરી મંજૂરી મેળવી આગળની કાર્યવાહી કરવાની રહેશે.

૭. પેટ્રોલ, ડીઝલ, કેરોસીન, સી.એન.જી., એલ.પી.જી. પંપ નાંખવા માટે બિનખેતી પરવાનગીના કામે બાંધકામ શરૂ કરતાં પહેલા જિલ્લા મેજિસ્ટ્રેટની જરૂરી મંજૂરી મેળવી આગળની કાર્યવાહી કરવાની રહેશે.

૮. ઇન્ડિયન એક્ષપ્લોઝિવ એકટ અન્વયે મેગેનિઝ, ફાયર વર્કસ, દારૂખાના માટે બિનખેતીની કાર્યવાહી કરતા પહેલા જિલ્લા મેજિસ્ટ્રેટની જરૂરી મંજૂરી મેળવી આગળની કાર્યવાહી કરવાની રહેશે.

૯. સવાલવાળી જમીન જો રેલવે હદની નજીક હોય તો રેલવેની હદથી નિયમ મુજબ જગ્યા છોડી બાંધકામ કરવાનું રહેશે.

૧૦. સવાલવાળી જમીન ઉપરથી અથવા બાજુમાંથી વીજળી ગ્રિડના તાર/ હાઇટેન્શન પાવર અગર થાંભલા આવેલ હોય ત્યારે તે અન્વયે લાગુ પડતા નિયમોનું પાલન કરવા અને તે મુજબ બાંધકામ કરવાનું રહેશે.

૧૧. બિનખેતી માંગવામાં આવી હોય તેવી જમીન જો એરોડ્રામ આસપાસ નિયમ મુજબની ત્રિજયામાં આવતી હોય ત્યારે બાંધકામની ઉંચાઇ તથા એરોડ્રામની દ્રષ્ટિએ જરૂરી એવુ ના-વાંધા પ્રમાણપત્ર સિવિલ એવિએશન ખાતા પાસેથી મેળવવાનું રહેશે અને સિવિલ એવિએશન ખાતાના નિયમોનું પાલન કરવાનું રહેશે.

૧૨. ઓ.એન.જી.સી. ના કુવાની નજીકમાં આવેલ જમીનના કિસ્સામાં અરજદારે સંબંધિત નિયમોનું પાલન કરવાનું રહેશે.

૧૩. નર્મદા કેનાલ/ અન્ય સિંચાઇ કેનાલની નજીકમાં આવેલ જમીનની બાબતમાં અરજદારે સૂચિત બાંધકામ માટે જાળવવાના થતાં અંતર અંગેના નિયમોનું પાલન કરવાનું રહેશે.

૧૪. અરજદારે/ જયાં જરૂરી હોય ત્યાં કેન્દ્ર સરકાર કે રાજય સરકારના કાયદા નીચે રક્ષિત સ્મારક (Protected Monuments) તરીકે જાહેર કરેલ પ્રાચીન સ્મારકથી નિયમ મુજબનું અંતર જાળવવાની પ્રવર્તમાન જોગવાઇઓનું પાલન કરવાનું રહેશે.

(૯) પ્રશ્નવાળી જમીનમાં નગરપાલિકા/ મહાનગરપાલિકા/ શહેરી વિકાસ સત્તા મંડળ દ્વારા જે શરતોએ પરવાનગી આપવામાં આવશે તે શરતોનું પાલન તથા બાંધકામ કરવાનું રહેશે.

(૧૦) આ જમીનમાં વરસાદી પાણીના ભુગર્ભ વહન/ સંચય માટે દર મકાન/ બહુમાળી મકાન દીઠ એકના દરે આ જમીનમાં ઉપર પરકોલેટીંગ બોરવેલની વ્યવસ્થા અચુક કરવાની રહેશે તથા વરસાદી પાણીના નિકાલની વ્યવસ્થા કરીને બાંધકામ કરવાનું રહેશે.

(૧૧) પ્રશ્નવાળી જમીનમાં સ્થળે થયેલ બાંધકામ સ્થાનિક સ્વરાજની સંસ્થાના નિયમોનુસાર નહિ હોય તો સ્થાનિક સ્વરાજની સંસ્થા નિયમોનુસાર કાર્યવાહી કરી શકશે. તેમાં આ હુકમથી બાધ આવશે નહિ.

અરજદારે ઉપરોકત શરતોનું પાલન કરવાનું રહેશે. જો તેમાં નિષ્ફળ જશે તો શરતભંગ ગણી સક્ષમ અધિકારી કાયદેસરની કાર્યવાહી કરશે.

(૧૨) ઉપરની કોઇપણ શરતનો ભંગ થયેથી જમીન મહેસૂલ કાયદાની કલમ-૬૭ મુજબ શિક્ષાત્મક પગલા લેવામાં આવશે તેમજ બીજી કોઇપણ શિક્ષાને પાત્ર હશે તો તેને બાધ આવ્યા સિવાય કે જે ફરમાવવાનું યોગ્ય લાગે તે પ્રમાણે દંડ અથવા આકાર લઇ સદરહુ જમીનનો કબજો કબજેદાર પાસે ચાલુ રહેવા દઇ શકાશે.

(૧૩) ઉપરોકત શરતોમાં ગમે તે મજકૂર હોય તેમ છતાં, કલેકટરશ્રી સદરહુ હુકમ વિરૂધ્ધ બાંધેલા અથવા વધારાના કોઇપણ મકાન અથવા ઇમલાને કલેકટરશ્રીએ, આ અર્થે જે મુદત ઠરાવી હોય તે મુદત દરમિયાન તેવી રીતે ખસેડવામાં ન આવે કે સૂચવ્યા મુજબ ફેરફાર ન કરવામાં આવે તો તેમ કરવામાં જે ખર્ચ થાય તે કબજેદાર પાસેથી જમીન મહેસૂલની બાકી તરીકે વસુલ કરવાને મુખત્યાર છે.

વધુમાં ઉપર્યુક્ત શરતોને આધીન અરજદાર દ્વારા રજુ થયેલ સોગંદનામાની વિગતોમાં તેઓ દ્વારા જાહેર કરેલી હકીકતોને આધારે સવાલવાળી જમીનના બિનખેતી ઉપયોગ માટે પરવાનગી આપવામાં આવે છે.

COLLECTOR
કલેકટર
VALSAD DISTRICT
વલસાડ

(સી આર ખરસાણ)
કલેકટર, વલસાડ

આર.પી.એ.ડી.

પ્રતિ,

Madura Carbon India Ltd
Unit 1 Banking Center
Beers Desai Road
Andheri (West)
Mumbai-400028

નકલ રવાના:-

૧. નગર નિયોજકશ્રી, વલસાડ નગર નિયોજક કચેરી
૨. મામલતદારશ્રી તા. ઉમરગામ જિ. વલસાડ (હુકમનો અમલ ગામ દફતરે રેકર્ડ ઓફ રાઈટ્સ મુજબ કરાવવા સારૂ.)
૩. જિલ્લા ઈન્સ્પેકટરશ્રી જમીન રેકર્ડ જિ. વલસાડ
૪. તલાટી કમ મંત્રીશ્રી, ફણસા
૫. તાલુકા વિકાસ અધિકારીશ્રી, ઉમરગામ
૬. નાયબ કલેકટરશ્રી, પારડી

* આ હુકમની ઇ-ધરા કેન્દ્ર, ઉમરગામ માં નોંધ નંબર 7053 થી મોજે.- ફણસા તા.- ઉમરગામ જિ.- વલસાડ માં નોંધ થયેલ છે.

કલેકટર અને જિલ્લા મેજિસ્ટ્રેટની કચેરી, વલસાડ

નવી કલેકટર કચેરી, તિથલ રોડ, વલસાડ - ૩૯૬૦૦૧

ફોન નંબર : ૦૨૬૩૨-૨૪૪૨૭૪/૨૪૪૨૭૯ ઇ-મેઇલ : collector-val@gujarat.gov.in

ગુજરાત જમીન મહેસૂલ અધિનિયમ-૧૮૭૯ ની કલમ-૬૫ હેઠળ

૩૧૬૭-૭૬

હુકમ નં. 844/25/05/001/2019

તા. 16/11/2019

વંચાણે લીધા :-

(૧) અરજદારશ્રી મદુરા કાર્બન ઇન્ડિયા લીમીટેડ ના ડાયરેકટર વિપન કાલર રહે. ફણસા, ઊમરગામ, વલસાડ-396140 ની તા.06/11/2019 ની ઓનલાઇન અરજી (નં.3250500139366) તથા સોગંદનામુ

(૨) મુંબઇ જમીન મહેસૂલ કાયદો ૧૮૭૯ ની કલમ - ૪૮, ૬૫, ૬૬ તથા ૬૭

(૩) ગુજરાત જમીન મહેસૂલ નિયમો, ૧૯૭૨ ના નિયમ ૮૧, ૧૦૦, ૧૦૧, ૧૦૨

(૪) સરકારશ્રીના મહેસૂલ વિભાગનાં ઠરાવ નં. બખપ/૧૦૦૬/૪૨૫/ક તા.૦૧/૦૭/૨૦૦૮

(૫) સરકારશ્રીના મહેસૂલ વિભાગનાં પરિપત્ર ક્રમાંક: બખપ/૧૦૨૦૧૮/૩૨૭/ક તા.૦૮/૦૫/૨૦૧૮

(૬) સરકારશ્રીના મહેસૂલ વિભાગના ઠરાવ ક્રમાંક: એસ/ટીપી/૧૨૨૦૯/૭૬૯/૧૧/હ.૧ તા.૩૧/૦૩/૨૦૧૧

(૭) સરકારશ્રીના મહેસૂલ વિભાગનાં ઠરાવ ક્રમાંક: બખપ/૧૦૨૦૧૮/૪૨૫/ક તા.૦૯/૦૧/૨૦૧૯

(૮) સરકારશ્રીના મહેસૂલ વિભાગનાં પરિપત્ર ક્રમાંક: બખપ/૧૦૨૦૧૮/૪૨૫/ક તા.૧૨/૦૨/૨૦૧૯

(૯) iRCMS પોર્ટલ પરની કેસ વિગત

COLLECTOR કલેકટર VALSAD DISTRICT

હુકમ :-

વંચાણે લીધેલ ક્રમ (૧) ની અરજી તથા સોગંદનામા થી અરજદારશ્રી મદુરા કાર્બન ઇન્ડિયા લીમીટેડ ના ડાયરેકટર વિપન કાલર એ મોજે ફણસા તા. ઊમરગામ જિ. વલસાડ ના સરવે/બ્લોક નં. 4108 ના ક્ષેત્રફળ 2,725.00 ચો.મી. ની જમીન અંગે ગુજરાત જમીન મહેસૂલ અધિનિયમ-૧૮૭૯ ની કલમ-૬૫ હેઠળ બિનખેતીના હેતુ માટે પરવાનગી આપવા વિનંતી કરેલ છે.

૨. સવાલવાળી જમીનના ગામ નમૂના નં. ૭/૧૨ માં કબજેદારોની વિગત નીચે મુજબ છે.

સરવે/બ્લોક નંબર ટી.પી. નંબર એફ.પી. નંબર	માંગણીનું ક્ષેત્રફળ (ચો.મી.)	કબજેદારોના નામ (ખાતા નં. 1807)	જમીનનો સત્તાપ્રકાર (૭/૧૨ મુજબ)
સરવે/બ્લોક નં. : 4108 જુનો સરવે/બ્લોક નં. : 479/૭ ટી.પી. નં. : --- એફ.પી. નં.: ---	2,725.00	મદુરા કાર્બન ઇન્ડિયા લીમીટેડ ના ડાયરેકટર વિપન કાલરા	જુની શરત (જુ.શ)

૩. વસુલ કરવામાં આવેલ કરવેરાની વિગત નીચે મુજબ છે.

બેંકમાં ચલન ભર્યા તા.15/11/2019 નં.57000013551003514111926047

કરની વિગત	સદર	માંગણીનું ક્ષેત્રફળ (ચો.મી.)	દર રૂ. પ્રતિ ચો.મી.	કુલ રકમ રૂ.
રૂપાંતર કર	569-0035-00-800-01	2,725.00	8.00	21,800.00
વિશેષ ધારો	570-0035-00-101-01	2,725.00	0.15	409.00
લોકલ ફંડ	574-0029-00-103-01	2,725.00	0.15	409.00
શિક્ષણ ઉપકર	575-0045-00-108-01	2,725.00	0.15	409.00
માપણી ફી	577-0029-00-106-01	2,725.00	---	1,800.00
			કુલ રૂ.	24,827.00

૪. ઉપર્યુકત તમામ હકીકતો ધ્યાને લઇ મોજે ફણસા તા. ઊમરગામ જિ. વલસાડ ના સરવે/બ્લોક નં. 4108 ના ક્ષેત્રફળ 2,725.00 ચો.મી. ની જમીનને નીચે જણાવેલ શરતોને આધિન ગુજરાત જમીન મહેસૂલ અધિનિયમ-૧૮૭૯ ની કલમ-૬૫ હેઠળ બિનખેતી હેતુ (બહુહેતુક ઉપયોગ) માટે પરવાનગી આપવા આથી હુકમ કરવામાં આવે છે.

શરતો : -

(૧) આ હુકમ મળ્યેથી બે માસમાં "એમ" નમૂનામાં સનદ પ્રાપ્ત થશે.

(૨) જિલ્લા ઇન્સ્પેકટરશ્રી, જમીન રેકર્ડની કચેરીમાં માપણી ફી જમા કરાવેલ છે. જેથી માપણી કરી / કરાવી આ હુકમ આધારે તેમજ મંજૂર થયેલ પ્લાન મુજબ દુરસ્તી પત્રક તૈયાર કરવાનું / કરાવવાનું રહેશે અને દુરસ્તી પત્રકનો મહેસૂલી દફતરે અમલ થયા બાદ જ પ્રસ્નવાળી બિનખેતીની જમીન / પ્લોટનું રજી. દસ્તાવેજથી થયેલ વેચાણ વ્યવહારના અમલ માટે નોંધ પાડવાની રહેશે.

(૩) અરજદારે પ્રતિ વર્ષે ખેતી સિવાયનો ધારો (વિશેષધારો) દર પ્રતિ ચો.મી. ના રૂ. 0.15 પ્રમાણે રૂ. 409.00 તેમજ નિયમ પ્રમાણે લોકલ ફંડ તથા શિક્ષણ સેસ ભરવો પડશે જે અંગેનો દર વખતોવખત ફેરફારને પાત્ર રહેશે.

(૪) વલસાડ નગર નિયોજક કચેરી એ મંજૂર કરેલા પ્લાન મુજબ બાંધકામ કરવાનું રહેશે અને હુકમ થયા તારીખથી ત્રણ વર્ષમાં બાંધકામ પૂર્ણ કરવાનું રહેશે.

(૫) સરકારશ્રીના મહેસૂલ વિભાગના ઠરાવ નં. બખપ/૧૦૯૩/૧૦૫૨/ક તા. ૧૩/૦૯/૧૯૯૩ માં ઠરાવ્યા મુજબ સહીયારા / કોમન પ્લોટ અને રસ્તાની જમીન સોસાયટીની માલિકીની અથવા સર્વે પ્લોટ હોલ્ડરની સહીયારી માલિકીની ગણાશે તે ઉપર મુળ માલિકનો કોઇ હકક રહેશે નહિ.

(૬) સરકારશ્રીના મહેસૂલ વિભાગના તા. ૦૭/૦૮/૧૯૯૧ ના પરિપત્ર નં. બખપ-૧૦૯૧/૧૭૫૬/ક ની જોગવાઇ મુજબ બિન અધિકૃત બાંધકામ બાબતે બાંધકામ નિયંત્રણ કરતી સંબંધિત મહાનગરપાલિકા / શહેરી વિસ્તાર સત્તા મંડળએ ધોરણસરનાં પગલાં લેવાના રહેશે.

(૭) સદર જમીનમાંથી પેટ્રોલીયમ / પાણીની કે અન્ય કોઇપણ પ્રકારની પાઇપલાઇન પસાર થતી હશે તો તે સંદર્ભે વિકાસ પરવાનગી આપનાર ઓથોરિટીએ સંબંધિતોનું ના-વાંધા પ્રમાણપત્ર મેળવી વિકાસ પરવાનગી આપવાની રહેશે.

(૮) સરકારશ્રીના મહેસૂલ વિભાગના તા.૧૨/૦૨/૨૦૧૯ ના પરિપત્ર નં.બખપ/૧૦૨૦૧૮/૪૨૫/ક મુજબની નીચેની શરતોનુ પાલન કરવાનું રહેશે.

૧. જો અગાઉ ચોકકસ હેતુ માટે પ્રિમિયમ ભરપાઇ થયેલ હોય અને અન્ય હેતુ માટે વિકાસ પરવાનગી માંગેલ હોય/ નકશા મંજૂર કરવાના થતા હોય તો વિકાસ પરવાનગી આપતાં પહેલા પ્રિમિયમ તફાવત ભરાયાની સંબંધિત સત્તામંડળે ખાતરી કરવાની રહેશે અને ત્યારબાદ જ વિકાસ પરવાનગી આપવાની રહેશે.

૨. જીડીસીઆર મુજબ જે તે હેતુ/ ઉપયોગ માટે પરવાનગી મળવાપાત્ર નહિં હોય તો તે ઉપયોગ કરી શકાશે નહિં.

૩. ખેતી ઝોનમાં જીડીસીઆર મુજબ જેટલુ બાંધકામ મળવાપાત્ર હશે તેટલા જ ક્ષેત્રફળ માટે વિકાસ પરવાનગી આપવાની રહેશે.

૪. બિનખેતી પરવાનગી મળ્યા બાદ જો ખાસ મંજૂરી વિના ધાર્મિક ઉપયોગ માટે બાંધકામ કરેલ હશે તો તે શરતભંગ ગણાશે અને તે બાંધકામ દૂર કરવાપાત્ર થશે.

(૯) સરકારશ્રીનાં મહેસૂલ વિભાગનાં તા. ૦૧/૦૭/૨૦૦૮ ના ઠરાવ નં. બખપ/૧૦૦૬/૪૨૫/ક માં જણાવેલ નીચે મુજબની શરતોનું પાલન કરવાનું રહેશે.

૧. જિલ્લા ઇન્સ્પેકટરશ્રી, જમીન રેકર્ડ દ્વારા ઇસ્યુ કરાયેલ માપણી શીટ કે જેના ઉપર મૂળ ટિપ્પણની હદ પણ દર્શાવેલ હોવી જોઇએ. રજૂ કરાયેલ પ્લાન તથા લે-આઉટ પ્લાન સક્ષમ કક્ષાએ મંજૂર કરાયેલ હોવી જોઇએ.

૨. બાંધકામ શરૂ કરતા પહેલા બાંધકામનાં નકશા સક્ષમ અધિકારી પાસે મંજૂર કરાવવાના રહેશે. પરંતુ અરજદાર બિનખેતી પરવાનગી મેળવ્યા વગર આવા બાંધકામની રજા ચિઠ્ઠી મેળવી શકશે નહિ.

૩. શહેરી વિસ્તાર જયાં ટાઉન પ્લાનિંગ સ્કીમ મંજૂર થઇ ગઇ છે ત્યાં જી.ડી.સી.આર. અને ઝોનિંગના નિયમો અનુસાર બાંધકામ કરવાનું રહેશે.

૪. મંજૂર થયેલ નકશા મુજબ આરોગ્ય અને સ્વાસ્થ્યની દ્રષ્ટિએ ગંદા પાણીનાં નિકાલની જોગવાઇ કરવાની રહેશે.

૫. અરજદારે રિબન ડેવલપમેન્ટ રુલ્સ નીચે જે તે રસ્તાનો પ્રકાર ધ્યાને લઇ રસ્તાના મધ્યબિંદુથી બાંધકામ વચ્ચે અંતર જાળવવાનું રહેશે અન્યથા અરજદારની જવાબદારી થશે.

૬. ફલોર, મિલ, સિનેમા/ ટુરિંગ સિનેમા/ થિયેટર માટે બિનખેતી પરવાનગીના કામે જિલ્લા મેજિસ્ટ્રેટની જરૂરી મંજૂરી મેળવી આગળની કાર્યવાહી કરવાની રહેશે.

૭. પેટ્રોલ, ડીઝલ, કેરોસીન, સી.એન.જી., એલ.પી.જી. પંપ નાંખવા માટે બિનખેતી પરવાનગીના કામે બાંધકામ શરૂ કરતાં પહેલા જિલ્લા મેજિસ્ટ્રેટની જરૂરી મંજૂરી મેળવી આગળની કાર્યવાહી કરવાની રહેશે.

૮. ઇન્ડિયન એક્ષપ્લોઝિવ એકટ અન્વયે મેગેનિઝ, ફાયર વર્કસ, દારૂખાના માટે બિનખેતીની કાર્યવાહી કરતા પહેલા જિલ્લા મેજિસ્ટ્રેટની જરૂરી મંજૂરી મેળવી આગળની કાર્યવાહી કરવાની રહેશે.

૯. સવાલવાળી જમીન જો રેલવે હદની નજીક હોય તો રેલવેની હદથી નિયમ મુજબ જગ્યા છોડી બાંધકામ કરવાનું રહેશે.

૧૦. સવાલવાળી જમીન ઉપરથી અથવા બાજુમાંથી વીજળી ગ્રિડના તાર/ હાઇટેન્શન પાવર અગર થાંભલા આવેલ હોય ત્યારે તે અન્વયે લાગુ પડતા નિયમોનું પાલન કરવા અને તે મુજબ બાંધકામ કરવાનું રહેશે.

૧૧. બિનખેતી માંગવામાં આવી હોય તેવી જમીન જો એરોડ્રામ આસપાસ નિયમ મુજબની ત્રિજ્યામાં આવતી હોય ત્યારે બાંધકામની ઉંચાઇ તથા એરોડ્રામની દ્રષ્ટિએ જરૂરી એવુ ના-વાંધા પ્રમાણપત્ર સિવિલ એવિએશન ખાતા પાસેથી મેળવવાનું રહેશે અને સિવિલ એવિએશન ખાતાના નિયમોનું પાલન કરવાનું રહેશે.

૧૨. એ.એન.જી.સી. ના કુવાની નજીકમાં આવેલ જમીનના કિસ્સામાં અરજદારે સંબંધિત નિયમોનું પાલન કરવાનું રહેશે.

૧૩. નર્મદા કેનાલ/ અન્ય સિંચાઇ કેનાલની નજીકમાં આવેલ જમીનની બાબતમાં અરજદારે સૂચિત બાંધકામ માટે જાળવવાના થતા અંતર અંગેના નિયમોનું પાલન કરવાનું રહેશે.

૧૪. અરજદારે/ જયાં જરૂરી હોય ત્યાં કેન્દ્ર સરકાર કે રાજય સરકારના કાયદા નીચે રક્ષિત સ્મારક (Protected Monuments) તરીકે જાહેર કરેલ પ્રાચીન સ્મારકથી નિયમ મુજબનું અંતર જાળવવાની પ્રવર્તમાન જોગવાઇઓનું પાલન કરવાનું રહેશે.

(૧૦) પ્રશ્નવાળી જમીનમાં નગરપાલિકા/ મહાનગરપાલિકા/ શહેરી વિકાસ સત્તા મંડળ દ્વારા જે શરતોએ પરવાનગી આપવામાં આવશે તે શરતોનું પાલન તથા બાંધકામ કરવાનું રહેશે.

(૧૧) આ જમીનમાં વરસાદી પાણીના ભુગર્ભ વહન/ સંચય માટે દર મકાન/ બહુમાળી મકાન દીઠ એકના દરે આ જમીનમાં ઉપર પરકોલેટીંગ બોરવેલની વ્યવસ્થા અચુક કરવાની રહેશે તથા વરસાદી પાણીના નિકાલની વ્યવસ્થા કરીને બાંધકામ કરવાનું રહેશે.

(૧૨) પ્રશ્નવાળી જમીનમાં સ્થળે થયેલ બાંધકામ સ્થાનિક સ્વરાજની સંસ્થાના નિયમોનુસાર નહિ હોય તો સ્થાનિક સ્વરાજની સંસ્થા નિયમોનુસાર કાર્યવાહી કરી શકશે. તેમાં આ હુકમથી બાધ આવશે નહિ.

અરજદારે ઉપરોકત શરતોનું પાલન કરવાનું રહેશે. જો તેમાં નિષ્ફળ જશે તો શરતભંગ ગણી સક્ષમ અધિકારી કાયદેસરની કાર્યવાહી કરશે.

(૧૩) ઉપરની કોઇપણ શરતનો ભંગ થયેથી જમીન મહેસૂલ કાયદાની કલમ-૬૭ મુજબ શિક્ષાત્મક પગલા લેવામાં આવશે તેમજ બીજી કોઇપણ શિક્ષાને પાત્ર હશે તો તેને બાધ આણ્યા સિવાય કે જે ફરમાવવાનું યોગ્ય લાગે તે પ્રમાણે દંડ અથવા આકાર લઇ સદરહુ જમીનનો કબજો કબજેદાર પાસે ચાલુ રહેવા દઇ શકાશે.

(૧૪) ઉપરોકત શરતોમાં ગમે તે મજકૂર હોય તેમ છતાં, કલેકટરશ્રી સદરહુ હુકમ વિરૂધ્ધ બાંધેલા અથવા વધારાના કોઇપણ મકાન અથવા ઇમલાને કલેકટરશ્રીએ, આ અર્થે જે મુદત ઠરાવી હોય તે મુદત દરમિયાન તેવી રીતે ખસેડવામાં ન આવે કે સૂચવ્યા મુજબ ફેરફાર ન કરવામાં આવે તો તેમ કરવામાં જે ખર્ચ થાય તે કબજેદાર પાસેથી જમીન મહેસૂલની બાકી તરીકે વસુલ કરવાને મુખત્યાર છે.

વધુમાં ઉપર્યુક્ત શરતોને આધીન અરજદાર દ્વારા રજુ થયેલ સોગંદનામાની વિગતોમાં તેઓ દ્વારા જાહેર કરેલી હકીકતોને આધારે સવાલવાળી જમીનના બિનખેતી ઉપયોગ માટે પરવાનગી આપવામાં આવે છે.

11/11/19

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પ્રતિ,
મદુરા કાર્બન ઇન્ડિયા લીમીટેડ ના ડાયરેકટર વિપન કાલર
ફણસા
ઊમરગામ
વલસાડ-396140

નકલ રવાના:-
૧. નગર નિયોજકશ્રી, વલસાડ નગર નિયોજક કચેરી
૨. મામલતદારશ્રી તા. ઊમરગામ જિ. વલસાડ (હુકમનો અમલ ગામ દફતરે રેકર્ડ ઓફ રાઈટ્સ મુજબ કરાવવા સારૂ.)
૩. જિલ્લા ઈન્સ્પેકટરશ્રી જમીન રેકર્ડ જિ. વલસાડ
૪. તલાટીશ્રી ફણસા તા. ઊમરગામ જિ. વલસાડ તરફ.
૫. તાલુકા વિકાસ અધિકારીશ્રી, ઉમરગામ
૬. નાયબ કલેકટરશ્રી, પારડી

* આ હુકમની ઇ-ધરા કેન્દ્ર, ઊમરગામ માં નોંધ નંબર 7141 થી મોજે.- ફણસા તા.- ઊમરગામ જિ.- વલસાડ માં નોંધ થયેલ છે.

કલેકટર અને જિલ્લા મેજિસ્ટ્રેટની કચેરી, વલસાડ

નવી કલેકટર કચેરી, તિથલ રોડ, વલસાડ - ૩૯૬૦૦૧

ફોન નંબર : ૦૨૬૩૨-૨૪૪૨૭૪/૨૪૪૨૭૯ ઇ-મેઇલ : collector-val@gujarat.gov.in

હુકમ નં. 12/25/05/001/2019/20853

તા. 09/04/2019

વંચાણે લીધા :-

(૧) અરજદારશ્રી Madura Carbon India Ltd
રહે. Unit 1 banking center, Beers desai road, Andheri (west), Mumbai-400028 ની તા. 16/03/2019 ની ઓનલાઇન અરજી તથા સોગંદનામુ

(૨) મુંબઇ જમીન મહેસૂલ કાયદો ૧૮૬૯ ની કલમ - ૪૮, ૫૬, ૬૬ તથા ૬૭

(૩) ગુજરાત જમીન મહેસૂલ નિયમો, ૧૯૭૨ ના નિયમ ૮૧, ૧૦૦, ૧૦૧, ૧૦૨

(૪) સરકારશ્રીના મહેસૂલ વિભાગનાં ઠરાવ નં. બખપ/૧૦૦૬/૪૨૫/૬ તા.૦૧/૦૭/૨૦૦૮

(૫) સરકારશ્રીના મહેસૂલ વિભાગનાં પરિપત્ર ક્રમાંક: બખપ/૧૦૨૦૧૮/૩૨૭/૬ તા.૦૮/૦૫/૨૦૧૮

(૬) સરકારશ્રીના મહેસૂલ વિભાગના ઠરાવ ક્રમાંક: એસ/ટીપી/૧૨૨૦૯/૭૬૯/૧૧/હ.૧ તા. ૩૧/૦૩/૨૦૧૧

(૭) iRCMS પોર્ટલ પરની કેસ વિગત

COLLECTOR કલેકટર જિલ્લો વલસાડ VALSAD DISTRICT

હુકમ :-

વંચાણે લીધેલ ક્રમ (૧) ની અરજી તથા સોગંદનામા થી અરજદારશ્રી Madura Carbon India Ltd એ મોજે ફણસા તા. ઊમરગામ જિ. વલસાડ ના સરવે/બ્લોક નં. 4110 ના ક્ષેત્રફળ 45,271.00 ચો.મી. ની જમીન અંગે ગુજરાત જમીન મહેસૂલ અધિનિયમ-૧૮૬૯ ની કલમ-૬૫ હેઠળ બિનખેતીના હેતુ માટે પરવાનગી આપવા વિનંતી કરેલ છે.

સવાલવાળી જમીનના ગામ નમૂના નં. ૭/૧૨ માં કબજેદારોની વિગત નીચે મુજબ છે.

સરવે/બ્લોક નંબર ટી.પી. નંબર એફ.પી. નંબર	માંગણીનું ક્ષેત્રફળ (ચો.મી.)	કબજેદારોના નામ (ખાતા નં. 1787)	જમીનનો સત્તાપ્રકાર (૭/૧૨ મુજબ)
સરવે/બ્લોક નં. : 4110 જુનો સરવે/બ્લોક નં. : 350/૫/૧ ટી.પી. નં. : --- એફ.પી. નં.: ---	45,271.00	મદુરા કાર્બન ઈન્ડીયા લી. ના ડાયરેક્ટર ગૌતમ વિપન કાલરા	જુની શરત (જુ.શ)

વસુલ કરવામાં આવેલ કરવેરાની વિગત નીચે મુજબ છે.

કરની વિગત	સદર	માંગણીનું ક્ષેત્રફળ (ચો.મી.)	દર રૂ. પ્રતિ ચો.મી.	કુલ રકમ રૂ.
રૂપાંતર કર	569-0035-00-800-01	45,271.00	8.00	3,62,168.00
વિશેષ ધારો	570-0035-00-101-01	45,271.00	0.15	6,790.65
લોકલ ફંડ	574-0029-00-103-01	45,271.00	0.15	6,790.65
શિક્ષણ ઉપકર	575-0045-00-108-01	45,271.00	0.15	6,790.65
માપણી ફી	577-0029-00-106-01	45,271.00	---	4,200.00
			કુલ રૂ.	3,86,739.95

ઉપર્યુકત તમામ હકીકતો ધ્યાને લઇ મોજે ફણસા તા. ઊમરગામ જિ. વલસાડ ના સરવે/બ્લોક નં. 4110 ના ક્ષેત્રફળ 45,271.00 ચો.મી. ની જમીનને નીચે જણાવેલ શરતોને આધિન ગુજરાત જમીન મહેસૂલ અધિનિયમ-૧૮૬૯ ની કલમ-૬૫ હેઠળ બિનખેતી હેતુ માટે પરવાનગી આપવા આથી હુકમ કરવામાં આવે છે.

શરતો : -

(૧) આ હુકમ મળ્યેથી બે માસમાં "એમ" નમૂનામાં સનદ પ્રાપ્ત થશે.

(૨) જિલ્લા ઇન્સ્પેકટરશ્રી, જમીન રેકર્ડની કચેરીમાં માપણી ફી જમા કરાવેલ છે. જેથી માપણી કરી / કરાવી આ હુકમ અધારે મંજૂર થયેલ પ્લાન મુજબ દુરસ્તી પત્રક તૈયાર કરવાનું / કરાવવાનું રહેશે અને દુરસ્તી પત્રકનો મહેસૂલી દફ્તરે અમલ ૬ જ પ્રશ્નવાળી બિનખેતીની જમીન / પ્લોટનું રજી. દસ્તાવેજથી થયેલ વેચાણ વ્યવહારના અમલ માટે નોંધ પાડવાની રહેશે.

(૩) અરજદારે પ્રતિ વર્ષે ખેતી સિવાયનો ધારો (વિશેષધારો) દર પ્રતિ ચો.મી. ના રૂ. 0.15 પ્રમાણે રૂ. 6,790.65 તેમજ નિયમ પ્રમાણે લોકલ ફંડ તથા શિક્ષણ સેસ ભરવો પડશે જે અંગેનો દર વખતોવખત ફેરફારને પાત્ર રહેશે.

(૪) વલસાડ નગર નિયોજક કચેરી એ મંજૂર કરેલા પ્લાન મુજબ બાંધકામ કરવાનું રહેશે અને હુકમ થયા તારીખથી ત્રણ વર્ષમાં બાંધકામ પૂર્ણ કરવાનું રહેશે.

(૫) સરકારશ્રીના મહેસૂલ વિભાગના ઠરાવ નં. બખપ/૧૦૯૩/૧૦૫૨/ક તા. ૧૩/૦૯/૧૯૯૩ માં ઠરાવ્યા મુજબ સહીયારા / કોમન પ્લોટ અને રસ્તાની જમીન સોસાયટીની માલિકીની અથવા સર્વે પ્લોટ હોલ્ડરની સહીયારી માલિકીની ગણાશે તે ઉપર મુળ માલિકનો કોઇ હક્ક રહેશે નહિ.

(૬) સરકારશ્રીના મહેસૂલ વિભાગના તા. ૦૭/૦૮/૧૯૯૧ ના પરિપત્ર નં. બખપ-૧૦૯૧/૧૭૫૬/ક ની જોગવાઇ મુજબ બિન અધિકૃત બાંધકામ બાબતે બાંધકામ નિયંત્રણ કરતી સંબંધિત મહાનગરપાલિકા / શહેરી વિસ્તાર સત્તા મંડળએ ધોરણસરનાં પગલાં લેવાના રહેશે.

(૭) સદર જમીનમાંથી પેટ્રોલીયમ / પાણીની કે અન્ય કોઇપણ પ્રકારની પાઇપલાઇન પસાર થતી હશે તો તે સંદર્ભે વિકાસ પરવાનગી આપનાર ઓથોરિટીએ સંબંધિતોનું ના-વાંધા પ્રમાણપત્ર મેળવી વિકાસ પરવાનગી આપવાની રહેશે.

(૮) સરકારશ્રીનાં મહેસૂલ વિભાગનાં તા. ૦૧/૦૭/૨૦૦૮ ના ઠરાવ નં. બખપ/૧૦૦૬/૪૨૫/ક માં જણાવેલ નીચે મુજબની શરતોનું પાલન કરવાનું રહેશે.

૧. જિલ્લા ઇન્સ્પેકટરશ્રી, જમીન રેકર્ડ દ્વારા ઇસ્યુ કરાયેલ માપણી શીટ કે જેના ઉપર મૂળ ટિપ્પણની હદ પણ દર્શાવેલ હોવી જોઇએ. રજૂ કરાયેલ પ્લાન તથા લે-આઉટ પ્લાન સક્ષમ કક્ષાએ મંજૂર કરાયેલ હોવી જોઇએ.

૨. બાંધકામ શરૂ કરતા પહેલા બાંધકામનાં નકશા સક્ષમ અધિકારી પાસે મંજૂર કરાવવાના રહેશે. પરંતુ અરજદાર બિનખેતી પરવાનગી મેળવ્યા વગર આવા બાંધકામની રજા ચિઠ્ઠી મેળવી શકશે નહિ.

૩. શહેરી વિસ્તાર જયાં ટાઉન પ્લાનિંગ સ્કીમ મંજૂર થઇ ગઇ છે ત્યાં જી.ડી.સી.આર. અને ઝોનિંગના નિયમો અનુસાર બાંધકામ કરવાનું રહેશે.

૪. મંજૂર થયેલ નકશા મુજબ આરોગ્ય અને સ્વાસ્થ્યની દ્રષ્ટિએ ગંદા પાણીનાં નિકાલની જોગવાઇ કરવાની રહેશે.

૫. અરજદારે રિબન ડેવલપમેન્ટ રુલ્સ નીચે જે તે રસ્તાનો પ્રકાર ધ્યાને લઇ રસ્તાના મધ્યબિંદુથી બાંધકામ વચ્ચે અંતર જાળવવાનું રહેશે અન્યથા અરજદારની જવાબદારી થશે.

૬. ફ્લોર, મિલ, સિનેમા/ ટુરિંગ સિનેમા/ થિયેટર માટે બિનખેતી પરવાનગીના કામે જિલ્લા મેજિસ્ટ્રેટની જરૂરી મંજૂરી મેળવી આગળની કાર્યવાહી કરવાની રહેશે.

૭. પેટ્રોલ, ડીઝલ, કેરોસીન, સી.એન.જી., એલ.પી.જી. પંપ નાંખવા માટે બિનખેતી પરવાનગીના કામે બાંધકામ શરૂ કરતાં પહેલા જિલ્લા મેજિસ્ટ્રેટની જરૂરી મંજૂરી મેળવી આગળની કાર્યવાહી કરવાની રહેશે.

૮. ઇન્ડિયન એક્ષપ્લોઝિવ એકટ અન્વયે મેગેનિઝ, ફાયર વર્કસ, દારૂખાના માટે બિનખેતીની કાર્યવાહી કરતા પહેલા જિલ્લા મેજિસ્ટ્રેટની જરૂરી મંજૂરી મેળવી આગળની કાર્યવાહી કરવાની રહેશે.

૯. સવાલવાળી જમીન જો રેલવે હદની નજીક હોય તો રેલવેની હદથી નિયમ મુજબ જગ્યા છોડી બાંધકામ કરવાનું રહેશે.

૧૦. સવાલવાળી જમીન ઉપરથી અથવા બાજુમાંથી વીજળી ગ્રિડના તાર/ હાઇટેન્શન પાવર અગર થાંભલા આવેલ હોય ત્યારે તે અન્વયે લાગુ પડતા નિયમોનું પાલન કરવા અને તે મુજબ બાંધકામ કરવાનું રહેશે.

૧૧. બિનખેતી માંગવામાં આવી હોય તેવી જમીન જો એરોડ્રામ આસપાસ નિયમ મુજબની ત્રિજયામાં આવતી હોય ત્યારે બાંધકામની ઉંચાઇ તથા એરોડ્રામની દ્રષ્ટિએ જરૂરી એવુ ના-વાંધા પ્રમાણપત્ર સિવિલ એવિએશન ખાતા પાસેથી મેળવવાનું રહેશે અને સિવિલ એવિએશન ખાતાના નિયમોનું પાલન કરવાનું રહેશે.

૧૨. ઓ.એન.જી.સી. ના કુવાની નજીકમાં આવેલ જમીનના કિસ્સામાં અરજદારે સંબંધિત નિયમોનું પાલન કરવાનું રહેશે.

૧૩. નર્મદા કેનાલ/ અન્ય સિંચાઇ કેનાલની નજીકમાં આવેલ જમીનની બાબતમાં અરજદારે સૂચિત બાંધકામ માટે જાળવવાના થતાં અંતર અંગેના નિયમોનું પાલન કરવાનું રહેશે.

૧૪. અરજદારે/ જયાં જરૂરી હોય ત્યાં કેન્દ્ર સરકાર કે રાજય સરકારના કાયદા નીચે રક્ષિત સ્મારક (Protected Monuments) તરીકે જાહેર કરેલ પ્રાચીન સ્મારકથી નિયમ મુજબનું અંતર જાળવવાની પ્રવર્તમાન જોગવાઇઓનું પાલન કરવાનું રહેશે.

(૯) પ્રશ્નવાળી જમીનમાં નગરપાલિકા/ મહાનગરપાલિકા/ શહેરી વિકાસ સત્તા મંડળ દ્વારા જે શરતોએ પરવાનગી આપવામાં આવશે તે શરતોનું પાલન તથા બાંધકામ કરવાનું રહેશે.

(૧૦) આ જમીનમાં વરસાદી પાણીના ભુગર્ભ વહન/ સંચય માટે દર મકાન/ બહુમાળી મકાન દીઠ એકના દરે આ જમીનમાં ઉપર પરકોલેટીંગ બોરવેલની વ્યવસ્થા અચુક કરવાની રહેશે તથા વરસાદી પાણીના નિકાલની વ્યવસ્થા કરીને બાંધકામ કરવાનું રહેશે.

(૧૧) પ્રશ્નવાળી જમીનમાં સ્થળે થયેલ બાંધકામ સ્થાનિક સ્વરાજની સંસ્થાના નિયમોનુસાર નહિ હોય તો સ્થાનિક સ્વરાજની સંસ્થા નિયમોનુસાર કાર્યવાહી કરી શકશે. તેમાં આ હુકમથી બાધ આવશે નહિ.

અરજદારે ઉપરોકત શરતોનું પાલન કરવાનું રહેશે. જો તેમાં નિષ્ફળ જશે તો શરતભંગ ગણી સક્ષમ અધિકારી કાયદેસરની કાર્યવાહી કરશે.

(૧૨) ઉપરની કોઇપણ શરતનો ભંગ થયેથી જમીન મહેસૂલ કાયદાની કલમ-૬૭ મુજબ શિક્ષાત્મક પગલા લેવામાં આવશે તેમજ બીજી કોઇપણ શિક્ષાને પાત્ર હશે તો તેને બાધ આણ્યા સિવાય કે જે ફરમાવવાનું યોગ્ય લાગે તે પ્રમાણે દંડ અથવા આકાર લઇ સદરહુ જમીનનો કબજો કબજેદાર પાસે ચાલુ રહેવા દઇ શકાશે.

(૧૩) ઉપરોકત શરતોમાં ગમે તે મજકૂર હોય તેમ છતાં, કલેકટરશ્રી સદરહુ હુકમ વિરૂધ્ધ બાંધેલા અથવા વધારાના કોઇપણ મકાન અથવા ઇમલાને કલેકટરશ્રીએ, આ અર્થે જે મુદત ઠરાવી હોય તે મુદત દરમિયાન તેવી રીતે ખસેડવામાં ન આવે કે સૂચવ્યા મુજબ ફેરફાર ન કરવામાં આવે તો તેમ કરવામાં જે ખર્ચ થાય તે કબજેદાર પાસેથી જમીન મહેસૂલની બાકી તરીકે વસુલ કરવાને મુખત્યાર છે.

વધુમાં ઉપર્યુક્ત શરતોને આધીન અરજદાર દ્વારા રજુ થયેલ સોગંદનામાની વિગતોમાં તેઓ દ્વારા જાહેર કરેલી હકીકતોને આધારે સવાલવાળી જમીનના બિનખેતી ઉપયોગ માટે પરવાનગી આપવામાં આવે છે.

COLLECTOR કલેકટર VALSAD DISTRICT

૧૬/૫/૧૯

(સી આર ખરસાણ)
કલેકટર, વલસાડ

આર.પી.એ.ડી.

પ્રતિ,

Madura Carbon India Ltd
Unit 1 banking center
Beers desai road
Andheri (west)
Mumbai-400028

નકલ રવાના:-

૧. નગર નિયોજકશ્રી, વલસાડ નગર નિયોજક કચેરી
૨. મામલતદારશ્રી તા. ઊમરગામ જિ. વલસાડ (હુકમનો અમલ ગામ દફતરે રેકર્ડ ઓફ રાઈટસ મુજબ કરાવવા સારૂ.)
૩. જિલ્લા ઈન્સ્પેકટરશ્રી જમીન રેકર્ડ જિ. વલસાડ
૪. નાયબ કલેકટર, પારડી
૫. તલાટી કમ મંત્રીશ્રી, ફણસા
૬. તાલુકા વિકાસ અધિકારીશ્રી, ઊમરગામ

* આ હુકમની ઇ-ધરા કેન્દ્ર, ઊમરગામ માં નોંધ નંબર 7013 થી મોજે.- ફણસા તા.- ઊમરગામ જિ.- વલસાડ માં નોંધ થયેલ છે.

કલેકટર અને જિલ્લા મેજિસ્ટ્રેટની કચેરી, વલસાડ

નવી કલેકટર કચેરી, તિથલ રોડ, વલસાડ - ૩૯૬૦૦૧

ફોન નંબર : ૦૨૬૩૨-૨૪૪૨૭૪/૨૪૪૨૭૯ ઇ-મેઇલ : collector-val@gujarat.gov.in

3911-20

હુકમ નં. 243/25/05/001/2019

તા. 21/06/2019

વંચાણે લીધા :-

(૧) અરજદારશ્રી મદુરા કાર્બન ઈન્ડીયા લી. ના ડાયરેક્ટર ગૌતમ વિપન કાલરા
રહે. ૧ જાનકી સેન્ટર, વિરાદેસાઇ રોડ, અંધેરી (વે), મુંબઇ-400053 ની તા. 14/06/2019 ની ઓનલાઇન અરજી તથા સોગંદનામુ

(૨) મુંબઇ જમીન મહેસૂલ કાયદો ૧૮૭૯ ની કલમ - ૪૮, ૫૬, ૬૬ તથા ૬૭

(૩) ગુજરાત જમીન મહેસૂલ નિયમો, ૧૯૭૨ ના નિયમ ૮૧, ૧૦૦, ૧૦૧, ૧૦૨

(૪) સરકારશ્રીના મહેસૂલ વિભાગનાં ઠરાવ નં. બખપ/૧૦૦૬/૪૨૫/૬ તા.૦૧/૦૭/૨૦૦૮

(૫) સરકારશ્રીના મહેસૂલ વિભાગનાં પરિપત્ર ક્રમાંક: બખપ/૧૦૨૦૧૮/૩૨૭/૬ તા.૦૮/૦૫/૨૦૧૮

(૬) સરકારશ્રીના મહેસૂલ વિભાગના ઠરાવ ક્રમાંક: એસ/ટીપી/૧૨૨૦૯/૭૬૯/૧૧/હ.૧ તા. ૩૧/૦૩/૨૦૧૧

(૭) iRCMS પોર્ટલ પરની કેસ વિગત

હુકમ :-

વંચાણે લીધેલ ક્રમ (૧) ની અરજી તથા સોગંદનામા થી અરજદારશ્રી મદુરા કાર્બન ઈન્ડીયા લી. ના ડાયરેક્ટર ગૌતમ વિપન કાલરા એ મોજે ફણસા તા. ઊમરગામ જિ. વલસાડ ના સરવે/બ્લોક નં. 4318 ના ક્ષેત્રફળ 2,881.00 ચો.મી. ની જમીન અંગે ગુજરાત જમીન મહેસૂલ અધિનિયમ-૧૮૭૯ ની કલમ-૬૫ હેઠળ બિનખેતીના હેતુ માટે પરવાનગી આપવા વિનંતી કરેલ છે.

સવાલવાળી જમીનના ગામ નમૂના નં. ૭/૧૨ માં કબજેદારોની વિગત નીચે મુજબ છે.

સરવે/બ્લોક નંબર ટી.પી. નંબર એફ.પી. નંબર	માંગણીનું ક્ષેત્રફળ (ચો.મી.)	કબજેદારોના નામ (ખાતા નં. 1787)	જમીનનો સત્તાપ્રકાર (૭/૧૨ મુજબ)
સરવે/બ્લોક નં. : 4318 જુનો સરવે/બ્લોક નં. : 350/૫/૪ ટી.પી. નં. : --- એફ.પી. નં.: ---	2,881.00	મદુરા કાર્બન ઈન્ડીયા લી. ના ડાયરેક્ટર ગૌતમ વિપન કાલરા	જુની શરત (જુ.શ)

વસુલ કરવામાં આવેલ કરવેરાની વિગત નીચે મુજબ છે.

કરની વિગત	સદર	માંગણીનું ક્ષેત્રફળ (ચો.મી.)	દર રૂ. પ્રતિ ચો.મી.	કુલ રકમ રૂ.
રૂપાંતર કર	569-0035-00-800-01	2,881.00	8.00	23,048.00
વિશેષ ધારો	570-0035-00-101-01	2,881.00	0.15	432.00
લોકલ ફંડ	574-0029-00-103-01	2,881.00	0.15	432.00
શિક્ષણ ઉપકર	575-0045-00-108-01	2,881.00	0.15	432.00
માપણી ફી	577-0029-00-106-01	2,881.00	---	1,800.00
			કુલ રૂ.	26,144.00

ઉપર્યુકત તમામ હકીકતો ધ્યાને લઇ મોજે ફણસા તા. ઊમરગામ જિ. વલસાડ ના સરવે/બ્લોક નં. 4318 ના ક્ષેત્રફળ 2,881.00 ચો.મી. ની જમીનને નીચે જણાવેલ શરતોને આધિન ગુજરાત જમીન મહેસૂલ અધિનિયમ-૧૮૭૯ ની કલમ-૬૫ હેઠળ બિનખેતી હેતુ માટે પરવાનગી આપવા આથી હુકમ કરવામાં આવે છે.

શરતો : -

(૧) આ હુકમ મળ્યેથી બે માસમાં "એમ" નમૂનામાં સનદ પ્રાપ્ત થશે.

(૨) જિલ્લા ઇન્સ્પેકટરશ્રી, જમીન રેકર્ડની કચેરીમાં માપણી ફી જમા કરાવેલ છે. જેથી માપણી કરી / કરાવી આ હુકમ આધારે તેમજ મંજૂર થયેલ પ્લાન મુજબ દુરસ્તી પત્રક તૈયાર કરવાનું / કરાવવાનું રહેશે અને દુરસ્તી પત્રકનો મહેસૂલી દફ્તરે અમલ થયા બાદ જ પ્રશ્નવાળી બિનખેતીની જમીન / પ્લોટનું રજી. દસ્તાવેજથી થયેલ વેચાણ વ્યવહારના અમલ માટે નોંધ પાડવાની રહેશે.

(૩) અરજદારે પ્રતિ વર્ષે ખેતી સિવાયનો ધારો (વિશેષધારો) દર પ્રતિ ચો.મી. ના રૂ. 0.15 પ્રમાણે રૂ. 432.00 તેમજ નિયમ પ્રમાણે લોકલ ફંડ તથા શિક્ષણ સેસ ભરવો પડશે જે અંગેનો દર વખતોવખત ફેરફારને પાત્ર રહેશે.

(૪) વલસાડ નગર નિયોજક કચેરી એ મંજૂર કરેલા પ્લાન મુજબ બાંધકામ કરવાનું રહેશે અને હુકમ થયા તારીખથી ત્રણ વર્ષમાં બાંધકામ પૂર્ણ કરવાનું રહેશે.

(૫) સરકારશ્રીના મહેસૂલ વિભાગના ઠરાવ નં. બખપ/૧૦૯૩/૧૦૫૨/ક તા. ૧૩/૦૯/૧૯૯૩ માં ઠરાવ્યા મુજબ સહીયારા / કોમન પ્લોટ અને રસ્તાની જમીન સોસાયટીની માલિકીની અથવા સર્વે પ્લોટ હોલ્ડરની સહીયારી માલિકીની ગણાશે તે ઉપર મુળ માલિકનો કોઇ હકક રહેશે નહિ.

(૬) સરકારશ્રીના મહેસૂલ વિભાગના તા. ૦૭/૦૮/૧૯૯૧ ના પરિપત્ર નં. બખપ-૧૦૯૧/૧૭૫૬/ક ની જોગવાઇ મુજબ બિન અધિકૃત બાંધકામ બાબતે બાંધકામ નિયંત્રણ કરતી સંબંધિત મહાનગરપાલિકા / શહેરી વિસ્તાર સત્તા મંડળએ ધોરણસરનાં પગલાં લેવાના રહેશે.

(૭) સદર જમીનમાંથી પેટ્રોલીયમ / પાણીની કે અન્ય કોઇપણ પ્રકારની પાઇપલાઇન પસાર થતી હશે તો તે સંદર્ભે વિકાસ પરવાનગી આપનાર ઓથોરિટીએ સંબંધિતોનું ના-વાંધા પ્રમાણપત્ર મેળવી વિકાસ પરવાનગી આપવાની રહેશે.

(૮) સરકારશ્રીનાં મહેસૂલ વિભાગનાં તા. ૦૧/૦૭/૨૦૦૮ ના ઠરાવ નં. બખપ/૧૦૦૬/૪૨૫/ક માં જણાવેલ નીચે મુજબની શરતોનું પાલન કરવાનું રહેશે.

૧. જિલ્લા ઇન્સ્પેકટરશ્રી, જમીન રેકર્ડ દ્વારા ઇસ્યુ કરાયેલ માપણી શીટ કે જેના ઉપર મૂળ ટિપ્પણની હદ પણ દર્શાવેલ હોવી જોઇએ. રજૂ કરાયેલ પ્લાન તથા લે-આઉટ પ્લાન સક્ષમ કક્ષાએ મંજૂર કરાયેલ હોવી જોઇએ.

૨. બાંધકામ શરૂ કરતા પહેલા બાંધકામનાં નકશા સક્ષમ અધિકારી પાસે મંજૂર કરાવવાના રહેશે. પરંતુ અરજદાર બિનખેતી પરવાનગી મેળવ્યા વગર આવા બાંધકામની રજા ચિઠ્ઠી મેળવી શકશે નહિ.

૩. શહેરી વિસ્તાર જયાં ટાઉન પ્લાનિંગ સ્કીમ મંજૂર થઇ ગઇ છે ત્યાં જી.ડી.સી.આર. અને ઝોનિંગના નિયમો અનુસાર બાંધકામ કરવાનું રહેશે.

૪. મંજૂર થયેલ નકશા મુજબ આરોગ્ય અને સ્વાસ્થ્યની દ્રષ્ટિએ ગંદા પાણીનાં નિકાલની જોગવાઇ કરવાની રહેશે.

૫. અરજદારે રિબન ડેવલપમેન્ટ રુલ્સ નીચે જે તે રસ્તાનો પ્રકાર ધ્યાને લઇ રસ્તાના મધ્યબિંદુથી બાંધકામ વચ્ચે અંતર જાળવવાનું રહેશે અન્યથા અરજદારની જવાબદારી થશે.

૬. ફ્લોર, મિલ, સિનેમા/ ટુરિંગ સિનેમા/ થિયેટર માટે બિનખેતી પરવાનગીના કામે જિલ્લા મેજિસ્ટ્રેટની જરૂરી મંજૂરી મેળવી આગળની કાર્યવાહી કરવાની રહેશે.

૭. પેટ્રોલ, ડીઝલ, કેરોસીન, સી.એન.જી., એલ.પી.જી. પંપ નાંખવા માટે બિનખેતી પરવાનગીના કામે બાંધકામ શરૂ કરતાં પહેલા જિલ્લા મેજિસ્ટ્રેટની જરૂરી મંજૂરી મેળવી આગળની કાર્યવાહી કરવાની રહેશે.

૮. ઇન્ડિયન એક્ષપ્લોઝિવ એકટ અન્વયે મેગેનિઝ, ફાયર વર્કસ, દારૂખાના માટે બિનખેતીની કાર્યવાહી કરતા પહેલા જિલ્લા મેજિસ્ટ્રેટની જરૂરી મંજૂરી મેળવી આગળની કાર્યવાહી કરવાની રહેશે.

૯. સવાલવાળી જમીન જો રેલવે હદની નજીક હોય તો રેલવેની હદથી નિયમ મુજબ જગ્યા છોડી બાંધકામ કરવાનું રહેશે.

૧૦. સવાલવાળી જમીન ઉપરથી અથવા બાજુમાંથી વીજળી ગ્રિડના તાર/ હાઇટેન્શન પાવર અગર થાંભલા આવેલ હોય ત્યારે તે અન્વયે લાગુ પડતા નિયમોનું પાલન કરવા અને તે મુજબ બાંધકામ કરવાનું રહેશે.

૧૧. બિનખેતી માંગવામાં આવી હોય તેવી જમીન જો એરોડ્રામ આસપાસ નિયમ મુજબની ત્રિજ્યામાં આવતી હોય ત્યારે બાંધકામની ઉંચાઇ તથા એરોડ્રામની દ્રષ્ટિએ જરૂરી એવુ ના-વાંધા પ્રમાણપત્ર સિવિલ એવિએશન ખાતા પાસેથી મેળવવાનું રહેશે અને સિવિલ એવિએશન ખાતાના નિયમોનું પાલન કરવાનું રહેશે.

૧૨. ઓ.એન.જી.સી. ના કુવાની નજીકમાં આવેલ જમીનના કિસ્સામાં અરજદારે સંબંધિત નિયમોનું પાલન કરવાનું રહેશે.

૧૩. નર્મદા કેનાલ/ અન્ય સિંચાઇ કેનાલની નજીકમાં આવેલ જમીનની બાબતમાં અરજદારે સૂચિત બાંધકામ માટે જાળવવાના થતાં અંતર અંગેના નિયમોનું પાલન કરવાનું રહેશે.

૧૪. અરજદારે/ જયાં જરૂરી હોય ત્યાં કેન્દ્ર સરકાર કે રાજય સરકારના કાયદા નીચે રક્ષિત સ્મારક (Protected Monuments) તરીકે જાહેર કરેલ પ્રાચીન સ્મારકથી નિયમ મુજબનું અંતર જાળવવાની પ્રવર્તમાન જોગવાઇઓનું પાલન કરવાનું રહેશે.

(૯) પ્રશ્નવાળી જમીનમાં નગરપાલિકા/ મહાનગરપાલિકા/ શહેરી વિકાસ સત્તા મંડળ દ્વારા જે શરતોએ પરવાનગી આપવામાં આવશે તે શરતોનું પાલન તથા બાંધકામ કરવાનું રહેશે.

(૧૦) આ જમીનમાં વરસાદી પાણીના ભુગર્ભ વહન/ સંચય માટે દર મકાન/ બહુમાળી મકાન દીઠ એકના દરે આ જમીનમાં ઉપર પરકોલેટીંગ બોરવેલની વ્યવસ્થા અચુક કરવાની રહેશે તથા વરસાદી પાણીના નિકાલની વ્યવસ્થા કરીને બાંધકામ કરવાનું રહેશે.

(૧૧) પ્રશ્નવાળી જમીનમાં સ્થળે થયેલ બાંધકામ સ્થાનિક સ્વરાજની સંસ્થાના નિયમોનુસાર નહિ હોય તો સ્થાનિક સ્વરાજની સંસ્થા નિયમોનુસાર કાર્યવાહી કરી શકશે. તેમાં આ હુકમથી બાધ આવશે નહિ.

અરજદારે ઉપરોકત શરતોનું પાલન કરવાનું રહેશે. જો તેમાં નિષ્ફળ જશે તો શરતભંગ ગણી સક્ષમ અધિકારી કાયદેસરની કાર્યવાહી કરશે.

(૧૨) ઉપરની કોઇપણ શરતનો ભંગ થયેથી જમીન મહેસૂલ કાયદાની કલમ-૬૩ મુજબ શિક્ષાત્મક પગલા લેવામાં આવશે તેમજ બીજી કોઇપણ શિક્ષાને પાત્ર હશે તો તેને બાધ આવ્યા સિવાય કે જે ફરમાવવાનું યોગ્ય લાગે તે પ્રમાણે દંડ અથવા આકાર લઇ સદરહુ જમીનનો કબજો કબજેદાર પાસે ચાલુ રહેવા દઇ શકાશે.

(૧૩) ઉપરોકત શરતોમાં ગમે તે મજકૂર હોય તેમ છતાં, કલેકટરશ્રી સદરહુ હુકમ વિરૂધ્ધ બાંધેલા અથવા વધારાના કોઇપણ મકાન અથવા ઇમલાને કલેકટરશ્રીએ, આ અર્થે જે મુદત ઠરાવી હોય તે મુદત દરમિયાન તેવી રીતે ખસેડવામાં ન આવે કે સૂચવ્યા મુજબ ફેરફાર ન કરવામાં આવે તો તેમ કરવામાં જે ખર્ચ થાય તે કબજેદાર પાસેથી જમીન મહેસૂલની બાકી તરીકે વસુલ કરવાને મુખત્યાર છે.

વધુમાં ઉપર્યુક્ત શરતોને આધીન અરજદાર દ્વારા રજુ થયેલ સોગંદનામાની વિગતોમાં તેઓ દ્વારા જાહેર કરેલી હકીકતોને આધારે સવાલવાળી જમીનના બિનખેતી ઉપયોગ માટે પરવાનગી આપવામાં આવે છે.

COLLECTOR કલેક્ટર VALSAD DISTRICT

(સી આર ખરસાણ)
કલેકટર, વલસાડ

આર.પી.એ.ડી.

પ્રતિ,
મદુરા કાર્બન ઈન્ડીયા લી. ના ડાયરેક્ટર ગૌતમ વિપન કાલરા
૧ જાનકી સેન્ટર
વિરાદેસાઇ રોડ
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નકલ રવાના:-

૧. નગર નિયોજકશ્રી, વલસાડ નગર નિયોજક કચેરી
૨. મામલતદારશ્રી તા. ઉમરગામ જિ. વલસાડ (હુકમનો અમલ ગામ દફતરે રેકર્ડ ઓફ રાઈટ્સ મુજબ કરાવવા સારૂ.)
૩. જિલ્લા ઈન્સ્પેકટરશ્રી જમીન રેકર્ડ જિ. વલસાડ
૪. તલાટી કમ મંત્રીશ્રી, ફણસા
૫. તાલુકા વિકાસ અધિકારીશ્રી, ઉમરગામ
૬. નાયબ કલેકટરશ્રી, પારડી

* આ હુકમની ઇ-ધરા કેન્દ્ર, ઉમરગામ માં નોંધ નંબર 7058 થી મોજે.- ફણસા તા.- ઉમરગામ જિ.- વલસાડ માં નોંધ થયેલ છે.

Letter of Intent for Accepting Hazaradous Waste from TSDF of BEIL

BHARUCH ENVIRO INFRASTRUCTURE LIMITED

Ref. BEIL/ANK/2019

18 February, 2019

To,
Madura Carbon India Ltd.
Survey No.3705, 3708, 3719, 3725, 3738, 4108, 4110 and 4318,
Village: Fansa,
Taluka: Umbergaon,
Dist: Valsad.

Sub: NOC for receiving Landfilling waste.

Dear Sir,

We have received your letter dtd.18-Feb-19. We would like to inform you that we have no objection in granting you our membership. We shall be accepting your **hazardous landfill waste Qty.100 MT /Year at Bharuch Enviro Infrastructure Ltd., Dahej site Plot No.D-43, GIDC, Dahej.**

The Hazardous waste acceptance is subject to verification of quality and it should be as per GPCB authorization.

Thanking you,

Yours faithfully,
For, BHARUCH ENVIRO INFRASTRUCTURE LTD.

AUTHORISED SIGNATORY

No. DCDD-3/PB-2/Madura Carbon/2031

Govt. Of Gujarat
Narmada, Water Resources,
Water Supply & Kalpsar
Department

DATE : 20 -06-2019

Office of
The Executive Engineer,
Damanganga Canal Distry. Dn. No. 3,
National Highway No. 8, Balitha
(Vapi)
Phone No. 0260-2401312
Fax No. 0260-2423462
E-mail :- dcdd3vapi@gmail.com

To,
Director,
Madura Carbon India Ltd,
Village- Fansa (karajgam),
Ta- Umargam, Dist- Valsad

Sub:- "In Principle Approval" for availability and supply of water to upcoming Project Madura Carbon India Ltd at Fansa (Karajgam), Ta-Umargam, Dist. Valsad.
Ref:- Your Letter Dated:- 14-06-2019.

With reference to above subject, It is to inform you that it is feasible to supply 2900 KL/Day water (Raw Water) from Ch. 1653 mt. of Khatalwada Distributory Canal passing from village Karajgam, Ta- Umargam for your upcoming Industrial Project at Survey No.3305, 3708, 3719, 3725, 3788, 4108, 4110 & 4118 of village Fansa (Karajgam), Ta- Umargam with following conditions.

Conditions:-

(1) The requirement will be fulfilled with availability of water at that time.

(2) The demand of water is considered first come first served basis.

(3) If your application for actual sanction is not received by this office within 12 months from the date of this letter, the acceptance will automatically cancel.

(4) The point of supply of water will be decided at the time of actual demand.

(5) Unit has to agree with the prevailing rules & rate of the Narmada, Water Resources, Water Supply & Kalpsar Department of Gujarat Government.

(6) Availability of water is calculated on the basis of present irrigation which may be increased in future. In this circumstances water supplied to farmers & for drinking purpose is prime importance and applicant has to make alternative arrangement at their own cost to meet the water requirement in future.

It is for favour of your kind information and further necessary action please.

(S.D.Patel)
Executive Engineer
Damanganga Canal Distry Dn.No.3
Balitha (Vapi)

Copy to the Deputy Executive Engineer, Damanganga Canal Sub Dn. No.15, Bhilad for information with reference to Your Office Letter No:- ઇનપેવિ-૧૫/પીબી/૩૮૮, તા.૧૮-૦૬-૨૦૧૯.

Scanned with CamScanner

સત્યમેવ જયતે

નાયબ વન સંરક્ષકશ્રીની કચેરી,
વલસાડ દક્ષિણ વન વિભાગ – વલસાડ,
જીલ્લા સેવા સદન–૨, ત્રીજો માળ,તીથલ રોડ,
વલસાડ – ૩૯૬ ૦૦૧.

E-mail: dcfvalsouth@gmail.com

Tel No.: (02632) 253809
Fax. : (02632) 259680

ક્રમાંકઃ ક/જમન/ટે.૧૧/ ૯૪૬-૪૫/૨૦૧૮–૧૯
વલસાડ,તા. ૦૭/૦૩/૨૦૧૯.

પ્રતિ,
શ્રી મદુરા કાર્બન ઈન્ડીયા લી.
અંધેરી (વેસ્ટ) મુંબઈ.

વિષયઃ–ઓથેન્ટીકેટેડ મેપ ઈન્ડીકેટીંગ ડિસ્ટન્સ ફ્રોમ નેશનલપાર્ક, સેન્ચુરીસ, બાયોસ્ફીયર રિઝર્વ, એન્ડ માયગ્રેટરી કોરીડોર ઓફ વાઈલ્ડ એનીમલ ઈટીસી લોકેટેડ વીથીન ૧૦ કિ.મી. રેડીયલ પેરીફેરી ઓફ ધ પ્લાન્ટ લોકેટેડ એટ વિલેજ કરંજગામ તા.ઉમરગામ,જી.વલસાડ,ગુજરાત એન્ડ નો ઓબ્જેકશન સર્ટીફિકેટ રિગાર્ડીંગ ધ પ્રપોઝલ પ્રોજેકટ ફ્રોમ ફોરેસ્ટ ડિપાર્ટમેન્ટ.

સંદર્ભઃ– (૧) આપનો તા.૧૫/૦૨/૨૦૧૯નો પત્ર.
(૨) મુખ્ય વન સંરક્ષકશ્રી, વલસાડના પત્રાંકઃ બ/જમન/૧૪/૯૫૪૯, તા.૦૬/૦૩/૨૦૧૯.
(૩)અત્રેની કચેરીના પત્રાંકઃક/જમન/૧૧/ ૯૪૨–૪૩.તા.૦૬/૦૩/૨૦૧૯.

મહાશય,

જયભારત સહ ઉપરોકત વિષયનાં અનુસંધાને જણાવવાનું કે, આપની તા.૧૫/૨/૨૦૧૯ ની અરજીમાં બીનજંગલ સર્વે નંબરઃ– ૩૬૩/૩/૪,૩૬૩/૩/૧,૪૭૯/૭,૩૫૦/૫/૧,૩૫૦/૫/૪,૪૭૯/૧/૧,૪૭૯/૧,૪૮૧/૧/૧ વાળી જમીનમાં આવેલ આપના પ્રોજેકટ પ્લાન થી ૧૦ કિ.મી.ના ત્રિજયામાં ઉકત વિષયમાં દર્શાવેલ વિસ્તારો દર્શાવતો નકશો અને તે અંગેનું "ના વાંધા પ્રમાણપત્ર" મેળવવા મુખ્ય વન સંરક્ષકશ્રી વલસાડને રજુઆત કરેલ છે.

પ્રસ્તુત અરજીમાં કરેલ રજુઆત પરત્વે મુખ્ય વન સંરક્ષકશ્રી વલસાડે સંદર્ભ (૨) હેઠળના પત્રથી સદર બાબતે નિયમોનુસાર કાર્યવાહી કરી કરેલ કાર્યવાહીનો અહેવાલ તેમની જાણ હેઠળ આપને પ્રત્યુત્તર આપવા જણાવેલ છે.

પ્રસ્તુત બાબતે અત્રેના વન વિભાગમાં નેશનલ પાર્ક,સેન્ચુરીસ, બાયોસ્ફીયર રિઝર્વ,માયગ્રેટરી કોરીડોર જેવા વિસ્તારો આવેલ નથી. પરંતુ આપના કરંજગામની ઉપર જણાવેલ સ.નં.વાળી બીનજંગલ જમીનથી ૧૦ કિ.મી.ની ત્રિજયામાં અત્રેના વન વિભાગનો કલમ–૨૯ હેઠળનો રક્ષિત અને કલમ–૨૦ હેઠળનો અનામત જંગલ વિસ્તાર આવેલ છે.જે પ્રોજેકટ વિસ્તારથી અંદાજે ૮૦૦ મીટર દુર આવેલ છે.અને નકશામાં દર્શાવવામાં આવેલ છે. આપના હયાત પ્રોજેકટ પ્લાન બાબતે અત્રેની કચેરીના સંદર્ભપત્ર(૩)માં જણાવેલ શરતોનું પાલન કરવા સબબ સોગંદનામુ આપના તરફથી લખી આપેલ હોય નીચે જણાવેલ શરતો આધિન નીચે સહી કરનાર તરફથી વન સંરક્ષણ તથા વન્ય જીવ સંરક્ષણનાં હિતને ધ્યાનમાં રાખી "ના વાંધા પ્રમાણપત્ર" તથા નકશો આપવામાં આવે છે.

X શરતો X

(૧) જે હેતુસર "ના વાંધા પ્રમાણપત્ર"અને નકશાની માંગણી કરેલ છે. તેના સબંધિત તમામ સરકારશ્રીના વિભાગો/ખાતાઓની પરવાનગીઓ પૂર્વે મેળવી લેવાની શરતે આ પ્રમાણપત્ર આપવામાં આવે છે.

(૨) આપના તરફથી આપવામાં આવેલ સોગંદનામુમાં લખી આપેલ શરતોનું પાલન કરવાનું રહેશે.

(૩) માંગણીવાળા વિસ્તારમાં આપના અથવા આપના વતી કામ કરતા કોઈપણ વ્યકિત ધ્વારા સદર વિસ્તાર સિવાય અન્ય વિસ્તારમાં કોઈપણ કામગીરી કરવામાં આવશે નહિં

(૪) માંગણીવાળા વિસ્તારમાં કામ કરતા કામદારો ધ્વારા નજીકના જંગલ વિસ્તારમાં પ્રવર્તમાન કાયદાઓની જોગવાઈઓનું ભંગ કરતૃ કોઈપણ અપકૃત્ય આચરવામાં આવશે નહિં અને આવો કોઈ અપકૃત્ય માટે આપની જવાબદારી નકકી થશે. તો તે માટે વન વિભાગ ધ્વારા લેવાતા પગલા બંધનકર્તા રહેશે.

(૫) નજીકના જંગલ અથવા અભ્યારણ્યમાં આવુ કોઈ ગેરકૃત્ય થયેલ અથવા થતુ હોવાનું આપના ધ્યાન પર આવશે.તો તે અંગેની જાણ તત્કાળ નજીકના વન વિભાગના અધિકારીશ્રીને કરવાની રહેશે.

(૬) માંગણીવાળા વિસ્તારમાં ઔધોગિક પ્રવૃતિ કરવાથી ફેલાતા પંદુષણ અને હવામાં ઉડતા રજકણોથી પર્યાવરણને નુકશાની ન થવા પામે અને નજીકના જંગલ વિસ્તારોને નુકશાન ન થવા પામે તેની આપના તરફથી તકેદારી રાખવાની રહેશ.

(૭) માંગણીવાળા વિસ્તાર નજીકના જંગલ વિસ્તારોમાં આપના મજુરો કે અન્ય ઈસમો ગેરકાયદેસર ખોદકામ, કપાણ,વાહતુક,છીદણી,ખેતી,આગ કે અન્ય વનગુના ન કરે તે માટે સજાગ રહેવુ પડશે.અને આવા કૃત્ય થશે તો નજીકના વનકર્મીને જાણ કરવાની રહેશે.

(૮) વિસ્તરણ વન વિભાગનાં સુરક્ષિત જંગલ તરીકે જાહેર થયેલાં રસ્તાઓ કે ગ્રામ્ય વનોનાં અનુસંધાનમાં જરૂર જણાયે નાયબ વન સંરક્ષકશ્રી, સામાજીક વનીકરણ યોજનાનો અને પંચાયતનો અલગથી અભિપ્રાય આપના ધ્વારા મેળવી લેવાનો રહેશે.અને જરૂર જણાયે ભારતીય વન સંરક્ષણ ધારા–૧૯૮૦ની દરખાસ્ત રજુ કરવાની રહેશે.

(૯) ભારતી વન અધિનિયમ–૧૯૨૭,ભારતીય વન્યપ્રાણી સંરક્ષણ અધિનિયમ–૧૯૨૭,ભારતીય વન સંરક્ષણ ધારા–૧૯૮૦ કે અન્ય કાયદાઓની જોગવાઈનું પાલન આપના તરફથી કરવાનું રહેશે.

(૧૦) આપના તરફથી નજીકના વન વિસ્તારોમાં ગેરકાયદેસર રસ્તા બનાવવા નહિં કે વન વિસ્તારોમાંથી વાહનો પસાર કરવાના રહેશે નહિં.

(૧૧) માંગણીવાળી જમીનમાં ભારે વાહનો લાવી કે અન્ય કોઈપણ પ્રકારની મશીનરીથી ઘોંઘાટ પેદા કરી નજીકના જંગલો મુકત વન્યજીવનને ખલેલ પહોંચાડવી નહિં.

(૧૨) માંગણીવાળી જમીનની આજુબાજુ આવેલ જંગલની જમીનમાં આગ લાગવાના કિસ્સા બને તો આપના ધ્વારા આગ ઓલવવામાં મદદ કરવા કામદારોને સંજોગોને અનુરૂપ મોકલવાના રહેશે.

(૧૩) વન વિભાગ તરફથી સૂચવેલ તમામ શરતો પૈકી કોઈપણ શરતનું ભંગ કે ઉલ્લંઘન થશે તો વિભાગ તરફથી આપવામાં આવેલ"ના વાંધા પ્રમાણપત્ર" તથા દસ્તાવેજો આપો આપ રદ થશે.

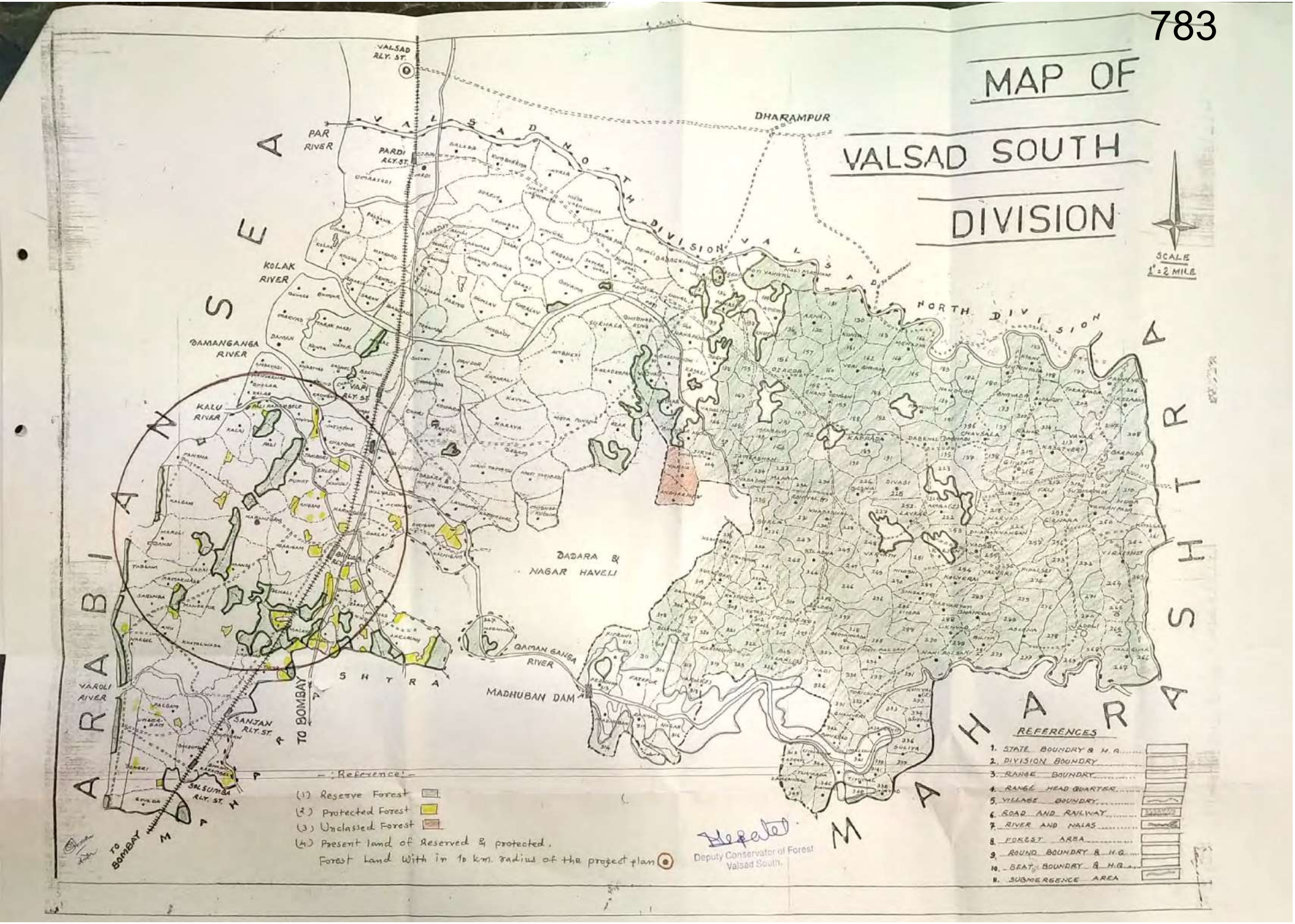
સ્થળ:વલસાડ
તારીખ:૦૭/૦૩/૨૦૧૯.

નાયબ વન સંરક્ષક
વલસાડ દક્ષિણ

નકલ સાદર રવાના:મુખ્ય વન સંરક્ષકશ્રી વન વર્તુળ,વલસાડ તરફ આપના સંદર્ભપત્ર અન્વયે જાણ થવા વિનંતી છે.

નાયબ વન સંરક્ષક
વલસાડ દક્ષિણ

MAP OF VALSAD SOUTH DIVISION



Deputy Conservator of Forest
Valsad South.

Scanned by CamScanner

"ONE TEAM ONE VISION ONE MISSION"

કરજગામ ગ્રામ પંચાયત

KARAJGAM GRAM PANCHAYAT

મુ. / પો. કરજગામ, સ્ટે. ભીલાડ, તા. ઉમરગામ, જિ. વલસાડ.

एक कदम स्वच्छता की ओर

સરપંચ : કમલેશભાઇ મંજીભાઇ ઘોડી મો. : 9904277330 / 9824124450

જાવક નં. :

તા. ૨૭/૦૮/૨૦૧૪

પ્રમાણપત્ર

આથી આ પ્રમાણપત્ર લખી આપવામાં આવે છે કે,

વલસાડ જિલ્લાના ઉમરગામ તાલુકાના મોજે. ફણસા કરજગામના રે.સર્વે નં. ૩૭૩૮, ૩૭૦૮, ૩૭૧૯, ૩૭૨૫, ૩૭૦૫, અને ૪૩૧૮ વાળી જમીન જે હાલે મદુરા કાર્બન ઈન્ડિયા લીમીટેડ નામે ચાલી આવે છે. સદર ઉપરોકત તમામ સર્વે નંબરવાળી જમીનની ૫૦૦ મીટરના વિસ્તારમાં વન વિભાગ તાંબા હેઠળની જમીન આવેલ નથી.

H.A. Jadav
તલાટી કમ મંત્રી,
ગ્રામ પંચાયત, કરજગામ,
તા. ઉમરગામ, જી. વલસાડ.

"ONE TEAM ONE VISION ONE MISSION"

કરજગામ ગ્રામ પંચાયત
KARAJGAM GRAM PANCHAYAT

મુ. / પો. કરજગામ, સ્ટે. ભીલાડ, તા. ઉમરગામ, જિ. વલસાડ.

सरपंच : કમલેશભાઇ મંજીભાઇ ધોડી મો. : 9904277330 / 9824124450

एक कदम स्वच्छता की ओर

જાવક નં. :

તા. ૨૭ / ૦૨ /૨૦૧૮

પ્રમાણપત્ર

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H. A. Tadvi
તલાટી કમ મંત્રી,
ગ્રામ પંચાયત, કરજગામ,
તા. ઉમરગામ, જી. વલસાડ.

"ONE TEAM ONE VISION ONE MISSION"

કરજગામ ગ્રામ પંચાયત
KARAJGAM GRAM PANCHAYAT

મુ. / પો. કરજગામ, સ્ટે. ભીલાડ, તા. ઉમરગામ, જિ. વલસાડ.

सरपंच : कमलेशभाइ मंजीभाइ धोडी मो. : 9904277330 / 9824124450

एक कदम स्वच्छता की ओर

જાવક નં. :

તા. ૨૭ / ૦૮ /૨૦૧૯

પ્રમાણપત્ર

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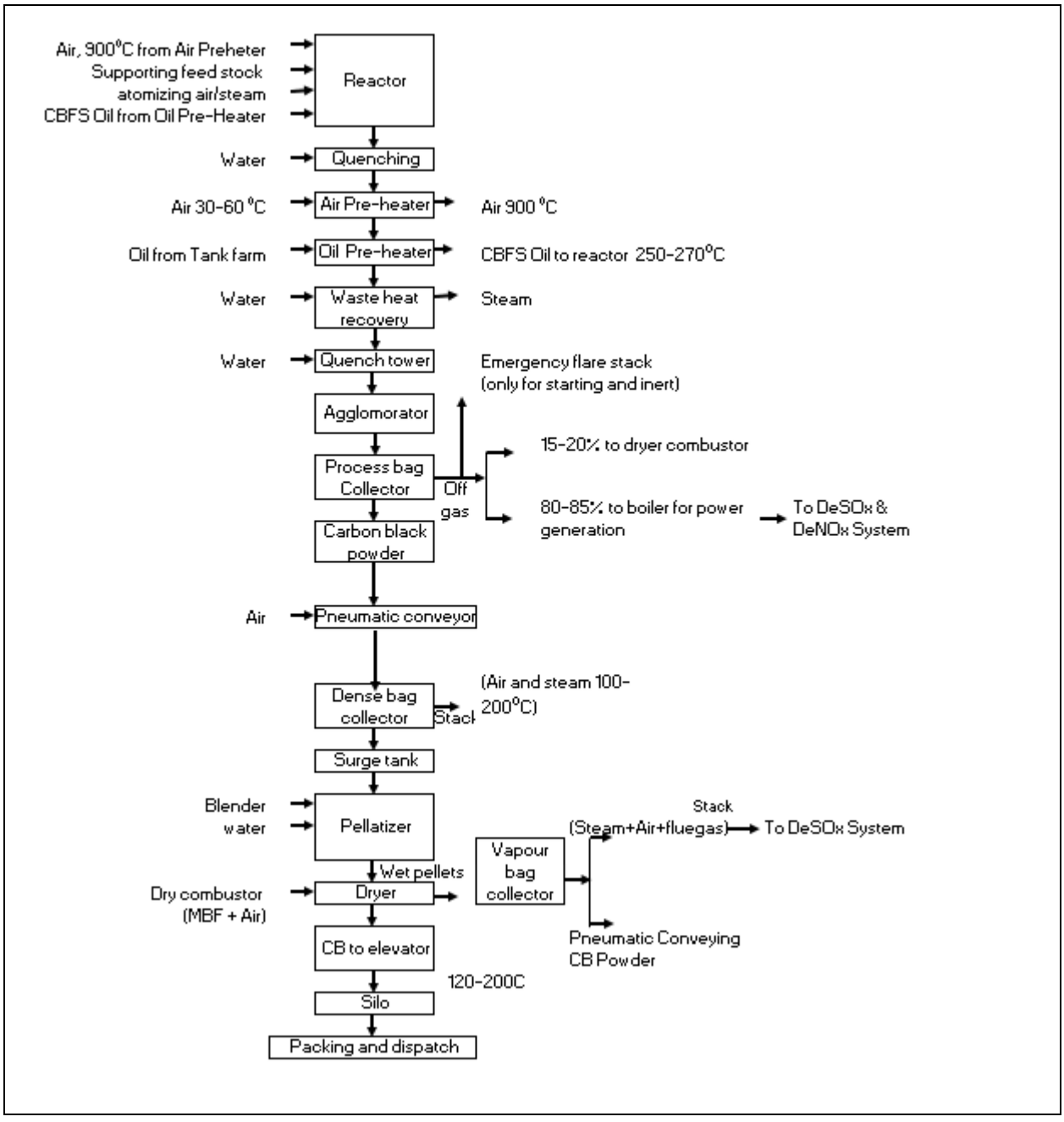
H.A. Jadeja
તલાટી કમ મંત્રી,
ગ્રામ પંચાયત, કરજગામ,
તા. ઉમરગામ, જી. વલસાડ.

Annexure-5: Process Details

1) CARBON BLACK

1.1 PROCESS FLOW DIAGRAM



1.2 PROCESS DESCRIPTION

In this project, oil furnace black process will be used for producing carbon black.

Heavy aromatic oils of petroleum oil refinery is used as as main feedstock. The furnace is basically a specially designed refractory lined horizontal steel vessel having different segments like combustion zone, venture zone, reaction zone, quench zone & evaporation cum conveying sections.

Combustion zone or hot flue gas generating section: Secondary feed stock e.g., natural gas or fuel oil or sometimes the main feed stock in proper ratio with preheated air is introduced in this section to produce hot gas. Adiabatic flame Temperature is maintained nearly $1900^{o}C$-$2000^{0}C$.

Venture section: Preheated main feed stock (aromatic oil) is introduced in atomized form under controlled conditions on the hot gas where liquid oil vaporizes. Velocity of gas stream maintained ~ 2000 FPM.

Reaction section: Pyrolysis of oil takes place in the vapour phase to form microscopic carbon particles. The basic reaction is dehydrogenation.

Hydrocarbon + Oxygen + Energy → Carbon Black + Carbon Monoxide + Hydrogen +Carbon Dioxide + Water etc.

Quench zone: the reaction rate is controlled by using water sprays.

Evaporation cum conveying sections: Water vaporizes in this zone. After all, carbon particles along with combustion gas are conveyed to the next downstream equipment.

Furnace black process consists of several downstream sections after reactor e.g., Heat recovery sections, filtration sections, conveying section, beading & drying sections and finished product transportation & storage, ware housing, pulling &dispatch section. The process which is selected for this project is illustrated bellow.

Heat recovery sections: Hot reactor combustion gas along with carbon black particles are cooled down by air. Preheated air is used in combustion section of reactor. Relatively cooled combustion gas along with carbon black again passes through oil preheater to preheat main feed stock. After passing through oil preheater, the combustion gas has sufficient sensible heat. In most of the energy efficient carbon black plants have in line sensible heat recovery (waste heat recovery) boilers. Saturated Steam is generated from waste heat recovery boilers which are used for steam tracing, & other equipment heating purposes.

Main Filtration section: High filtration efficiency pulsejet bag filter modules (main filter) will be used for filtering carbon black from carbon black laden gas (process gas). A specially designed agglomerator unit will be installed before bag house to agglomerate carbon black particles. This agglomerator unit will not only enhance filtration efficiency, it will also enhance life of the filter cloth. Agglomerated carbon black particles will be deposited on the outer surface of the cloth and compressed air pulse will release carbon black particles from bags. A sequential timer will be used in pulsing system. Gas will pass through bags and finally it will be passed through a common header which is connected to other downstream unit e.g., dryer combustor etc. Carbon black dislodge from the bags will be collected in hopper. Accumulated carbon black powder will be transported to the conveying system via rotary air locks.

Conveying system: It consists of drop box of rotary air locks, suction conveying ducts, conveying fans, conveying fan discharge ducts, conveying bag filter, conveying bag filter vent scrubber & a surge tank at the bottom of conveying bag house. All the rotary air locks placed at the bottom of main bag filter modules will be discharging carbon black particles to a common duct which is connected with a pneumatic conveying fan. In this process, air will be used for conveying carbon black. All carbon black particles from the rotary air locks discharge will be picked up by air and conveyed to another bag filter called conveying bag filter by conveying fans. Air from the bag filter can be vented to atmosphere after passing through

venture scrubber. Carbon black collected from bag filter will be stored in surge tank to remove adsorbed air from carbon black.

Beading & drying system: The beading & drying system consists of pelletizer, polisher, rotary dryer with insulated jacket and combustor as hot gas generator and purge gas filter. Fluffy carbon black, water and molasses solution (used as binder) mixed in pelletizer to form beads. Polishers are also used for making uniform diameter beads or pallets. This polisher also helps to reduce fines in carbon black. After polishing the pallets, the wet pallets pass through indirect heating rotary dryer to remove water from pallets. Hot gas required for drying is generated in refractory lined combustor. Process combustion gas from main bag filter is used as fuel in combustor. Vapour generated inside dryer along with fines is sucked by purge gas fan and filter through purge gas filter. Carbon black from purge gas filter is connected in main conveying line and vapour is vented to atmosphere after passing through venture scrubber.

Product transportation & storage: This section consists of elevator, screw conveyors magnetic separator, rotary screen, storage silos, off spec silo & de dusting bag house. Dried carbon black is transported to final storage silos by above mentioned material handling equipment.

Warehouse, pulling &dispatch section: Depending on customer requirement, the granular carbon black is packed in 25 kg paper bag or in 1 m PP jumbo bulk bags.

Capacity & Conversion: The capacity of the reactor is mainly dependent on air rate and oil BMCI.The reactor is designed for an air rate of 13500nm^3/hr. An output of 78 T/day/reactor for N-330 grade will be produced based on 130 BMCI oil. The yield for N-330 grade will be 56% on total oil. The production capacity & yield will be different for other grades.

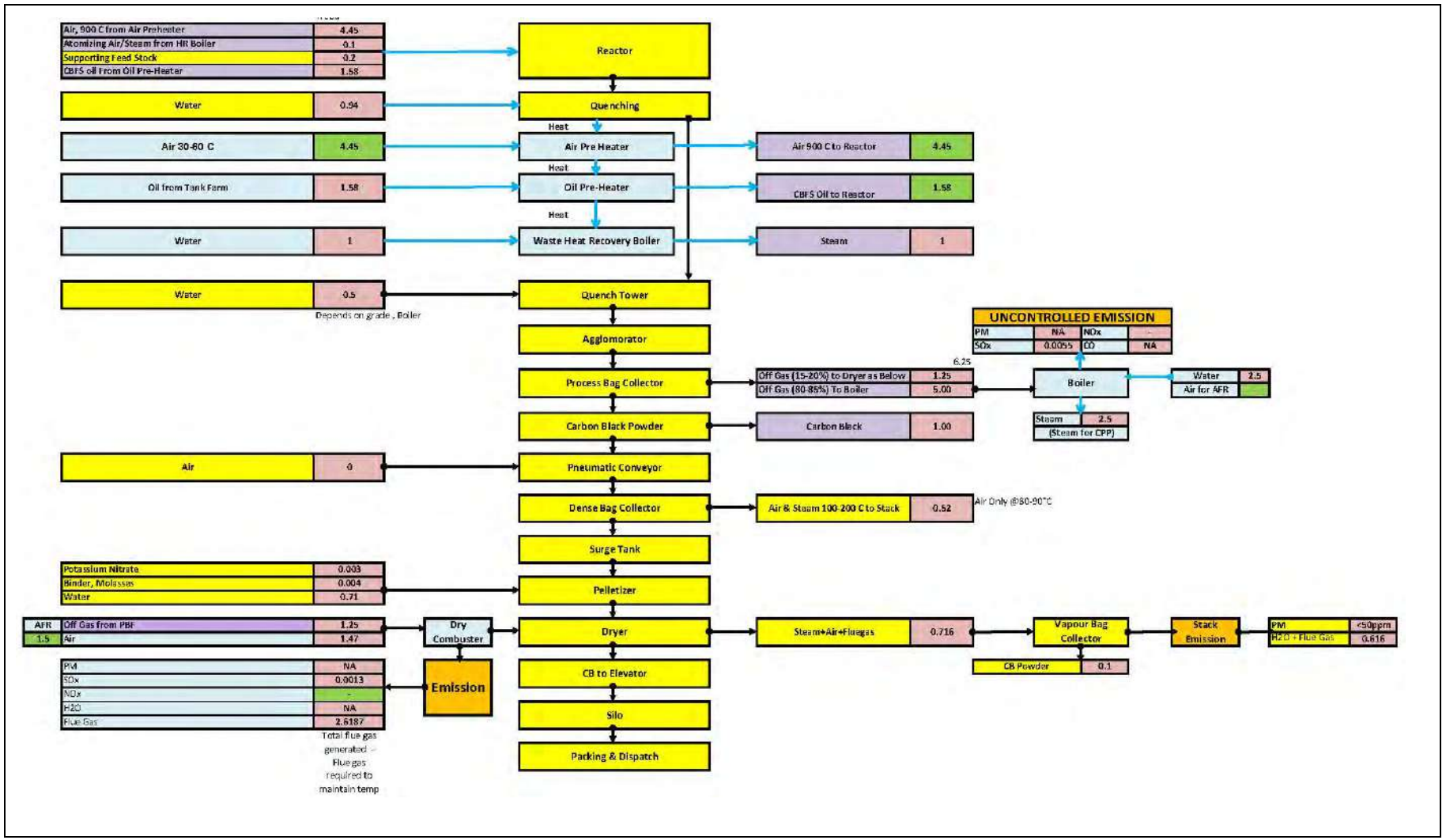
Energy efficiency: The system will be designed to extract heat up to 80%. Approximately 7.5 T steam/ton of carbon black will be generated. The major part of steam will be used for sale to other process industry and some will be used for power generation at a later stage in co-generation system. The power consumption for the process would be 350 KwH/T of carbon black.

Emission: The system would be designed to control particulate matter well within the GPCB & CPCB norms, around 50-60 mg/Nm^3. The stacks for gas emission would be designed for height and velocity to comply with the GPCB & CPCB laid norms to ensure minimum impact from NO_x and SO_x emissions. The pollution control system will be designed to ensure zero discharge from the plant.

1.3 MATERIAL BALANCE

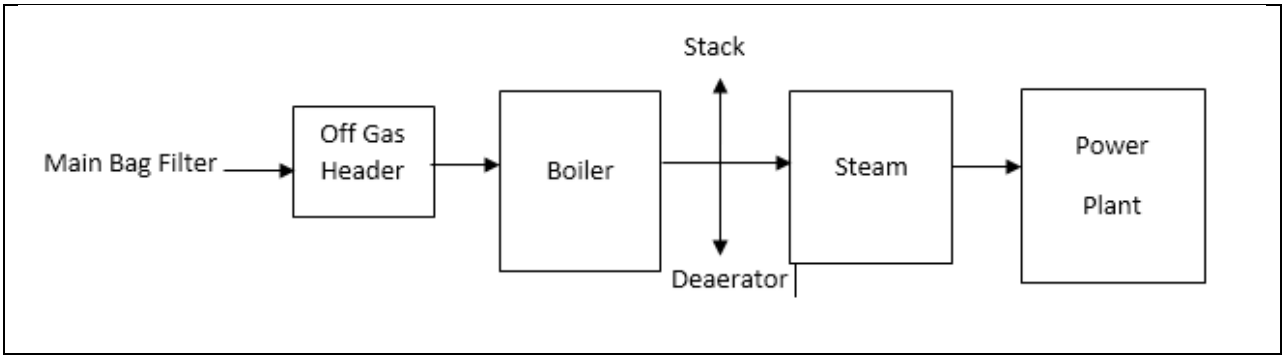
S. No.	Quantity(T/T)				Remarks
	Raw material	Input/T of Product	Output/T of Product		
1	Carbon Black Feed Stock as raw material	1.58	Carbon black	1.00	--
2	CBFS / LDO as secondary fuel	0.2	Off gas	8.48	Off gas will be used for dryer combustor and boiler for power plant
3	Molasses	0.004	--	--	--
4	Potassium Nitrate	0.003	--	--	--
5	Water	3.15	--	--	--
6	Air	4.45			
	Total	**9.48**	**--**	**9.48**	**--**

MATERIAL BALANCE DIAGRAM



2) POWER PLANT

2.1 PROCESS FLOW DIAGRAM



2.2 PROCESS DESCRIPTION

Low heat off gases generated in the manufacturing process of CB in the reactor section and separated from accompanying CB particles in PBC section are collected in the off gas header. In spite of their low calorific value, these gases can be utilized to recover their calorific value in a specially designed boiler system to generate high pressure steam and in a specially designed dryer combustor furnace to supply the heat energy requirements in the pelletizing and drying section.

The quantum of high pressure steam which can be generated through burning of these off gases meets the plant requirement of steam and power.

So the benefit of above scheme is being fully taken care of by installing the following system:

1. High pressure boiler system
2. Turbo Generators
3. Power Export

High pressure boiler which can be run on a combination of off gases generates high pressure superheated steam at 88 atm & 525^{o}C. This high-pressure steam is used to generate sufficient power required for plant consumption through turbo generator system.

Annexure-6: Methodology for sampling & Analysis

1.0 Ambient Air Quality

1.1 Method of Analysis

The air samples are analysed as per standard method specified by relevant sections of IS 5182.

1.2. Instrument used for Sampling

Respirable dust samplers, model RDS of Envirotech Instruments (duly calibrated) with gaseous sampling attachment, were used for monitoring of PM_{10}, SO_2, NO_2 & Hg. Fine particulate samplers, of Envirotech Instruments (Duly Calibrated) were used for monitoring of $PM_{2.5}$. TVOC as isobutylene have been monitored with PID based Gas detector. The samples for CO & HC have been collected in gas bladder and analysed by NDIR based CO analyser Gas chromatography respectively.

1.3 Instrument used for Analysis

PM_{10} and $PM_{2.5}$ was analyzed on electronic balance. Whereas, SO_2 & NO_2 were analyzed on UV – Visible Spectrophotometer. TVOC as isobutylene have been monitored with PID based Gas detector. CO was analysed on NDIR based CO analyser & HC was analysed Gas Chromatography. Hg was analysed on atomic absorption spectrophotometer.

1.4 Sampling and analytical techniques

The methodology adopted for sampling and analysis of ambient air quality is as mentioned in Table 1.

Table 1: Methodology of Ambient Air Monitoring

Sampling Locations & Time Period	Parameters	Frequency	Equipment	Sample Analysis		Methodology
				Analytical Instrument	Sensitivity/ Detection Limit	
10 Locations During Oct-Dec-18	PM_{10}	Twice in a week for 12 weeks	Respirable Dust Sampler with Cyclone & Flow measurement	Electronic balance	10 µg/m^3	IS 5182(Part 23):2017 (by Gravimetry)
	$PM_{2.5}$		Fine Particulate Sampler	Electronic balance	10 µg/m^3	SOP No. 120 Issue No. 03 Issue Date March 2015: 2015 (40CFR 60 by Gravimetry)
	SO_2		Gaseous sampler	UV-visible spectro-photometer	5 µg/m^3	IS 5182(Part 2):2017 Modified West & Geake method
	NO_2		Gaseous sampler	UV-visible spectro-photometer	8 µg/m^3	IS 5182(Part 6):2017 Jacob & Hochheisser method
	TVOC As isobutylene	Twice in a month for 3 months	PID based Gas detector	PID based Gas detector	0.005 mg/m^3	PID based Gas detector
	CO		Gas bladder &	GC	0.1 mg/m^3	NDIR based CO

Sampling Locations & Time Period	Parameters	Frequency	Equipment	Sample Analysis		Methodology
				Analytical Instrument	Sensitivity/ Detection Limit	
			Pump			Analyser
	HC As Methane		Gas bladder & Pump	GC	0.5 ppm	GC method
	HC As Non-Methane		Gas bladder & Pump	GC	0.5 ppm	GC method
	Hg		Respirable Dust Sampler	Atomic Absorption Spectrophotometer	5 $\mu g/m^3$	Atomic Absorption Spectrophotometric method with cold vapour generator

2.0 Water Analysis

2.1 Sampling & Preservation

A sample to access the quality of the available water were taken for chemical analysis in carboys/ glass bottles and preserved, as per the techniques explained by APHA in 'Standard Methods for Examination of Water & Wastewater'. The samples were brought to the laboratory and analyzed.

The samples have been analyzed as per the procedures specified in 'Standard Methods for the Examination of Water and Wastewater' published by American Public Health Association (APHA – 23rd Edition) and Bureau of Indian Standards.

The methodology for sample collection and preservation techniques was followed as per the techniques mentioned in table 2.

Table 2: Techniques for preservation of water sampling

A) Refrigeration (preservation without chemical treatment)

Sr. No.	Determination	Preservation
1	Alkalinity	Refrigerate
2	BOD	Refrigerate
3	Color	Refrigerate
4	Electrical Conductivity	Refrigerate
5	Nitrate	Analyse as soon as possible, refrigerate.
6	Solids	Refrigerate
7	Sulphate	Refrigerate
8	Odour	Analyse as soon as possible, refrigerate
9	Phosphate	Refrigerate
10	Turbidity	Analyse same day, refrigerate
11	Fluoride	Not specified
12	Sodium	Not specified
13	Potassium	Not specified
14	Calcium	Not specified
15	Magnesium	Not specified
16	Chloride	Not required
17	pH	Analyse as soon as possible
18	Temperature	Immediately analyse at the time of sampling
19	Hardness	HNO_3 or H_2SO_4 <2 pH
20	Heavy Metal	HNO_3

B) Refrigeration (preservation with chemical treatment)

Sr. No.	Determination	Preservation
1	COD	Analyse as soon as possible or add H2SO4 to pH<2 refrigerate
2	Oil & grease	Add H2SO4 to pH<2 refrigerate
3	Phenolic compounds	Refrigerate add H_2SO_4 to pH<2

Remarks:

1. Sample is collected in an appropriate big size container instead of individual parameter-wise sampling requiring similar container and preservation requirement.
2. Glass and plastic containers are used for samples.

2.2 Analytical techniques

The methodology adopted for sampling and analysis of water quality is as mentioned in Table 3.

Table 3: Analytical Methodology of Ground Water & Surface Water

Sampling Location & Period	Sampling Parameters	Sample Collection	Analysis Equipment	Sensitivity/ Detection	Methodology
Groundwater – 8 locations Grab Sampling During Oct-Dec-18 Surface water – 8 locations Grab Sampling During Oct-Dec-18	pH	Manual sampling in Carboy/ glass bottles	pH meter	2.0	APHA 23rd Ed., 2017 -4500 pH, IS 3025(Part 11): 2017
	Temp (°C)		Thermometer	5°C	APHA 23rd Ed., 2017 - 2550B: 2017
	Colour (pt.co. Scale)		Spectrophotometer	Colour Unit	APHA 23rd Ed., 2017 - 2120 B & C: 2017
	Odour		Manual	Qualitative	APHA 23rd Ed., 2017 - 2150: 2017
	Turbidity, (NTU)		Nephlometer	0.1 NTU	APHA 23rd Ed., 2017 - 2130 B IS 3025(Part 10): 2017
	Total Dissolved Solids		Electronic Balance	5 mg/l	APHA 23rd Ed.,2017- 2540 C IS 3025(Part 16):2017
	EC		Conductivity Meter	10 µS/cm	APHA 23rd Ed., 2017 - 2510-B IS 3025(Part 14): 2017
	Oil & Grease		Electronic Balance	0.1 mg/l	APHA 23rd Ed., 2017 - 5520 B IS 3025(Part 39): 2014
	BOD		Incubator, Titration	2.0 mg/l	IS 3025 (Part 44): 2014
	COD		Titration	5.0 mg/l	APHA 23rd Ed., 2017 - 5220B : 2017
	Phenolic compounds		Spectrophotometer	0.001 mg/l	APHA 23rd Ed., 2017- 5530 C APHA 23rd Ed., 2017 - 5530 D IS 3025(Part 43): 2014
	Total Alkalinity		Titration	5.0 mg/l	APHA 23rd Ed., 2017 - 2320 B. IS 3025(Part 23): 2014
	Total Hardness		Titration	2.0 mg/l	IS 3025(Part 21) APHA 23rd Ed., 2017 – 2340 C.: 2014 EDTA-Titrimetric method
	Calcium		Titration	2.0 mg/l	APHA 23rd Ed., 2017 - 3500-B, EDTA-Titrimetric method IS 3025(Part 40): 2014
	Magnesium		Titration	2.0 mg/l	APHA 23rd Ed., 2017 - 3500-Mg-B IS 3025(Part 46): 2014
	Chlorides as Cl		Titration	5.0 mg/l	APHA 23rd Ed., 2017 - 4500 Cl. B IS 3025(Part 32): 2014
	Nitrates as NO_3		Spectrophotometer	0.1 mg/l	APHA 23rd Ed., 2017 - 4500–NO3-B : 2017 (UV Screening method)
	Sulphates as SO_4		Spectrophotometer	1.0 mg/l	APHA 23rd Ed., 2017 - 4500 SO42 –E IS 3025(Part 24): 2014 (Turbidity Method)
	Phosphates as PO_4		Spectrophotometer	0.1 mg/l	APHA 23RD Ed., 2017 - 4500-P-D IS 3025(Part 31): 2014
	Fluorides as F		Ion Meter	0.1 mg/l	APHA 23rd Ed., 2017 - 4500 F-C- : 2017

Sampling Location & Period	Sampling Parameters	Sample Collection	Analysis Equipment	Sensitivity/ Detection	Methodology
					(By Ion Selective Electrode)
	Sodium		AAS	0.5 mg/l	APHA 23rd Ed., 2017 – 3500 - Na, B, IS 3025(Part 45): 2014
	Potassium		AAS	1 mg/l	APHA 23rd Ed., 2017 - 3500-K, B IS 3025(Part 45): 2014
	Iron		AAS	0.1 mg/l	APHA 23rd Ed., 2017 - 3111-B: 2017
	Manganese		AAS	0.05 mg/l	APHA 23rd Ed., 2017- 3500-Mn,B: 2017 IS 3025 (Part 59): 2017
	Cyanide		Ion Meter	0.02 mg/l	APHA 23rd Ed., 2017 - 4500-CN- F (by ISE) IS 3025(Part 27): 2017
	Copper		AAS	0.02 mg/l	APHA 23rd Ed., 2017- 3111-B : 2017 IS 3025 (Part 42): 2014
	Nickel		AAS	0.01 mg/l	APHA 23rd Ed., 2017- 3111B: 2017 IS 3025 (Part 54): 2014
	Lead		AAS	0.01 mg/l	APHA 23rd Ed., 2017- 3111B : 2017 IS 3025(Part 47): 2014
	Zinc		AAS	0.2 mg/l	APHA 23rd Ed., 2017- 3111-B : 2017 IS 3025 (Part 49): 2014
	Total Chromium		AAS	0.02 mg/l	APHA 23rd Ed., 2017- 3111B : 2017 IS 3025 (Part 52): 2014
	Total Coliform			Present/Absent >MPN index/250 ml	IS 15185: 2016 APHA 9221B: 2017 IS 1622 : 2009
	Faecal Coliform			Present/Absent >MPN index/250 ml	IS 1622: 2009 IS 15185: 2016 APHA 9221B: 2017

3.0 Noise levels

3.1 Method of Monitoring

Noise level monitoring was carried out once at 9 location for 24 hours at hourly intervals, during the study period. The day time limit is between 6 am to 10 pm and night time limit is 10 pm to 6 am.

3.2 Instrument Used for Monitoring

SLM100 Sound Level Meter from Envirotech (type II) was used for noise level monitoring.

4.0 Soil Quality

4.1 Sampling

Sample were collected form selected points by manually using auger. Undisturbed top soil was collected in containers.

4.2 Analytical techniques

The methodology adopted for sampling and analysis of soil quality is as mentioned in Table 4

Table: 4 Analytical Methodology of Soil Sample

Sampling Location & Period	Sampling Parameters	Analysis Equipment	Sensitivity/ Detection	Methodology
4 soil samples were collected During Oct-Dec-18	Texture Class	--	--	U.S. Texture Triangle
	Grain Size Distribution	--	--	IS 2720(P-4):1985
	Bulk Density	Glass ware	--	IS 2720: Part 28/29: 1974 (By Cylinder method)
	Water holding capacity	Analytical balance	5%	DIRD
	pH	pH meter	1.0	IS 2720 (Part 26):1987 (RA 2011)
	Electrical Conductivity (EC)	Conductivity Meter	10 µS/cm	IS 14767:2000 RA 2010
	Organic Matter	Titrimetric	5 mg/kg	IS 2720 (Part 22):2002
	Organic Carbon	Titrimetric	5 mg/kg	IS 2720 (Part 22):2002
	Sodium	AAS	5 mg/kg	USEPA 3050B
	Zinc	Titrimetric	5 mg/kg	USEPA 3050B
	Copper	AAS	5 mg/kg	EPA 3050B & EPA 7000B
	Manganese	AAS	5 mg/kg	EPA 3050B & EPA 7000B
	Iron	AAS	5 mg/kg	EPA 3050B & EPA 7000B
	Nitrogen (as N)	Spectrophotometer	5 mg/kg	IS 14684:1999 (RA 2000)
	Phosphorous (as P)	Spectrophotometer	5 mg/kg	IS 10158-1982 (RA 2009)
	Potassium (as K)	AAS	5 mg/kg	USEPA 3050B

Table 5 Standard soil classification

S. No.	Soil Test	Classification
1	pH	Acidic <6.5 Normal 6.5-8.2 Alkaline >8.2
2	Salinity Electrical Conductivity (mmhos/cm) (1 ppm = 640 µmhos/cm)	Up to 1.00: average 1.01-2.00: harmful to germination 2.01-3.00: harmful to crops (sensitive to salts)
3	Organic Carbon	Low <0.5 Medium 0.5-0.75 High >7.5
4	Nitrogen (kg/ha)	Up to 50: very less 51-100: less 101-150: good 151-300: better >300: sufficient
5	Phosphorus (kg/ha)	Low < 28 Medium 28-56 High >56

S. No.	Soil Test	Classification
6	Potash (kg/ha)	Low < 140 Medium 140-280 High >280

(Source: Hand Book of Agriculture, Indian Council of Agricultural Research, New Delhi)

Annexure-7: Common flora and fauna of the study area

Table A: List of Flora the study area

Species Name	Common Name	Type (Form)	Family
Abutilon indicum (L.) Sw. subsp. indicum	Khapato, Dabaliar, Kanski	Under Shrub	Malvaceae
Acacia auriculiformis A. Cunn. ex Benth.	Australian/Vilayati Baval	Tree	Mimosaceae
Acacia chundra (Roxb. Ex Rottl.) Willd.	Katho, Kher	Tree	Mimosaceae
Acacia nilotica (L.) Del. subsp. indica(Bth.) Brenan	Deshi Baval, Bavar Kalo	Tree	Mimosaceae
Acalypha indica L.	Dadario, Dadro	Herb	Euphorbiaceae
Acanthospermum hispidum DC.	-	Herb	Asteraceae
Acanthus illicifolius	-	Shrub	Acanthaceae
Achyranthes aspera L. var. argentea Hook. f.	Andhedi, Anghedo	Herb	Amaranthaceae
Achyranthes aspera L. var. porphyristachya Hk. f.	Andhedi	Herb	Amaranthaceae
Achyranthes sp.	-	Aquatic Herb	Amaranthaceae
Aegle marmelos (L.) Corr.	Bili Patra, Bili	Tree	Rutaceae
Aerva persica (Burm.f.) Merrill	Bur, Gorakh Ganjo	Herb	Amaranthaceae
Agave americana L.	Ketki, Ramban	Shrub	Agavaceae
Ailanthus excelsa Roxb.	MotoArduso Rukhdo,	Tree	Simaroubaceae
Alangium sp.	Ankol	Tree	Alangiaceae
Albizia lebbeck (L.) Bth.	Karo Sirish	Tree	Mimosaceae
Aloe barbadensis Mill.	Kuvarpathu	Herb	Liliaceae
Alternanthera pungens H. B. & K.	Kantaro Bhangaro	Herb	Amaranthaceae
Alternanthera sessilis (L.) DC.	Jar Bhaji, Jar Bhangaro	Herb	Amaranthaceae
Alysicarpus longifolius (Rottl. ex Spr.) W. & A.	Moto Sanervo	Herb	Fabaceae
Alysicarpus monilifer (L.) DC. var. monilifer	Nano Sanervo,	Herb	Fabaceae
Amaranthus spinosus L.	Jangali tandaljo	Herb	Amaranthaceae
Amischophacelus axillaris (L.) Rolla.	-	Herb	Commelinaceae
Ammannia baccifera L.	Rato Jal Agio, Lal Agio	Herb	Lythraceae
Anacardium occidentalis	Kaju	Tree	Annacardiaceae
Anisomeles indica (L.) O. Ktze.	Chodharo	Under Shrub	Lamiaceae
Annona squamosa L.	Jamfal	Small Tree	Annonaceae
Apluda mutica L.	-	Grass	Poaceae
Aristida adscensionis L. subsp. adscensionis	Lampdu	Grass	Poaceae
Avicennia alba auct.	Tivar	Tree	Avicenniaceae
Avicennia marina (Forsk.) Vierh.	Tivar	Shrub	Avicenniaceae
Azadirachta indica A. Juss.	Limbdo, Neem	Tree	Meliaceae
Bacopa monnieri (L.) Pennell	Kadvi Naveri, Jal Naveri, Bam	Herb	Scrophulariaceae

Species Name	Common Name	Type (Form)	Family
Bauhinia racemosa Lam.	Asundro, Asotri	Tree	Caesalpiniaceae
Bergia ammannioides Roxb. ex Roth	Jal Ukharad	Herb	Elatinaceae
Bidens biternata (Lour.) Merr. & Sherff	Karakokdi, Samara Kokdi	Herb	Asteraceae
Blepharis maderaspatensis (L.) Roth	Uti Gan, Vado Kandho	Herb	Acanthaceae
Bombax ceiba L.	Savar, Shimal	Tree	Bombacaceae
Borreria articularis (L.f.) F.N. Will.	-	Herb	Rubiaceae
Bothriochloa pertusa (L.) A. Camus	-	Grass	Poaceae
Bougainvillea spectabilis Wild.	-	Straggling Shrub	Nyctaginaceae
Brassica juncea (L.) Coss.	Raido, Rai	Herb	Brassicaceae
Butea monosperma (Lam.) Taub.	Kesudo, Khakharo	Tree	Fabaceae
Caesalpinia crista L.	Kakach, Kakchiya	Straggling Shrub	Fabaceae
Caesalpinia pulcherrima (L.) Sw.	Shankhasur, Galtora	Shrub	Caesalpiniaceae
Calotropis procera (Ait.) R. Br.	Akado	Shrub	Asclepiadaceae
Canna indica L.	-	Herb	Cannaceae
Capparis sepiaria L.	Kanther	Straggling Shrub	Capparaceae
Cardiospermum halicacabum L.	Kag Doriyu	Herb	Sapindaceae
Carica papaya L.	Papaya, Papayu	Tree	Caricaceae
Carissa congesta Wt.	Karamda, Karvanda	Shrub	Apocynaceae
Cassia absus L.	-	Herb	Caesalpiniaceae
Cassia occidentalis L.	Sundaro, Kasundro	Herb	Caesalpiniaceae
Cassia pumilla Lam.	Nidhecholijozad	Herb	Caesalpiniaceae
Cassia siamea Lam.	Kasid	Tree	Caesalpiniaceae
Cassia tora L.	Kunwario	Herb	Caesalpiniaceae
Casuarina equisetifolia L.	Sharu	Tree	Casuarinaceae
Cayratia carnosa (Lam.) Gagnep.	Khat Khatubado	Climber	Vitaceae
Celosia argentea L.	Lampadi, Lampdi, Lambdi	Herb	Amaranthaceae
Cenchrus setigerus Vahl	Dhaman	Grass	Poaceae
Ceriops tagal(Pers.) Rob.	Tivar	Tree	Rhizophoraceae
Chloris barbata Sw.	Siyar Puchh	Grass	Poaceae
Citrus limon (L.) Burm.	Limbu, Rasalu	Small Tree	Rutaceae
Clitora ternatea L.	Gaeni, Bibari, Gokarn	Twiner	Fabaceae
Coccinia grandis (L.) Voigt	Tindora, Ghiloda	Climber	Cucurbitaceae
Cocculus hirsutus (L.) Diels	Vevdi, Vevti, Vagval	Straggling Shrub	Menispermaceae
Cocus nucifera L.	Neriel,Tarafoo	Tree	Arecaceae
Commelina albescens Hassk.	-	Herb	Commelinaceae
Commelina benghalensis L.	Sis Muriyu, Motu Shishmuliu	Herb	Commelinaceae
Commelina diffusa Burm. f.	Shihmuliu	Herb	Commelinaceae

Species Name	Common Name	Type (Form)	Family
Corchorus aestuans L.	Kag Shing, Chunch, Chhadhari	Herb	Tiliaceae
Corchorus olitorus L.		Herb	Tiliaceae
Corchorus tridens L.	-	Herb	Tiliaceae
Cordia dichotoma Forst.	Gunda, Vadgundo, Bhokar	Tree	Ehretiaceae
Cordia sebestena L.	-	Small Tree	Ehretiaceae
Costus speciosous (Koenig ex.) Sm.	Pavuta, Va-Lakadi	Herb	Zingiberaceae
Ctenolepis cerasiformis (Stocks.) Hk.	Aknh Futamani	Climber	Cucurbitaceae
Cucumis callosus (Rottl.) Cogn.	Gay Vasukada	Climber	Cucurbitaceae
Cuscuta reflexa Roxb.	Amarvel	Parasite	Cuscutaceae
Cynodon dactylon (L.) Pers.	Dhrab	Grass	Poaceae
Cyperus difformis L.	Chiyo	Sedge	Cyperaceae
Cyperus rotundus L. subsp. rotundus	Moth	Sedge	Cyperaceae
Dactyloctenium aegypticum (L.) P. Beauv.	-	Grass	Poaceae
Datura metel L.	Dhaturo	Under Shrub	Solanaceae
Delonix regia (Boj.) Raf.	Gulmohor	Tree	Caesalpiniaceae
Dendrocalamus strictus Nees	Narvans, Manvel-Vans	Grass	Poaceae
Dendrophthoe falcata (L. f.) Etting var. falcata	Vando	Parasite	Loranthaceae
Derris indica (Lam.) Bennet	Karanj	Tree	Fabaceae
Digera muricata (L.) Mart.	Kanjaro, Kanejro	Herb	Amaranthaceae
Digitaria adscendens (H.B.&K.) Henr.	Tarodiyu	Grass	Poaceae
Dioscorea bulbifera L.	Kanak	Twiner	Dioscoreaceae
Dioscorea oppositifolia L.	-	Twiner	Dioscoreaceae
Diospyros melanoxylon Roxb.	Bidi Patta	Tree	Ebenaceae
Dipteracanthus prostratus Hassk.	-	Herb	Acanthaceae
Echinochloa colonum (L.) Link	Samo, Jiriu	Grass	Poaceae
Eclipta prostrata (L.) L. Mant.	Jal Bhangro	Herb	Asteraceae
Elytraria acualis (L f.) Lindau	Pat Pathari	Herb	Acanthaceae
Eragrostis tenella (L.) P. Beauv. ex R. & S.	-	Grass	Poaceae
Eucalyptus globulus Labill.	Nilgiri	Tree	Myrtaceae
Euphorbia hirta L.	Vadi Dudheli, Kalu Ganthiu	Herb	Euphorbiaceae
Euphorbia neriifolia L.	Thuvar, Thor	Shrub	Euphorbiaceae
Ficus benghalensis L.	Vad	Tree	Moraceae
Ficus benghalensis L.	Vad	Tree	Moraceae
Ficus hispida L. f.	Dhedh Umardo	Shrub	Moraceae
Ficus racemosa L.	Umaro, Umbio	Tree	Moraceae
Ficus religiosa L.	Piparo, Piplo	Tree	Moraceae
Gloriosa superba L.	Kankasani, Kajia Khori	Herb	Liliaceae
Gmelina arborea Roxb.	Sivan	Tree	Verbenaceae
Goniogyna hirta (Willd.) Ali	-	Herb	Fabaceae

Species Name	Common Name	Type (Form)	Family
Gossypium herbaceum auct. Non L. var. acerifolium(Guill. & Perr.) Chevalier	Kapas, Desi Kapas	Shrub	Malvaceae
Grewia tiliaefolia Vahl var. tiliaefolia	Dhaman	Shrub	Tiliaceae
Hemidesmus indicus (L.) Schult.	Dudheli, Dudh Vel	Twiner	Periplocaceae
Heteropogon sp.	-	Grass	Poaceae
Holarrhena antidysenterica (Heyne ex Roth) Wall.	Kadvo Indrajav	Tree	Apocynaceae
Holoptelea integrifolia (Roxb.) Planch.	Kanaji Kanjo, Papada	Tree	Ulmaceae
Hygrophila auriculata (Schum.) Heine	Kanta Sherio	Herb	Acanthaceae
Hyphaene dichotoma	Branched Palm	Tree	Arecaceae
Impatiens balsmina L. var. coccinea Hk. f.	Takmaria, Gulmendi	Herb	Balsaminaceae
Indigofera cordifolia Heyne ex Willd.	Pat Gari	Herb	Fabaceae
Indigofera linifolia Retz. var. linifolia	-	Herb	Fabaceae
Indigofera linnaei Ali.	Fatakiya, Bhonygal	Herb	Fabaceae
Indigofera oblongifolia Forsk.	Zil	Shrub	Fabaceae
Indigofera tinctoria L.	Gari, Gokarn	Shrub	Fabaceae
Ipomoea fistulosa Mart.	-	Straggling Shrub	Convolvulaceae
Ipomoea obscura (L.) Ker- Gawl	Vad Fudardi	Twiner	Convolvulaceae
Ipomoea pes-caprae (L.) Sw.	Dariya Vel	Climbing Herb	Convolvulaceae
Ipomoea pes-tigridis L.	Fotiyal, Wagpadi	Twining Herb	Convolvulaceae
Ixora sp.	Naveri	Small Tree	Rubiaceae
Jatropha curcas L.	Ratan Jyot, Vilayti Arandi	Shrub	Euphorbiaceae
Jatropha gossypifolia L.	-	Shrub	Euphorbiaceae
Justicia procumbens L.	Bodi Andhedi	Herb	Acanthaceae
Justicia simplex Don	Kari Andhedi	Herb	Acanthaceae
Kirganelia reticulata (Poir.) Baill.	Kamboi, Picharun	Shrub	Euphorbiaceae
Lantana camara auct. Non L. var. aculeata (L.) Mold.	Indradhanu	Under Shrub	Verbenaceae
Lawsonia inermis L.	Heena Mendhi	Shrub	Lythraceae
Leucaena latisiliqua (L.) Wt. & Arn.	Liso Bavar	Tree	Mimosaceae
Lindernia oppositifolia (Retz.) Mukerjee	-	Herb	Scrophulariaceae
Ludwigia perennis L.	-	Aquatic Herb	Onagraceae
Luffa sp	Ghee-turai, Galku	Climber	Cucurbitaceae
Lycopersicon lycopersicum (L.) Karst.	Tamata, Tamatu	Herb	Solanaceae
Maerua oblongifolia (Foeak.) A. Rich.	Hemkand	Woody Twiner	Capparaceae
Mangifera indica L.	Ambo, Kheri	Tree	Anacardiaceae
Martyinia annua L.	Vinshudo	Under Shrub	Martiniaceae
Melia azedarach L.	Bakani Nim, Bakanlimdo	Tree	Meliaceae
Merremia gangetica (L.) Cufod.	Undardi, Undarkani	Herb	Convolvulaceae
Mimosa hamata Willd.	Kai bavari, Kai	Under Shrub	Mimosaceae

Species Name	Common Name	Type (Form)	Family
Moringa oleifera Lam.	Mitho Saragvo	Tree	Moringaceae
Mukia maderespatensis (L.) M. Roem.	Ankhfutmani	Climber	Cucurbitaceae
Nelumbo nucifera Gaertn.	Kamal	Aquatic Herb	Nympheaceae
Nerium indicum Mill.	Lal Karen	Shrub	Apocynaceae
Ocimum gratissimum L.	Ram Tulsi	Herb	Lamiaceae
Ocimum sanctum L.	Tulsi	Herb	Lamiaceae
Opuntia elatior Mill.	Phaphada Thor	Herb	Cactaceae
Panicum sp.	-	Grass	Poaceae
Paspalum distichum L.	-	Grass	Poaceae
Paspalum sp.	-	Grass	Poaceae
Peltophorum pterocarpum (DC.) Backer ex Heyne	Tamrafali	Tree	Caesalpiniaceae
Pentatropis spiralis (Forsk.) Decne	-	Twiner	Asclepiadaceae
Perotis indica (L.) O. Ktze.	-	Grass	Poaceae
Phoenix sp.	Khajur	Tree	Arecaceae
Phoenix sylvestris (L.) Roxb.	Khajur	Tree	Arecaceae
Phragmites karka (Retz.) Trin. Ex Steud.	Ratvelio	Sedge	Poaceae
Physalis minima L.	Sarpopata, Popti, Parpopti	Herb	Solanaceae
Pithecellobium dulce (Roxb.) Bth.	Goras Amali	Tree	Mimosaceae
Plumeria rubra L.	Khad Champo	Tree	Apocynaceae
Polyalthia longifolia (Sonn.) Thw.	Asopalav	Tree	Annonaceae
Polygala erioptera DC. var. erioptera	Patsan, Bhonysan	Herb	Polygalaceae
Polygonum glabrum Willd.	-	Herb	Polygonaceae
Prosopis cineraria (L.) Druce	Khijado, Shami	Tree	Mimosaceae
Prosopis juliflora (Sw.) DC.	Gando Baval	Shrub	Mimosaceae
Psoralea sp.	Kapurio+C93	Herb	Fabaceae
Pupalia lappacea (L.) Juss.	Zapti	Under Shrub	Amaranthaceae
Rhynchosia minima (L.) DC. var. minima	Nahni Kamal Vel	Twiner	Fabaceae
Saccharum spontaneum L.	Dabh, Kans	Grass	Poaceae
Sagittaria sagittifolia L.	-	Herb	Alismataceae
Sehima nervosum (Rottle) Stapf.	-	Grass	Poaceae
Sesamum indicum L.	Tal	Herb	Pedaliaceae
Sesbania sesban (L.) Meer. subsp. sesban var. sesban	Ekad, Shevari, Jayanti	Shrub	Fabaceae
Sida acuta Burm. f.	Bala	Herb	Malvaceae
Sida cordata (Burm. f.) Borss	Bala, Baladana	Herb	Malvaceae
Sida ovata Forsk.	-	Herb	Malvaceae
Sida rhombifolia L.	Khetrau Balbuvaro	Herb	Malvaceae
Solanum surattense Burm. f.	Bhoyan Ringani, Dol ri	Herb	Solanaceae
Sorghum bicolor (L.) Moench.	Juwar, Jawar	Grass	Poaceae
Syzygium cumini (L.) Skells	Jambu	Tree	Myrtaceae

Species Name	Common Name	Type (Form)	Family
Tamarindus indica L.	Ambali, Emali, Amblijo-zad	Tree	Caesalpiniaceae
Tectona grandis L.f.	Sag, Sagado, Nagod, Nagud	Tree	Verbenaceae
Tephrosia purpurea (L.) Pers.	Sarpankho	Herb	Fabaceae
Thespesia populnea (L.) Sol. ex Corr.	Paras Pimpro	Small Tree	Malvaceae
Tinospora cordifolia (Willd.) Miers	Garo, Gadu, Gudaj Vel	Climber	Menispermaceae
Trichodesma amplexicaule Roth	Undha Fuli	Herb	Boraginaceae
Tridax procumbens L.	Pardeshi Bhangro	Herb	Asteraceae
Tridax procumbensi L.	Pardeshi Bhangro	Herb	Asteraceae
Triumfetta rhomboidea Jacq.	Zipti	Under Shrub	Tiliaceae
Triumfetta rotundifolia Lam.	Zipti	Herb	Tiliaceae
Typha angustata Bory. & Chaub.	Gha Bajariu	Herb	Typhaceae
Urena lobata l.	San Bhindi	Herb	Malvaceae
Vernonia cinerea (L.) Less.	Sahdevi	Herb	Asteraceae
Vigna sp.	-	Herb	Fabaceae
Vitis vinifera L.	Jangli Draksh	Climber	Vitaceae
Wattakaka volubilis (L.f.) Stapf	-	Twiner	Asclepiadaceae
Woodfordia fruticosa (L.) Kurz.	-	Tree	Lythraceae
Xanthium strumarium L.	Gadariyu	Herb	Asteraceae
Zizyphus mauritiana Lam.	Mota Bor	Small Tree	Rhamnaceae
Zizyphus oenoplia (L.) Mill.	Boydi No Velo	Shrub	Rhamnaceae

(Source: Primary survey done by FAE (EB), Precitech Laboratories Pvt. Ltd.)

Table B: Common Fauna of study area

Sr. No.	Name of Family	Name of Species	Local Name	IUCN Category/ Shc. of WLPA, 1972
Amphibian				
1	Bufonidae	*Duttaphrynus melanostictus*	Common Indian Toad	LC/-
2	Bufonidae	*Duttaphrynus stomaticus*	Marbled toad	LC/-
3	Dicroglossidae	*Euphlyctis cyanophlyctis*	Skittering frog	LC/-
4	Dicroglossidae	*Hoplobatrachus tigerinus*	Indian bull frog	LC/Shc.IV
5	Ranixalidae	*Indirana leithii*	Leith's Frog	VU/-*
Reptiles				
6	Trionchidae	*Lissemys punctata*	Flap shell turtle	LC/Sch-I
7	Gekkonidae	*Hemidactylus brookii*	Brook's Gecko	-
8	Agamidae	*Calotes versicolor*	Common garden lizard	LC
9	Chamaeleonidae	*Chameleon zeylanicus*	Chameleon	LC/Sch-II
10	Sciuridae	*Mabuya carinata*	Common Brahminy skink	LC
11	Scincidae	*Lygosoma punctata*	Snake skink	LC
12	Varanidae	*Varnus bengalensis*	Common Indian monitor	LC/Sch-I
13	Boidae	*Eryx johnii*	Red sand Boa (Andhadi chakad)	LC/ Sch-II

Sr. No.	Name of Family	Name of Species	Local Name	IUCN Category/ Shc. of WLPA, 1972
14	Colubridae	*Elaphe Helena / Coelognathus helena*	Trinket Snake	LC/Sch-IV
15	Colubridae	*Ptyas mucosa*	Rat Snake	LC/Sch-II
16	Colubridae	*Argyrogena fasciolatus*	Banded Racer	LC/Sch-IV
17	Colubridae	*Oligodon arnensis*	Common kukri snake	LC/Sch-IV
18	Colubridae	*Dendrelaphis tristis*	Common Bronze back	LC/Sch-IV
19	Colubridae	*Ahaetulla nasuta*	Green Vine Snake	LC/Sch-IV
20	Elapidae	*Naja naja*	Common cobra (Nag)	LC/Sch-II
21	Elapidae	*Bungarus caeruleus*	Common Indian Krait (Kadotaro)	LC/Sch-IV
22	Viperidae	*Vipera russelli*	Russel's viper, Kamario	-/Sch-II
23	Viperidae	*Echis carinatus*	Furso, Saw-Scaled Viper	-/Sch-II
Aves				
24	Corvidae	*Corvus splendens*	Common Crow	LC/Sch-V
25	Sturnidae	*Acridotheres tristis*	Indian myna	LC/Sch-IV
26	Ardeidae	*Bubulcus ibis*	Cattle Egret	LC/Sch-IV
27	Upupidae	*Upupa epops*	Hoopoe	LC/Sch-IV
28	Charadriidae	*Vanellus indicus*	Red wattled lapwing	LC/Sch-IV
29	Cuculidae	*Eudynamys scolopacea*	Asian Koel	LC/Sch-IV
30	Phasianidae	*Pavo cristatus*	Common Peafowl	LC/Sch-I
31	Meropidae	*Merops orientalis*	Little green bee eater	LC/Sch-IV
32	Corvidae	*Dendrocitta vagabunda*	Indian tree pie	LC/Sch-IV
33	Corvidae	*Streptopelia chinensis*	Spotted dove	LC/Sch-IV
34	Ramphastidae	*Megalaima haemacephala*	Crimson breasted barbet	LC/Sch-IV
35	Haradriidae	*Coracias benghalensis*	Indian roller	LC/Sch-IV
36	Ardeidae	*Egretta garzetta*	Little Egret	LC/Sch-IV
37	Charadriidae	*Vanellus malabaricus*	Yellow wattled lapwing	LC/Sch-IV
38	Laridae	*Sterna aurantia*	River tern	LC/Sch-IV
39	Rallidae	*Amauromis phoenicurus*	White breasted water hen	LC/Sch-IV
40	Rallidae	*Porphyrio porphyrio*	Purple Moorhen	LC/Sch-IV
41	Rallidae	*Fulica atra*	Coot	LC/Sch-IV
42	Scolopacidae	*Tringa totanus*	Red shank	LC/Sch-IV
43	Scolopacidae	*Numenius arquata*	Curlew	LC/Sch-IV
44	Recurvirostridae	*Himantopus*	Black winged stilt	LC/Sch-IV
45	Recurvirostridae	*Recurvirostra avosetta*	Pied Avocet	LC/Sch-IV
46	Columbidae	*Columba livia*	Blue rock pigeon	LC/Sch-IV
47	Cuvulidae	*Centropus sinensis*	Greater Coucal	LC/Sch-IV
48	Megalaimidae	*Megalaima asiatica*	Blue throated barbet	LC/Sch-IV
49	Tytonidae	*Tyto alba*	Barn Owl	LC/Sch-IV
50	Apodidae	*Apus affinis*	House/Little Swift	LC/Sch-IV
51	Alcedinidae	*Halcyon smyrnensis*	White Throated kingfisher	LC/Sch-IV
52	Alcedinidae	*Alcedo atthis*	Small blue kingfisher	LC/Sch-IV
53	Motacillidae	*Motacilla flava*	Yellow wagtail	LC/Sch-IV
54	Cuculidae	*Cuculus varius*	Common Hawk-cuckoo	LC/Sch-IV
55	Strigidae	*Athene brama*	Spotted owlet	LC/Sch-IV
56	Laniidae	*Lanius schach*	Ling tailed shrike	LC/Sch-IV

Sr. No.	Name of Family	Name of Species	Local Name	IUCN Category/ Shc. of WLPA, 1972
57	Oriolidae	*Oriolus xanthornus*	Blackheaded oriole	LC/Sch-IV
58	Paridae	*Parus major*	Gray tit	LC/Sch-IV
59	Campephagidae	*Coracina melanoptera*	Large Cuckoo-Shrike	LC/Sch-IV
60	Chloropseidae	*Chloropsis aurifrons*	Chloropsis	LC/Sch-IV
61	Aegithinidae	*Aegithina tiphia*	Common ora	LC/Sch-IV
62	Pycnonotidae	*Pycnonotus cafer*	Redvented bulbul	LC/Sch-IV
63	Timalidae	*Chrysomma sinense*	Yellow eyed babbler	LC/Sch-IV
64	Timalidae	*Turdoides caudatus*	Common babbler	LC/Sch-IV
65	Monarchidae	*Terpsiphone paradisi*	Paradise flycatcher	LC/Sch-IV
66	Riphiduridae	*Rhipidura albicollis*	Fantail flycatcher	LC/Sch-IV
67	Sylviidae	*Ortotomus sutorius*	Tailor bird	LC/Sch-IV
68	Muscicapidae	*Copsychus saularis*	Magpie robin	LC/Sch-IV
69	Muscicapidae	*Saxicoloides fulicata*	Indian robin	LC/Sch-IV
70	Motacillidae	*Motacilla caspica*	Gray wagtail	LC/Sch-IV
71	Nectariniidae	*Nectarinia asiatica*	Purple-rumped sunbird	LC/Sch-IV
72	Ploceidae	*Ploceus phillipinus*	Baya weaver bird	LC/Sch-IV
73	Passeridae	*Passer domesticus*	House sparrow	LC/Sch-IV
74	Jacanidae	*Hydrophasianus chirurgus*	Pheasant tailed jacana	LC/Sch-IV
75	Jacanidae	*Metopiius indicus*	Bronze winged jacana	LC/Sch-IV
76	Burhinidae	*Burhinus oedicnemus*	Stone curlew	LC/Sch-IV
77	Accipitridae	*Accipiter badius*	Shikra	LC/Sch-IV
78	Columbidae	*Sterptopelia decaocto*	Ringed dove	LC/Sch-IV
79	Sturnidae	*Psturnus roseus*	Rosy pastor	LC/Sch-IV
80	Threskiornithidae	*Platalea leucorodia*	Spoonbill	LC/Sch-IV
81	Phalacrocoracidae	*Phalacrocorax niger*	Little Cormorant	LC/Sch-IV
82	Ardeidae	*Egretta gularis*	Indian reef heron	LC/Sch-IV
83	Ardeidae	*Ardea cinerea*	Gray Heron	LC/Sch-IV
84	Ardeidae	*Ardeola graji*	Paddy bird	LC/Sch-IV
85	Ardeidae	*Nycticorax nycticorax*	Night Heron	LC/Sch-IV
86	Threskiornithidae	*Pseudibis papillosa*	Black Ibis	LC/Sch-IV
87	Ciconiidae	*Anastomus oscitans*	Open-billed stork	LC/Sch-IV
88	Podicipedidae	*Podiceps ruficollis*	Dabchick	LC/Sch-IV
89	Anatidae	*Sarkidiomis melanotos*	Comb duck/Nakta	LC/Sch-IV
90	Anatidae	*Tadorna ferruginae*	Brahming Duck	LC/Sch-IV
91	Anatidae	*Anas crecca*	Common Teal	LC/Sch-IV
92	Anatidae	*Anas platyrhynchos*	Mallard	LC/Sch-IV
93	Accipitridae	*Haliastur indus*	Brahminy kite	LC/Sch-IV
Mammals				
94	Pteropodidae	*Pteropus giganteus*	Indian Flying fox	LC/-
95	Pteropodidae	*Cynopterus sphinx*	Short-nosed fruit bat	LC/Sch V
96	Soricidae	*Suncus murinus*	Grey musk shrew/Chen	LC
97	Vespertilionidae	*Pipistrellus coromandra*	Indian Pipistrelle house bat	LC/-
98	Muridae	*Mus musculus*	Common house mouse	LC/Sch V
99	Muridae	*Bandicota indica*	Bandicoot Rat	LC/Sch V
100	Herpestidae	*Herpestes edwardsi*	Common Mongoose	LC/Sch-II
101	Leporidae	*Lepus nigricollis*	Hare	LC/Sch-IV
10	Herpestidae	*Herpestes vitticollis*	Small Indian mongoose	LC/Sch-II

Sr. No.	Name of Family	Name of Species	Local Name	IUCN Category/ Shc. of WLPA, 1972
2				
103	Canidae	*Vulpes bengalensis*	Indian fox	LC/Sch-II
104	Muridae	*Vandeleuria oleracea*	Long tailed tree mouse	LC/Sch V
105	Muridae	*Mus booduga*	Indian field mouse	LC/Sch V
106	Sciuridae	*Funambulus pennantii*	Five striped palm Squirrel	LC/Sch-IV
107	Felidae#	*Panthera Pardus*#	Dipado, Leopard#	VU/Sch-I

Note:
Vulnerable (VU) - High risk of endangerment in the wild
Least Concern (LC) - Lowest risk. Does not qualify for more at risk category. Widespread & abundant taxa are included in this category
Critically Endangered (CR)- Nearly Threatened (NT) - Moderate Risk. may be considered threatened with extinction in the near future, although it does not currently qualify for the threatened status
* endemic to westernghat, # Sighting Reported by only few villagers

(Source: Primary survey done by FAE (EB), Precitech Laboratories Pvt. Ltd.)

Phytoplankton:

The following phytoplankton were observed during the study period.

- **Bacillariophyceae:** Navicula sp., Nitzschia sp., Achnanthes sp., Amphora sp., Amphiprora sp. Cocconeis sp., Amphicocconeis Sp., Cymbella sp., Gomphonema sp., Gyrosigma sp., Pleurosigma sp., Eunotia sp., Caloneis sp.
- **Fragilariophyceae:** Fragilaria sp., Tabellaria sp., Psammodiscus nitidus (Marine), Asterionella sp. Asterionella sp., Diatoma sp., Thallasionema sp.(Estuary),
- **Mediophyceae:** Biddulphia sp., Chaetoceros sp., Cyclotella sp., Skeletonema sp., Thalassiosira sp. (Marine),
- **Coscinodiscophyceae:** Coscinodiscus sp.
- **Cyanophyceae:** Oscillatoria sp., Anabaena sp. (Estuary), Spirulina sp. (Marine) and Microcystis sp. **Chlorophyceae:** Hydrodictyon sp., Oedogonium sp., Pandorina sp., Pediastrum sp., Scenedesmus sp., Ankistrodesmus sp. and Volvox sp.
- **Conjugatophyceae:** Spirogyra sp., Cosmarium sp., Closterium sp.
- **Ulvophyceae:** Ulothrix sp.
- **Euglenophyceae:** Euglena sp.
- **Phaeophyceae:** Mesogloia sp.(Marine)
- **Trebouxiophyceae:** Chlorella sp.

Zooplankton:

Following are the zooplankton observed in the samples collected during the study.

- **Protozoa:** Amoeba, Arcella, Globigerina, Polystomella and Vorticella
- **Rotifera:** Brachionus sp., Keratella sp. and Rotaria sp.
- **Cladocerans:** Bosmina sp., Daphnia sp and Moina species.
- **Copepoda:** Calanus sp., Diaptomus sp., Mesocyclops sp., Eucalanus sp. and Pseudodiaptomus sp.
- **Chaetognatha:** Sagitta.
- **Larval forms:** Brachyuran larvae, Decapod larvae, Metanauplis, Nauplis, Polychaete larvae, fish larvae and eggs and insect larvae.

Fishes:

The fishes observed from the fish catch done by local fishermen in the riverine & marine regions within the study area are as below:

- Prawns, Lobster, White Pomfret, Black Pomfret, Bombay Duck, Thread Fin, Jew Fish, Hilsa, Golden Anchovy, Ray fish, Mackerels, Clupeids, Coilia, Cocup, Leather skin, Croakers, Indian Threadfins, Shark, Mullet, Catfish, Eel, Seer Fish, Indian Salmon, Ribbon Fish, Silver Bar, Perch, Small Scieneidies, Shrimp, Crab, Levta (mud skipper), Cuttle fish and Squids
- Catla catla, Labeo rohita, Cirrhinus mrigala, Labeo bata, L. ariza, L. gonius, Tor tor., Clarius batrachus, Wallago Attu.

Annexure 8: Wildlife Conservation Plan

As observed and described in the baseline ecological status in chapter 3, following important wildlife species are observed:

1. Panthera paradus- Leopard (IUCN Status: Vulnerable / WLA Status: Sch-I)
2. *Pavo cristatus*- Common Peafowl (Least Concern /Sch-I)
3. V*arnus bengalensis*- Common Indian monitor (Least Concern /Sch-I)
4. Indirana leithii - Leith's Frog (Vulnerable, Endemic to Western Ghat)

These five species requires special effort for the conservation and systematic approaches. Considering this, a wildlife conservation plan has been formulated along with the necessary details of these species. The details are described in subsequent sections.

1. INFORMATION ABOUT SPECIES:

A. *Panthera pardus (Leopard, Dipado)*

TAXONOMY:

Kingdom	Phylum	Class	Order	Family
Animalia	Chordata	Mammalia	Carnivora	Felidae

IUCN STATUS: Vulnerable

Red List Category & Criteria:	Vulnerable A2cd ver 3.1
Year Published:	2016
Date Assessed:	2015-07-11

WILDLIFE PROTECTION ACT SCHEDULE: Schedule I

DESCRIPTION

Indian leopard (Panthera pardus fusca) is a leopard subspecies widely distributed on the Indian subcontinent. The species Panthera pardus is listed as Vulnerable on the IUCN Red List because populations have declined following habitat loss and fragmentation, poaching for the illegal trade of skins and body parts, and persecution due to conflict situations.

The Indian leopard is one of the five big cats found in India, apart from the Asiatic lion, the Bengal tiger, the snow leopard and the clouded leopard.
In 2014, a national census of leopards around tiger habitats was carried out in India except the northeast. 7,910 individuals were estimated in surveyed areas and a national total of 12,000-14,000 speculated.

Habitat Types and Range
Leopards occur in the widest range of habitats among any of the Old World Cats (Nowell and Jackson 1996). They are found in the desert and semi-desert regions of southern Africa in Namibia and Botswana. There are remnant populations in the arid regions of North Africa in Egypt, as well as the Arabian Peninsula. They persist in rugged montane regions of southwest Asia in Iran, in a varied range of landscapes in India and in the savanna grasslands of East and southern Africa. Leopards live in mountainous environments up to an altitude of 4,600 m on Mt. Kenya and 5,200 m in the Himalayas. They also thrive in the rainforests of West and Central Africa as well as Sri Lanka and southeast Asia. A remnant Leopard subpopulation also persists in the snowy regions of the Russian Far-East. Leopard subpopulations also occur in suburban and urban environments in India and parts of sub-Saharan Africa.
Leopards have survived outside protected areas in many parts of India since historical times (Daniel 1999) and even today high density of Leopards do occur among high human densities (Singh 2005, Athreya et al. 2013), although associated levels of conflict can also be high (Athreya et al. 2011). Occupancy survey found that Leopards occupied 174,066 km² of forest habitat in India (Jhalla et al. 2008). Despite widespread occurrence they are killed in very large numbers in India (Raza et al. 2012b).
Leopards prefer to hunt in areas that provide sufficient cover despite higher prey densities elsewhere when sympatric with larger competitors (Balme et al. 2006).

The known range of the Indian Leopard has increased compared to the previous assessment, but this is likely due to more intensive surveys conducted in previously unstudied wild and suburban environments. Poaching for wildlife trade is an increasing threat to Indian Leopards (Datta et al. 2008). For example, Raza et al. (2012b) estimated that four Leopards per week have been poached for illegal wildlife trade over the previous 10 years. Additionally, high conflict is reported in some areas resulting in lethal control of problem individuals (Athreya et al. 2013). Continuous decreases in wild prey are negatively impacting Leopard numbers in some regions (Datta et al. 2008, Selvan et al. 2014), indicating Leopard populations may decline in the future. Moreover, even in well protected areas, the recovery of Tiger numbers often results in lower Leopard numbers (Harihar et al. 2011, Mondal et al. 2012), as Tigers are known to kill and displace Leopards (McDougal 1988, Odden et al. 2010). The first ever scientific national census of Leopards around Tiger habitats in India (except the northeast) in 2014 estimated 7,910 individuals, with a speculated national total of 12,000-14,000 (Bhattacharya 2015). A full assessment is recommended for P. p. fusca, as it may potentially qualify as Vulnerable due to a suspected declining population containing fewer than 10,000 mature individuals.
Leopard home range size varies with prey availability and habitat structure. Leopards have the largest ranges within arid and semi-arid environs where prey density is low. The largest recorded Leopard ranges include the Central Kalahari (mean = 2,182 km², Bothma et al. 1997). The smallest recorded ranges correspond to rainforest habitats in south and southeast Asia. In Thailand, Grassman (1999) recorded home ranges as small as 8.8 km² for a female and an average 17.7 km² for two adult males. In India three collared Leopards in human dominated landscapes exhibited home range sizes between 8 to 15 km² (Odden et al. 2014).
Diet
Leopard diet is related to prey availability and presence of larger competitors. Generally, Leopards prefer medium-sized ungulate prey (10- 40 kgs) where available (Hayward et al. 2006). They have a highly varied diet, however, feeding on insects, reptiles, birds and small mammals up to large

ungulates. Though the Leopard as a species has the reputation of being a generalist, often individuals will become adept specialists for a particular prey item. These individuals will feed almost exclusively on that prey, occasionally supplementing their diet with other food items when necessary. Where competitors are present Leopards will cache their kills under thick vegetation or hoist their prey into the limbs of a tree. Hoisting behaviour is more often recorded where intraguild competitors density is higher. Male Leopards tend to hoist more often than females, particularly in the dry season when available ground cover is scarce (Stein et al. in press). In the absence of larger competitors, leopards feed on larger prey (Ramakrishnan et al. 1999, Hayward et al. 2006).
In many parts of its range, the importance of domestic animals in their diet is also evident with dogs, goats and cattle forming a large proportion of their diet (Mukherjee et al. 2001) sometimes even dominating the prey items in the diet (Athreya et al. 2014, Shehzad et al. 2014). Dogs have been reported as important prey for Leopards (Edgaonkar and Chellam 2002, Athreya et al. 2014). Overall studies on diet of Leopards are very scant across its Asian range.

MAJOR THREAT(S):
The primary threats to Leopards are anthropogenic. Habitat fragmentation, reduced prey base and conflict with livestock and game farming have reduced Leopard populations throughout most of their range (Nowell and Jackson 1996, Ray et al. 2005, Hunter et al. 2013). The conversion of forest habitats and savanna systems to agriculture, livestock farming and urban sprawl have significantly reduced Leopard range. Though exceptions exist (Athreya et al. 2013), this conversion typically leads to the depletion of natural prey species through poaching thereby reducing the natural prey base in these areas.
Where livestock and game farms have been created, Leopards may feed on these commercially valuable prey causing conflicts with farmers. These farmers may be intolerant to Leopard conflict and kill the Leopards for real or perceived threats to their lives and livelihoods (Stein et al. 2010, Athreya et al. 2011). Recent reports from northern Iraq suggest unsustainable levels of Leopard removal (Raza et al. 2012b).
Leopards are also targets for trophy hunting. If poorly managed, trophy hunting can be detrimental to the population, especially when permits are focused in one geographic area and targeted individuals are in their prime, territorial, reproductively active (Balme et al. 2010). Leopard trophy hunting has been reviewed or closed in Namibia, Botswana, and Zambia within the last five years.
In Indo-Malaya and China, Leopards require better protection from illegal trade in skins and bones (Nowell 2007) and recent reports estimate very high levels of Leopard removal at four individuals per week for 10 years (Raza et al. 2012b). Leopards are also killed for their skins in traditional ceremonies and other parts for medicinal use in eastern cultures. These trades can have a substantial impact on local Leopard populations.
In the face of changing land-use, prey availability and direct mortality from humans, Leopards have persisted where other large predators have not. Their ability to live within human-dominated landscapes and feed on a variety of prey have given many people the impression that Leopards require little concern, however, recent trends have shown that current threats have substantially reduced Leopard populations throughout West and Central Africa, South-west and South-east Asia and China.

B. *Pavo cristatus (Common Peafowl, Peacock, Mor)*

TAXONOMY:

Kingdom	Phylum	Class	Order	Family
Animalia	Chordata	Aves	Galliformes	Phasianidae

IUCN STATUS: Least Concern

Red List Category & Criteria:	Least Concern ver 3.1
Year Published:	2016
Date Assessed:	2016-10-01

WILDLIFE PROTECTION ACT SCHEDULE: Schedule I

DESCRIPTION

The Indian peafowl or blue peafowl (Pavo cristatus), a large and brightly coloured bird, is a species of peafowl native to South Asia, but introduced in many other parts of the world.

The male peafowl is predominantly blue with a fan-like crest of spatula-tipped wire-like feathers and is best known for the long train made up of elongated upper-tail covert feathers which bear colourful eyespots. These stiff feathers are raised into a fan and quivered in a display during courtship. Females lack the train, and have a greenish lower neck and duller brown plumage. The Indian peafowl lives mainly on the ground in open forest or on land under cultivation where they forage for berries, grains but also prey on snakes, lizards, and small rodents. Their loud calls make them easy to detect, and in forest areas often indicate the presence of a predator such as a tiger. They forage on the ground in small groups and usually try to escape on foot through undergrowth and avoid flying, though they fly into tall trees to roost.

The function of the peacock's elaborate train has been debated for over a century. In the 19th century, Charles Darwin found it a puzzle, hard to explain through ordinary natural selection. His later explanation, sexual selection, is widely but not universally accepted. In

the 20th century, Amotz Zahavi argued that the train was a handicap, and that males were honestly signalling their fitness in proportion to the splendour of their trains. Despite extensive study, opinions remain divided on the mechanisms involved.
The bird is celebrated in Indian and Greek mythology and is the national bird of India. The Indian peafowl is listed as of Least Concern by the International Union for Conservation of Nature (IUCN).

Distribution & Habitat
The Indian peafowl is a resident breeder across the Indian subcontinent and is found in the drier lowland areas of Sri Lanka. In South Asia, it is found mainly below an altitude of 1,800 metres (1.1 mi) and in rare cases seen at about 2,000 metres (1.2 mi). It is found in moist and dry-deciduous forests, but can adapt to live in cultivated regions and around human habitations and is usually found where water is available. In many parts of northern India, they are protected by religious practices and will forage around villages and towns for scraps. Some have suggested that the peacock was introduced into Europe by Alexander the Great, while others say the bird had reached Athens by 450 BCE and may have been introduced even earlier. It has since been introduced in many other parts of the world and has become feral in some areas.
Besides its native habitat, the bird has been introduced by humans to the United States, Mexico, Honduras, Colombia, Guyana, Suriname, Brazil, Uruguay, Argentina, South Africa, Portugal, Madagascar, Mauritius, Réunion, Indonesia, Papua New Guinea, Australia, Croatia (Split, island of Lokrum), and elsewhere. In isolated cases, the Indian peafowl has been known to be able to adapt to harsher climates, such as those of northern Canada. The species has been spotted as far north as Schomberg, Ontario, thriving in its newly adapted northern climate.

Range & Population
This species has an extremely large range, and hence does not approach the thresholds for Vulnerable under the range size criterion (Extent of Occurrence <20,000 km2 combined with a declining or fluctuating range size, habitat extent/quality, or population size and a small number of locations or severe fragmentation). The population trend appears to be stable, and hence the species does not approach the thresholds for Vulnerable under the population trend criterion (>30% decline over ten years or three generations). The population size has not been quantified, but it is not believed to approach the thresholds for Vulnerable under the population size criterion (<10,000 mature individuals with a continuing decline estimated to be >10% in ten years or three generations, or with a specified population structure). For these reasons the species is evaluated as Least Concern.
The global population size has not been quantified, but the species is reported to be common to locally very common (del Hoyo et al. 1994). National population sizes have been estimated at c.100-10,000 introduced breeding pairs in Taiwan and c.100-10,000 introduced breeding pairs in Japan (Brazil 2009).
The population is suspected to be stable in the absence of evidence for any declines or substantial threats. The species is considered sacred throughout much of its range and therefore is not persecuted. The species is common throughout much of its range and exists in a large number of degraded and man-made habitats as well as around villages and towns (del Hoyo et al. 1994).
The species found:

Native: Bangladesh; Bhutan; India; Nepal; Pakistan; Sri Lanka

Introduced: Australia; Bahamas; New Zealand; United States (Hawaiian Is.)

Food:

Peafowl are omnivorous and eat seeds, insects, fruits, small mammals and reptiles. They feed on small snakes but keep their distance from larger ones. In the Gir forest of Gujarat, a large percentage of their food is made up of the fallen berries of Zizyphus. Around cultivated areas, peafowl feed on a wide range of crops such as groundnut, tomato, paddy, chili and even bananas. Around human habitations, they feed on a variety of food scraps and even human excreta. In the countryside, it is particularly partial to crops and garden plants.

COMMON THREAT(S):

Pavo cristatus (Common Peafowl, Peacock, Mor) faces threats due to reducing farmlands, increasing area of uncultivated land & Poaching for Food & Feathers.

C. Varanus bengalensis (Common Indian Monitor, Goi)

TAXONOMY:

Kingdom	Phylum	Class	Order	Family
Animalia	Chordata	Reptilia	Squamata	Varanidae

IUCN STATUS: Least Concern

Red List Category & Criteria:	Least Concern ver 3.1
Year Published:	2010
Date Assessed:	2009-06-30

WILDLIFE PROTECTION ACT SCHEDULE: Schedule I

DESCRIPTION

The Bengal monitor (Varanus bengalensis) or common Indian monitor, is a monitor lizard found widely distributed over the Indian Subcontinent, as well as parts of Southeast Asia and West Asia. This large lizard is mainly terrestrial, and its length can range from about 61 to 175 cm from the tip of the snout to the end of the tail. Young monitors may be more arboreal, but adults mainly hunt on the ground, preying mainly on arthropods, but also taking small terrestrial vertebrates, ground birds, eggs and fish. Although large monitors have few predators apart from humans who hunt them for meat, younger individuals are hunted by many predators.

Distribution and Habitat

This species is found in a variety of habitats, from desert areas to floodplains, scrubland to forests, at moderate elevations (Auffenberg 1994, Pianka 2004). It can also inhabit agricultural areas (Auffenberg 1994).

The species ranges from Iran to Java, among the most widely distributed of varanid lizards. It is found in river valleys in eastern Iran, Afghanistan, India, Nepal, Sri Lanka, Bangladesh and Burma. The subspecies Varanus bengalensis nebulosus, the clouded monitor, occurs in southern Burma, Vietnam, Cambodia, Thailand, Malaysia, Sumatra, Java and the Sunda Islands. They have not been confirmed on Sumatra, and have been found to be absent from the Andaman Islands.

The species is distributed mainly in the lower elevations, and is found both in dry semiarid desert habitats to moist forest. They are often found in agricultural areas, and are mainly found below 1500m altitude.

Food

Bengal monitor tend to active whole day with different activities including feeding. Large adults may ascend vertical tree trunks, where they sometimes stalk and capture roosting bats. Their normal prey consists of beetles, grubs, orthopterans, scorpions, snails, ants and other invertebrates. Vertebrate prey is comparatively rare, and includes frogs, fish, lizards, snakes and rodents. Bengal monitors are also scavengers. They sometimes feed on dead animals. In areas where livestock are common, they often visit dung, where they forage for beetles and other insects.

Range Description:

This wide ranging Varanid is found from southeastern Iran, through south central Asia (ranging from Afghanistan in the north as far south as Sri Lanka) and eastwards throughout Southeast Asia, as far as Java and the Anambas Islands in Indonesia. However, in the last century, this species has been exterminated from parts of Sri Lanka, India and Bangladesh. Although there are some old specimens purportedly from Sumatra, no recent records seem to exist (e.g. Auffenberg 1994). This species has an upper limit of 1,500 m above sea level.

Native: Afghanistan; Bangladesh; Cambodia; China; India; Indonesia (Jawa, Sumatera); Iran, Islamic Republic of; Lao People's Democratic Republic; Malaysia; Myanmar; Nepal; Pakistan; Sri Lanka; Thailand; Viet Nam

Population:

In some agricultural areas, this species has been found to be common (Auffenberg 1989). Density estimates varied greatly between different habitats in northern India and Pakistan, from an average of two individuals per km² recorded on the edge of a seasonally flooded evaporation basin in Rajasthan to just under 40 individuals on average per km² in marsh habitat in Pakistan (Auffenberg 1994). Various techniques were used to derive these estimates, so that the numbers are not directly comparable (Auffenberg 1994). Densities were also found to be relatively high in agricultural habitats, from around 14 to 30 individuals per km² (Auffenberg 1994). In the more arid parts of its range it probably occurs at reasonably low densities. Although present on Java, the species is reportedly very scarce and localized (S. Sweet pers. comm.).

MAJOR THREAT(S):

This species is possibly threatened by habitat destruction, however, as it can utilize a wide range of habitat types this is not considered a major threat at this time. This species is indirectly affected by pesticides which reduce the food resource availability in agricultural areas. However, perhaps the greatest threat to this species is hunting as it is hunted

commercially for its skin, and its meat is commonly eaten. The fat of this species is also used in traditional medicine. In Iran, it is killed by people who mistakenly consider it to be dangerous; it is not hunted for food or skins in that country.

D. Indirana lethii (Leith's Frog)

TAXONOMY:

Kingdom	Phylum	Class	Order	Family
Animalia	Chordata	Amphibia	Anura	Ranixalidae

IUCN STATUS: Vulnerable

Red List Category & Criteria:	Vulnerable B1ab(iii) ver 3.1
Year Published:	2004
Date Assessed:	2004-04-30

Listed as Vulnerable because its Extent of Occurrence is less than 20,000 km2, its distribution is severely fragmented, and there is continuing decline in the extent and quality of its forest habitat in the Western Ghats of Maharastra State in India.

DESCRIPTION

Leith's leaping frog or Matheran Indian frog (Indirana leithii) is a species of frog found in the Western Ghats of India. Indirana leithii is a terrestrial species associated with leaf-litter of moist, tropical, semi-evergreen forest, including degraded forests.

This taxon is known with certainty only from the Western Ghats of Maharashtra State in India. All additional records are believed to refer to other taxa. Further taxonomic studies are needed to clarify the precise identity of specimens currently assigned to this species collected outside Maharashtra State. It has an altitudinal range of 400-1,200m asl.

Vomerine teeth in two oblique groups just behind the level of the choanae. A free, pointed papilla on the middle of the tongue. Head moderate; snout obtuse, with obtuse canthus rostralis and concM e loreal region; nostril nearer to the end of the snout than to the eye; interorbital space a little narrower than the upper eyelid- tympanum distinct, two thirds the diameter of the eye. Fingers moderate, first not extending quite as for as second; toes two-thirds webbed, the web reaching the disks of the third and fifth toes; tips of fingers and toes dilated into small but well-developed disks; subarticular tubercles moderate; a single, small, oval inner metatarsal tubercle; no tarsal fold. The tibio-tarsal articulation reaches halfway between the eye and the end of the snout. Skin of back with small

scattered longitudinal warts; a strong fold from the eye to the shoulder. Brown above, with small dark spots; limbs with dark transverse bands; lower parts white, throat mottled with brown. From snout to vent 1.25 inches.

Habitat and Ecology:
It is a terrestrial species associated with leaf-litter of moist, tropical, semi-evergreen forest. It is also found in degraded forest. Breeding takes place on wet rocks, and the larvae are found on moist surfaces next to streams.

MAJOR THREAT(S):
It is mostly threatened by the conversion of forested land to intensive agricultural use. Harvesting of wood for subsistence use by local people and road construction are also threats. The type locality (Matheran) is threatened by tourism development.

2. WILDLIFE PROTECTION & CONSERVATION ACTIONS:

The following actions for wildlife protection & conservation shall be taken by RIL (SMD).

A. Key Actions For Project Site:

- Proper & efficient implementation of mitigation measures & EMP suggested for Air, Water & Noise environment.
- Regular monitoring of stack Emission & Ambient air quality to be carried out as per monitoring plan.
- Greenbelt development & compensatory afforestation. RIL, SMD has already developed a matured greenbelt around its premises. Same activity shall be continued further to strengthen greenbelt.
- RIL, SMD shall ensure that whenever protected common species is observed in premises, they will carefully shift them out of impact prone areas.
- RIL, SMD shall ensure that whenever any wild life species is found in vicinity of premises, they will call concern authority/party and forest department to get them back in their forest habitat.
- RIL, SMD shall ensure that all necessary measures for prevention of environmental pollution is provided and working efficiently to ensure that there is no harmful effects on protected species of the area.
- RIL, SMD shall contribute in the wild life protection activities carried out by forest department, wild life warden and any other NOG/organisation.
- RIL, SMD shall conduct awareness program in local area for wild life conservation & protection.

B. Offsite Actions For Wildlife Protection & Conservation:

Generic Actions:

1. Formation of eco-development committees through active participation of all segments of society in planning and decision making.
2. Participatory Rural Appraisal (PRA) technique is to be adopted for mutual interactions and reciprocal arrangements between the protected area management and people.
3. Adoption of simplified Micro-plan format. This will help in incorporating the PRA results in an easier way. Micro-plan should have clear information on objectives, Conservation activities, mutual obligations, approved investments, schedule, monitoring and evaluation mechanisms, indicators of success etc.

4. Women, tribal, scheduled castes, back ward castes, peoples from Panchayat and NGOs should be encouraged to contribute in the formulation of plan and decision making. This will enhance the success probability in a big way.
5. Establishment of Anti-Poaching Camps in and around WLS in association with Chief Wild Life Warden of DNH WLS as well as Forest Department of DNH.
6. In association with the concern authorities as mentioned in above point, proper Signages & Boards shall be provided in order to improve the information available to local people, visitors etc. The following activities are suggested:
    a. Proper signage to be put inside the forest area to give details of the flora, fauna, historical sites, details of medical plants, maps to show WLS & Forest Area etc.
    b. Hoarding to be put up on the high ways for the publicity of camping sites and other conservation action facility.
    c. Displaying DO's and Don'ts at various locations, camp sites etc.
    d. Public Awareness & Publicity activities as described in subsequent section.

Public Awareness & Publicity:

- The whole task of management will be rendered easy if the local people are made aware about the significance of wildlife and bio-diversity conservation. So regular conservation education programmes should be taken up for the people in and around the sanctuary.
- Organizing experience sharing workshop and use of mass media. Organization of environmental/ awareness camps for sensitization of students, public servants, political leaders, media personnel etc.
- Nature education camps for students and teachers of schools and colleges and for the local population for exposure about forests and WLS
- Workshops for local community leaders like members of gram panchayat, Nagar panchayat and Zilla panchayat and other elected representatives.
- Publishing & Circulation of posters, handbills, pamphlets, brochures etc. Such documents shall include Do's & Don't's as described below:

  Do's :

  1. Allow the flora and fauna to flourish in its natural environment
  2. The use of polythene and plastics is unhealthy for the environment. Kindly use only if necessary.
  3. Carry away all non-degradable litter-empty bottles, tins, polythene bags etc. and throw them in municipal dustbins only, so that they can be disposed off properly.
  4. Observe the sanctity of holy sites. In case of any offerings, contact the staff of the temple committee only.
  5. When taking photographs, respect privacy; ask for prior permission and use restraint
  6. In case temporary toilets are set up near campsites, after defecation, cover with mud or sand. Ensure that the spot is at least 50 mtrs. from a water source.

  Don'ts :

  1. Do not taking away cuttings, seeds and roots etc.
  2. Avoid using pollutants, such as detergent, in streams or springs.
  3. Do not use wood as fuel to cook food at the camp site and do not destroy the forest wealth of the Western Ghats which are our heritage.

4. Do not leave smoldering cigarettes or make open fires in the forests. Do not consume alcohol, drugs or any other intoxicant.
5. Do not tempt the local children by offering them foodstuff or sweets. Respect local traditions.
6. Do not listen to radios, tape recorders or any other electronic entertainment equipment at high volume to avoid noise pollution.

Annexure-9: Socio-Economic Details

Table 1: Status of Demographic indicators in Project Area

Village/Town	Population	Area in Km	Pop_den_ (sqkm)	Sex_ ratio	Sex_ ratio (0-6)	% of SC Pop	% of ST Pop	Total Liter_rate	Fem_Lit_Rate	Work_Pra_rate	%Main_Work	%Marg_Work
Pali Karambeli	2356	3.19	738	926	79	10	53	78	82	58	99	1
Kalai	3191	0.95	3373	949	95	3	24	72	74	39	87	13
Mohan	6225	0.67	9320	970	85	4	80	76	80	49	81	19
Pali	2241	17.13	131	983	85	0	87	65	63	38	96	4
Punat	2621	0.27	9646	998	99	1	94	72	72	41	90	10
Jamburi	1868	1.99	938	996	103	6	84	70	72	40	86	14
Fansa	14459	0.32	44862	974	88	6	38	76	81	42	79	21
Eklahare	1696	0.52	3239	906	86	9	86	82	86	44	82	18
Nahuli	1644	2.97	554	962	84	0	80	75	76	40	97	3
Valwada	3922	0.18	21837	922	83	5	56	74	78	44	89	11
Kalgam	10687	6.32	1690	1003	88	5	56	76	80	42	87	13
Achchhari	2047	1.47	1393	924	101	0	73	69	69	38	94	6
Bhathi Karambeli	2056	0.17	12132	1070	99	0	88	66	66	41	82	18
Angam	2477	1.61	1540	975	73	3	85	60	58	46	84	16
Boralai	3193	1.37	2330	928	81	0	95	60	58	51	63	37
Borigam	3233	3.68	879	991	98	1	85	74	73	38	82	18
Maroli	15678	0.22	72468	953	89	6	40	73	73	36	93	7
Sarigam (CT)	19903	31.12	640	819	93	4	36	70	73	42	92	8
Sarigam (INA)	925	5.09	182	629	83	3	1	76	81	47	98	2
Manda	6022	0.50	12044	1007	101	1	88	58	57	42	90	10
Bhilad (CT)	9022	7.47	1208	878	96	2	49	71	74	36	92	8
Sarai	2391	2.96	808	960	84	0	91	62	57	42	82	18
Dhanoli	2826	0.34	8383	985	86	2	78	59	59	34	85	15
Tadgam	2514	0.56	4480	923	97	16	35	76	79	48	66	34
Mamakwada	1515	2.94	516	932	82	0	83	72	71	43	90	10
Daheli (CT)	10475	9.61	1090	941	91	1	56	66	70	35	96	4
Talwada	1223	0.78	1563	1021	131	0	96	54	53	42	84	16
Seronda	2978	4.26	698	1014	91	7	77	69	68	42	94	6
Manekpur	2919	0.56	5188	992	85	1	89	54	52	32	90	10
Zaroli	5469	0.75	7255	993	96	2	87	63	62	37	89	11
Nagwas	1743	0.62	2811	1006	113	0	99	62	58	53	52	48
Ahu	1490	1.43	1041	987	82	10	75	64	65	49	96	4

Village/Town	Population	Area in Km	Pop_den_ (sqkm)	Sex_ ratio	Sex_ ratio (0-6)	% of SC Pop	% of ST Pop	Total Liter_rate	Fem_Lit_Rate	Work_Pra_rate	%Main_Work	%Marg_Work
Khattalwada	21036	1.55	13552	996	97	8	38	63	64	37	89	11
Malav	2788	0.80	3497	989	99	0	98	56	54	46	83	17
Vankas	2472	0.16	15005	945	94	0	98	67	65	51	85	15
Nandigam	1971	2.21	893	1053	104	0	97	56	56	42	72	28
Tumb	3539	2.03	1740	1030	102	1	89	48	46	29	87	13
Ghimsa Kankariya	1832	0.66	2780	966	81	0	51	62	65	31	85	15
Karanj	4255	10.37	410	963	115	7	66	24	22	76	67	41
Namdha	1938	0.46	4169	871	84	3	64	77	76	47	81	19
Vapi (M)	163630	1.91	85670	739	86	2	7	77	84	41	93	7
Chandor	2389	1.91	1251	966	77	4	75	73	74	41	91	9
Vapi (INA)	34162	9.31	3669	882	85	3	2	84	93	33	92	8
Chanod (CT)	18776	3.05	6156	739	87	1	7	78	88	39	94	6
Achchhad	2770	0.99	2798	1044	92	0	80	54	53	38	76	24
Dhapsa	444	2.17	205	1046	110	0	80	59	62	40	75	25
Naroli (CT)	9466	12.79	740	718	85	8	30	77	81	47	92	8
Palhit	75	27.24	3	1018	60	11	39	73	69	34	91	9
Pariari	381	115.45	3	939	83	12	54	73	74	37	99	1
Daman (M Cl)	10222	51.80	197	921	91	2	6	81	87	37	96	4
Damanwada	216	53.59	4	1028	111	2	20	74	79	34	75	25
Magarwada	6735	6.60	1020	925	93	2	27	75	75	36	96	4
Bhamati	939	0.53	1772	994	96	30	57	75	81	45	69	31
Dholar	1184	0.82	1444	919	87	0	7	72	69	37	97	3
Deva Pardi	255	0.33	773	962	68	0	91	67	65	45	99	1
Naila Pardi	827	0.30	2757	928	102	0	95	72	72	54	70	30
Thana Pardi	1091	0.69	1581	859	93	22	36	80	83	53	64	36
Zari	1163	0.94	1237	786	75	0	87	79	80	59	64	36
Jampore	875	1.16	754	1049	68	0	48	71	71	36	100	0
Kachigam (CT)	13599	6.41	2122	356	92	1	6	78	76	67	97	3

Source: District Census Handbook of Daman; Dadra Nagar Havelli; Thane and Valsad district (2011)

Table 2 : Status of Demographic indicators in Project Area

Village Name	Anganwadi	Govt. Primary School	Govt. Vocational Training Centre ITI	Govt. PHC & SC	Tap Water Untreated	River & Canal	Total Sanitation Campaign	Telephone / Mobile	Public/Pvt mode of transportation	Metal Road	Commercial Bank	Agricu-lture Credit Society	Community Centre	Self Help Groups	Electric Power Supply
Pali Karambeli	1	1	2	2	1	1	2	1	1	1	2	2	2	1	1
Kalai	1	1	2	1	1	1	2	1	1	1	2	2	2	1	1
Mohan	1	1	2	2	1	2	2	1	1	1	2	2	2	1	1
Pali	1	1	2	1	2	2	2	1	1	1	1	1	2	1	1
Punat	2	1	2	2	1	2	2	1	1	1	1	2	1	1	1
Jamburi	1	1	2	1	1	2	2	1	1	1	1	1	1	1	1
Fansa	1	1	2	1	1	1	2	1	1	1	1	2	1	1	1
Eklahare	1	1	2	2	1	2	2	1	1	1	2	2	1	1	1
Nahuli	1	1	2	2	1	1	2	1	1	1	1	2	1	1	1
Valwada	1	1	2	2	1	2	2	1	1	1	2	2	2	1	1
Kalgam	1	1	2	2	1	1	2	1	1	1	2	2	2	1	1
Achchhari	1	1	2	1	1	2	2	1	1	1	1	1	2	1	1
Bhathi Karambeli	1	1	2	2	1	1	2	1	1	1	2	2	2	1	1
Angam	1	1	2	2	1	1	2	1	1	1	1	1	1	1	1
Boralai	1	1	2	2	1	1	2	1	1	1	2	2	2	1	1
Borigam	1	1	2	2	1	2	2	1	1	1	2	2	1	1	1
Maroli	1	1	2	2	1	1	2	1	1	1	2	2	1	1	1
Manda	1	1	2	2	1	1	2	1	1	1	2	2	2	1	1
Sarai	1	1	2	2	1	1	2	1	1	1	2	2	2	1	1
Dhanoli	1	1	2	2	1	2	2	1	1	1	2	2	1	1	1
Tadgam	1	1	2	2	1	1	2	1	1	1	2	2	2	2	1
Mamakwada	1	1	2	2	1	1	2	1	1	1	2	2	2	1	1
Talwada	1	1	2	2	1	1	2	1	1	1	2	2	1	2	1
Seronda	1	1	2	1	1	1	2	1	1	1	2	2	2	1	1
Manekpur	1	1	2	2	1	1	2	1	1	1	2	1	1	1	1
Zaroli	1	1	2	2	1	1	2	1	1	1	2	1	1	1	1
Nagwas	1	1	2	2	1	1	2	1	1	1	2	2	2	1	1
Ahu	1	1	2	2	1	1	2	1	1	1	2	2	1	1	1
Khattalwada	1	1	2	2	1	1	2	1	1	1	2	2	2	1	1

Village Name	Anganwadi	Govt. Primary School	Govt. Vocational Training Centre ITI	Govt. PHC & SC	Tap Water Untreated	River & Canal	Total Sanitation Campaign	Telephone / Mobile	Public/Pvt mode of transportation	Metal Road	Commercial Bank	Agricu-lture Credit Society	Community Centre	Self Help Groups	Electric Power Supply
Malav	1	1	2	2	1	1	2	1	1	1	2	2	2	1	1
Karanj	1	1	2	2	1	1	2	1	1	1	2	1	2	1	1
Vankas	1	1	2	2	1	1	2	1	1	1	2	2	1	2	1
Nandigam	1	1	2	2	1	2	2	1	1	1	2	2	2	1	1
Tumb	2	1	2	2	1	2	2	1	1	1	2	2	2	1	1
Ghimsa Kankariya	1	1	2	2	1	1	2	1	1	1	2	2	2	1	1
Namdha	1	1	2	2	1	1	2	1	1	1	2	2	1	1	1
Chandor	1	1	2	2	1	1	2	1	1	1	2	2	1	1	1
Palhit	1	1	2	2	2	1	1	1	1	1	2	1	1	1	1
Achchhad	1	1	2	2	2	2	1	1	1	1	1	1	1	1	1
Pariari	1	1	2	2	2	2	1	1	1	1	2	1	2	1	1
Damanwada	1	1	2	2	2	1	1	1	1	1	1	1	1	1	1
Magarwada	1	1	2	2	2	2	2	1	2	1	2	2	2	2	1
Bhamati	1	1	2	2	2	2	2	1	2	1	2	2	2	2	1
Dholar	1	2	2	2	2	2	2	1	1	1	2	2	2	2	1
Jampore	1	1	2	2	2	2	2	1	2	1	2	2	2	2	1
Deva Pardi	2	2	2	2	2	2	2	1	2	1	2	2	2	2	1
Naila Pardi	1	1	2	2	2	2	2	1	1	1	2	2	2	2	1
Thana Pardi	1	1	2	2	2	2	2	1	1	1	2	2	2	2	1
Zari	1	1	2	2	2	2	2	1	2	1	2	2	1	2	1
Dhapsa	1	1	2	2	1	1	2	1	1	1	2	2	2	2	1
Daman (M Cl)	1	1	2	2	1	1	2	1	1	1	2	2	2	2	1
Sarigam (INA)	1	1	2	1	1	2	2	1	1	1	1	1	1	1	1
Sarigam (CT)	1	1	2	1	1	2	1	1	1	1	1	1	1	1	1
Daheli (CT)	1	1	2	1	1	2	1	1	1	1	1	1	1	1	1
Vapi (M)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Vapi (INA)	1	1	2	1	1	1	2	1	1	1	1	1	1	1	1
Chanod (CT)	1	1	2	1	1	2	1	1	1	1	1	1	1	1	1
Kachigam (CT)	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1
Naroli (CT)	1	1	2	1	1	2	1	1	1	1	1	1	1	1	1

Village Name	Anganwadi	Govt. Primary School	Govt. Vocational Training Centre ITI	Govt. PHC & SC	Tap Water Untreated	River & Canal	Total Sanitation Campaign	Telephone / Mobile	Public/Pvt mode of transportation	Metal Road	Commercial Bank	Agricu-lture Credit Society	Community Centre	Self Help Groups	Electric Power Supply
Bhilad (CT)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Note: 1 Yes and 2 No Source: District Census Handbook of Daman; DNH, Thane and Valsad district (2011) verfied with village panachayat in the sample villages of the project

Village level Demand for CER Fund for 2019-20

1	Name of Village	Karambeli
	Name of Surpunch	Falguniben
	Mobile Number	7567659850

	Type of Services	Which Place	Type of Items	Total No	Unit Rate INR	Total Amt INR
1.1	Infrastructure	Village	HH toilet	40	20000	800000.00
1.2			Street Light LED Light bulb	100	1500	150000.00
1.3			Steel/Cement Benches	50	5000	250000.00
1.4	Services	School	Big Shetranji (10x10 Feet)	6	2500	15000.00
1.5			Kitchen Vessels (1 Set)			25000.00
1.6			Sports Items (1 set of 12 items)			25000.00
			Total			1265000.00

2	Name of Village	Ekalhara
	Name of Surpunch	Amrutbhai
	Mobile Number	9879398033

	Type of Services	Which Place	Type of Items	Total No	Unit Rate INR	Total Amt INR
2.1	Services	School	RO Water System	1	20000	20000.00
2.2			Sports Items (1 set of 12 items)			25000.00
2.3	Services	Anganwadi	Big Shetranji (10x10 Feet)	3	2500	7500.00
2.4			Toys for small children (1-5 yrs)			25000.00
2.5			Furniture			25000.00
2.6	Services	Community Hall	Steel Benches	10	5000	50000.00
2.7			Kitchen Vessels			50000.00
2.8			Sports Items (1 set of 12 items)			25000.00
			Total			227500.00

3	Name of	Punat

	Village					
	Name of Surpunch	Bhartiben				
	Mobile Number	9909571206				
	Type of Services	Which Place	Type of Items	Total No	Unit Rate INR	Total Amt INR
3.1	Infrastructure	Village Gram Sabha	Steel/Cement Benches	10	5000	50000.00
3.2			Street Light LED Light bulb	100	1500	150000.00
3.3	Services	School	RO Water System	1	20000	20000.00
3.4			Sports Items (1 set of 12 items)			25000.00
3.5	Services	Anganwadi	Big Shetranji (10x10 Feet)	3	2500	7500.00
3.6			Toys for small children (1-5 yrs)			25000.00
			Total			277500.00

4	Name of Village	Angam				
	Name of Surpunch	Shaileshbhai Varli				
	Mobile Number	9978887190				
	Type of Services	Which Place	Type of Items	Total No	Unit Rate INR	Total Amt INR
4.1	Infrastructure	Village	HH toilet	15	20000	300000.00
4.2			Street Light LED Light bulb	50	1500	75000.00
4.3			Steel/Cement Benches	10	5000	50000.00
4.4	Infrastructure	Panchayat	Furniture			50000.00
4.5	Services	School	Big Shetranji (10x10 Feet)	6	2500	15000.00
4.6			RO Water System	1	20000	20000.00
4.7			Sports Items (1 set of 12 items)			25000.00
			Total			535000.00

5	Name of Village	Manda
	Name of Surpunch	Prabhubhai
	Mobile Number	9904138638

	Type of Services	Which Place	Type of Items	Total No	Unit Rate INR	Total Amt INR
5.1	Infrastructure	Village	HH toilet	100	20000	2000000.00
5.2			Steel/Cement Benches	25	5000	125000.00
5.3			Street Light LED Light bulb	100	1500	150000.00
5.4	Services	School	Sports Items (1 set of 12 items)			25000.00
5.5	Infrastructure	Anganwadi	Rennovation Work of building			150000.00
			Total			2450000.00

6	Name of Village	Sarai
	Name of Surpunch	Jamin Raval
	Mobile Number	9228776000

	Type of Services	Which Place	Type of Items	Total No	Unit Rate INR	Total Amt INR
6.1	Infrastructure	Village	HH toilet	50	20000	1000000.00
6.2			Water Pipe line 1000 feet	1000	150	150000.00
6.3			Water Tank (5Lx5Wx5H) m	6	250000	1500000.00
6.4	Infrastructure	School	Sports Items (1 set of 12 items)			25000.00
6.5			Rennovation of building			250000.00
6.6	Infrastructure	Anganwadi	Rennovation Work of building			150000.00
6.7	Infrastructure	Panchayat	Rennovation Work of building			150000.00
			Total			3225000.00

7	Name of Village	Maroli

	Name of Surpunch	Lataben				
	Mobile Number	7798442155				
	Type of Services	Which Place	Type of Items	Total No	Unit Rate INR	Total Amt INR
7.1	Infrastructure	Village	HH toilet	50	20000	1000000.00
7.2			Wheel Chair	10	12500	125000.00
7.3			Water Pipe line 5000 feet	5000	150	750000.00
7.4	Infrastructure	School	Sports Items (1 set of 12 items)			25000.00
7.5	Infrastructure	Anganwadi	Furniture			25000.00
7.6	Infrastructure	Panchayat	AC for Gram Panahcyat			50000.00
			Total			1975000.00

8	Name of Village	Kalgham				
	Name of Surpunch	Kusamben				
	Mobile Number	9624170126				
	Type of Services	Which Place	Type of Items	Total No	Unit Rate INR	Total Amt INR
8.1	Infrastructure	Village	Water Tank (5Lx5Wx5H) m	3	250000	750000.00
8.2			Street Light LED Light bulb	100	1500	150000.00
8.3			Pond Fencing & Pawar Block			500000.00
8.4	Infrastructure	School	Sports Items (1 set of 12 items)			25000.00
8.5	Infrastructure	Anganwadi	Toys for small children (1-5 yrs)			25000.00
			Total			1450000.00

9	Name of Village	Fansa
	Name of Surpunch	Sarojben

	Mobile Number	9979383433				
	Type of Services	Which Place	Type of Items	Total No	Unit Rate INR	Total Amt INR
9.1	Infrastructure	Panchayat	Furniture			50000.00
9.2			Rennovation Work of building			150000.00
9.3	Infrastructure	Village	Water Pipe line 5000 feet	2000	150	300000.00
9.4			Instrument for SW disposal			100000.00
9.5	Infrastructure	Anganwadi	Toys for small children (1-5 yrs)			25000.00
9.6	Services	School	Sports Items (1 set of 12 items)			25000.00
9.7			Benches	50	5000	250000.00
9.8			Plastic Chairs	100	500	50000.00
9.9			Teachers Chair	5	1250	6250.00
			Total			956250.00

10	Name of Village	Karaj
	Name of Surpunch	Kamleshbahi
	Mobile Number	9824124450/9904277330

	Type of Services	Which Place	Type of Items	Total No	Unit Rate INR	Total Amt INR
10.1	Infrastructure	Village	Water Pipe line 10000 feet	10000	150	1500000.00
10.2			Street Light LED Light bulb	250	1500	375000.00
10.3			Poles for LED light	250	3000	750000.00
10.4			Wiring 5000 meters	5000	100	500000.00
10.5			Big RO Water Plant	1	150000	150000.00
10.6			HH toilet	100	20000	2000000.00
10.7			Steel/Cement Benches	50	5000	250000.00
10.8			Pond Butification	1		500000.00
10.9	Infrastructure	School	Sports Items (1 set of 12 items)			25000.00
10.1			RO Water System	2	20000	40000.00
10.2			Benches	50	5000	250000.00
10.3			Plastic Chairs	100	500	50000.00
10.4	Infrastructure	Anganwadi	Toys for small children (1-5 yrs)			25000.00
10.5	Infrastructure	Panchayat	Furniture			100000.00
			Total			6515000.00

11	Name of	Pali

	Village					
	Name of Surpunch	Bharatbhai				
	Mobile Number	9909474733				
	Type of Services	Which Place	Type of Items	Total No	Unit Rate INR	Total Amt INR
11.1	Infrastructure	Village	Water Tank (5Lx5Wx5H) m	2	250000	500000.00
11.2			Street Light LED Light bulb	250	1500	375000.00
11.3			Poles for LED light	250	3000	750000.00
11.4			Wiring 5000 meters	5000	100	500000.00
11.5			Big RO Water Plant	1	150000	150000.00
11.6			New Check Dam	1	500000	500000.00
11.7			Cusway	1	750000	750000.00
11.8			Pawer Block			200000.00
11.9			HH toilet	50	20000	1000000.00
11.10			Steel/Cement Benches	25	5000	125000.00
11.11			Pond Butification	1		500000.00
11.12			Agriculture Equipments			100000.00
11.13	Infrastructure	Panchayat	Furniture			100000.00
11.14	Services	School	Sports Items (1 set of 12 items)			25000.00
11.15	Services	Anganwadi	Toys for small children (1-5 yrs)			25000.00
			Total			5600000.00

12	Name of Village	Kalai				
	Name of Surpunch	Narendrabhai Tendel				
	Mobile Number	9725486496				
	Type of Services	Which Place	Type of Items	Total No	Unit Rate INR	Total Amt INR
12.1	Infrastructure	Village	Big RO Water Plant	1	500000	500000.00
12.2			Construction of Highway Circle of Lightning with Company Logo	1	250000	250000.00
12.3			Steel/Cement Benches	25	5000	125000.00
			Total			875000.00

Air Dispersion Modeling

For

Proposed Project for Manufacturing of Carbon Black & Power Generation (Green Power)

At

Survey No. 3705, 3708, 3719, 3725, 3738, 4108, 4110, 4318, Village: Karanj, Taluka: Umbergaon Dist.: Valsad, Gujarat

Client:
MADURA CARBON INDIA LTD.

December 2019

Precitech Laboratories Pvt. Ltd.
1st Floor, Bhanujyot Complex,
Plot No. C5/27, Opp Oriental Ins. Co. Ltd., Nr. GIDC Char Rasta,
Vapi – 396195
Telefax: (0260) 2425542, 2420995
Email: vapi@precitechlab.com

1.0 Scope of Work

The detailed scope of work is as below:

1.1 Prediction of ground level concentrations for a radius of 10 km due to the proposed installations and vehicle movement by using "ISC-AERMOD (by Lakes Environmental, Canada)" computer user-interface based on the Gaussian plume based ISCST3 model developed by USEPA.

1.2 Prediction of the impacts from the proposed project due to stack emissions and vehicular emissions on the existing baseline ambient air quality.

2.0 Details required from the Client

The following details were requested from the client:

Stack emission details:

- Stack height,
- Stack internal diameter at top,
- Exit gas velocity,
- Exit gas temperature,
- Characteristics of the fuels to be used and their consumption rates,
- Site layout with stack locations for assigning the coordinates.

3.0 The Dispersion Software – 'ISC-Aermod View'

The dispersion of pollutants in the atmosphere is a function of several meteorological parameters viz. wind speed, direction, stability class, etc. Several models have been developed for the prediction of pollutant concentration at any point from an emitting source. The Industrial Source Complex – Short Term (ISCST3) dispersion model is a steady-state Gaussian plume model. It is most widely accepted for its interpretability. It is also accepted by the Ministry of Environment & Forests, Govt. of India.

The Industrial Source Complex Short Term model version 3 (ISCST3) provides options to model emissions from a wide range of sources that might be present at a typical industrial source complex. The basis of the model is the straight-line, steady-state Gaussian plume equation, which is used to model point source emissions such as emissions from stacks, isolated vents, multiple vents, storage piles etc. Emission sources are categorized into four basic types of sources, i.e., point sources, volume sources, area sources, and open pit sources.

For the present study, the software-graphical user interface "ISC-AERMOD View", developed by Lakes Environmental, Canada, using the ISCST3 model, was used for the prediction of maximum ground level concentration (GLC).

4.0 Stack Emissions (Point source)

The dispersion modeling for prediction of GLC has been carried out for 3 nos. of stacks as below:

- Stack-1: Common Attached to Steam Boiler - 112 TPH & Steam Boiler - 72 TPH
- Stack-2: Attached to Dryer combustor & Vapour bag collector (line-1)

- Stack-3: Stack-2: Attached to Dryer combustor & Vapour bag collector (line-2)

- The GLC have been predicted for 4 parameters, namely PM (Particulate Matter), NOx (Oxides of Nitrogen), SO_2 (Sulphur Dioxide) & Carbon monooxide (CO).

4.1 Input Parameters

The input parameters for the preparation of mathematical model consist of baseline values, meteorological data and source emission details. The details are discussed below:

4.1.1 Micro-meteorological data

- Pre-processed micro-meteorological data for the project site, obtained from Denvilabs Technologies processed for the period of Oct to Dec 2018 have been utilized for modeling.
- The wind-rose diagram is given in figure 1 and the wind class and stability class distribution charts are given in figure 2.

Figure 1: Wind rose diagram of the processed file

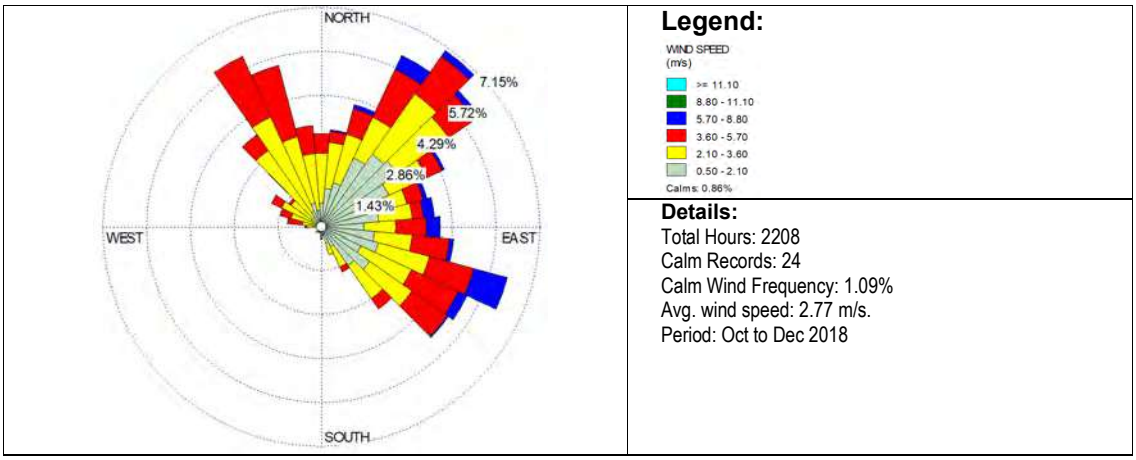
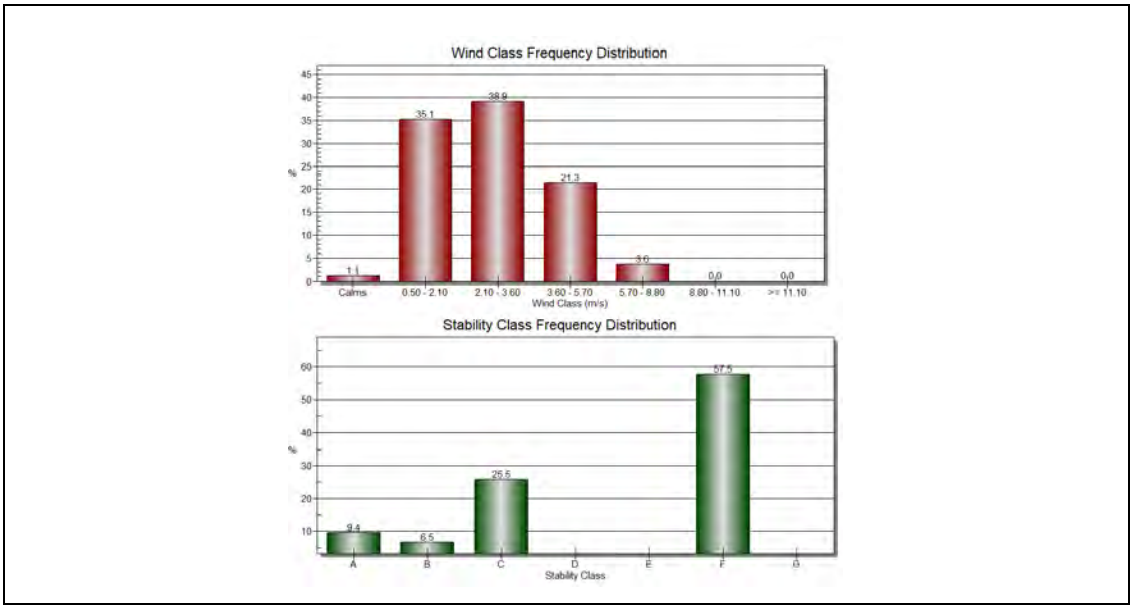


Figure 2: Wind Class & Stability Class Distribution Chart



4.1.2 Source emission details

The input data for source emissions i.e. the emission rates have been derived from the data provided by the client as below:

- Offgas generated during manufacturing of carbon black will be utilized as fuel for power generation & dryer combustor.
- 80% of the total off gas will be diverted to boilers & 20% to dryer combustors.
- From the 20% of off-gas diverted to combustors, 60% will be diverted to line-1 & 40% will be diverted to line-2.

a. Sulphur Dioxide (SO_2):

- Emission rates for SO_2 for Boilers/ Dryers have been calculated based on Sulphur content of Carbon black feed stock (CBFS).
    - Sulphur content of 2.5% is considered in CBFS.
    - It is considered that 80% Sulphur will be carried over with Carbon Black & 20% will be carried out with off gas.
    - FGD (Flue gas desulphurization) will be installed as APCD to control SO_2 emission, from Common stack of boilers.
    - The %efficiency of FGD is considered as 95%.
    - Lime slurry scrubber will be installed as APCD to control SO_2 emission from common stack of dryer combustor & Vapour bag collector.
    - The %efficiency of Lime slurry scrubber is considered as 92.5%.

b. Particulate Matter (PM):

- Emission rates for Particulate matter have been computed from the emission factors taken from AP-42 (USEPA) based on per day production capacity of Carbon Black.
    - It is assumed that PM emission will be reduced by 50% due to provision of FGD.

c. Oxides of Nitrogen ($NOx_)$:

- Emission rates for Nitrogen Dioxide have been computed from the emission factors taken from AP-42 (USEPA) based on per day production capacity of carbon black.
    - SCR (Selective catalytic reduction)/ SCNR (Selective non-catalytic reduction) will be used as APCD to control NO_2 emission, installed with common stack of boilers.
    - The %efficiency of SCR/SNCR to control NOx emission is considered as 75%.

d. Carbon Monoxide (CO):

- Emission rates for Carbon Monoxide have been computed from the emission factors taken from AP-42 (USEPA) based on per day production capacity of carbon black.
- Since, Emission Factor of CO for Drier/ Combustor were not provided, it was only considered for the Boiler.

- The details of source of air emissions are given in Table 1.

Table 1: The Sources Emission Details

Stack Code	Stack attached to	Cartesian co-ordinates	Base Elevation above MSL (m)	Ht. & Dia. of Stack, (m)	Exit Gas Velocity (m/s) & Temp. (°C)	Fuel considered	APCM to be Installed	Para-meter	Pollutant release rates (g/s)	
									W/o APCM	With APCM
FG-01	Boiler - 112 TPH	-145.90 12.21	37.15	Common Stack H: 110 D: 3.2	V: 15 T: 200	Off gas: 334839 Nm^3/hr	FGD	PM	7.800	3.900
							FGD	SO_2	427.200	21.360
	Boiler - 72 TPH						SCR/ SCNR	NOx	34.875	8.719
							--	CO	19.556	N.A.
FG-02	Dryer Combustor + Vapour Bag Collector (Line-1)	-60.00, 101.45	40.08	H: 60 D: 2	V: 9 T: 250	Off gas: 68750 Nm^3/hr	--	PM	N.A.	1.620
							Lime slurry scrubber	SO_2	64.080	4.806
							--	NOx	N.A.	0.99
FG-03	Dryer Combustor + Vapour Bag Collector (Line-2)	-23.18, 120.90	40.31	H: 60 D: 2	V: 6 T: 250	Off gas: 45833 Nm^3/hr	--	PM	N.A.	1.080
							Lime slurry scrubber	SO_2	42.720	3.204
							--	NOx	N.A.	0.66

4.1.3 The receptor area and assigning local coordinate system to the study area

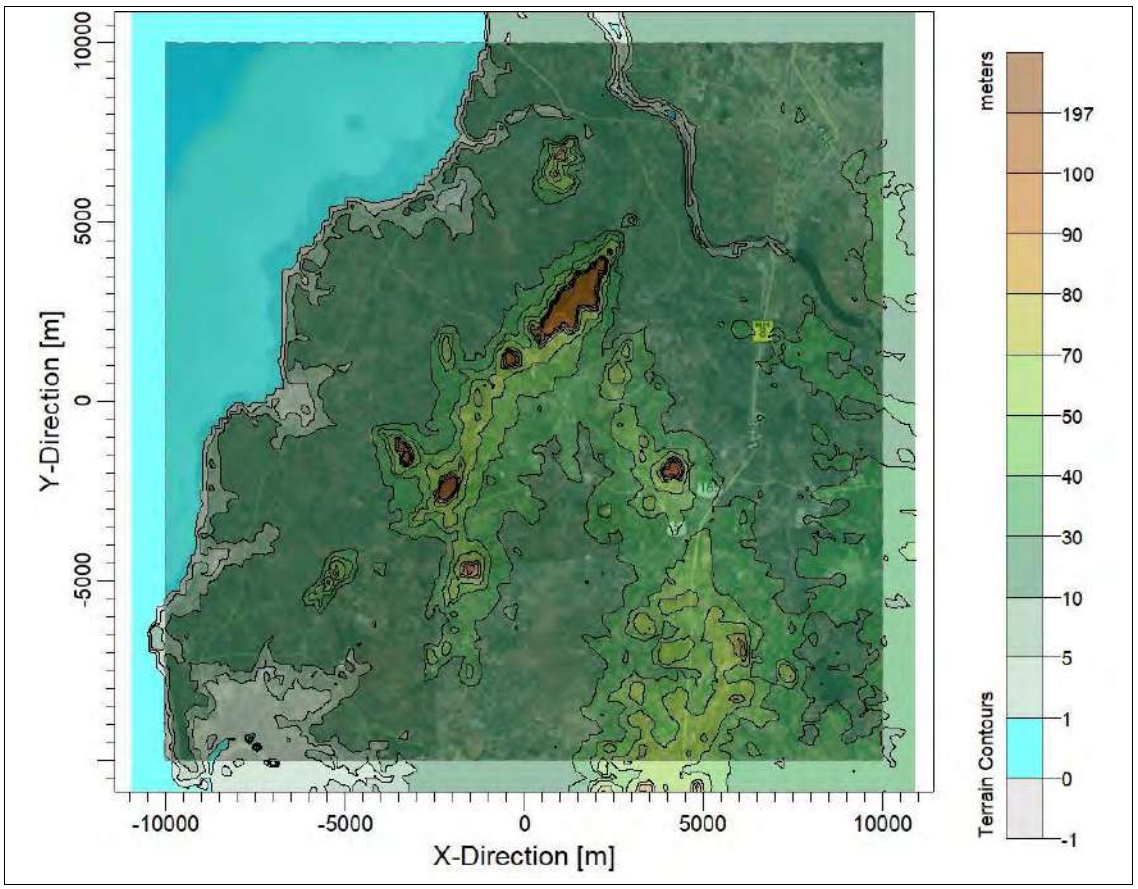
The receptor area is generally defined to predict the impact of the emissions due to the defined sources, by superimposing the predicted GLC on the existing ambient air quality status for each of the parameter to derive at a resultant air quality value.

- The receptors have been identified as below:
  - A uniform Cartesian grid of receptors has been defined within as below:
  - The Cartesian grid of receptor UCART Consisting of 473 receptors each at a distance of 1000 m.
  - Moreover, each of the 10 nos. of AAQM stations has been identified as specific Cartesian receptor.
  - Hence, a total of 483 receptors have been considered for modeling the GLC.
- The approximate center of the plant (at 20.30°N, 72.83°E) was considered at (0, 0) co-ordinates of the Cartesian grid and corresponding values of Cartesian co-ordinates were assigned to the stack sources by overlaying the site layout plant on the Cartesian grid.
- Similarly, the receptors were assigned the Cartesian co-ordinates by overlaying a map of the 10-km radial periphery on the Cartesian co-ordinate system.

4.1.5 The terrain

- The terrain of the domain boundary was considered as Elevated terrain.
- The terrain elevations have been assigned to the sources and receptors in the study area after processing in AERMAP by utilization of SRTM3 (Shuttle Radar Topography Mission Global Coverage maps ~90m resolution) maps.

Figure 3: Terrain Contours within the radial periphery of 10km



4.2 Output Parameters

- The GLC were predicted for over a 24-hour period for all parameters except CO, for ease of comparison with the 24-hourly ambient air quality standards.
- The GLC for CO were predicted for 1 hourly period.
- The output values of GLC were selected to be calculated in µg/m^3.

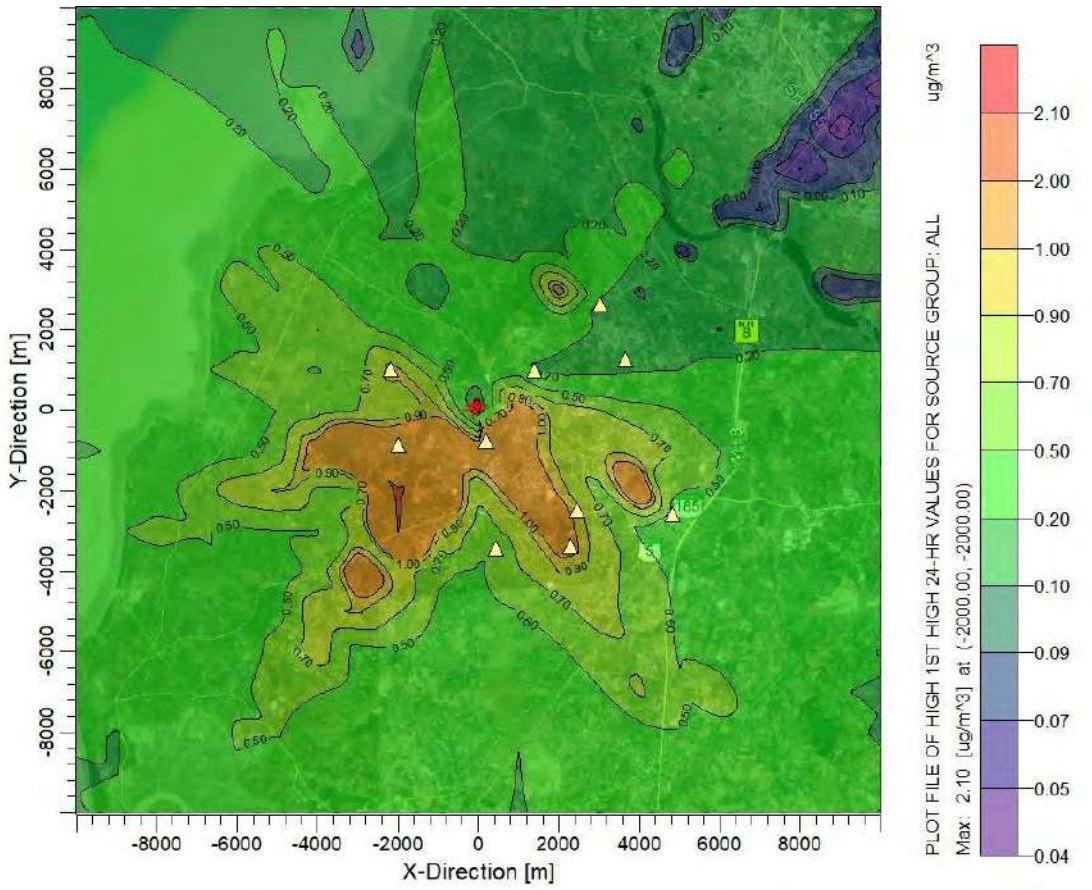
5.0 The Results

The contour plots of the 24-hourly average GLCs for each of the pollutant are illustrated in figures 4 to 10. The outcome of ISC-AERMOD View Model is tabulated in table 2 as Incremental GLC with other necessary details for maximum values of GLC as well as for selected discrete cartesian receptors. The results of the maximum GLCs for prediction of ambient air quality due to the proposed flue gas stacks are presented at Table 2.

Table 2: The predicted 24 hourly GLC of Air Pollutants

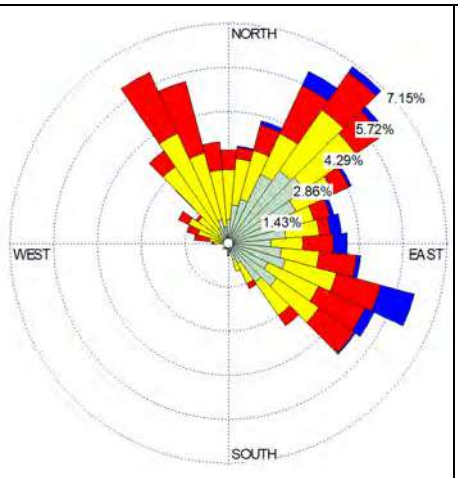
Pollutant/ Receptor	X-Axis (m)	Y-axis (m)	Approx. Aerial Distance & Direction From Site (km)	Base elevation (m)	Predicted Incremental GLC values due to the Proposed Project (µg/m³)	
					Without APCM	With APCM
PM						
1st Max	-2000.00	-2000.00	≈ 2.83 (SW)	82.90	2.10	1.80
A1	192.99	-741.4	≈ 0.7 km (S)	36.26	1.85	1.32
A2	3031.73	2634.08	≈ 4.0 km (NE)	24.63	0.16	0.11
A3	1388.27	1000.04	≈ 1.7 km (NE)	40.51	0.18	0.14
A4	2457.64	-2478.38	≈ 3.4 km (SE)	32.68	0.93	0.71
A5	429.99	-3436.76	≈ 3.3 km (S)	29.64	0.53	0.37
A6	-2169.95	1018.94	≈ 2.4 km (NW)	50.74	0.96	0.88
A7	-1979.75	-851.62	≈ 2.1 km (WSW)	37.79	1.30	0.98
A8	3667.26	1280.38	≈ 3.8 km (ENE)	28.83	0.11	0.10
A9	4834.96	-2589.7	≈ 5.3 km (ESE)	38.66	0.48	0.32
A10	2294.38	-3378.14	≈ 3.9 km (SE)	40.03	1.07	0.80
SO_2						
1st Max	-2000.00	-3000.00	≈ 3.61 (SW)	51.50	98.7	--
	-2000.00	-2000.00	≈ 2.83 (SW)	82.90	--	6.09
A1	192.99	-741.4	≈ 0.7 km (S)	36.26	89.33	5.23
A2	3031.73	2634.08	≈ 4.0 km (NE)	24.63	8.03	0.46
A3	1388.27	1000.04	≈ 1.7 km (NE)	40.51	9.07	0.49
A4	2457.64	-2478.38	≈ 3.4 km (SE)	32.68	43.84	2.67
A5	429.99	-3436.76	≈ 3.3 km (S)	29.64	26.01	1.51
A6	-2169.95	1018.94	≈ 2.4 km (NW)	50.74	40.42	2.82
A7	-1979.75	-851.62	≈ 2.1 km (WSW)	37.79	60.77	3.70
A8	3667.26	1280.38	≈ 3.8 km (ENE)	28.83	4.65	0.32
A9	4834.96	-2589.7	≈ 5.3 km (ESE)	38.66	24.08	1.34
A10	2294.38	-3378.14	≈ 3.9 km (SE)	40.03	50.50	3.06
NOx						
1st Max	-2000.00	-3000.00	≈ 3.61 (SW)	51.50	6.02	1.86
A1	192.99	-741.4	≈ 0.7 km (S)	36.26	5.27	1.67
A2	3031.73	2634.08	≈ 4.0 km (NE)	24.63	0.51	0.15
A3	1388.27	1000.04	≈ 1.7 km (NE)	40.51	0.63	0.18
A4	2457.64	-2478.38	≈ 3.4 km (SE)	32.68	2.32	0.80
A5	429.99	-3436.76	≈ 3.3 km (S)	29.64	1.57	0.49
A6	-2169.95	1018.94	≈ 2.4 km (NW)	50.74	1.20	0.67
A7	-1979.75	-851.62	≈ 2.1 km (WSW)	37.79	3.20	1.11
A8	3667.26	1280.38	≈ 3.8 km (ENE)	28.83	0.18	0.08
A9	4834.96	-2589.7	≈ 5.3 km (ESE)	38.66	1.60	0.46
A10	2294.38	-3378.14	≈ 3.9 km (SE)	40.03	2.82	0.93
CO						
1st Max	192.99	-741.4	≈ 0.77 (S)	36.26	29.16	--
A1	192.99	-741.4	≈ 0.7 km (S)	36.26	29.16	N.A.
A2	3031.73	2634.08	≈ 4.0 km (NE)	24.63	6.43	N.A.
A3	1388.27	1000.04	≈ 1.7 km (NE)	40.51	7.94	N.A.
A4	2457.64	-2478.38	≈ 3.4 km (SE)	32.68	11.25	N.A.
A5	429.99	-3436.76	≈ 3.3 km (S)	29.64	13.03	N.A.
A6	-2169.95	1018.94	≈ 2.4 km (NW)	50.74	8.62	N.A.
A7	-1979.75	-851.62	≈ 2.1 km (WSW)	37.79	9.52	N.A.
A8	3667.26	1280.38	≈ 3.8 km (ENE)	28.83	2.01	N.A.
A9	4834.96	-2589.7	≈ 5.3 km (ESE)	38.66	9.81	N.A.
A10	2294.38	-3378.14	≈ 3.9 km (SE)	40.03	13.85	N.A.

Figure 4: 24 Hourly Contour Plot for PM without APCM for Proposed Scenario



△= Ambient Air Quality Monitoring Location

Windrose diagram of Met file for modelling



Project:

Air Dispersion Modelling Report for Proposed Project by Madura Carbon India Ltd.

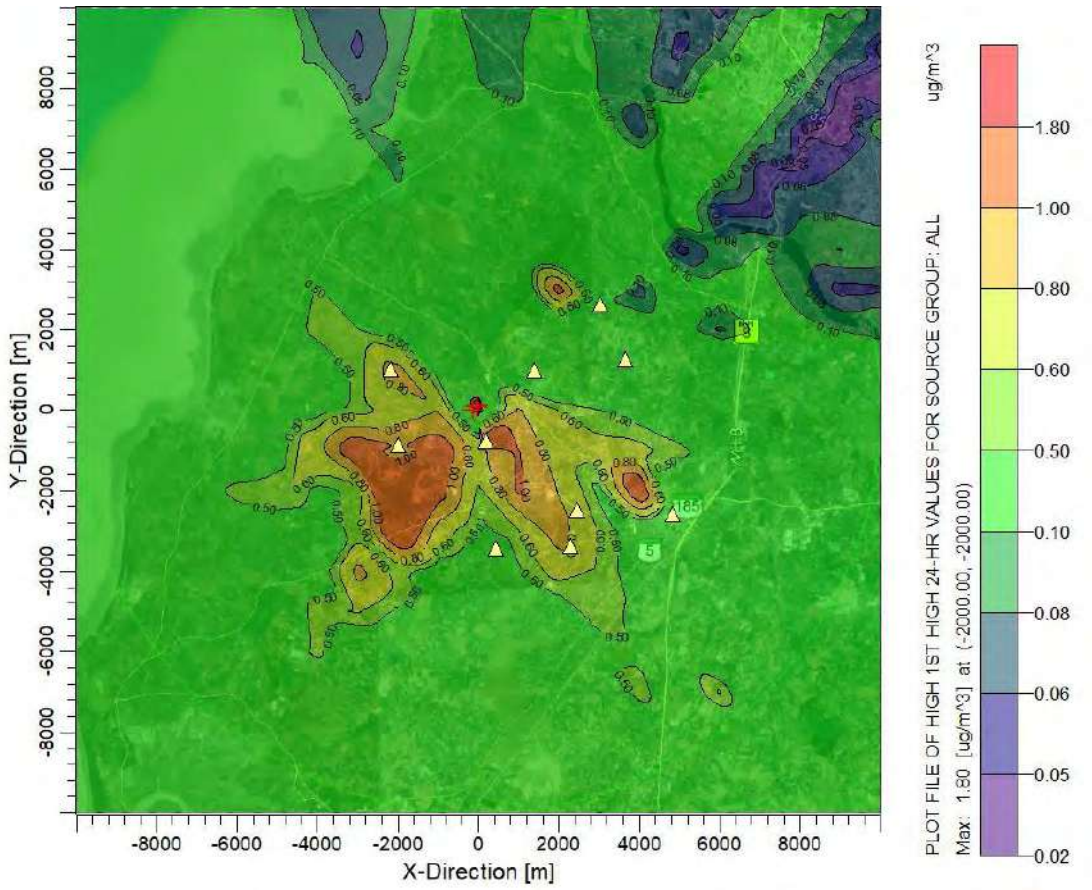
Sources: 3	**Receptors:** 483

Maximum Conc.: 2.10 µg/m³ at

(-2000.00, -2000.00)

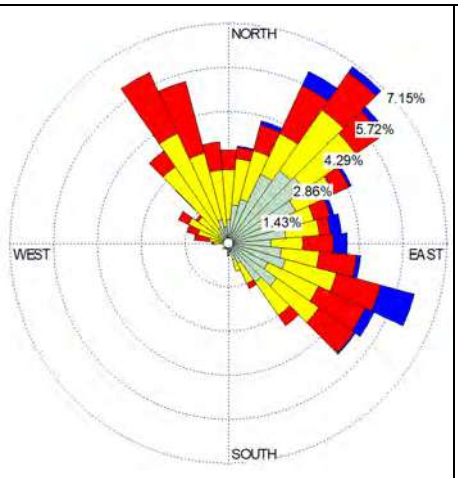
precitech Laboratories PVT. LTD.

Figure 5: 24 Hourly Contour Plot for PM with APCM for Proposed Scenario



△= Ambient Air Quality Monitoring Location

Windrose diagram of Met file for modelling



Project:

Air Dispersion Modelling Report for Proposed Project by Madura Carbon India Ltd.

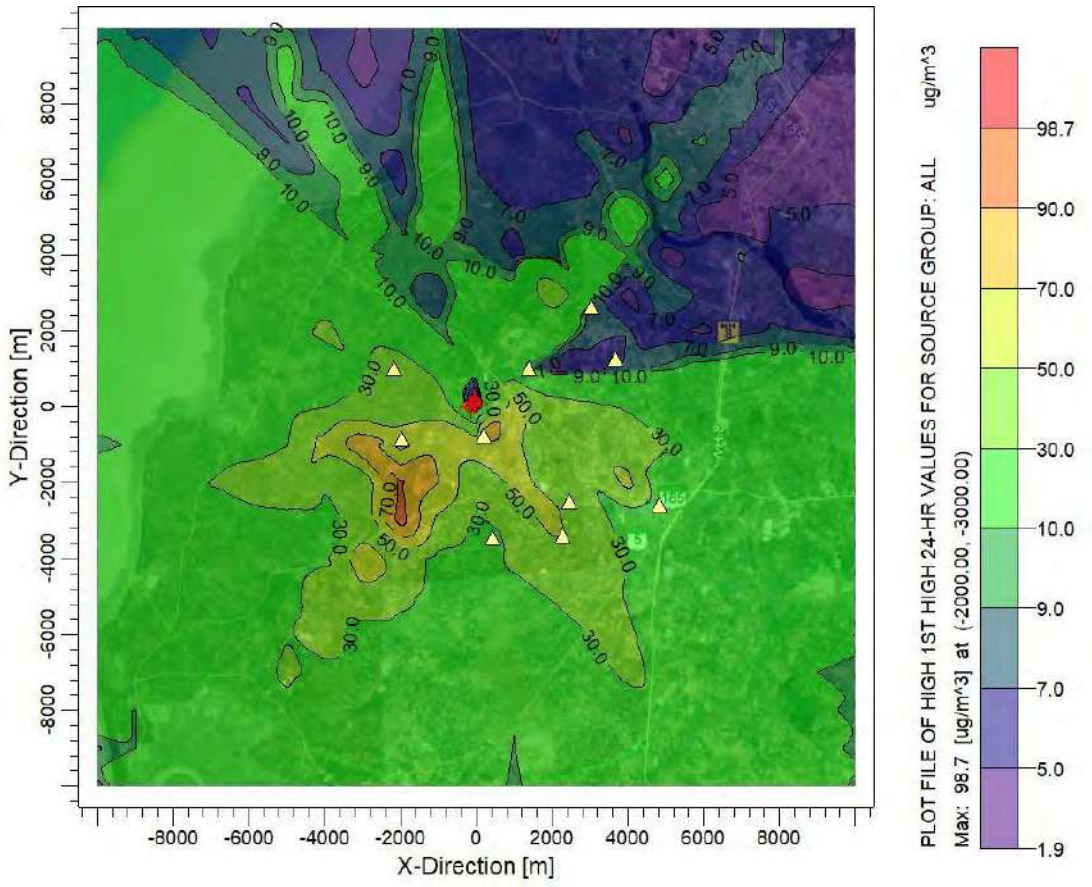
Sources: 3	**Receptors:** 483

Maximum Conc.: 1.80 µg/m³ at

(-2000.00, -2000.00)

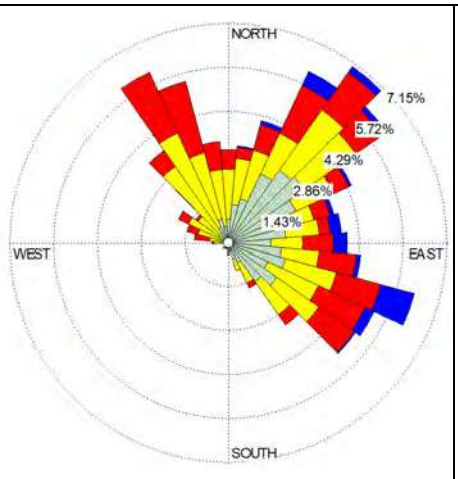
precitech Laboratories PVT. LTD.

Figure 6: 24 Hourly Contour Plot for SO_2 without APCM for Proposed Scenario



△= Ambient Air Quality Monitoring Location

Windrose diagram of Met file for modelling



Project:

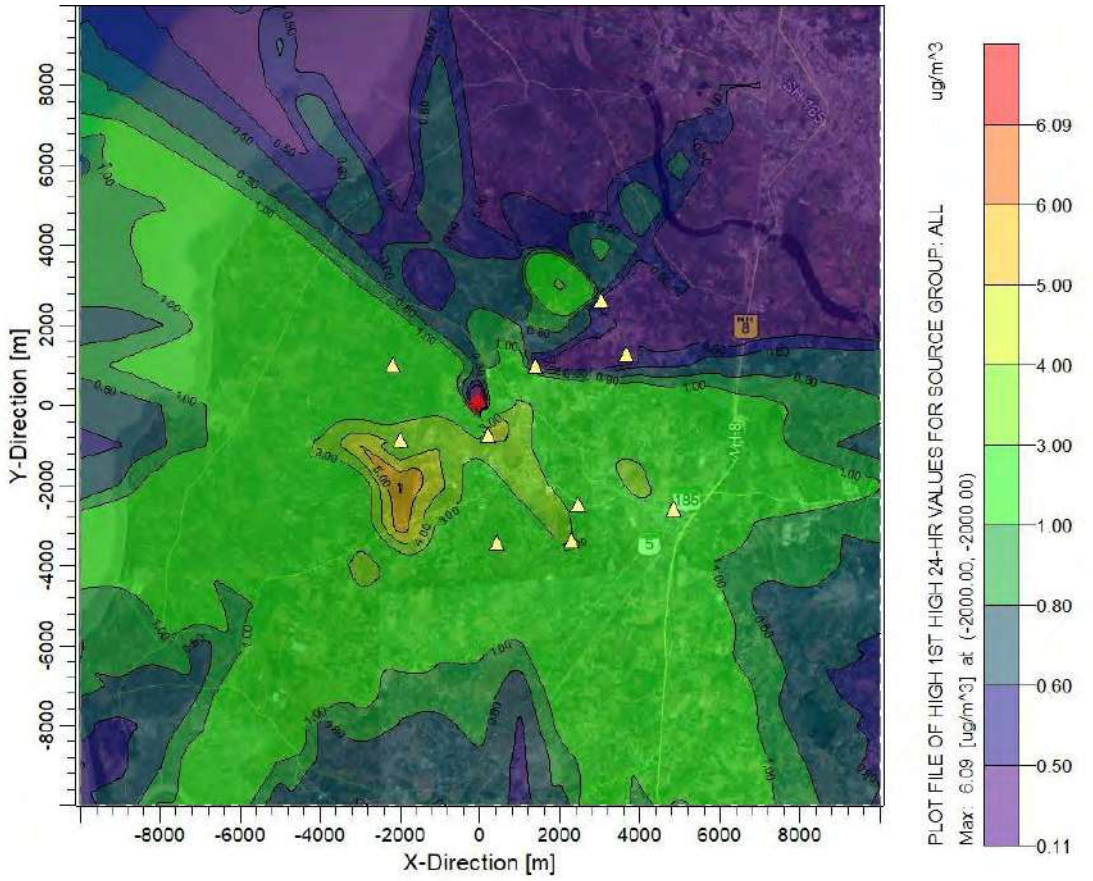
Air Dispersion Modelling Report for Proposed Project by Madura Carbon India Ltd.

Sources: 3 | **Receptors:** 483

Maximum Conc.: 98.7 µg/m³ at (-2000.00, -3000.00)

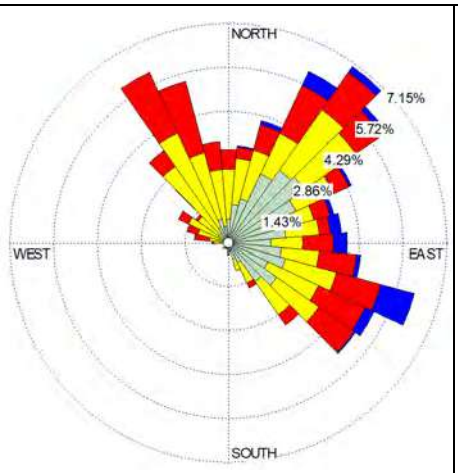
precitech Laboratories PVT. LTD.

Figure 7: 24 Hourly Contour Plot for SO_2 with APCM for Proposed Scenario



△= Ambient Air Quality Monitoring Location

indrose diagram of Met file for modelling



Legends:

WIND SPEED (m/s)

- >= 11.10
- 8.80 - 11.10
- 5.70 - 8.80
- 3.60 - 5.70
- 2.10 - 3.60
- 0.50 - 2.10

Calms: 0.86%

Project:

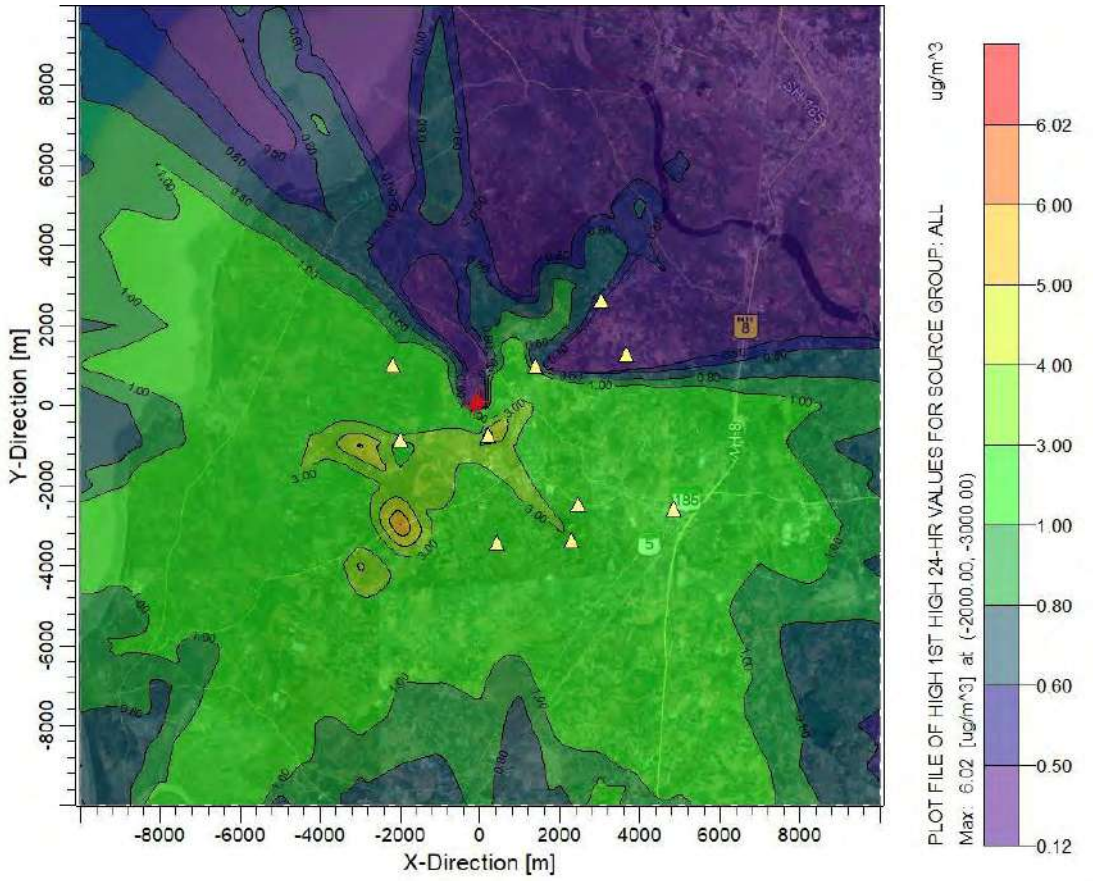
Air Dispersion Modelling Report for Proposed Project by Madura Carbon India Ltd.

Sources: 3 | **Receptors:** 483

Maximum Conc.: 6.09 µg/m³ at (-2000.00, -2000.00)

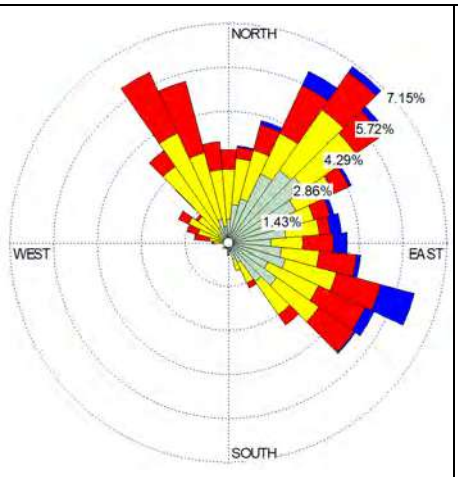
precitech Laboratories PVT. LTD.

Figure 8: 24 Hourly Contour Plot for NOx without APCM for Proposed Scenario



△= Ambient Air Quality Monitoring Location

indrose diagram of Met file for modelling



Legends:

WIND SPEED (m/s)

- >= 11.10
- 8.80 - 11.10
- 5.70 - 8.80
- 3.60 - 5.70
- 2.10 - 3.60
- 0.50 - 2.10

Calms: 0.86%

Project:

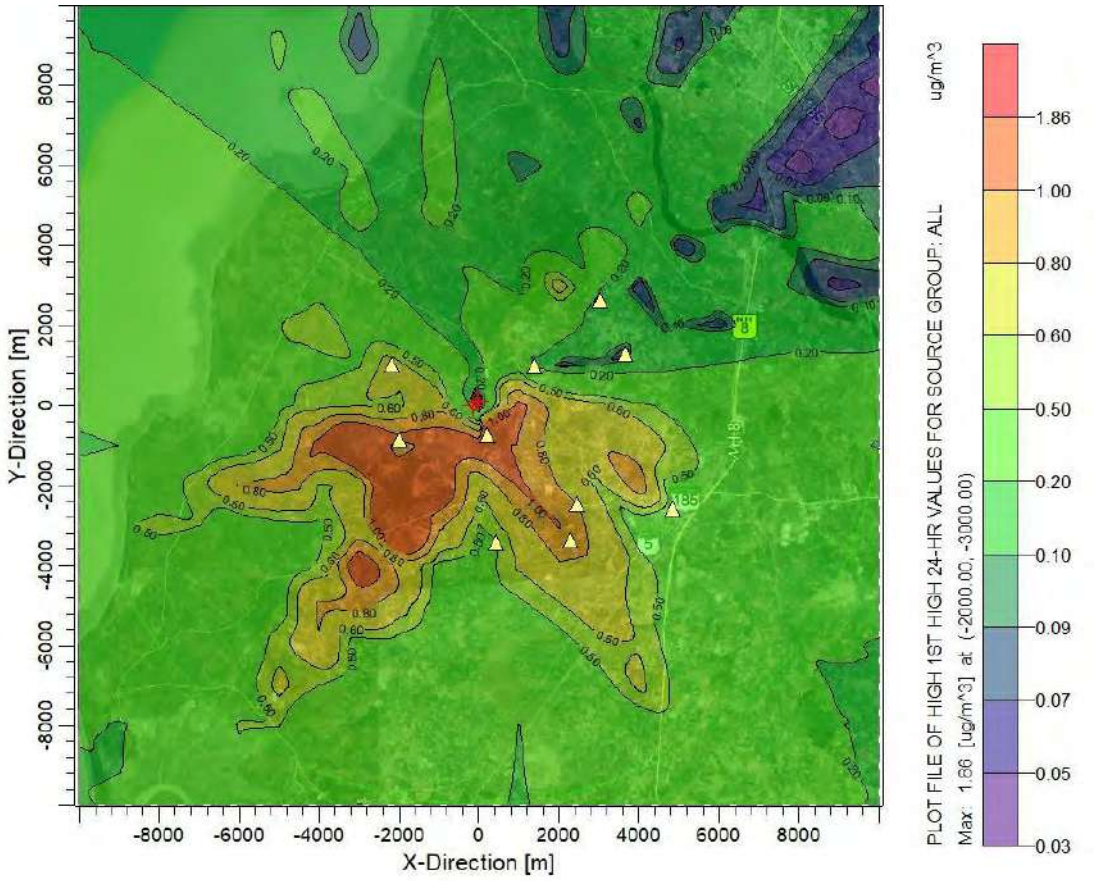
Air Dispersion Modelling Report for Proposed Project by Madura Carbon India Ltd.

Sources: 3 | **Receptors:** 483

Maximum Conc.: 6.02 µg/m³ at (-2000.00, -3000.00)

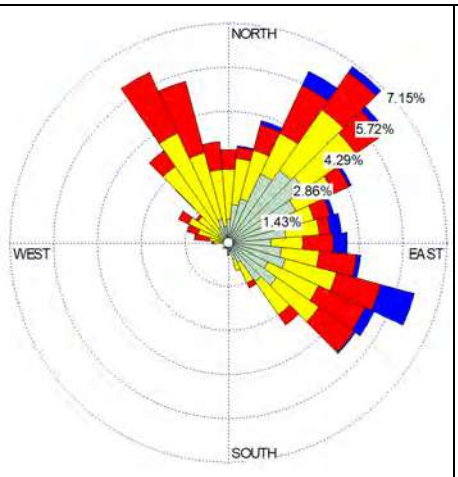
precitech Laboratories PVT. LTD.

Figure 9: 24 Hourly Contour Plot for NOx with APCM for Proposed Scenario



△= **Ambient Air Quality Monitoring Location**

indrose diagram of Met file for modelling



Project:

Air Dispersion Modelling Report for Proposed Project by Madura Carbon India Ltd.

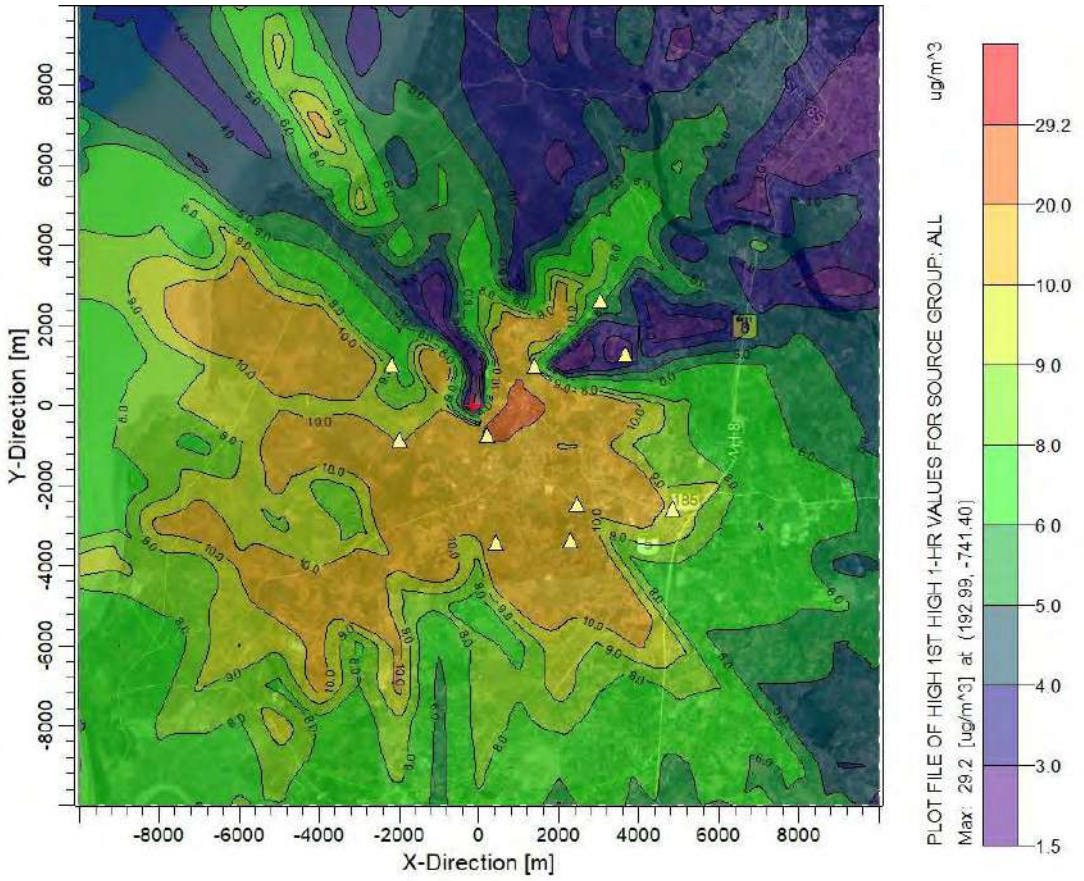
Sources: 3	**Receptors:** 483

Maximum Conc.: 1.86 µg/m³ at

(-2000.00, -3000.00)

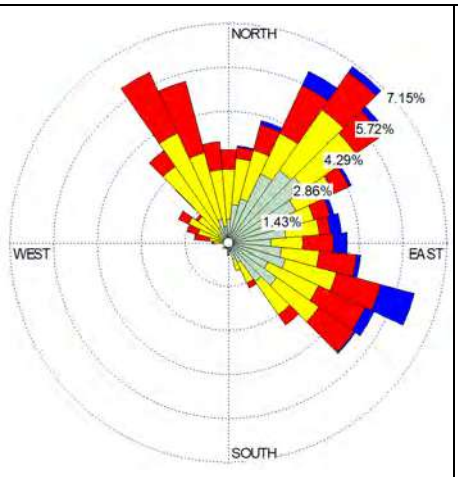
precitech Laboratories PVT. LTD.

Figure 10: 24 Hourly Contour Plot for CO for Proposed Scenario



△= Ambient Air Quality Monitoring Location

indrose diagram of Met file for modelling



Legends:

WIND SPEED (m/s)

- >= 11.10
- 8.80 - 11.10
- 5.70 - 8.80
- 3.60 - 5.70
- 2.10 - 3.60
- 0.50 - 2.10

Calms: 0.86%

Project:

Air Dispersion Modelling Report for Proposed Project by Madura Carbon India Ltd.

Sources: 3 | **Receptors:** 483

Maximum Conc.: 29.16 µg/m³ at (192.99, -741.40)

precitech Laboratories PVT. LTD.

6.0 Conclusion

An attempt has been made to predict the ambient air quality after the proposed project at the AAQM stations by superimposing the predicted incremental GLC's on the existing observed AAQM results presented for the study carried out in Oct to Dec 2017. The same are compared with National Ambient Air Quality Monitoring Standards and presented at Table 3.

Since, PM_{10} (Particulate Matter less than 10 Micron in size) also includes $PM_{2.5}$ (Particulate Matter less than 2.5 Micron in size), the ambient air quality for $PM_{2.5}$ has been predicted by superimposing the predicted incremental GLC's for PM10 on the existing observed $PM_{2.5}$ results monitored.

Table 3: Predicted Level of Pollutants at AAQM Stations after the Proposed Project

Stn. Code	Pollutant/ Receptor	Predicted Incremental GLC value due to Proposed project (µg/m³)		Existing concentration in ambient air (Max.) (µg/m³)	Predicted concentration in ambient air after proposed Project (µg/m³)		*NAAQS
		Without APCM	With APCM		Without APCM	With APCM	
PM_{10}							
A1	Near Project Site	1.85	1.32	89	90.85	90.32	100
A2	Punat	0.16	0.11	84	84.16	84.11	
A3	Karanjgam - Punat Road	0.18	0.14	88	88.18	88.14	
A4	Sarigam	0.93	0.71	85	85.93	85.71	
A5	Manda	0.53	0.37	88	88.53	88.37	
A6	Kalgam	0.96	0.88	78	78.96	78.88	
A7	Maroli	1.30	0.98	82	83.30	82.98	
A8	Angam	0.11	0.10	86	86.11	86.10	
A9	Bhilad	0.48	0.32	87	87.48	87.32	
A10	Daheli	1.07	0.80	86	87.07	86.80	
$PM_{2.5}$							
A1	Near Project Site	1.85	1.32	44	45.85	45.32	60
A2	Punat	0.16	0.11	35	35.16	35.11	
A3	Karanjgam - Punat Road	0.18	0.14	33	33.18	33.14	
A4	Sarigam	0.93	0.71	42	42.93	42.71	
A5	Manda	0.53	0.37	33	33.53	33.37	
A6	Kalgam	0.96	0.88	33	33.96	33.88	
A7	Maroli	1.30	0.98	37	38.30	37.98	
A8	Angam	0.11	0.10	37	37.11	37.10	
A9	Bhilad	0.48	0.32	37	37.48	37.32	
A10	Daheli	1.07	0.80	34	35.07	34.80	
SO_2							
A1	Near Project Site	89.33	5.23	22	111.33	27.23	80
A2	Punat	8.03	0.46	16	24.03	16.46	
A3	Karanjgam - Punat Road	9.07	0.49	16	25.07	16.49	
A4	Sarigam	43.84	2.67	19	62.84	21.67	
A5	Manda	26.01	1.51	15	41.01	16.51	

Stn. Code	Pollutant/ Receptor	Predicted Incremental GLC value due to Proposed project (µg/m³)		Existing concentration in ambient air (Max.) (µg/m³)	Predicted concentration in ambient air after proposed Project (µg/m³)		*NAAQS
		Without APCM	With APCM		Without APCM	With APCM	
A6	Kalgam	40.42	2.82	15	55.42	17.82	
A7	Maroli	60.77	3.70	19	79.77	22.70	
A8	Angam	4.65	0.32	20	24.65	20.32	
A9	Bhilad	24.08	1.34	19	43.08	20.34	
A10	Daheli	50.50	3.06	17	67.50	20.06	
NO_2							
A1	Near Project Site	5.27	1.67	26	31.27	27.67	80
A2	Punat	0.51	0.15	20	20.51	20.15	
A3	Karanjgam - Punat Road	0.63	0.18	20	20.63	20.18	
A4	Sarigam	2.32	0.80	21	23.32	21.80	
A5	Manda	1.57	0.49	18	19.57	18.49	
A6	Kalgam	1.20	0.67	22	23.20	22.67	
A7	Maroli	3.20	1.11	23	26.20	24.11	
A8	Angam	0.18	0.08	22	22.18	22.08	
A9	Bhilad	1.60	0.46	23	24.60	23.46	
A10	Daheli	2.82	0.93	21	23.82	21.93	
CO							
A1	Near Project Site	29.16	N.A.	1180	1209.16	N.A.	4000
A2	Punat	6.43	N.A.	390	396.43	N.A.	
A3	Karanjgam - Punat Road	7.94	N.A.	530	537.94	N.A.	
A4	Sarigam	11.25	N.A.	570	581.25	N.A.	
A5	Manda	13.03	N.A.	400	413.03	N.A.	
A6	Kalgam	8.62	N.A.	480	488.62	N.A.	
A7	Maroli	9.52	N.A.	370	379.52	N.A.	
A8	Angam	2.01	N.A.	590	592.01	N.A.	
A9	Bhilad	9.81	N.A.	460	469.81	N.A.	
A10	Daheli	13.85	N.A.	330	343.85	N.A.	

Note: All values are in µg/m³, N. A. = Not Applicable.
NAAQS = National ambient air quality as per CPCB notification (98% - 24 hourly values) , For CO (1 hourly)

- The results also indicate that without the suggested APCD (FGD & Lime Slurry Scrubber), the values of SO_2 might cross the threshold values of NAAQS.
- It is noteworthy that predicted GLC values of SO_2 with suggested APC (FGD & Lime Slurry Scrubber) indicate decrease in the levels of SO_2 in ambient air due to the proposed project.
- It can be concluded that when superimposed over the baseline concentrations the resultant concentrations viz. the predicted level of conventional pollutants in the ambient air are well below the National Ambient Air Quality Standards with implementation of suggested air pollution control systems.
- Thus, with proper mitigation & provision of adequate stack height, the impacts of conventional pollutants on ambient air environment will not be significant.

7.0 Vehicular emissions (Line area source)

Approximately, 200 truck trips, would be required per day for transportation of raw materials, products/ lime & gypsum sludge for the proposed project. Due to the movement of trucks, there will be marginal increase in PM, NOx & CO conc. in the ambient air. The movement will be through Bhilad to Sarigam Road and Sarigam by pass Road (GIDC internal road) to project site, which are 'paved' roads. The emission rates have been calculated based on CPCB environmental standards for Bharat-IV norms for vehicular emissions (CO, NOx & PM) as shown in Table 4.

Table 4: Vehicular Emission Details after proposed project

Vehicle type	No. of trips	Parameters	Emission Rate (g/sec)
Truck/ Tanker	200	PM	0.0048
		NOx	0.0229
		CO	0.0098

The predicted maximum GLC due to movement of proposed vehicles are observed close to the edge of the road and the concentration reduces with increase in distance from the road. The maximum predicted GLC values due to transportation have been given in Table-5 below:

Table 5: Predicted 24 hourly GLC of Air Pollutants from Vehicular Emission

Pollutant/ Receptor	Predicted GLC value after Proposed Project (µg/m3)		
	PM	NOx	CO
	0.245	0.646	0.277

Noise Level Modelling Report

For

Proposed Project for Manufacturing of Carbon Black & Power Generation (Green Power)

At

Survey No. 3705, 3708, 3719, 3725, 3738, 4108, 4110, 4318, Village: Fansa (Karajgam), Taluka: Umbergaon
Dist.: Valsad, Gujarat

Client:
MADURA CARBON INDIA LTD.

May 2019

precitech Laboratories PVT. LTD.
FORMERLY KNOWN AS PRECITECH LABORATORIES

Precitech Laboratories Pvt. Ltd.
1st Floor, Bhanujyot Complex,
Plot No. C5/27, Opp Oriental Ins. Co. Ltd., Nr. GIDC Char Rasta,
Vapi – 396195
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1.0 Methodology

Noise modelling study has been done using the Software tool “dhwaniPRO”, which predicts the noise levels at various receiver points due to the sources present at the site.

A google earth image of the project site has been imported into the software. Various sources of noise have been added with their Sound Pressure Levels (SPLs) and the ‘receptor points’ have been added at various locations where noise monitoring was conducted.

The noise sources from proposed project is for production of Carbon Black along with power generation (green power) is given in Table-1.

Table-1: Sources of Noise with their Sound Pressure Levels

Sr. No.	Sources	Sound pressure levels dB(A)
1	Cooling tower	85
2	Boiler -112 TPH	85
3	Boiler -72 TPH	85
4	Air compressor	85
5	Turbine	85
6	DG Set	85

(Source: Madura Carbon India Ltd.)

It may be noted that project site boundary wall of 3m height was considered as a barrier, while running the model.

2.0 Baseline noise levels at receptors

The baseline noise levels monitored at each receptor are tabulated in table-2.

Table-2: Monitored baseline noise level at Receptors

Receptor codes	Receptor Name	Area	Baseline noise level in dB(A) (L_{eq})	
			Day Time	Night Time
N1	Near Project Site	Industrial	69.9	62.9
N2	Sarigam	Commercial	66.1	58.0
N3	Bhandarwada Road	Residential	52.0	43.6
N4	Manda	Residential	48.0	41.4
N5	Karanjgam	Commercial	62.3	54.9
N6	Daheli	Residential	50.8	43.0
N7	Maroli	Residential	51.8	43.5
N8	Punat	Residential	50.8	43.0
N9	Near Laxmi Vidhyapeeth	Silence zone	42.8	37.4

3.0 Modelling results

The predicted incremental noise levels because of the proposed sources are tabulated in table-3.

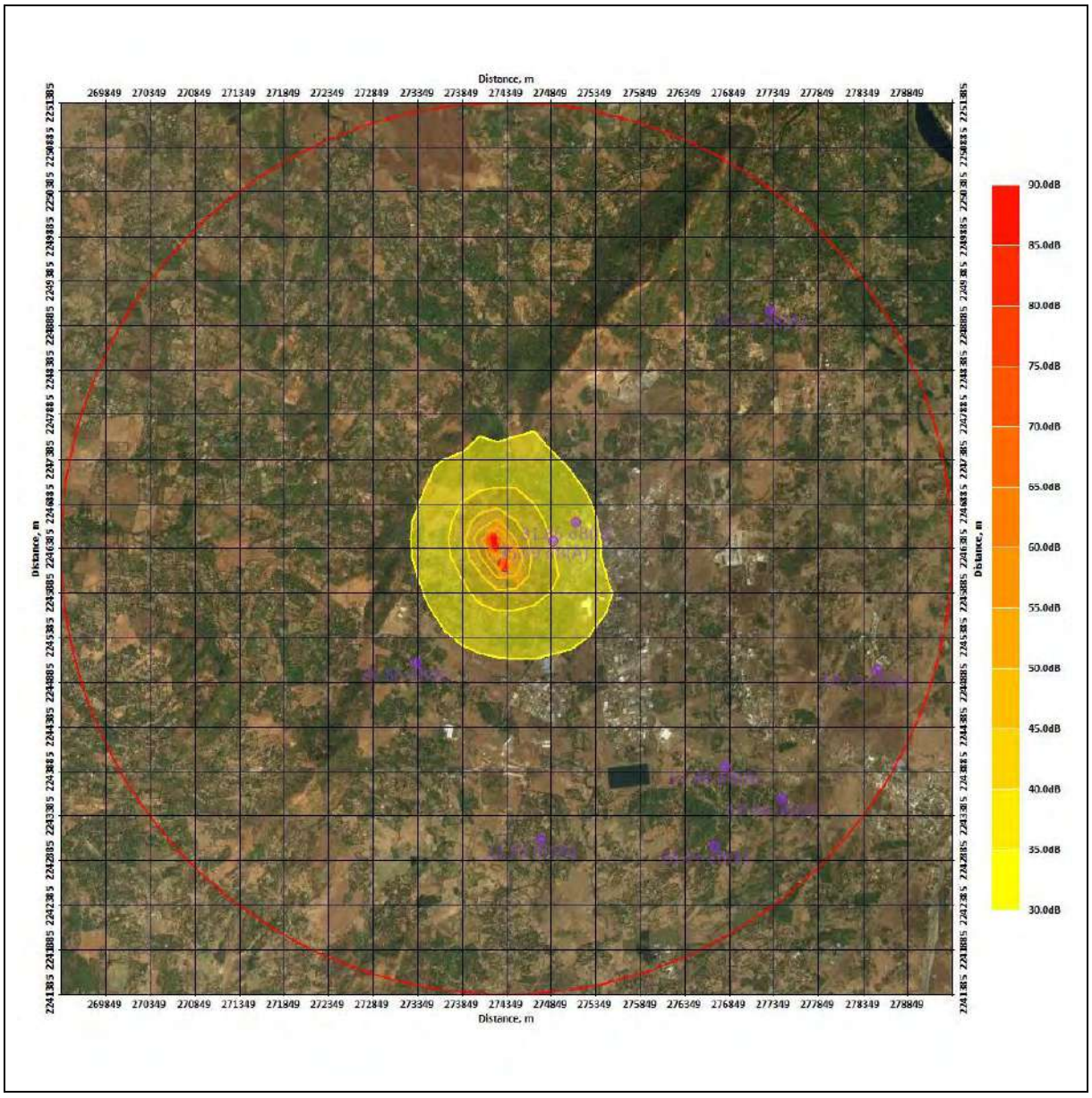
Table-3: Predicted incremental noise levels at Receptors

Station code	Location	Area	Predicted incremental noise level, dB(A)
N1	Near Project site	Indusrtial area	35.08
N2	Sarigam	Commercial area	21.46
N3	Bhandarwad road	Residential area	19.65
N4	Manda	Residential area	21.24
N5	Karanjgam	Commercial area	31.85
N6	Daheli	Residential area	20.40

Station code	Location	Area	Predicted incremental noise level, dB(A)
N7	Maroli	Residential area	26.85
N8	Punat	Residential area	19.50
N9	Laxmi Vidhyapeeth School	Silence Zone	18.72

The output of the modelling study predicts that incremental noise levels from the proposed project sources near to the project site of M/s. Madura Carbon (India) Ltd. will be around 35.08 dB(A). The predicted incremental noise propagation isopleths are given in Figure-1.

Figure-1: Noise propagation contour map for point source



4.0 Observations

Results have been collated with baseline monitored data to predict the noise levels at the monitored receptors during the proposed project operations

It is observed that the predicted incremental noise levels are not higher than the baseline values of noise levels at specified receptors and there is nochange in the resultant noise levels due to the proposed project activities at the receptor near project site and alsoat the other receptors.

It is noteworthy, that the cumulative predicted noise levels will be below from the prescribe limit.The details of the same for day time and night time have been tabulated in table-4.

Table-4: Predicted Noise Level at Receptors due to Proposed Project

Receptor code	Receptor Name	Area	Baseline noise level in dB(A) (L_{eq})		Effect on Receptorwith barriers	Predicted cumulative noise levels due to proposed Project, dB(A)		CPCB standards	
			Day Time	Night Time		Day Time	Night Time	Day	Night
N1	Near Project site	Industrial area	69.9	62.9	35.08	69.9	62.9	75	70
N2	Sarigam	Commercial area	66.1	58.0	21.46	66.1	58.0	65	55
N3	Bhandarwad road	Residential area	62.3	54.9	31.85	62.3	54.9	55	45
N4	Manda	Residential area	52.0	43.6	19.65	52.0	43.6	55	45
N5	Karanjgam	Commercial area	48.0	41.4	21.24	48.0	41.4	65	55
N6	Daheli	Residential area	50.8	43.0	20.40	50.8	43.0	55	45
N7	Maroli	Residential area	51.8	43.5	26.85	51.8	43.6	55	45
N8	Punat	Residential area	50.8	43.0	19.50	50.8	43.0	55	45
N9	Near Laxmi Vidhyapeeth	Silence Zone	42.8	37.4	18.72	42.8	37.4	50	40

5.0 Conclusion

From table-4, it is observed that the predicted incremental values were lower than the baseline values at receptors. It may also be noted that only the boundary wall of 3m height has been considered as a barrier and the effects of building walls and that of proposed greenbelt as barriers has not been considered while modelling. Also, it will not affect the surrounding habitations in the study area.

Thus, it can be concluded that with the provision of adequate dense greenbelt, the impact due to the proposed project on the noise environment can be brought to acceptable levels.

Annexure-12: Photographs of the Project Site

Annexure-13: Raw data of AAQ parameters at each location

A-1 Project site

Date	PM10	PM2.5	SOx	NOx	Hg	CO*	HC* As Methane	HC* As Non-methane	TVOC*
2-Oct-18	86	44	19	25	<5	0.85	1.65	<0.5	0.036
3-Oct-18	84	39	16	22	---	---	---	---	---
8-Oct-18	84	41	17	23	---	---	---	---	---
9-Oct-18	82	40	14	20	---	---	---	---	---
15-Oct-18	89	44	15	20	---	---	---	---	---
16-Oct-18	79	35	12	17	---	---	---	---	---
22-Oct-18	83	41	17	23	<5	0.96	1.32	<0.5	0.039
23-Oct-18	87	32	10	15	---	---	---	---	---
29-Oct-18	80	35	16	20	---	---	---	---	---
30-Oct-18	86	32	9	16	---	---	---	---	---
12-Nov-18	88	42	15	20	<5	1.18	2.16	<0.5	0.024
13-Nov-18	80	40	10	15	---	---	---	---	---
19-Nov-18	88	44	17	23	---	---	---	---	---
20-Nov-18	77	27	14	20	---	---	---	---	---
26-Nov-18	76	34	22	26	<5	0.82	2.22	<0.5	0.032
27-Nov-18	78	34	12	17	---	---	---	---	---
2-Dec-18	82	38	13	18	---	---	---	---	---
3-Dec-18	82	40	11	16	---	---	---	---	---
9-Dec-18	83	40	14	19	<5	1.06	1.76	<0.5	0.029
10-Dec-18	80	37	12	17	---	---	---	---	---
16-Dec-18	81	37	21	24	---	---	---	---	---
17-Dec-18	77	30	10	15	---	---	---	---	---
23-Dec-18	82	38	15	20	<5	0.93	1.82	<0.5	0.038
24-Dec-18	79	40	14	20	---	---	---	---	---

Note: All values are in µg/m^3 except TVOC& CO (as iso-butylene) in mg/m^3And HC as methane &non-methane values in ppm.
*TVOC (as isobutylene) & CO was measured twice in a month during the study period.

A-2 Punat

Date	PM10	PM2.5	SOx	NOx	Hg	CO*	HC* As Methane	HC* As Non-methane	TVOC*
4-Oct-18	67	25	16	17	<5	0.16	2.63	<0.5	0.023
5-Oct-18	64	20	9	12	---	---	---	---	---
10-Oct-18	84	27	15	17	---	---	---	---	---
11-Oct-18	67	30	14	18	---	---	---	---	---
17-Oct-18	72	28	13	19	---	---	---	---	---
18-Oct-18	76	25	15	18	---	---	---	---	---
24-Oct-18	80	35	15	16	<5	0.22	2.23	<0.5	0.038
25-Oct-18	62	25	11	14	---	---	---	---	---
31-Oct-18	80	26	15	18	---	---	---	---	---
1-Nov-18	71	31	11	20	---	---	---	---	---
14-Nov-18	72	29	13	15	<5	0.17	2.49	<0.5	0.028
15-Nov-18	67	30	9	17	---	---	---	---	---
21-Nov-18	78	33	15	16	---	---	---	---	---
22-Nov-18	66	22	11	17	<5	0.39	5.32	<0.5	0.043
28-Nov-18	77	22	13	16	---	---	---	---	---
29-Nov-18	72	27	12	14	---	---	---	---	---
4-Dec-18	66	26	11	13	<5	0.25	3.29	<0.5	0.027
5-Dec-18	79	30	9	18	---	---	---	---	---
11-Dec-18	64	34	14	15	---	---	---	---	---
12-Dec-18	64	25	12	15	---	---	---	---	---
18-Dec-18	75	28	16	17	---	---	---	---	---
19-Dec-18	77	23	12	16	<5	0.19	2.64	<0.5	0.036
25-Dec-18	65	26	11	15	---	---	---	---	---
26-Dec-18	77	19	9	12	---	---	---	---	---

Note: All values are in $\mu g/m^3$ except TVOC& CO (as iso-butylene) in mg/m^3And HC as methane &non-methane values in ppm.
*TVOC (as isobutylene) & CO was measured twice in a month during the study period.

A-3 Karajgam-Punat Road

Date	PM10	PM2.5	SOx	NOx	Hg	CO*	HC* As Methane	HC* As Non-methane	TVOC*
4-Oct-18	69	26	16	19	<5	0.43	3.66	<0.5	0.033
5-Oct-18	71	21	10	11	---	---	---	---	---
10-Oct-18	75	25	12	16	---	---	---	---	---
11-Oct-18	73	23	10	14	---	---	---	---	---
17-Oct-18	74	27	11	14	---	---	---	---	---
18-Oct-18	70	33	12	18	---	---	---	---	---
24-Oct-18	75	29	10	16	<5	0.32	1.98	<0.5	0.029
25-Oct-18	70	21	9	18	---	---	---	---	---
31-Oct-18	71	25	10	16	---	---	---	---	---
1-Nov-18	69	23	12	14	---	---	---	---	---
14-Nov-18	73	22	12	14	<5	0.30	3.52	<0.5	0.034
15-Nov-18	77	28	11	20	---	---	---	---	---
21-Nov-18	75	26	14	18	---	---	---	---	---
22-Nov-18	69	21	9	15	<5	0.53	5.07	---	---
28-Nov-18	69	21	12	15	---	---	---	---	---
29-Nov-18	67	19	13	13	---	---	---	---	---
4-Dec-18	68	22	9	16	<5	0.22	5.35	<0.5	0.039
5-Dec-18	79	29	12	18	---	---	---	---	---
11-Dec-18	77	27	10	16	---	---	---	---	---
12-Dec-18	68	16	9	11	---	---	---	---	---
18-Dec-18	77	26	14	14	---	---	---	---	---
19-Dec-18	75	24	12	12	<5	0.31	2.14	<0.5	0.025
25-Dec-18	88	27	9	19	---	---	---	---	---
26-Dec-18	76	26	12	16	---	---	---	---	---

Note: All values are in $\mu g/m^3$ except TVOC& CO (as iso-butylene) in mg/m^3And HC as methane &non-methane values in ppm.
*TVOC (as isobutylene) & CO was measured twice in a month during the study period.

A-4 Sarigam

Date	PM10	PM2.5	SOx	NOx	Hg	CO*	HC* As Methane	HC* As Non-methane	TVOC*
2-Oct-18	84	31	18	19	<5	0.33	1.68	<0.5	0.026
3-Oct-18	70	36	11	14	<5	0.28	1.87	<0.5	0.044
8-Oct-18	84	31	16	19	..	..	..	..	..
9-Oct-18	73	35	16	18	..	..	..	..	..
15-Oct-18	75	32	19	20	..	..	..	..	..
16-Oct-18	82	30	19	18	..	..	..	..	..
22-Oct-18	85	39	16	18	..	..	..	..	..
23-Oct-18	77	32	18	19	..	..	..	..	..
29-Oct-18	83	30	17	20	..	..	..	..	..
30-Oct-18	77	41	16	18	..	..	..	..	..
12-Nov-18	75	42	14	15	<5	0.32	2.22	<0.5	0.039
13-Nov-18	73	35	18	21	<5	0.57	1.89	<0.5	0.021
19-Nov-18	81	40	16	18	..	..	..	..	..
20-Nov-18	84	27	16	19	..	..	..	..	..
26-Nov-18	80	26	18	21	..	..	..	..	..
27-Nov-18	78	32	14	16	..	..	..	..	..
2-Dec-18	69	38	12	16	<5	0.45	0.98	<0.5	0.017
3-Dec-18	85	35	10	14	<5	0.34	1.02	<0.5	0.039
9-Dec-18	83	38	15	17	..	..	..	..	..
10-Dec-18	76	37	14	18	..	..	..	..	..
16-Dec-18	78	32	17	20	..	..	..	..	..
17-Dec-18	83	28	18	20	..	..	..	..	..
23-Dec-18	78	38	19	20	..	..	..	..	..
24-Dec-18	82	24	9	14	..	..	..	..	..

Note: All values are in µg/m^3 except TVOC& CO (as iso-butylene) in mg/m^3And HC as methane &non-methane values in ppm.
*TVOC (as isobutylene) & CO was measured twice in a month during the study period.

A-5 Manda

Date	PM10	PM2.5	SOx	NOx	Hg	CO*	HC* As Methane	HC* As Non-methane	TVOC*
6-Oct-18	75	33	13	17	<5	0.33	3.55	<0.5	0.025
7-Oct-18	88	32	12	13					
12-Oct-18	74	32	11	14	..	..	..	..	..
13-Oct-18	76	27	14	17	..	..	..	..	..
19-Oct-18	75	31	9	12	..	..	..	..	..
20-Oct-18	70	30	12	15	..	..	..	..	..
26-Oct-18	74	30	11	14	<5	0.40	4.94	<0.5	0.020
27-Oct-18	70	25	15	18	..	..	..	..	..
2-Nov-18	67	29	10	13	..	..	..	..	..
3-Nov-18	70	24	9	11	..	..	..	..	..
16-Nov-18	68	28	9	12	<5	0.27	3.49	<0.5	0.019
17-Nov-18	69	27	13	16					
23-Nov-18	62	29	11	14	..	..	..	..	..
24-Nov-18	65	29	14	17	..	..	..	..	..
30-Nov-18	81	30	10	15	<5	0.3	3.88	<0.5	0.022
1-Dec-18	66	28	12	15	..	..	..	..	..
6-Dec-18	63	29	9	10					
7-Dec-18	67	24	11	14					
13-Dec-18	64	30	9	11	<5	0.28	4.40	<0.5	0.044
14-Dec-18	71	29	12	16	..	..	..	..	..
20-Dec-18	65	29	15	16	..	..	..	..	..
21-Dec-18	69	28	10	13	..	..	..	..	..
27-Dec-18	63	30	13	16	<5	0.25	4.79	<0.5	0.029
28-Dec-18	61	29	12	18	..	..	..	..	..

Note: All values are in µg/m^3 except TVOC& CO (as iso-butylene) in mg/m^3And HC as methane &non-methane values in ppm.
*TVOC (as isobutylene) & CO was measured twice in a month during the study period.

A-6 Kalgam

Date	PM10	PM2.5	SOx	NOx	Hg	CO*	HC* As Methane	HC* As Non-methane	TVOC*
4-Oct-18	71	31	13	19	<5	0.33	3.55	<0.5	0.047
5-Oct-18	73	33	11	15					
10-Oct-18	75	30	12	22	..	..	..	..	..
11-Oct-18	74	29	13	17	..	..	..	..	..
17-Oct-18	78	31	11	18	..	..	..	..	..
18-Oct-18	75	30	13	16	..	..	..	..	..
24-Oct-18	72	28	13	19	<5	0.48	2.02	<0.5	0.033
25-Oct-18	70	26	13	18	..	..	..	..	..
31-Oct-18	71	25	15	20	..	..	..	..	..
1-Nov-18	68	29	14	17	..	..	..	..	..
14-Nov-18	65	30	13	18	<5	0.36	3.58	<0.5	0.026
15-Nov-18	68	31	11	13					
21-Nov-18	60	28	12	18	..	..	..	..	..
22-Nov-18	77	27	11	16	<5	0.43	4.97	<0.5	0.035
28-Nov-18	61	29	13	20	..	..	..	..	..
29-Nov-18	62	31	12	19	..	..	..	..	..
4-Dec-18	66	33	13	18	<5	0.39	3.61	<0.5	0.042
5-Dec-18	68	30	14	16					
11-Dec-18	70	26	12	17	..	..	..	..	..
12-Dec-18	68	28	14	19	..	..	..	..	..
18-Dec-18	67	29	13	18	..	..	..	..	..
19-Dec-18	71	31	12	15	<5	0.38	5.92	<0.5	0.029
25-Dec-18	74	30	11	17	..	..	..	..	..
26-Dec-18	73	28	13	17	..	..	..	..	..

Note: All values are in µg/m^3 except TVOC& CO (as iso-butylene) in mg/m^3And HC as methane &non-methane values in ppm.
*TVOC (as isobutylene) & CO was measured twice in a month during the study period.

A-7 Maroli

Date	PM10	PM2.5	SOx	NOx	Hg	CO*	HC* As Methane	HC* As Non-methane	TVOC*
6-Oct-18	79	29	13	18	<5	0.11	3.33	<0.5	0.026
7-Oct-18	79	29	16	19					
12-Oct-18	81	30	19	23	..	..	..	..	..
13-Oct-18	78	25	15	17	..	..	..	..	..
19-Oct-18	81	31	12	15	..	..	..	..	..
20-Oct-18	79	31	15	19	..	..	..	..	..
26-Oct-18	80	34	12	18	<5	0.26	2.80	<0.5	0.030
27-Oct-18	72	24	9	17	..	..	..	..	..
2-Nov-18	77	35	16	19	..	..	..	..	..
3-Nov-18	73	31	9	14	..	..	..	..	..
16-Nov-18	81	30	12	15	<5	0.22	3.44	<0.5	0.039
17-Nov-18	79	37	15	19					
23-Nov-18	81	26	15	18	..	..	..	..	..
24-Nov-18	72	29	14	18	..	..	..	..	..
30-Nov-18	76	27	11	16	<5	0.37	3.91	<0.5	0.027
1-Dec-18	74	29	13	15	..	..	..	..	..
6-Dec-18	74	27	10	15					
7-Dec-18	82	31	16	19					
13-Dec-18	76	26	12	14	<5	0.17	3.39	<0.5	0.024
14-Dec-18	75	20	11	14	..	..	..	..	..
20-Dec-18	78	32	16	18	..	..	..	..	..
21-Dec-18	68	28	11	14	..	..	..	..	..
27-Dec-18	74	28	12	19	<5	0.16	5.70	<0.5	0.023
28-Dec-18	79	34	19	21	..	..	..	..	..

Note: All values are in µg/m^3 except TVOC& CO (as iso-butylene) in mg/m^3And HC as methane &non-methane values in ppm.
*TVOC (as isobutylene) & CO was measured twice in a month during the study period.

A-8 Angam

Date	PM10	PM2.5	SOx	NOx	Hg	CO*	HC* As Methane	HC* As Non-methane	TVOC*
4-Oct-18	86	26	17	19	<5	0.24	3.71	<0.5	0.019
5-Oct-18	66	33	11	14					
10-Oct-18	83	28	16	20	..	..	..	..	..
11-Oct-18	69	32	16	18	..	..	..	..	..
17-Oct-18	71	29	18	21	..	..	..	..	..
18-Oct-18	78	27	20	21	..	..	..	..	..
24-Oct-18	83	36	16	18	<5	0.30	3.00	<0.5	0.023
25-Oct-18	64	29	13	16	..	..	..	..	..
31-Oct-18	79	27	16	20	..	..	..	..	..
1-Nov-18	73	33	13	15	..	..	..	..	..
14-Nov-18	71	30	14	17	<5	0.23	4.25	<0.5	0.022
15-Nov-18	69	32	18	22					
21-Nov-18	77	37	16	18	..	..	..	..	..
22-Nov-18	68	24	16	19	<5	0.59	3.02	<0.5	0.031
28-Nov-18	76	23	14	18	..	..	..	..	..
29-Nov-18	74	29	14	16					
4-Dec-18	65	27	12	15	<5	0.36	5.04	<0.5	0.018
5-Dec-18	81	32	10	14					
11-Dec-18	79	35	15	17	..	..	..	..	..
12-Dec-18	66	27	14	17	..	..	..	..	..
18-Dec-18	74	29	17	19	..	..	..	..	..
19-Dec-18	79	25	14	18	<5	0.22	3.28	<0.5	0.033
25-Dec-18	64	29	12	15	..	..	..	..	..
26-Dec-18	79	21	10	14	..	..	..	..	..

Note: All values are in µg/m^3 except TVOC& CO (as iso-butylene) in mg/m^3And HC as methane &non-methane values in ppm.
*TVOC (as isobutylene) & CO was measured twice in a month during the study period.

A-9 Bhilad

Date	PM10	PM2.5	SOx	NOx	Hg	CO*	HC* As Methane	HC* As Non-methane	TVOC*
6-Oct-18	84	29	18	23	<5	0.24	1.89	<0.5	0.036
7-Oct-18	85	30	18	22					
12-Oct-18	82	26	16	21	..	..	..	..	..
13-Oct-18	83	25	16	19	..	..	..	..	..
19-Oct-18	87	32	14	18	..	..	..	..	..
20-Oct-18	80	27	14	19	..	..	..	..	..
26-Oct-18	85	34	16	20	<5	0.31	3.28	<0.5	0.041
27-Oct-18	78	25	9	13	..	..	..	..	..
2-Nov-18	78	31	15	19	..	..	..	..	..
3-Nov-18	78	31	9	14	..	..	..	..	..
16-Nov-18	87	31	14	18	<5	0.39	2.04	<0.5	0.017
17-Nov-18	80	33	12	17					
23-Nov-18	86	37	16	20	..	..	..	..	..
24-Nov-18	78	30	16	21	..	..	..	..	..
30-Nov-18	77	36	19	20	<5	0.46	3.43	<0.5	0.022
1-Dec-18	79	29	14	18	..	..	..	..	..
6-Dec-18	80	28	12	14					
7-Dec-18	83	27	13	17					
13-Dec-18	81	26	13	16	<5	0.36	1.44	<0.5	0.031
14-Dec-18	81	21	14	17	..	..	..	..	..
20-Dec-18	79	28	18	22	..	..	..	..	..
21-Dec-18	73	28	12	16	..	..	..	..	..
27-Dec-18	80	29	14	22	<5	0.43	1.83	<0.5	0.036
28-Dec-18	80	30	16	22	..	..	..	..	..

Note: All values are in µg/m^3 except TVOC& CO (as iso-butylene) in mg/m^3And HC as methane &non-methane values in ppm.
*TVOC (as isobutylene) & CO was measured twice in a month during the study period.

A-10 Daheli

Date	PM10	PM2.5	SOx	NOx	Hg	CO*	HC* As Methane	HC* As Non-methane	TVOC*
6-Oct-18	79	32	13	19	<5	0.27	3.49	<0.5	0.034
7-Oct-18	81	34	13	19					
12-Oct-18	83	31	12	21	..	..	..	..	..
13-Oct-18	82	30	11	18	..	..	..	..	..
19-Oct-18	86	32	15	18	..	..	..	..	..
20-Oct-18	83	31	11	18	..	..	..	..	..
26-Oct-18	80	29	13	19	<5	0.30	4.88	<0.5	0.045
27-Oct-18	78	27	11	16	..	..	..	..	..
2-Nov-18	79	26	15	20	..	..	..	..	..
3-Nov-18	76	30	17	15	..	..	..	..	..
16-Nov-18	73	31	13	18	<5	0.15	3.37	<0.5	0.017
17-Nov-18	77	32	13	17					
23-Nov-18	70	29	12	21	..	..	..	..	..
24-Nov-18	68	28	11	20	..	..	..	..	..
30-Nov-18	67	30	13	20	<5	0.33	3.67	<0.5	0.034
1-Dec-18	70	32	12	17	..	..	..	..	..
6-Dec-18	74	34	13	18					
7-Dec-18	76	31	12	15					
13-Dec-18	78	27	12	17	<5	0.12	3.34	<0.5	0.029
14-Dec-18	76	29	12	17	..	..	..	..	..
20-Dec-18	75	30	13	18	..	..	..	..	..
21-Dec-18	79	32	14	18	..	..	..	..	..
27-Dec-18	82	31	11	19	<5	0.19	4.73	<0.5	0.036
28-Dec-18	81	29	11	19	..	..	..	..	..

Note: All values are in µg/m^3 except TVOC& CO (as iso-butylene) in mg/m^3And HC as methane &non-methane values in ppm.
*TVOC (as isobutylene) & CO was measured twice in a month during the study period.

S. No.	Consultant Organization	Scope of Accreditation			
		As per 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)
123	**Precitech Laboratories Private Limited** (formerly known as Precitech Laboratories) **Address:** 1st Floor Bhanujyot Complex, Plot No. C5/27, Opp Oriental Ins. Co. Ltd., Nr. GIDC Char Rasta Vapi - 396195 **Email:**vapi@precitechlab.com, rhb@precitechlab.com; dr.hmbhatt@precitechlab.com, rujul.h.bhatt@gmail.com **Tel.:** 0260-2425542, 2420995, 2424901, 3298985, 09825121185, 9925008673 *Conditions apply*	4	Thermal power plants	B	1 (d)
		9	Cement plants	B	3 (b)
		17	Pesticides industry and pesticide specific intermediates (excluding formulations)	A	5 (b)
		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	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		
		38	Building and construction projects	B	8 (a)
124	**Pridhvi Envirotech (P) Ltd.** **Address:** 184/c,Lawn House, 4th floor, Vengalraonagar, Hyderabad - 500 038 **Email:** pvr@pridhvienviro.com **Tel.:** 040-40179770, 9849023662 *Conditions apply*	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)	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)
		31	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes	A	7 (c)

National Accreditation Board
for Education and Training
(Member - International Accreditation Forum & Pacific Accreditation Cooperation)

May 13, 2019

QCI/NABET/EIA/ACO/19/0976
Precitech Laboratories Pvt. Ltd.
1st Floor, Bhanujyot Complex,
Plot No. C5/27, B/h. Pancharatna Complex,
Nr. GIDC Char Rasta, Vapi-396195
(Kind Attention: **Sh. Rujul Bhatt**)

Sub: Validity of Accreditation

Dear Sir,

This has reference to the accreditation of your organization under QCI-NABET EIA Scheme, the validity of **Precitech Laboratories Pvt. Ltd.** is hereby extended till November 05, 2019 or completion of assessment process, whichever is earlier.

The above extension is subject to the submission of required information/documents related to assessment on time to NABET.

You are requested not to use this letter after expiry of the above stated date.

With best regards,

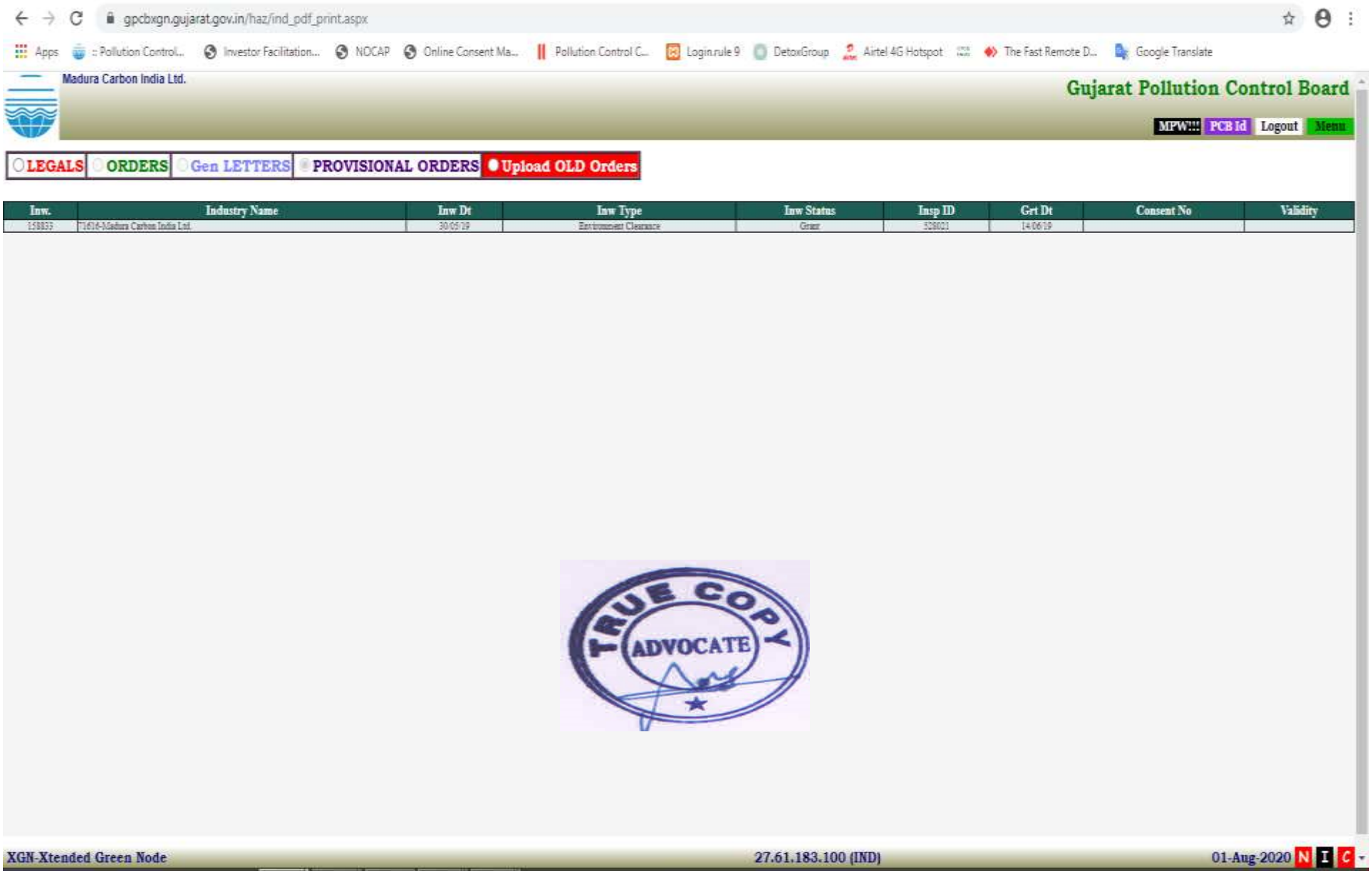
13/05/2019

A.K Jha
Senior Director| NABET

TRUE COPY
ADVOCATE

Annexure 4: Screenshot of EC to CTE Grant

ANNEXURE-R-4



ANNEXURE-R-5

Minutes of Meeting

Of

Public Hearing

Proponent:

M/s. Madura Carbon India Ltd.

Village: Karaj, Ta. : Umbergaon

Dist.: Valsad.

PH Proceeding

Annexure A: Name & Sign of the People who were present during Public Hearing

Annexure B: Minutes of Meeting (English)

Annexure C1 to C300: Representations/ Queries received

PH Proceeding

GUJARAT POLLUTION CONTROL BOARD
REGIONAL OFFICE, SARIGAM
S. No. 253/2, Ahir Faliya, Bhandarwad, Sarigam:396 155
Ta: Umbergaon, Dist Valsad
Website: www.gpcbxgn.gujarat.gov.in

PUBLIC HEARING PROCEEDING

It is hereby informed that as per the Ministry of Environment and Forests, Government of India, New Delhi vide its Notification No. S. O. 1533 dated 14th September, 2006 and subsequent amendment S.O. 3067 (E) dated 1st December 2009. Public Hearing was fixed for **M/s. Madura Carbon India Limited** for proposed manufacturing of Carbon Black -230000 TPA & Power Generation – 45 MW, at Survey No. 3705, 3708, 3719, 3725, 3738, 4108, 4110, 4318, Village : Karaj, Ta. Umbergaon, Dist: Valsad, (Gujarat), covered under category Schedule 5 (e) and 1(d) Category–"A".

A copy of the draft Environment Impact Assessment Report and the Executive Summary of draft Environmental Impact Assessment Report were sent to the following authorities or offices to make it available for inspection to the public during normal office hours, till the Public Hearing is over.

1. The District Collector Office, Valsad.
2. District Development Office, Valsad.
3. District Industry Centre, Valsad
4. Taluka Development Office, Ta: Umargam, Dist.: Valsad.
5. The Chief Conservator of Forests,
   Ministry of Environment & Forests,
   Govt. of India, Regional Office (West Zone),
   Kendriya Paryavaran Bhavan, E – 5, Area Colony,
   Link Road – 3, Ravishankar Colony,
   BHOPAL – 462 016.
6. Regional Office, Gujarat Pollution Control Board, Ahir Faliya (Bhandarwad), Sarigam - 396155, Ta. Umargam, Dist. Valsad.

Executive Summary of draft Environmental Impact Assessment Reports were also circulated in surrounding 27 villages for effective publicity.

Other concerned persons having plausible stake in the environmental aspects were requested to send their response in writing to the concerned regulatory authorities.

The Public Hearing was scheduled on 19/07/2019 at 11.30 hrs at Survey No. 3705, 3708, 3719, 3725, 3738, 4108, 4110, 4318, Village : Karaj, Ta. Umbergaon, Dist: Valsad, (Gujarat).

An advertisement in English was published in Gujarati Daily - "Sandesh", & English Daily – "The Times of India" dated 19/06/2019.

Shri. C. R. Kharsan (I.A.S) Collector and District Magistrate, Valsad supervised and presided over the entire public hearing proceedings.

A statement showing participants present during the Public Hearing is enclosed herewith as **Annexure – A. who have signed the sign of sheet but during public hearing more than 650 person were present.**

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 herewith as **Annexure B1.**

The representations received by the affected concerned persons having plausible stake in the Environment aspects is enclosed as Annexure **C-1 to C-6** Which are received at GPCB, Regional Office, Sarigam and enclosed as Annexure **C-7 to C-537** Which are received at Site of public hearing.

Reply of Annexure **C-1 to C-6** are given by Project Proponent is enclosed as annexure **D-1 to D-6** and reply of the remaining Annexure **C-7 to C-537** are given by Project Proponent is enclosed as annexure **D-7 to D-537** and also as per direction given by Chairman, reply letter enclosed **from D-538 to D-547**, for orally representation from peoples during public hearing.

Place :-
Survey No. 3705, 3708, 3719, 3725, 3738, 4108, 4110, 4318, Village : Karanj, Ta. Umbergaon, Dist: Valsad
Date: 19/07/2019

H.M. Ganvit
Regional Officer, GPCB, Sarigam
as representative of the Member Secretary, GPCB

C. R. Kharsan, (I.A.S)
District Collector and District Magistrate, Valsad

Encl: 1 Annexure A, B, B1, C-1 to C-537 and D-1 to D-547 as above
2 Video DVD of Public Hearing

Annexure A

ANNEXURE – A

A Statement showing participants present during the public hearing

As per the ministry of Environment, Forests & Climate Change, Government of India, New Delhi, vide its notification no. S.O. 1533 (E) dated 14th September 2006, and its subsequent amendments S.O. 3067 (E) dated 1st December 2009, Public Hearing was fixed for M/s. Madura Carbon India Ltd for proposed manufacturing of Carbon Black -230000 TPA & Power Generation – 45 MW, at survey no. 3705, 3708, 3719, 3725, 3738, 4108, 4110, 4318, village; Karanj, Ta. Umbergaon, Dist: Valsad, Gujarat, covered under category Schedule 5 (e) Category-"A" as mentioned in their request application.

The statement showing participants present during the public hearing held on 19/07/2019 at 11:30 a.m. hours at survey no. 3705, 3708, 3719, 3725, 3738, 4108, 4110, 4318, village; Karanj, Ta. Umbergaon, Dist: Valsad, Gujarat, as under:

ભારત સરકારના પર્યાવરણ, વન અને જળવાયુ પરિવર્તન મંત્રાલય, નવી દિલ્હીના જાહેરનામા ક્રમાંક: એસ. ઓ. ૧૫૩૩ (ઇ) તા. ૧૪/૦૯/૨૦૦૬ અને તેના પછીના સુધારા ક્રમાંક: એસ.ઓ.૩૦૬૭(ઇ) તા. ૦૧/૧૨/૨૦૦૯ અનુસંધાને મેસર્સ મદુરા કાર્બન ઇન્ડીયા લિ. સર્વે નં. ૩૭૦૫, ૩૭૦૮, ૩૭૧૯, ૩૭૨૫, ૩૭૩૮, ૪૧૦૮, ૪૧૧૦, ૪૩૧૮, ગામ. કરંજ, તા: ઉમરગામ, જીલ્લો:- વલસાડ ખાતે કાર્બન બ્લેક - ૨,૩૦,૦૦૦ ટન/વર્ષ અને પાવર જનરેશન- ૪૫ મેગાવોટ ના ઉત્પાદન માટે સુચિત વિસ્તરણ માટેની પરિયોજના કેટેગરી શિડ્યુલ ૫(ઇ) કેટેગરી –"એ" માં આવરી લેવાય છે જે અનુસંધાનમાં લોકસુનાવણીનું આયોજન કરવામાં આવેલ છે.

સુચીત વિસ્તરણ પરીયોજના માટે જાહેર લોકસુનાવણી નું આયોજન તા.૧૯/૦૭/૨૦૧૯ ના રોજ સવારે ૧૧:૩૦ કલાકે સર્વે નં. ૩૭૦૫, ૩૭૦૮, ૩૭૧૯, ૩૭૨૫, ૩૭૩૮, ૪૧૦૮, ૪૧૧૦, ૪૩૧૮, ગામ. કરંજ, તા: ઉમરગામ, જીલ્લો:- વલસાડ ખાતે યોજવામાં આવેલ. જાહેર લોક સુનાવણી દરમ્યાન હાજર રહેલા લોકોની યાદી નીચે મુજબ છે.

Sr. No. ક્રમાંક	Name & Designation નામ અને હોદ્દો	Organization/Village સંસ્થા/ગામ	Sign સહી
1	Vinod Taneja Director	VSPL / Madura Carbon	
2	B.M Nichat Director	VSPL / Madura Carbon	
3	Sandeep Patil Chief Piping Engg.	VSPL / Madura Carbon	
4	Piyush Mishra Sr. Process Engg.	VSPL / Madura Carbon	
5.	P.B. Chandra G.M. (Admn & Comm)	Madura Carbon India LTD	

Sr. No. ક્રમાંક	Name & Designation નામ અને હોદ્દો	Organization/Village સંસ્થા/ગામ	Sign સહી
6	[illegible]	[illegible]	[illegible]
7	[illegible]	[illegible]	[illegible]
8	[illegible]	[illegible]	[illegible]
9	[illegible]	[illegible]	[illegible]
10	[illegible]	[illegible]	[illegible]
11	[illegible]	[illegible]	[illegible]
12	[illegible]	[illegible]	[illegible]
13	[illegible]	[illegible]	[illegible]
14	[illegible]	[illegible]	[illegible]
15	[illegible]	[illegible]	[illegible]
16	[illegible]	[illegible]	[illegible]
17	[illegible]	[illegible]	[illegible]
18	[illegible]	[illegible]	[illegible]
19	Rahul. A. Dhodi	Kadvigam	Rahul
20	[illegible]		
21	[illegible]	પારલી	[illegible]
22	[illegible]	[illegible]	[illegible]
23	[illegible]	[illegible]	[illegible]
24	[illegible]	[illegible]	[illegible]
25	[illegible]	[illegible]	[illegible]
26	[illegible]	[illegible]	[illegible]
27	[illegible]	[illegible]	[illegible]
28	[illegible]	[illegible]	[illegible]
29	[illegible]	[illegible]	[illegible]
30	[illegible]	[illegible]	[illegible]

Sr. No. ક્રમાંક	Name & Designation નામ અને હોદ્દો	Organization/Village સંસ્થા/ગામ	Sign સહી
91	[illegible]	[illegible]	[illegible]
92	[illegible]	[illegible]	[illegible]
93	[illegible]	[illegible]	[illegible]
94	[illegible]	[illegible]	[illegible]
95	[illegible]	[illegible]	[illegible]
96	[illegible]	[illegible]	[illegible]
97	[illegible]	[illegible]	[illegible]
98	[illegible]	[illegible]	[illegible]
99	[illegible]	[illegible]	[illegible]
100	[illegible]	[illegible]	[illegible]
101	[illegible]	[illegible]	[illegible]
102	[illegible]	[illegible]	[illegible]
103	[illegible]	[illegible]	[illegible]
104	[illegible]	[illegible]	[illegible]
105	[illegible]	[illegible]	[illegible]
106	[illegible]	[illegible]	[illegible]
107	[illegible]	[illegible]	[illegible]
108	[illegible]	[illegible]	[illegible]
109	[illegible]	[illegible]	[illegible]
110	[illegible]	[illegible]	[illegible]
111	[illegible]	[illegible]	[illegible]
112	[illegible]	[illegible]	[illegible]
113	[illegible]	[illegible]	[illegible]
114	[illegible]	[illegible]	[illegible]
115	[illegible]	[illegible]	[illegible]

Sr. No. ક્રમાંક	Name & Designation નામ અને હોદ્દો	Organization/Village સંસ્થા/ગામ	Sign સહી
56	[illegible]	[illegible]	
57	[illegible]	[illegible]	
58	[illegible]	[illegible]	
59	[illegible]	[illegible]	
60.	[illegible]	[illegible]	
61	[illegible]	[illegible]	
62	[illegible]	[illegible]	
63	[illegible]	[illegible]	
64	[illegible]	[illegible]	ASVIN
65	[illegible]	[illegible]	
66	[illegible]	[illegible]	
67	[illegible]	[illegible]	
68	[illegible]	[illegible]	
69	[illegible]	[illegible]	
70	[illegible]	[illegible]	
71	[illegible]	[illegible]	
72	[illegible]	[illegible]	
73	[illegible]	[illegible]	
74	[illegible]	[illegible]	
75	[illegible]	[illegible]	
76	Vishal. Babubhai	[illegible]	
77	[illegible]	[illegible]	Abhishek. P
78	[illegible]	[illegible]	
79	Dilip G. [illegible]	[illegible]	
80			

Sr. No. ક્રમાંક	Name & Designation નામ અને હોદ્દો	Organization/Village સંસ્થા/ગામ	Sign સહી
81	[illegible]	[illegible]	
82	[illegible]	[illegible]	
83	[illegible]	[illegible]	
84	[illegible]	[illegible]	
85	[illegible]	[illegible]	
86	[illegible]	[illegible]	
87	[illegible]	[illegible]	
88	[illegible]	[illegible]	
89	[illegible]	[illegible]	
90	[illegible]	[illegible]	
91	[illegible]	[illegible]	
92	[illegible]	[illegible]	
93	[illegible]	[illegible]	
94	[illegible]	[illegible]	
95	[illegible]	[illegible]	
96	[illegible]	[illegible]	
97	[illegible]	[illegible]	
98	[illegible]	[illegible]	
99	[illegible]	[illegible]	
100	[illegible]	[illegible]	
101	[illegible]	[illegible]	
102	[illegible]	[illegible]	
103	[illegible]	[illegible]	
104	[illegible]	[illegible]	
105	[illegible]	[illegible]	

Sr. No. ક્રમાંક	Name & Designation નામ અને હોદ્દો	Organization/Village સંસ્થા/ગામ	Sign સહી
106	[illegible]	[illegible]	M.N.D.
107	[illegible]	[illegible]	S.A.B.
108	વૈશાલી વિપુલ કુલપતિ	કરણગામ	Vaishali
109	પર્વતી મોહન કુલપતિ	કરણગામ	P.M.H
110.	બીરૂ વિપુલ કુલપતિ	કરણગામ	બીરૂ
111	સુમન ચંદુ કુલેગા	કરણગામ	S.C.D
112	જશી સોમાન વારતી	કરણગામ	J.S.V.
113	રમણ ના પિતાશ્રી ઘોડી		રમણ ના
114	[illegible]	[illegible]	[illegible]
115	[illegible]	[illegible]	[illegible]
116	[illegible]	[illegible]	B.Patel.
117	[illegible]	"	[illegible]
118	[illegible]	"	[illegible]
119	[illegible]	"	H.B. Patel
120	[illegible]	"	[illegible]
121	[illegible]	[illegible]	S.V. Patel
122	[illegible]	[illegible]	M.K. Patel
123	[illegible]	[illegible]	M.R.Patel
124	[illegible]	[illegible]	M.A. Patel
125	[illegible]	[illegible]	A.H.V
126	[illegible]	[illegible]	B.A.D
127	[illegible]	[illegible]	[illegible]
128	[illegible]	[illegible]	M.R.P
129	[illegible]	[illegible]	T.J.A.
130	[illegible]	[illegible]	L.D.P.

Sr. No. ક્રમાંક	Name & Designation નામ અને હોદ્દો	Organization/Village સંસ્થા/ગામ	Sign સહી
131	મધુબેન વનેશાલાર્પણભાઈ	કુશીગામ	M.R. Ahir
132	તૃપ્તિબેન શૈલેશભાઈ મહેતા	કુશીગામ	T.S. Patel
133	[illegible]	કુશીગામ	[illegible]
134	[illegible]	કુશીગામ	[illegible]
135	[illegible]	કુશીગામ	Dhadvani
136	[illegible]	કુશીગામ	પટારી
137	[illegible]	કુશીગામ	[illegible]
138	[illegible]	[illegible]	[illegible]
139	[illegible]	કુશીગામ	[illegible]
140	[illegible]	કુશીગામ	[illegible]
141	Bhudabhai K. Ahir	Kushi gam	Bhudabhai
142	Kaushikbhai Bhandari	Kushigam	[illegible]
143	[illegible]	કુશીગામ	Nilimesh
144	[illegible]	કુશીગામ	[illegible]
145	[illegible]	કુશીગામ	[illegible]
146	[illegible]	કુશીગામ	[illegible]
147	[illegible]	કુશીગામ	[illegible]
148	[illegible]	કુશીગામ	[illegible]
149	[illegible]	કુશીગામ	[illegible]
150	[illegible]	કુશીગામ	[illegible]
151	[illegible]	કુશીગામ	[illegible]
152	[illegible]	કુશીગામ	[illegible] P.S.
153	[illegible]	કુશીગામ	[illegible]
154	[illegible]	કુશીગામ	M.K. Dhodi
155	[illegible]	કુશીગામ	M.P. Dhodi

Sr. No. ક્રમાંક	Name & Designation નામ અને હોદ્દો	Organization/Village સંસ્થા/ગામ	Sign સહી
156	Shyam Sunderbhai	Savari	
157	[illegible]	[illegible]	
158	[illegible]	[illegible]	
159	[illegible]	[illegible]	
160.	[illegible]	[illegible]	
161	[illegible]	[illegible]	
162	[illegible]	[illegible]	
162	Nayan K. Ahir	Biliya	
163	Jitendra H. Ahir	Angam	
164	[illegible]	[illegible]	
165	Manoj Rajput	Sarigam	
164	Nazar A. K.	Sarigam	
165	Nilesh Patel	-	
166	Nimesh Patel	-	
167	P. K. Patel	-	
168	[illegible]	-	
169	Sunil Kumar Vishnubhai Koli	Kargam	
190	Sunny [illegible]	Sarigam	
171	[illegible]	Sarigam	
172	Sanju Verma	Sarigam	
173	Vipul Solanki	Sarigam	
174	Ajay Yadav	Sarigam	
175	Rahul Mahto	Sarigam	
176	Manish Rawat	Sarigam	
177			

Sr. No. ક્રમાંક	Name & Designation નામ અને હોદ્દો	Organization/Village સંસ્થા/ગામ	Sign સહી
178	[illegible]	[illegible]	
179	[illegible]	[illegible]	
180	[illegible]	[illegible]	
181	[illegible]	[illegible]	
182	[illegible]	[illegible]	
183	[illegible]	[illegible]	
184	[illegible]	[illegible]	
185	Ravindra Kolekar	[illegible]	RK
186	mehul Ramesh vasli	[illegible]	M.R. Vasli
187	[illegible]	[illegible]	[illegible]
189	Bhagvan M. Vaidya	Kanjurmarg	Bha. Vaidya
190	Jayshri N. Vasli	[illegible]	[illegible]
191	[illegible]	[illegible]	
192	Kamlesh Ravindra	[illegible]	[illegible]
193	Rajesh Vasta [illegible]	KARJAGAN	[illegible]
194	[illegible]	[illegible]	[illegible]
195	[illegible]	[illegible]	[illegible]
196	[illegible]	[illegible]	
197	[illegible]	[illegible]	
198	[illegible]	[illegible]	
199	[illegible]	[illegible]	
200	[illegible]	[illegible]	
201	[illegible]	[illegible]	
202	[illegible]	[illegible]	
203	[illegible]	[illegible]	

Sr. No. ક્રમાંક	Name & Designation નામ અને હોદ્દો	Organization/Village સંસ્થા/ગામ	Sign સહી
204	[illegible]	[illegible]	[illegible]
205.	[illegible]	[illegible]	[illegible]
206.	[illegible]	[illegible]	[illegible]
207.	[illegible]	[illegible]	[illegible]
208.	[illegible]	[illegible]	[illegible]
209.	[illegible]	[illegible]	[illegible]
210.	Shahel Kham.	[illegible]	S.K.
211.	Yogesh. Wasli	Sarigam	Y.W.
212	Vinod. Wasli.	Sarigm.	Vinod.
213	manish.	Sarigam.	M.F.
214	Hitesh.	Sarigam.	H.b.
215.	Sakil Shikh.	Sarigam	S.S.
216.	Mukesh.	Sarigam.	mak.
217.	Ejaj	Sarigam	E.2.
218.	Elmaz.	Sarigam.	E.
219.	Sachin.	Sarigam.	Sachin
220	Manoj bhai.	Sarigam.	M.b.
221.	Parvind	Sarigm.	P.B.
222	Rahul. bhai.	Sarigam	R.b
223	Jiga. bhai.	Sarigam	J.g.
224	Mukesh	Sarigam	mk
225	Nimesh	SARIGAM	[illegible]
226	Manish Patel	AEE, UPHB, Sayan	[illegible]
227	Manoj Vasu	AEE, UPHB Sarigam	M.M.Vasu
228			

Sr. No. ક્રમાંક	Name & Designation નામ અને હોદ્દો	Organization/Village સંસ્થા/ગામ	Sign સહી
229	[illegible]	[illegible]	[illegible]
230	[illegible]	[illegible]	[illegible]
231	[illegible]	[illegible]	
232	[illegible]	[illegible]	
233	[illegible]	[illegible]	
234	[illegible]	[illegible]	
235	[illegible]	[illegible]	[illegible]
236	[illegible]	[illegible]	
237	[illegible]	[illegible]	
238	[illegible]	[illegible]	[illegible]
239	[illegible]	[illegible]	[illegible]
240	[illegible]	[illegible]	
241	[illegible]	[illegible]	
242	[illegible]	[illegible]	[illegible]
243	[illegible]	[illegible]	[illegible]
244	[illegible]	[illegible]	[illegible]
245	[illegible]	[illegible]	ARUNA
246	[illegible]	[illegible]	CHHATHI
247	[illegible]	[illegible]	[illegible]
248	[illegible]	[illegible]	[illegible]
249	[illegible]	[illegible]	
250	[illegible]	[illegible]	[illegible]
251	[illegible]	[illegible]	
252	[illegible]	[illegible]	[illegible]
253	[illegible]	[illegible]	[illegible]

Sr. No. ક્રમાંક	Name & Designation નામ અને હોદ્દો	Organization/Village સંસ્થા/ગામ	Sign સહી
254	[illegible]	[illegible]	S.K. Bhoji
255	[illegible]	[illegible]	[illegible]
256	[illegible]	[illegible]	[illegible]
257	[illegible]	[illegible]	[illegible]
258	[illegible]	[illegible]	[illegible]
259	[illegible]	[illegible]	[illegible]
260	[illegible]	[illegible]	[illegible]
261	[illegible]	[illegible]	S.M.P
262	[illegible]	[illegible]	[illegible]
263	[illegible]	[illegible]	[illegible]
264	[illegible]	[illegible]	Manisha
265	[illegible]	[illegible]	[illegible]
266	[illegible]	[illegible]	[illegible]
267	[illegible]	[illegible]	[illegible]
268	[illegible]	[illegible]	[illegible]
269	[illegible]	[illegible]	[illegible]
270	[illegible]	[illegible]	[illegible]
271	[illegible]	[illegible]	[illegible]
272	[illegible]	[illegible]	[illegible]
273	[illegible]	[illegible]	[illegible]
274	[illegible]	[illegible]	[illegible]
275	[illegible]	[illegible]	[illegible]
276	[illegible]	[illegible]	[illegible]
277	[illegible]	[illegible]	[illegible]
279	[illegible]	[illegible]	[illegible]

Sr. No. ક્રમાંક	Name & Designation નામ અને હોદ્દો	Organization/Village સંસ્થા/ગામ	Sign સહી
280	[illegible]	[illegible]	[illegible]
281.	[illegible]	[illegible]	Smit
282	[illegible]	[illegible]	[illegible]
283	[illegible]	[illegible]	[illegible]
284	[illegible]	[illegible]	[illegible]
285	[illegible]	[illegible]	[illegible]
286	[illegible]	[illegible]	[illegible]
287.	[illegible]	[illegible]	[illegible]
288.	[illegible]	[illegible]	G. Dhodi
289.	[illegible]	[illegible]	[illegible]
290.	[illegible]	[illegible]	[illegible]
291.	[illegible]	[illegible]	[illegible]
292.	[illegible]	[illegible]	[illegible]
293.	[illegible]	[illegible]	[illegible]
294.	[illegible]	[illegible]	[illegible]
295	[illegible]	[illegible]	Dhodi A.P
296.	[illegible]	[illegible]	Dhodi A.A
297	[illegible]	[illegible]	[illegible]
298	[illegible]	[illegible]	[illegible]
299	[illegible]	[illegible]	[illegible]
300	[illegible]	[illegible]	[illegible]
301.	[illegible]	[illegible]	[illegible]
302	[illegible]	[illegible]	[illegible]
303	[illegible]	[illegible]	[illegible]
304	[illegible]	[illegible]	[illegible]

Sr. No. ક્રમાંક	Name & Designation નામ અને હોદ્દો	Organization/Village સંસ્થા/ગામ	Sign સહી
305	દિનેશ ભાઈ	કરમાન	દિનેશ મોહન ઘાડી
306	વિશાલ ભાઈ	કરમાન	વિશાલ કિશનભાઈ
307	કમલેશ ભાઈ	કરમાન	કમલેશ મોહનભાઈ
308	દિનેશ ભાઈ	કરમાન	દિનેશ
309	કિશન ભાઈ	કરમાન	
310	કાંતિ ભાઈ નાનુ ભાઈ ગોવિ		
311	નરેશ ભાઈ		
312	રાકેશ રાજેશ ઘાડી	કરમાન	
313	જગદીશ કિશોર ઘાડી	કરમાન	
314	કીર્તન Kirtan ઘાડી	કરમાન	Kirtan
315	રાકેશ નરેન્દ્ર ઘાડી	કરમાન	Sanju
316	કનુભાઈ ભાઈ	કરમાન	
317	દલપત ભાઈ	કરમાન	દલપત
318	નિતીનભાઈ બી. ઘાડી	કરમાન	Nitin
319	અંકુર લાડુ	કરમાન	
320	યોગેશ ભાઈ ઘાડી કરમાન	9413039773	
321	Yogesh P. Joshi	Precitech Labs	
322	Dr. Hemal Kumar Naik	Precitech Lab	
323	Rujul Bhatt	Precitech Lab	
324	Maitri Rana	Precitech Lab	
325	Sanjay Joshi	Precitech Lab	
326	Megha Sharma	Precitech Lab	
327	Tanvi Pathak	Precitech lab	
328	Palin Thakar	Precitech Lab	
329	Bharat J. Dodia	Precitech Lab	

Sr. No. ક્રમાંક	Name & Designation નામ અને હોદ્દો	Organization/Village સંસ્થા/ગામ	Sign સહી
340	[illegible]	ઈશ્વરીયા	Bhoraji
341	કાનજીભાઈ	ઈશ્વરીયા	કાનજીભાઈ
342	મુકેશભાઈ	ઈશ્વરીયા	મુકેશભાઈ
343	સંતોષભાઈ	ઈશ્વરીયા	સંતોષ
344	ગોપાલભાઈ	ઈશ્વરીયા	ગોપાલભાઈ
345	[illegible]	ઈશ્વરીયા	[illegible]
346	રોશનભાઈ	ઈશ્વરીયા	Roshan
347	[illegible]	ઈશ્વરીયા	[illegible]
348	[illegible]	ઈશ્વરીયા	[illegible]
349	[illegible]	ઈશ્વરીયા	[illegible]
350	[illegible]	ઈશ્વરીયા	[illegible]
351	[illegible]	ઈશ્વરીયા	[illegible]
352	[illegible]	ઈશ્વરીયા	[illegible]
353	[illegible]	ઈશ્વરીયા	[illegible]
354	[illegible]	ઈશ્વરીયા	[illegible]
355	[illegible]	ઈશ્વરીયા	[illegible]
356	[illegible]	ઈશ્વરીયા	[illegible]
360	[illegible]	ઈશ્વરીયા	[illegible]
361	[illegible]	ઈશ્વરીયા	[illegible]
362	[illegible]	ઈશ્વરીયા	[illegible]
363	[illegible]	ઈશ્વરીયા	Divyesh
364	[illegible]	ઈશ્વરીયા	J. M. Dhodi
365	[illegible]	ઈશ્વરીયા	M. Dhodi
366	[illegible]	ઈશ્વરીયા	ASHA
369	[illegible]	ઈશ્વરીયા	[illegible]

Sr. No. ક્રમાંક	Name & Designation નામ અને હોદ્દો	Organization/Village સંસ્થા/ગામ	Sign સહી
368	[illegible]	[illegible]	[illegible]
369	[illegible]	[illegible]	Vimila
370	[illegible]	[illegible]	[illegible]
371	Pankaj Rai	Sarigam	[illegible]
372	Jhabu Rai	Sarigam	Jhabu
373	Niraj Bhatt	Karajgam	[illegible]
374	Kamlesh Dhodi	Karajgam	[illegible]

Annexure B

Annexure –B (ENGLISH)

A Statement showing issues raised by the participants and responses by the representative of the applicant during the Public Hearing

As per the Ministry of Environment, Forests & Climate Change, Government of India, New Delhi, vide its Notification No. S.O.1533 dated 14th September 2006 and subsequent amendment No. S.O.3067 (E) dated 1st December 2009; Public Hearing was fixed for the related local effected peoples with the purpose of to consider their Objections/points/suggestions under Schedule No. 5(E), the following project covered under CATAGARY "A" 1(d) of **M/s. Madura Carbon India Limited** for proposed manufacturing of Carbon Black -230000 TPA & Power Generation – 45 MW, at Survey No. 3705, 3708, 3719, 3725, 3738, 4108, 4110, 4318, Village : Karaj, Ta. Umbergaon, Dist: Valsad, (Gujarat).

Shri. C. R. Kharsan (I.A.S) Collector and District Magistrate, Valsad supervised and presided over the entire public hearing proceedings on 19/07/2019 at 11.30 am onwards.

Shri H. M. Ganvit, Regional Officer, GPCB, Sarigam as a Representative of the Member Secretary, Gujarat Pollution Control Board welcomed all present in the Public Hearing and with due permission of the Chairman initiated the procedure of the hearing. He outlined the various provisions of the Notification and briefed the procedural details for conducting this public hearing including actions taken by GPCB for vide publicity of this public hearing and the advertisement given earlier in the local daily newspapers, "Sandesh" Valsad District edition in Gujarati and "The Times of India" in English on 19/06/2019. He announced that as per the provision of notification, only locally affected persons will be allowed to represent in the public hearing while others having plausible stake holders may give their representation in writing which would be included in the proceedings. The Regional Officer, Gujarat Pollution Control Board, Sarigam informed the present public that before the public hearing Six (6) written presentation from plausible stakeholders. These have been included in proceedings of the minutes.

Sr. No.	Name and Address	Points represented and / or written submission	Chronological Replies from Project Proponent
1.	Mr. Shashikant Chhaganji Patel (Bharatiy Kisan Sangh, President Valsad District), Vill : Saronda, Dist : Valsad	• He represented that emitted toxic gases like SO_2 and CO gas from the industries will cause ample damage to the crop. • SO_2 emitted into the atmosphere from the stack is converted in to Sulfuric Acid which results into acid rain and damages agriculture crop. So we are against this project.	• Company's representative Mr.Rujul Bhatt replied that regarding SOx and NOx, adequate stack height will be provided as per Government and GPCB norms which are mentioned in the EIA report. Impact of SO_2 and NOx and its mitigation measures according to norms are mentioned in the report. So there will be no impact on

Sr. No.	Name and Address	Points represented and / or written submission	Chronological Replies from Project Proponent
			agriculture crop and mango.
		• Company will use 3220 KLD water from Damanganga river whereas villagers are not getting enough water and company has not planned even one liter of rainwater harvesting. So it is not appropriate to give permission to this project.	• Company's representative Mr. Rujul Bhatt replied that details of rain water harvesting are incorporated in EIA report. • The chairman asked that how much harvesting will be done and with what method? • Company's representative Mr. Rujul Bhatt replied that by roof top harvesting system around 22,217 meter cube per year harvesting will be carried out and water will be collected through drainage collection system. Then after ground water will be recharged as per requirement.
		• There should be 40 feet road in case of industrial NA whereas there is only 12 feet narrow gully. So how come large vehicle will pass from here in the future? Investigation should be done in the same as to how NA obtained for the land and permission of this industrial unit should be cancelled.	• Company's representative Mr. P. Chandra replied that road connectivity will be directly from the GIDC to company's plot for transportation.
2.	Ms. Manali Bhoir, Vill : Karajgam, Agriwad, Ta. : Umargam, Dist : Valsad	• She represented that the company will manufacture 2,30,000 Ton carbon black per year. In that 45 MW green power and captive power will be generated and there are two aanganwadi, Primary Schools & Forest Area in the surrounding villages. So damage will be	

Sr. No.	Name and Address	Points represented and / or written submission	Chronological Replies from Project Proponent
		caused to animals and children.	
		• 3220 KLD water will be used and will also reused but only conserved and reused 330 KLD water will be reused and fresh water will be used for the remaining requirement. • 110 KLD domestic water will be used from the pond of our village. So villagers will not get drinking water.	• Company's representative Mr.Rujul Bhatt replied that one question about water consumption, an approval has been obtained to use water for industrial purpose from distributary canal of Damanganga river.
		• SO_2, PM and NOx are emission from this project which is very harmful gases can causes brain diseases to new born babies, Heart diseases & respiratory diseases & skin cancer. • Height of stack attached to 2 Nos. 92 TPH boilers is 100 meter and due to this air affect surrounding people, also 4 driers, 1 No. 135 TPH Boiler and 1 No. DG set will be used which is risky for people.	• Company's representative Mr.Rujul Bhatt replied that dispersion modeling study has been carried out for environmental impact due to the upcoming company and the same is incorporated in EIA report as per present norms. Results derived from the same are mentioned in the report as well and it will within the prescribed limit of National Ambient Air Quality Standards Parameters.
		• Temperature and air moisture will be increased due to the upcoming project. At present it's hot and it's not raining. Collector Sir is well aware about what will happen if this carbon company will be setup. • You can carry out Medical checkup of the surrounding people right now and after establishment of the company and starting of production,	

Sr. No.	Name and Address	Points represented and / or written submission	Chronological Replies from Project Proponent
		there will be problem in their medical report. • According to definition of Panchayati Raj, Sarpanch should inform villagers by conducting gramsabha even for a small hospital. Sarpanch has not informed villagers for such a big carbon company and our village sarpanch is not supporting us. • Grazing (*Gauchar*) land will be lost due to upcoming company.	
3	Mr. Prakash Bhikhaji Aarekar, (Social Worker, Ex. Sarpanch, Sarigam) Vill : Sarigam, Dist : Valsad	• *Jay Krishna Jay Gopal, Sarigam, Karajgam ko mat banao Bhopal* • He represented that we, the people of Karaj village are not against this project but we are against the pollution. • Whether this is Hearing (*Sunaavani*) or Tsunami. We attend every hearing and every hearing is hampered and everyone gets approval. Despite of 100% opposition of villagers during public hearing for Coromandal and N.R. Aggarwal, permission to both the company has been granted. Please give a definite decision of this hearing. We want development but not at the cost of our lives. • I am fighting for the last 30 years but the pollution is not stopping. I have also done hunger strike, strikes and I am tired of doing everything but company is not obeying. We are ready, if employees of the company are ready to live here without AC with their family. If	-------

Sr. No.	Name and Address	Points represented and / or written submission	Chronological Replies from Project Proponent
		those people stay for a month, we will write an undertaking on a stamp paper of Rs.100. • Poor people lives in Pagipada and Rohitwas. They are surrounded by Coromandal, N.R. Agarwal and stone quarry. So that's why we are feeling sad. Children are tired of cough and mothers are tired of carrying their children to the clinic. That's why clinics and dispensary numbers have been increased here and there is a problem of water as well. And we demand that there should be no pollution. Companies gives undertaking and action should be taken against the company but the action is not taken. Instead of the development of the village, there is development of pocket.	
4	Mr. Bharat Jadav, Vill : Bhilad, Ta. : Umargam, Dist : Valsad	• He represented that we are against this project. But we will not oppose if the company establishes some another project. • In Punjab, Tanda, Sarabjit Singh and others filed a case in NGT Tribunal for the same kind of company and the hearing was conducted on 30/05/2019 and the H'ble court has ordered immediately to shift the company by April 2020. • This company is harmful to the human body. Human lungs, trees and leaves will be damaged due to carbon. We do not have any objections if the	-------

Sr. No.	Name and Address	Points represented and / or written submission	Chronological Replies from Project Proponent
		company will bring another product. We are strictly against this company.	
5	Mr. Bhulbhai Ahir, Vill : Sarigam, Ta. : Umargam, Dist : Valsad	• He represented that in their process they (company) have not mentioned percentage of COD and BOD before treatment of wastewater and also COD & BOD after treatment in ETP should be disclosed. Moreover, he inquired to disclose consumption of oxygen.	• Company's representative Mr.Rujul Bhatt replied that ,this a washing water and not like process water which has COD/BOD, therefore only primary tertiary treatment is only needed and no need to give secondary treatment. • The chairman questioned to representative that its about third level treatment, state that level also, filtration is secondary treatment. If you are not going to carry out tertiary treatment, then whey it is shown in the report? • Company's representative Mr. Rujul Bhatt replied that filtration will be tertiary treatment. In our terminology chemical treatment means primary treatment, aerobic treatment means secondary treatment and filtration treatment means tertiary treatment. Collecting effluent and removing oil & grease is a primary treatment means physical treatment and followed by aeration but aeration will not be done, directly filtration will be carried out, it means tertiary treatment. • The chairman questioned

Sr. No.	Name and Address	Points represented and / or written submission	Chronological Replies from Project Proponent
			to representative that if you are not going to carry out aerobic treatment then how will you carry out the treatment? • Company's representative Mr. Rujul Bhatt replied that there will be SS content in washing water. As it does not contain COD, BOD, it does not require secondary treatment. Only primary and tertiary treatment is shown in EIA report. ETP will be of 30 KLD capacity. Secondary treatment will be carried out in STP only. • The chairman inquired that whether the STP is of 100 KL capacity or not? You don't have employees. Functioning of 100 KL STP requires 2000 employees and you are going to provide employment to only 300-400 persons. Provide information in EIA report if you are going to employ persons on contract basis. • Company's representative Mr. Rujul Bhatt replied that details of persons employed on contract basis will be incorporated in final EIA report.
6	Mr. Hemant Naik, Vill : Karaj, Ta. : Umargam,	• He represented that this project should be rejected and there is no need for public	-------

Sr. No.	Name and Address	Points represented and / or written submission	Chronological Replies from Project Proponent
	Dist : Valsad	hearing. • It is better to establish this plant in chemical zone. What about impacts of carbon? • What about the value of undertaking given to Grampanchayat? What will grampanchayat do if the company doesn't follow the same? GPCB issue closure notices which do not make any impact (on them). • Water of Koliwad has been polluted for the last 10 years. Despite of guarantee of company & GPCB, water is still polluted. Company throws 1-2 water bottles. Is this development? Development of Sarigam, Karaj and Manda means dirt, mosquitoes, air pollution, water pollution and epidemic. Income from agriculture is reduced due to polluted climate.	
		• Whether any study regarding increase in temperature due to reaction at 1200^0 C to 1800^0 C in the power project and manufacturing of carbon has been carried out or not? • Temperature of Karaj village remains 40^0 C to 42^0 C. and due to carbon black there are possibilities of throat infection, tumor in the lungs, cancer, cardiovascular diseases to the people in the long term and tiny dust particles of carbon causes nuisance. They stick to	• Company's representative Mr.Rujul Bhatt replied that, question was regarding increase in temperature. We would like to state that the whole plant will be insulated and energy efficient. Heat generated will be used in preheater and it will be used to heat the air feed as well. So there will be no increase in ambient temperature. The whole plant will be insulated. • In addition, Company's representative Mr. Rujul Bhatt informed that there will be no emission of carbon

Sr. No.	Name and Address	Points represented and / or written submission	Chronological Replies from Project Proponent
		clothes, skin and trees and hard to remove. So everything will turn black after 10 years. So we request you to shift this plant in chemical zone. Projects like plastic plant, solar plant should be established on this land which is encouraged by the Government.	black like the emission during the burning of coal, so particulate matter will remain inside and whole system will be closed system.
7	Mr. Vinay Fulchand Sheth, Vill : Fansa, Ta. : Umargam, Dist : Valsad	• He represented that report of the company is incomplete, inadequate and misleading. No toxic gas will be generated as mentioned in the presentation. But as mentioned on page no. 6 of the report, toxic gases like PM, SOx, NOx will be emitted. • As mentioned on page no. 5 of the report, there are trees in 8.95% area only which is too distant from the truth. Because there are many trees and greenery in the surrounding area. There is a possibility of harm to agriculture, trees and humans of this area. • Company has ensured zero discharge, but if ETP stops working, it should be restarted immediately, even due care by CETP is not being taken, in this situation how and where water will be discharged? • Company is going to establish the plant by investing Rs.415 Crore. It is mentioned in their report that 385 persons will get employment out of which only 160 nontechnical persons will be employed. We can create more employment by investing Rs.415 Crore in agriculture.	-------

Sr. No.	Name and Address	Points represented and / or written submission	Chronological Replies from Project Proponent
		• It is illusory that the project will be beneficial for employment. • All the outsider people are being employed in Sarigam GIDC and in such a case local people suffer and also have to suffer from lung diseases and cancer and also don't get employment and not get benefited. Then such type development by Gujarat Govt. or any other Govt, it is an inappropriate. • This type of development the cost of our destruction is not acceptable to us. Agriculture should be developed. Government also wants to increase the share of agriculture in GDP and increase the income of the farmers as well. Short term development is harmful for the agriculture, farmers and the country and action should be taken keeping in mind long term development.	
8	Dr. Nirav Shah, Vill : Sarigam, Ta. : Umargam, Dist : Valsad	• He represented that company has given positive feedback in their EIA report and negative feedback has not been mentioned in the report. • It is mentioned in page no.8 of the report that trees of surrounding area, land, farming land will be affected by PM, SO_2 and NO_2 emission from the project. There will be harmed & reduced in vegetation due to long term effect, who will be responsible? Kindly give the	• Company's representative Mr. Rujul Bhatt replied that emission of SO2 and Particulate Matter will be under the rules and regulations stipulated by government. Effect of the same on existing quality of ambient air will be within the stipulated limit after setting up of the plant.

Sr. No.	Name and Address	Points represented and / or written submission	Chronological Replies from Project Proponent
		answer. • I have got the factsheet published by N.J. Health Institute, USA. Carbon black is a hazardous substance as per the said factsheet and it causes lung cancer, skin diseases, throat cancer and other cancers. I request you to pay attention on the factsheet.	
9	Mr. Pratik Shankar Varli Vill : Kanad, Ta. : Umargam, Dist : Valsad	• He represented that company has given EIA report, in which they mentioned on page no.5 that many type chemicals will be released. What is $PM_{2.5}$? Many companies already know the effect of $PM_{2.5}$, but the people don't know its effect. Please take note of report and representation given herewith.	• Company's representative Mr. Rujul Bhatt replied that, PM2.5 is a size of dust particle. Dust particle smaller than 2.5 micron may enter into lungs and may be harmful. Government of India has formed National Ambient Air Quality Standards for the same. 60 microgram per meter cube quantity is mentioned for dust particle emission. But in this plant people are going to work so whole system is closed. This is a closed system so there will be no dust emission & care will be taken. • The chairman asked to Company's Representative that who will monitor emission of dust particles? • Company's representative Mr. Rujul Bhatt replied that by Govt. authorized agency every six month compliance report is needed to be submitted. Moreover, continuous

Sr. No.	Name and Address	Points represented and / or written submission	Chronological Replies from Project Proponent
			monitoring system will be installed on the chimney which will be connected to the CPCB. • The chairman informed that the data of the continuous monitoring system installed by the company should be displayed publicly so that any person can see it. • Company's representative Mr. Rujul Bhatt replied that display board is required to be install beside the gate of the company and daily online data has to be displayed there.
10	Mr. Dalpatbhai Chhotubhai Dhodi Vill : Karajgam, Ta : Umargam, Dist : Valsad	• He represented that we are strictly against this project in this area because the Government forms new laws but the laws are not being implemented. PESA Act has been implemented in the year 2018-19. There are 70% tribal in our village and they even don't have money when they fell ill. So if such a big company establishes here, it will be a major problem and can be harmful. So I request you to give justice to the people considering provisions of recently formed PESA Act in the year 2018-19.	-------
11	Mr. Lalit Pravinchandra Shah Vill : Kanadu, Ta : Umargam,	• He represented that Alfonzo mangos are being grown in this area in a large number. Crop has been damaged for the last	-------

Sr. No.	Name and Address	Points represented and / or written submission	Chronological Replies from Project Proponent
	Dist : Valsad	few years due to establishment of companies and change in temperature. Temperature will increase due to establishment of this company. 80% of farmers depend upon mango crop for their livelihood which will be damaged. We are against this company as it will damage many huge Ambawadis and greenbelt in this area.	
12	Mr. Prakash Bhatt Vill : Karaj, Ta. : Umargam, Dist : Valsad	• He represented that we possess land in chemical zone. Crop gets failed for the last 20 years. Crop of our Ambawadi gets failed and our livelihood depends on it. Our bores are failed due to establishment of chemical and other plants in koliwad and getting chemical containing water. I request H'ble Collector to visit our home for inspection and we don't know which company sent two-two water bottles at our home. As this dangerous plant is going to be established, we request H'ble Collector to take appropriate actions taking an account of villagers of Karaj village.	-------
13	Mr. Sanjay Patel Vill : Kalgam, Ta : Umargam Dist : Valsad	• He represented that I have nine questions and reply should be given by GPCB and Company's Director because their executive summary report is misleading. • How much TPH boiler will be installed? They have mentioned in their report to install bag filter. Filtration of Alkali Scrubber has to be installed for	• Company's representative Mr.Rujul Bhatt replied that Tail Gas generated from the manufacturing of the product will be used as

Sr. No.	Name and Address	Points represented and / or written submission	Chronological Replies from Project Proponent
		0.3 TPH boiler, Bag filter has to be installed in case of boiler upto 10 TPH, ESP has to be installed for boiler more than 10 TPH capacity which is not mentioned anywhere in the report. Toxic dust through bag filter will be dispersed in air and it is said that it will not cause any air pollution which is false statement. Clarify which type of filtration will be installed for Boiler.	fuel in the power plant. Coal will not be used. As natural gas is used to generate the power, in the same way tail gas will be used as fuel. Hence bag filter will not be installed with the boiler. • The chairman asked to Company's Representative that Which filter will you install in the boiler? • Company's representative Mr.Rujul Bhatt replied that solid fuel like coal will not be used. Gas will be used in the boiler and not any solid fuel. Bag filter will be installed in process. Carbon black will be passed through the bag filter and it will be collected. Only gas will be burnt in the boiler, so there is no need of bag filter in the boiler. Bag filter will be installed in process wherever necessary. And that is their product that's why extra care will be taken.
		• Question no.2; Management of VOCs generated from the reactor is not mentioned. Mitigation measures of odour generated from the heat are not mentioned. (Other) Rubber companies are situated within 500 meter of Agriwad (Karajgam) here. School students are suffering due to these (Rubber) companies. Despite of having techniques, we are not able to prevent	• Company's representative Mr.Rujul Bhatt replied that VOC means volatile solvent of low pressure which vaporizes in the air. No such product will be used as raw material. Carbon black feed stock will be used which is in the form of thick oil. It does not contain any kind of VOC. Bag filter will be installed to control the dust emission. The whole plant will be closed system. So gas will

Sr. No.	Name and Address	Points represented and / or written submission	Chronological Replies from Project Proponent
		odour. So give details of VOCs to be generated and its mitigation measures.	also go through in closed system as a fuel.
		• Ambient air monitoring has been carried out in the area of 10 km radius at 10 locations to assess quality of ambient air by M/s. Precitech Laboratory. Give the details of 10 locations, names of persons accompanied while monitoring and name of village and school where monitoring was carried out and because report given by them is false. So we request to carry out monitoring again.	• Company's representative Mr.Rujul Bhatt replied that we will answer the questions in writing.
		• It is told by the company that greenbelt will be developed by to reduce noise pollution. If the greenbelts were developed by the industries of Sarigam, there would be a forest like the Dangs in this area. • When N.R. Aggarwal company obtained permission to use coal, they promised to develop the greenbelt and they submitted the report to the Government to plant 25,000 trees. But when inspection was carried out in consultation with the Forest Department, it was revealed that there were only 500 trees planted by them. Greenbelt's claims are absurd and false.	
		• Arrange to carry out survey by forest department for wildlife and birds of surrounding area. There is fear of extinction of	• Company's representative Mr.Rujul Bhatt replied that NOC have been obtained by the company from the Forest Department.

Sr. No.	Name and Address	Points represented and / or written submission	Chronological Replies from Project Proponent
		wildlife and birds of surrounding area due to air and noise pollution. Mention the actions taken by the company for the same and if the actions are not taken then close the company or permission should not be granted to the company. • The company will generate 1,00,000 liter domestic wastewater per day and 2,47,000 industrial wastewater per day from which 30,000 liter wastewater will be treated in ETP and 84,000 liter wastewater will be evaporated, 1,40,000 liter wastewater is added. It is not mentioned that where will remaining 1,33,000 liter wastewater be discharged. It is not mentioned that whether this wastewater be discharged in sewer drain or under the ground or transported by tankers. • Rubber companies are located in Agriwad. The school is located within 100 meters from Dashmash Rubber and children are suffering there. There is population within 200 meter and even school-colleges within 500 meter radius from where we are standing, so criteria should be decided accordingly and arrangement should be made accordingly.	• Company's representative Mr. Rujul Bhatt replied that main requirement of water in carbon plant is in quenching process. Flow diagram has been given in EIA report. 1500 KL water is sprinkled for cooling the quenching carbon black which is evaporation loss. • The chairman stated that this question is after water loss. • Company's representative Mr. Rujul Bhatt replied that blow down water will go to the RO plant. Reject of RO plant will be evaporated in MEE and remaining water will be reused.

Sr. No.	Name and Address	Points represented and / or written submission	Chronological Replies from Project Proponent
		• It is said that employment will be generate by M/s Madura Carbon (India) Ltd. at Village Karaj and 385 persons will be employed which is very less. According to the Government rule 85% of local employment should be provided, whenever there is an issue of employment to local people, they will say that you are not qualified & not educated. Then what the employment to the people will be given for water irrigation from this left wastewater? Please clarify the same and If the company submit affidavit to the H'ble Collector, then only permission for production should be granted.	• Company's representative Mr. P. Chandra replied skilled & unskilled persons will be employed after providing training. • Chairman questioned to Company's representative that approx 400 or more people will be employed by you. Then 85% locality has to be employed then how many local people will be employed as per 85%? • P. Chandra replied approx. 320 unskilled people will be directly employed and skilled people will be employed after giving technical training. • The chairman stated that non-technical illiterate persons who know agriculture can be employed to develop the greenbelt. So such 40-50 persons should be employed and incorporate the same in EIA report.
		• It is shown that there are three such companies in Gujarat. These companies have been established before the year 2004, no permission has been granted to such company after the year 2004.	• Company's representative Mr. P. Chandra said that there was one more question that after 2004 no carbon factory have been approved. I want to inform regarding the same that approval were given to PCPL company Mundra in 2018, BKT carbon in 2018, Kiri carbon in 2019 and to Continental Carbon in 2019. • The Chairman inquired that at which place these approved company are located? • Company's representative Mr. P. Chandra replied

Sr. No.	Name and Address	Points represented and / or written submission	Chronological Replies from Project Proponent
			that, PCPL company is in Mundra, BKT carbon is in Bhuj, Kiri carbon and Continental Carbon is in Dahej. • The chairman asked to company's representative that whether all these 4 companies are prohibited or not? • Company's representative Mr. P. Chandra replied that all these 4 companies are not prohibited but approved.
		• M/s Madura Carbon (India) Ltd. at Karaj will carry out pyrolysis process in their plant, which is prohibited by Gujarat Pollution Control Board. Then how Gujarat Pollution Control Board will give permission to this plant? Gujarat Pollution Control Board should clarify the same.	• The chairman asked to Regional Officer that whether there is prohibition on this type of company? • The Regional Officer replied that companies producing carbon black have been permitted.
14	Shri Pankaj Rai, Vill.: Sarigam, Ta.: Umargam, Dist.: Valsad.	• He presented that Madura Company is situated at Sarigam and it is in operation. It has provided employment mostly to local people and many people employed they are present here. Company is also helping in development work in village under CSR. Gram Sarigam is getting revenue. It earns by providing house number. It is a textile division. NOC was given to Coromandal its name is Sabero when Sarigam was Gram Panchayat. Mangozeb (Pesticide) is a product produced by Coromandal Company.	-------

Sr. No.	Name and Address	Points represented and / or written submission	Chronological Replies from Project Proponent
		Pesticides used by the farmers in crops are in the form of Mangozeb. And one such company produces company kaltar and used it in farming. • There is a company in Sarigam which produces Ferrous which is used in farming of onion and potato. Aarti Drugs is also in Sarigam and it produces drugs which are used to prevent disease like plague which was used in Surat. In the Public hearing of the N.R. Agrawal which was in Sarigam people present here to oppose were present there then why didn't they opposed there. This company is going to be established at Karajgam. Approval should be given to the company only after consent of Grampanchayat Karaj and by considering public interest, local employment and development of the village and surrounding villages as per norms of MoEF&CC and GPCB.	
15	Shri Vilash Gohil, Vill.: Karajgam, Ta.: Umargam Dist.: Valsad.	• He represented that I am illiterate. This company should not establish here in any situation. If this company will establish here then we 200 boys & 250 ladies will burn our self in oppose of this company. People present here want business. There is no need to establish such a huge plant only to employ 160 people. Those who want job can go to 450 companies in Sarigam GIDC.	-------

Sr. No.	Name and Address	Points represented and / or written submission	Chronological Replies from Project Proponent
		• This Chemical Company should be established in Bharuch and Ankleshwar which has chemical zone. Why company has came to pollute village and has come to request us. • Amongst the people present here, 50% people are in favour of the company and rest 50% are against the company. If 90% people are in favour of the company and 10% against the company, if 10% people are against then it doesn't matter. All the companies are established here. Sir, i will burn myself if this company permitted to be setup here. If the Karajgam is not aware, I will make aware adivasis of Umargam Taluka, I will go to Valsad District, I will go to Gandhinagar and even report to Shri Narendra Modi, I will go alone. How many companies are going to be established in Sarigam? Is there less chemical companies in this area? Population of our village is 2300, out of which only 200 people are working and rest of the people are earning from home. So we don't want such a huge company only for 160 people. We suggest you to setup school or university. R.K. Rubber is situated at the distance of 200 meter. Nobody has got employment in that company. Madura Carbon should not be established here. Otherwise we are ready to	

Sr. No.	Name and Address	Points represented and / or written submission	Chronological Replies from Project Proponent
		burn ourselves. • This is to inform H'ble Collector that we are ready to buy this land if you allot us half-half acre land by Khalsa. • This company will not provide employment to the people even if it is going to be established here.	
16	Shri Kamlesh Manjibhai Dhodi, (Sarpanch) Vill.: Karajgam, Ta. : Umargam, Dist.: Valsad.	• He represented that there are possibilities of cancer these days due to smoking and smoke of vehicles. People are opposing the company for their self-interest only. • Where were the people of Aagrivad village during the establishment of Royal Company, Shotra Company and A.K. Rubber and why didn't they opposed the company? We are not against this company.	-------
17	Shri Navin Patel, Vill.: Karaj, Ta.: Umargam, Dist.: Valsad.	• He represented that PESA Act 1996 was enforced in the year 2018 and by enforcement of the said act all the powers of the Panchyat was transferred to Gram Sabha. This company is going to be established without the permission Gram Sabha, so we are opposing this company. We are opposing this company under PESA Act. PESA Act is being implemented at present and we don't want any type of plant or factory. We request that all the procedures should be followed as per PESA Act 1996.	-------
18	Smt. Varshaben Raval, Vill.: Khatalwada,	• She represented that thousands of people will get	-------

Sr. No.	Name and Address	Points represented and / or written submission	Chronological Replies from Project Proponent
	Ta.: Umargam, Dist.: Valsad	employment by the establishment of this company. So this company should be established.	
19	Shri Pintu Gohil, Vill.: Sarigam, Ta.: Umargam, Dist.: Valsad.	• He represented that we don't need development, we have less needs, and we neither want development nor employment. We will earn on our own, we don't want development. We are against this company.	-------
20	Shri Lalitbhai Shaileshbhai Patel, Vill.: Karaj, Ta.: Umargam Dist.: Valsad.	• He represented that people form Sarigam of Bhilad came and represented here but till today they never came to our Karajgam to ask us that how we are living. Now when the company is going to be established here and we are about to get employment then all people came here to oppose the company. But we are not opposing this company.	-------
21	Shri Surajkumar Uttambhai Dhodi Vill.: Karajgam, Ta.: Umargam, Dist.: Valsad	• He represented that I have completed M.Sc. in Organic Chemistry. After completing my post-graduation, I was unemployed for six months. Whenever any company establishes, commits to provide employment to local people. Whenever interviews conducted local people are not selected for employment. It is my request to protect the environment.	• Company's representative Mr. Rasik Raval replied that we assure that efforts will be made to provide employment to the unemployed persons of surrounding areas
	• Annexure D-1 to D-547 is answer in writing given by the company representative Shri. P. Chandra.		
	• The chairman stated to company's representative that written representative by People's and all the questions asked verbally by the people's present here should be replied in written and a copy of the same should be given to the Regional Officer.		

Sr. No.	Name and Address	Points represented and / or written submission	Chronological Replies from Project Proponent
	• People's written representation and aforesaid People's verbal representation during the public hearing is submitted replied letter by Company's Representative through the UPC and Hand delivery.		

Chairmen informed that, it is my duty to forward the objections and suggestions represented here by the people to GPCB by taking into account of this hearing. It will be send accordingly. Any questions or objections, you will be answered in writing by the company. Represented issues related to environment, employment, company's pollution and chemicals will be covered in proceeding and sent to GPCB. After taking necessary steps on it, Government will take decision.

Regional Officer informed that, before Public Hearing six (6) representations were received from (1) Shri Kantibhai Mohanbhai patel, Bhilad, (2) Dr. Nirav Shah, Sarigam, (3) Shri Dalpatbhai Chhotubhai Ghodi, Karajgam, (4) Shri Prabhubhai Satubhai Thakariya, Sarpanchshri, Gram Panchayat Manda, (5) Shri Hiteshbhai Uttambhai Ghodi, Karajgam and (6) Shree Sanjaykumar M. Patel, Kalgam. Reply to written representation received during Public Hearing will be given by the company in writing and one copy of the same will be given to GPCB and further procedure will be carried out after that.

At the end, chairman concluded the Public Hearing with the vote of thanks.

Place :-
Survey No. 3705, 3708,
3719, 3725, 3738, 4108,
4110, 4318,
Village : Karanj,
Ta. Umbergaon,
Dist: Valsad

Date: 19/07/2019

H.M. Ganvit
Regional Officer, GPCB,
Sarigam
as representative of the
Member Secretary, GPCB

C. R. Kharsan, I.A.S
District Collector and
District Magistrate,
Valsad

Annexure C1-C537

Annexure-C1-Gujarati to English

Applicant: Kantilal Mohanlal Patel

Beside Railway crossing,

Siddhi Vinayak Niwas, Sanjan Road, Bhilad-396105

Mob. No. 9825274328

To,

Gujarat Pollution Control Board

Sarigam.

Subject: Regarding noting of objection against the permission to be given to proposed manufacturing of Carbon Black – 23000 TPA and Captive Power Generation – Green Power (45 MW) at survey no. 3705, 3708, 3719, 3725, 3738, 4108, 4110, 4318, Village: Karanj, Taluka: Umbergaon, Dist.: Valsad.

It is our kind request I am the resident of the address mentioned above and I am a social worker. I am totally against the above subjected project in favor of public.

We are against the company due to the points given below:

1. Since ancient times, India is a country of Saints, and our country is traditionally running and believer of the traditional culture. Hence, we are against this if this would pollute the Air, Water, and land.
2. As Air, Water, noise and land is going to be polluted due to the manufacturing of Carbon Black, we are against this project.
3. Due to the Captive Power (Green power) generation, there will be the problem of the noise pollution on permanent basis which will be dangerous for the pollution human settlement as well animals and birds, which are within the 20 km area of the proposed project.
4. The land - 94499 m^2, which is going to be used for the proposed project, along with the surrounding area's land is going to be poisonous permanently for the lifetime and due to which this land area of India's Continent will be the poisonous burden forever. This is very dangerous for human life.
5. Water @3220 KLD will be drawn from Damanganga Canal Distry. Due to this, the main purpose of canal for farming is deviated. Farming will be affected due to usage of canal water for plant and there are chances of havoc situation for farmers, which is very dangerous for human survival.
6. In the proposed project the Carbon Black feed will be used as the fuel for generating power of 13 MW, which is very dangerous for the survival of human and other insects on earth and will also be detrimental for environment.
7. The need of the fuel - CBFS (Carbon Feed Stock) will be provided by local suppliers, which will be beneficial for the poor and middle class people of the taluka – is just a virtual offer.
8. The survey of National Air Quality Monitoring was published in the Sandesh newspaper on the date 15th July 2019. According to which, Ahmedabad is 3rd amongst the most polluted cities of India. The survey has shown that power plants are responsible for the same. Given below are the statistics of the power plants running at Ahmedabad:

   Polluted due to power plant – 39%
   Polluted due to roads – 22%
   Due to incineration of waste – 5%
   Due to kiln of bricks – 11%

How the pollution will be controlled after proposed project?

9. If the project gets an approval then, every tree of 12" diameter which is covered within the 20 km radius of the plant area shall be given the redemption for providing Oxygen and absorbing dust particles.
10. Reserve forests will be destroyed. Due to removal of forest, chances of rising heat levels in hilly areas will be increased due to removal of forests.

Description:

1. India is a country of the saints, and there were many natural forests in the country, full of herbs. There was no pollution in forests and the living standard of people was simple. While in the current era, chemical and other pollutants are deteriorating quality air, water, noise and land for the sake of the development. Due to this, survival of human and other living beings on earth is becoming difficult. Because of this pollution, various new kind of diseases are already being produced and we have started making other people and insects life difficult for our own growth. This has been such a serious matter. Company is taking advantage of the people living in surrounding area, because they are illiterate. The next generation and the surrounding area of the plant is going to be destructed on extreme point. Because of these reasons we are against this project.
2. Manufacturing of the Carbon Black, which is the feeding material for rubber manufacturing is extremely poisonous. The foul smell of the Carbon Black/black powder or liquid which is going to be manufactured is extremely severe, which adversely affects the lungs as well as many cells of the human body and dims the consciousness of human body. Its particles are extremely poisonous, which will be flying in the air and will stick on the surface of the fruits and vegetables and will affect the people living within the 20 km radius of the proposed project area. These carbon black particles does not get removed even after washing them with water, so the same will be consumed by the human and animals and the intake of these particles will tend to produce new disease which is very harmful for humans. The wastewater will pollute the land and the water will be mixed with the seawater which will result in polluting thousand acre of land. As this is extremely harmful, we are against sanctioning an approval for the project.
3. Machineries for production of captive (green power) generation will make tremendous noise. Hence the life of the people, cattle and other insects will be so difficult who are within the 25 km radius of the plant area. Children will be highly affected due to this. People will suffer from mental illness. Due to this noise pollution people living in nearby villages will be compelled to leave their residency. Due pollution situation for exodus will arrive shortly. The people living in the surrounding area might would suffer from ear illness. That is why we are against this.
4. The land – 94499 m^2, which is going to be used for the proposed project, along with the surrounding area's land, is going to be poisonous permanently for the lifetime and due to which, this much of land area of India's Continent will be the poisonous burden forever. This is very dangerous for human life. The land of the project site along with the 5 km land of the surrounding area will also be polluted and will not be useful for any purpose in future. The solid waste which is going to be generated will make this 94499 m2 land into a barren land, so it will be very difficult for the survival of human and other creatures.

   If in our country power plants are required, then government must give attention to the power plants running by solar energy.

5. Water @3220 KLD will be drawn from Damanganga Distry. for the proposed project. The main purpose of the Damanganga canal is to provide water for farming. This canal is not providing competent water currently andif it water will be sourced from it for industries then many problems will arrive in near future. The productivity of farmers will be reduced. The main purpose of Damanganga canal is to provide sufficient quantity of water to farmlands, but as it is not satisfied there are chances of havoc situation for farmers which is very dangerous for human survival. Hence, it is not appropriate to provide water to company from Damanganga canal. This is why we are against this project.

6. Very big and heavy generators will be used for manufacturing 13 MW power, which will create tremendous noise. This situation will be difficult to survive. Reactive solid waste will be generated which is extremely harmful for the mankind, insects and the surrounding environment. That is why we are against this project.
7. The need of the fuel - CBFS (Carbon Black Feed Stock) will be provided by local dealers. What is the definition of the local dealer? This is a greedy offer. Whether this will be complied or not? This is just a virtual offer, which is not going to be beneficial for the local people.
8. In the executive summary of the project report the project proponents give assurance, but it is not complied. Due to various technical faults surrounding environment is getting affected. The survey of National Air Quality Monitoring was published in the Sandesh newspaper on the date 15th July 2019. According to it Ahmedabad is 3rd amongst the most polluted cities of India. The survey has shown that power plants are responsible for the same. Given below are the statistics of the power plants running at Ahmedabad:

   Polluted due to power plant – 39%
   Polluted due to roads – 22%
   Due to incineration of waste – 5%
   Due to kiln of bricks – 11%

   According to it Ahmedabad is 3rd amongst the most polluted cities of India.

   If 39% pollution is occurring due to this power plants, is this correct to give approval? Even if the assurance for the preventive measures are given, the companies are not complying this. The people living in the surrounding area mostly ignorant, which will not let them to complain against this for the prevention of pollution. So, on behalf of them we are against this project as there are many probabilities of increasing pollution due to proposed project.
9. If the project gets an approval due to some other reasons the trees covered within the 25 km radius from the center point of the proposed project shall be given the redemption of around 2000/- per tree to the farmers. Because trees will provide Oxygen and will absorb dust particles. Trees will control heat of the surrounding area. It is our request to give approval to the company only after they agree to comply the conditions, so that we can balance the environment.

We have some other issues along with the points given above. Due to the power plant and the carbon black, the reserved forest which is right next to the project site is going to be affected. Noise generation from plant machinery will badly affect the life of the people living in surrounding area. Due to dust particles the surrounding area's field crops will be destroyed. The local people will be forced to migrate. People living in surrounding area will suffer from disease and mental illness. This is the reason why we are against this project.

Copy sent to,

- Collector, Valsad District
- District Development Officer, Valsad.

Yours Faithfully,

Kantilal Mohanlal patel.

Annexure-C2-Gujarati to English

Applicant: Dr. Nirav Lalitbhai Shah.
Age: 29 years, Profession: Doctor and Farmer
Village Sarigam, Next to Jain Mandir,
Ta. Umergaon, Dist. Valsad.
M: 9924966740

To,
Member Secretary GPCB,
GPCB office, Sarigam,
Sarigam

SUBJECT: Regarding objection against the carbon company in the village of Karajgam.

With Jay Bharat, we wish to inform you that –

Our applicant's humble request is that -

We applicants are the residents of the address mentioned above. Our farm-lands are located at Karajgam, Sarigam, Kanadu, Fansa, Kalgam, Punat villages. We are cultivating mangoes and other seasonal fruits. Now if a carbon company will establish in Karajgam village, then there is total possibility of damaging all the farm lands and all the crops, which is the reason of opposing for the establishment of the company.

Hafoos mangoes of Valsad district in Gujarat state is well known in whole world for its ample amount of mango production. These mangoes are being exported at national and international level and government is getting good amount of revenue. Since last few years, the establishment of several chemical companies surrounding such as Coromandel Organics, Aarti Organics, Sandhya Chemicals, Macleods Pharma, N.R Agrawal etc, has polluted the surrounding air, water and land at a huge level. Due to this reason for protecting the land and production of Hafoos mangoes, framers has to invest lots and lots on money and in comparison to previous production, the production at present has been reduce.

Presently a new unit named Hidamba chemicals is going to be established, which is going to be equally affecting the production of crops and health of the residents. Above all this, the establishment of the new carbon company will totally affect the health of the mankind, resources and the lands.

The proof of the same has been shown by the New Jersey Department of Health, in which, lung cancer, incurable diseases of skin and eyes, throat cancer, respiratory problems and many other diseases due to carbon have been mentioned in this article. On other side due to the establishment of this company the pollution created by it will result in increasing the temperature which leads to the global warming and eventually makes it difficult to survive.

The companies which are established in past some years had given an assurance for providing employment, better education facility. Even they had assured that more trees will be grown and no air or water pollution will increase, but they have failed in complying the same. Because of this pollution, human resources, livestock and other living beings have been destroyed. The water of Damanganga canal needs to get inspected frequently, is a proof of it. Till today colored water has been observed flowing in this canal. Due to this, farmers have left cultivating summer and seasonal crops. Thus, if the permission will be granted to this kind of units, then the people living in the surrounding area may have to face the worst situation, and the officers will be responsible for the same.

If the permission will be granted to the company, then please provide us an assurance in writing that who will be responsible for the damage.

Sarigam

Dated. 17/07/2019.

Copies sent to:

1) Collector, Collector office, Valsad
2) Deputy collector, Office, Pardi
3) Mamalatdar officer, Mamlatdar office, Umargam.
4) Heath officer, District panchayat office, Valsad.

Name & Signature of villagers:

1) Dr. Pallav P. Oza
2) Lalit P. Shah
3) Jayesh M. Shah
4) Upendra A. Oza
5) Viral R. Oza
6) Nipul P. Dixit
7) Kamlesh Hirachandra Shah
8) Jeet P. Dixit
9) Harbeshkumar Umashankar Oza
10) Jogesh Ramashankar Bhatt
11) Prakash B. Arekar
12) Jinesh H. Dixit
13) Varda Parsotam S.
14) Mahesh kasinath Oza
15) Arun C. Dixit
16) Mahesh L. Oza
17) Dr. Hemal M. Oza
18) Ravindra N Arekar
19) Hasmukh Harishankar Dixit
20) Nainesh A. Patel
21) Jayantibhai Haribhai Patel
22) Nimesh K. Patel
23) Pushpaben M. Bhatt
24) Ashmita Rajesh Nayak
25) Shantilal ramchandra Nayak
26) Manisha Hemal Nayak
27) Dr. Ashok R. Shah
28) Jashmin M. Oza
29) Ashish Arekar
30) Dr. Jayesh N. Dixit
31) Dr. Ankit Dixit

32) Dr. Ashish R. Arekar
33) Dr. Asush Patel
34) Rajesh R. Nayak
35) Rohit R. Arekar.

NJ Health
New Jersey Department of Health

Right to Know Hazardous Substance Fact Sheet

Common Name: **CARBON BLACK**

Synonyms: C.I. Pigment Black 7; Channel Black; Lamp Black

Chemical Name: Carbon Black

Date: December 2007 . Revision: November 2016

CAS Number: 1333-86-4

RTK Substance Number: 0342

DOT Number: UN 1361

EMERGENCY RESPONDERS >>>> SEE BACK PAGE

Description and Use

Carbon Black is black, odorless, finely divided powder generated from the incomplete combustion of *Hydrocarbons*. It may contain *Polycyclic Aromatic Hydrocarbons* (PAHs) which are formed during its manufacture and become adsorbed on the **Carbon Black**. It is used in making tire treads, in abrasion resistant rubber products, and as a pigment for paints and inks.

Reasons for Citation

- **Carbon Black** is on the Right to Know Hazardous Substance List because it is cited by OSHA, ACGIH, NIOSH and IARC.
- This chemical is on the Special Health Hazard Substance List as it is considered a carcinogen.

SEE GLOSSARY ON PAGE 5

Hazard Summary

Hazard Rating	NJDOH	NFPA
HEALTH	3	-
FLAMMABILITY	1	-
REACTIVITY	0	-

CARCINOGEN
SPONTANEOUSLY COMBUSTIBLE PARTICULATE
POISONOUS GASES ARE PRODUCED IN FIRE

Hazard Rating Key: 0=minimal; 1=slight; 2=moderate; 3=serious; 4=severe

- **Carbon Black** can affect you when inhaled.
- **Carbon Black** should be handled as a CARCINOGEN--WITH EXTREME CAUTION.
- Contact can irritate the skin and eyes.
- Inhaling **Carbon Black** can irritate the nose, throat and lungs.
- Finely dispersed **Carbon Black** particles may form explosive mixtures in air.

FIRST AID

Eye Contact
- Immediately flush with large amounts of water for at least 15 minutes, lifting upper and lower lids. Remove contact lenses, if worn, while rinsing.

Skin Contact
- Remove contaminated clothing and wash contaminated skin with soap and water.

Inhalation
- Remove the person from exposure.
- Begin rescue breathing (using universal precautions) if breathing has stopped and CPR if heart action has stopped.
- Transfer promptly to a medical facility.

EMERGENCY NUMBERS

Poison Control: 1-800-222-1222
CHEMTREC: 1-800-424-9300
NJDEP Hotline: 1-877-927-6337
National Response Center: 1-800-424-8802

Workplace Exposure Limits

OSHA: The legal airborne permissible exposure limit (PEL) is **3.5 mg/m³** averaged over an 8-hour workshift.

NIOSH: The recommended airborne exposure limit (REL) is **3.5 mg/m³** averaged over a 10-hour workshift.

NIOSH: The recommended airborne exposure limit (REL) is **0.1 mg PAHs/m³** (as the *Cyclohexane-extractable fraction*) for **Carbon Black** in the presence of *Polycyclic Aromatic Hydrocarbons* averaged over a 10-hour workshift.

ACGIH: The threshold limit value (TLV) is **3.0 mg/m³** averaged over an 8-hour workshift.

- **Carbon Black** may be a CARCINOGEN in humans. There may be no safe level of exposure to a carcinogen, so all contact should be reduced to the lowest possible level.

Determining Your Exposure

- Read the product manufacturer's Material Safety Data Sheet (MSDS) and the label to determine product ingredients and important safety and health information about the product mixture.
- For each individual hazardous ingredient, read the New Jersey Department of Health Hazardous Substance Fact Sheet, available on the RTK Program website (http://nj.gov/health/workplacehealthandsafety/right-to-know/) or in your facility's RTK Central File or Hazard Communication Standard file.
- You have a right to this information under the New Jersey Worker and Community Right to Know Act, the Public Employees Occupational Safety and Health (PEOSH) Act if you are a public worker in New Jersey, and under the federal Occupational Safety and Health Act (OSHA) if you are a private worker.
- The New Jersey Right to Know Act and the PEOSH Hazard Communication Standard (N.J.A.C. 12:100-7) requires most employers to label chemicals in the workplace and requires public employers to provide their employees with information concerning chemical hazards and controls. The federal OSHA Hazard Communication Standard (29 CFR 1910.1200) requires private employers to provide similar information and training to their employees.

This Fact Sheet is a summary of available information regarding the health hazards that may result from exposure. Duration of exposure, concentration of the substance and other factors will affect your susceptibility to any of the potential effects described below.

Health Hazard Information

Acute Health Effects
The following acute (short-term) health effects may occur immediately or shortly after exposure to **Carbon Black**:

- Contact can irritate the skin and eyes.
- Inhaling **Carbon Black** can irritate the nose and throat causing coughing and wheezing.

Chronic Health Effects
The following chronic (long-term) health effects can occur at some time after exposure to **Carbon Black** and can last for months or years:

Cancer Hazard
- **Carbon Black** may be a CARCINOGEN in humans since it has been shown to cause lung cancer in animals.
- Many scientists believe there is no safe level of exposure to a carcinogen. Carcinogens, potential carcinogens and mutagens may have the potential for causing reproductive damage in humans.

Reproductive Hazard
- According to the information presently available to the New Jersey Department of Health, **Carbon Black** has not been tested for its ability to affect reproduction.

Other Effects
- **Carbon Black** can irritate the lungs. Repeated exposure may cause bronchitis to develop with coughing, phlegm, and/or shortness of breath.

Medical

Medical Testing
For frequent or potentially high exposure (half the PEL or greater), the following are recommended before beginning work and at regular times after that:

- Chest x-ray and lung function tests

Any evaluation should include a careful history of past and present symptoms with an exam. Medical tests that look for damage already done are not a substitute for controlling exposure.

Request copies of your medical testing. You have a legal right to this information under the OSHA Access to Employee Exposure and Medical Records Standard (29 CFR 1910.1020).

Mixed Exposures
- Smoking can cause heart disease, lung cancer, emphysema, and other respiratory problems. It may worsen respiratory conditions caused by chemical exposure. Even if you have smoked for a long time, stopping now will reduce your risk of developing health problems.

Workplace Controls and Practices

Very toxic chemicals, or those that are reproductive hazards or sensitizers, require expert advice on control measures if a less toxic chemical cannot be substituted. Control measures include: (1) enclosing chemical processes for severely irritating and corrosive chemicals, (2) using local exhaust ventilation for chemicals that may be harmful with a single exposure, and (3) using general ventilation to control exposures to skin and eye irritants. For further information on workplace controls, consult the NIOSH document on Control Banding at www.cdc.gov/niosh/topics/ctrlbanding/.

The following work practices are also recommended:

- Label process containers.
- Provide employees with hazard information and training.
- Monitor airborne chemical concentrations.
- Use engineering controls if concentrations exceed recommended exposure levels.
- Provide eye wash fountains and emergency showers.
- Wash or shower if skin comes in contact with a hazardous material.
- Always wash at the end of the workshift.
- Change into clean clothing if clothing becomes contaminated.
- Do not take contaminated clothing home.
- Get special training to wash contaminated clothing.
- Do not eat, smoke, or drink in areas where chemicals are being handled, processed or stored.
- Wash hands carefully before eating, smoking, drinking, applying cosmetics or using the toilet.

In addition, the following may be useful or required:

- Before entering a confined space where **Carbon Black** *powder* or *dust* may be present, check to make sure that an explosive concentration does not exist.

Personal Protective Equipment

The OSHA Personal Protective Equipment Standard (29 CFR 1910.132) requires employers to determine the appropriate personal protective equipment for each hazard and to train employees on how and when to use protective equipment.

The following recommendations are only guidelines and may not apply to every situation.

Gloves and Clothing

- Avoid skin contact with **Carbon Black**. Wear personal protective equipment made from material which can not be permeated or degraded by this substance. Safety equipment suppliers and manufacturers can provide recommendations on the most protective glove and clothing material for your operation.
- Safety equipment manufacturers recommend *Natural Rubber* for gloves and DuPont *Tychem® Polycoat, QC, CPF1, SL* and *CPF2* as protective materials for clothing.
- All protective clothing (suits, gloves, footwear, headgear) should be clean, available each day, and put on before work.

Eye Protection

- Wear dust proof goggles when working with powders or dust unless full facepiece respiratory protection is worn.
- Wear a face shield along with goggles when working with corrosive, highly irritating or toxic substances.
- Contact lenses should not be worn when working with this substance.

Respiratory Protection

Improper use of respirators is dangerous. Respirators should only be used if the employer has implemented a written program that takes into account workplace conditions, requirements for worker training, respirator fit testing, and medical exams, as described in the OSHA Respiratory Protection Standard (29 CFR 1910.134).

- Where the potential exists for exposure over **3.0 mg/m³**, use a NIOSH approved air-purifying, particulate filter respirator with an N95 filter. More protection is provided by a full facepiece respirator than by a half-mask respirator, and even greater protection is provided by a powered-air purifying respirator.
- Leave the area immediately if (1) while wearing a filter or cartridge respirator you can smell, taste, or otherwise detect **Carbon Black**, (2) while wearing particulate filters abnormal resistance to breathing is experienced, or (3) eye irritation occurs while wearing a full facepiece respirator. Check to make sure the respirator-to-face seal is still good. If it is, replace the filter or cartridge. If the seal is no longer good, you may need a new respirator.
- Consider all potential sources of exposure in your workplace. You may need a combination of filters, prefilters or cartridges to protect against different forms of a chemical (such as vapor and mist) or against a mixture of chemicals.
- Where the potential exists for exposure over **30 mg/m³**, use a NIOSH approved supplied-air respirator with a full facepiece operated in a pressure-demand or other positive-pressure mode. For increased protection use in combination with an auxiliary self-contained breathing apparatus operated in a pressure-demand or other positive-pressure mode.
- Exposure to **1,750 mg/m³** is immediately dangerous to life and health. If the possibility of exposure above **1,750 mg/m³** exists, use a NIOSH approved self-contained breathing apparatus with a full facepiece operated in a pressure-demand or other positive-pressure mode equipped with an emergency escape air cylinder.

Fire Hazards

If employees are expected to fight fires, they must be trained and equipped as stated in the OSHA Fire Brigades Standard (29 CFR 1910.156).

- **Carbon Black** is a COMBUSTIBLE SOLID, which may contain *flammable Hydrocarbons*.
- Use dry chemical, CO_2, water spray or foam as extinguishing agents.
- POISONOUS GASES ARE PRODUCED IN FIRE.
- Use water spray to keep fire-exposed containers cool.

Spills and Emergencies

If employees are required to clean-up spills, they must be properly trained and equipped. The OSHA Hazardous Waste Operations and Emergency Response Standard (29 CFR 1910.120) may apply.

If **Carbon Black** is spilled, take the following steps:

- Evacuate personnel and secure and control entrance to the area.
- Eliminate all ignition sources.
- Moisten spilled *powder* first or use a HEPA-filter vacuum for clean-up.
- For solid **Carbon Black**, collect in the most convenient and safe manner and deposit in sealed containers.
- Ventilate and wash area after clean-up is complete.
- Keep **Carbon Black** *powder* or *dust* out of confined spaces, such as sewers, because of the possibility of an explosion.
- It may be necessary to contain and dispose of **Carbon Black** as a HAZARDOUS WASTE. Contact your state Department of Environmental Protection (DEP) or your regional office of the federal Environmental Protection Agency (EPA) for specific recommendations.

Handling and Storage

Prior to working with **Carbon Black** you should be trained on its proper handling and storage.

- **Carbon Black** is not compatible with OXIDIZING AGENTS (such as PERCHLORATES, PEROXIDES, PERMANGANATES, CHLORATES, NITRATES, CHLORINE, BROMINE and FLUORINE).
- Sources of ignition, such as smoking and open flames, are prohibited where **Carbon Black** is used, handled, or stored in a manner that could create a potential fire or explosion hazard.
- Use **Carbon Black** in a closed system.
- Use dust ignition proof electrical equipment and fittings wherever **Carbon Black** is used, handled, manufactured, or stored.

Occupational Health Information Resources

The New Jersey Department of Health offers multiple services in occupational health. These services include providing informational resources, educational materials, public presentations, and industrial hygiene and medical investigations and evaluations.

For more information, please contact:

New Jersey Department of Health
Right to Know
PO Box 368
Trenton, NJ 08625-0368
Phone: 609-984-2202
Fax: 609-984-7407
E-mail: rtk@doh.nj.gov
Web address:
http://nj.gov/health/workplacehealthandsafety/right-to-know/

The Right to Know Hazardous Substance Fact Sheets are not intended to be copied and sold for commercial purposes.

CARBON BLACK

GLOSSARY

ACGIH is the American Conference of Governmental Industrial Hygienists. They publish guidelines called Threshold Limit Values (TLVs) for exposure to workplace chemicals.

Acute Exposure Guideline Levels (AEGLs) are established by the EPA. They describe the risk to humans resulting from once-in-a lifetime, or rare, exposure to airborne chemicals.

Boiling point is the temperature at which a substance can change its physical state from a liquid to a gas.

A **carcinogen** is a substance that causes cancer.

The **CAS number** is unique, identifying number, assigned by the Chemical Abstracts Service, to a specific chemical.

CFR is the Code of Federal Regulations, which are the regulations of the United States government.

A **combustible** substance is a solid, liquid or gas that will burn.

A **corrosive** substance is a gas, liquid or solid that causes destruction of human skin or severe corrosion of containers.

DEP is the New Jersey Department of Environmental Protection.

DOT is the Department of Transportation, the federal agency that regulates the transportation of chemicals.

EPA is the Environmental Protection Agency, the federal agency responsible for regulating environmental hazards.

ERG is the Emergency Response Guidebook. It is a guide for emergency responders for transportation emergencies involving hazardous substances.

Emergency Response Planning Guideline (ERPG) values are intended to provide estimates of concentration ranges where one reasonably might anticipate observing adverse effects.

A **fetus** is an unborn human or animal.

A **flammable** substance is a solid, liquid, vapor or gas that will ignite easily and burn rapidly.

The **flash point** is the temperature at which a liquid or solid gives off vapor that can form a flammable mixture with air.

IARC is the International Agency for Research on Cancer, a scientific group.

Ionization Potential is the amount of energy needed to remove an electron from an atom or molecule. It is measured in electron volts.

IRIS is the Integrated Risk Information System database maintained by federal EPA. The database contains information on human health effects that may result from exposure to various chemicals in the environment.

LEL or **Lower Explosive Limit**, is the lowest concentration of a combustible substance (gas or vapor) in the air capable of continuing an explosion.

mg/m^3 means milligrams of a chemical in a cubic meter of air. It is a measure of concentration (weight/volume).

A **mutagen** is a substance that causes mutations. A **mutation** is a change in the genetic material in a body cell. Mutations can lead to birth defects, miscarriages, or cancer.

NFPA is the National Fire Protection Association. It classifies substances according to their fire and explosion hazard.

NIOSH is the National Institute for Occupational Safety and Health. It tests equipment, evaluates and approves respirators, conducts studies of workplace hazards, and proposes standards to OSHA.

NTP is the National Toxicology Program which tests chemicals and reviews evidence for cancer.

OSHA is the federal Occupational Safety and Health Administration, which adopts and enforces health and safety standards.

PEOSHA is the New Jersey Public Employees Occupational Safety and Health Act, which adopts and enforces health and safety standards in public workplaces.

Permeated is the movement of chemicals through protective materials.

PIH is a DOT designation for chemicals which are Poison Inhalation Hazards.

ppm means parts of a substance per million parts of air. It is a measure of concentration by volume in air.

A **reactive** substance is a solid, liquid or gas that releases energy under certain conditions.

STEL is a Short Term Exposure Limit which is usually a 15-minute exposure that should not be exceeded at any time during a work day.

A **teratogen** is a substance that causes birth defects by damaging the fetus.

UEL or **Upper Explosive Limit** is the highest concentration in air above which there is too much fuel (gas or vapor) to begin a reaction or explosion.

Vapor Density is the ratio of the weight of a given volume of one gas to the weight of another (usually *Hydrogen*), at the same temperature and pressure.

The **vapor pressure** is a measure of how readily a liquid or a solid mixes with air at its surface. A higher vapor pressure indicates a higher concentration of the substance in air and therefore increases the likelihood of breathing it in.

NJ Health

Right to Know Hazardous Substance Fact Sheet

Emergency Responders Quick Reference

Common Name: **CARBON BLACK**

Synonyms: C.I. Pigment Black 7; Channel Black; Lamp Black, Furnace Black
CAS No: 1333-86-4
Molecular Formula: Mixture
RTK Substance No: 0342
Description: Black, odorless, finely divided powder

HAZARD DATA

Hazard Rating	Firefighting	Reactivity
3 - Health **1 - Fire** **0 - Reactivity** **DOT#:** UN 1361 **ERG Guide #:** 133 **Hazard Class:** 4.2 (Spontaneously combustible)	**Carbon Black** is a COMBUSTIBLE SOLID, which may contain *flammable Hydrocarbons*. Use dry chemical, CO_2, water spray or foam as extinguishing agents. POISONOUS GASES ARE PRODUCED IN FIRE. Use water spray to keep fire-exposed containers cool.	Finely dispersed particles may form explosive mixtures in air. **Carbon Black** is not compatible with OXIDIZING AGENTS (such as PERCHLORATES, PEROXIDES, PERMANGANATES, CHLORATES, NITRATES, CHLORINE, BROMINE and FLUORINE).

SPILL/LEAKS

Isolation Distance:
Small Spills: 25 meters (75 feet)
Large Spills: 100 meters (330 feet)
Moisten spilled powder first or use a HEPA-filter vacuum for clean-up.
For solid **Carbon Black**, collect in the most convenient and safe manner and deposit in sealed containers.
Keep **Carbon Black** *powder or dust* out of confined spaces, such as sewers, because of the possibility of an explosion.

PHYSICAL PROPERTIES

Odor Threshold:	Odorless
Flash Point:	No information
Vapor Pressure:	0 mm Hg at 68°F (20°C)
Specific Gravity:	1.8 - 2.1(water = 1)
Water Solubility:	Insoluble
Boiling Point:	Sublimates approx. 6,605°F (3,652°C)
Melting Point:	Sublimates approx. 6,605°F (3,652°C)
Molecular Weight:	12.01

EXPOSURE LIMITS

OSHA:	3.5 mg/m³, 8-hr TWA
NIOSH:	3.5 mg/m³, 10-hr TWA 0.1 mg PAHs/m³, 10-hr TWA
ACGIH:	3.0 mg/m³, 8-hr TWA
IDLH LEVEL:	1,750 mg/m³
PAC LEVELS:	PAC-1 = 9 mg/m³; PAC-2 = 99 mg/m³; PAC-3 = 590 mg/m³

PROTECTIVE EQUIPMENT

Gloves:	Natural Rubber
Coveralls:	DuPont Tychem® Polycoat, QC, CPF1, SL and CPF2
Boots:	Rubber
Respirator:	>3.0 mg/m³ - APR with High efficiency filters >30 mg/m³ - Supplied air

HEALTH EFFECTS

Eyes:	Irritation
Skin:	Irritation
Inhalation:	Irritation of the nose, throat and lungs with coughing and wheezing
Chronic:	Carcinogen (lung) in animals

FIRST AID AND DECONTAMINATION

Remove the person from exposure.
Flush eyes with large amounts of water for at least 15 minutes. Remove contact lenses if worn.
Remove contaminated clothing and wash contaminated skin with soap and water.
Begin artificial respiration if breathing has stopped and CPR if necessary.
Transfer to a medical facility.

Annexure-C3-Gujarati to English

To,
H. M. Ganvit,
Gujarat Pollution Control Board
Bhandarwad, Sarigam.

Subject: Regarding proposed manufacturing of Carbon Black – 23000 TPA and Captive Power Generation – Green Power (45 MW) at survey no. 3705, 3708, 3719, 3725, 3738, 4108, 4110, 4318, Village: Karanj, Taluka: Umbergaon, Dist.: Valsad.

Respected Sir,

For the proposed project for manufacturing of Carbon Black 23000 TPA and Captive Power Generation – -Green Power (45 MW) at survey no. 3705, 3708, 3719, 3725, 3738, 4108, 4110, 4318, Village: Karanj, Taluka: Umbergaon, Dist.: Valsad, public hearing is going to be held on 19th July, 2019 at the survey no. mentioned above. We have found some issues as given below:

1. The whole surrounding area of the survey no. is having human settlement. Surrounding tribal area consists mainly Mahyavanshi, Warli, Halpati, Dhodiya, Agni and Brahmin people. Amongst these, majority of people are depending on farming and animal husbandry. Hence, this tribe is going to be affected. The population of the area is of about 6000 people.
2. Exactly by the side of this company, there is a land of Mahyavanshi tribal people and other people, then whether the collector has permitted it according to 73 AA?
3. Within 200 meter area of the above survey no. there are hills of the Forest department are being covered. So, whether Forest department has given the permission for the same or not?
4. Within 200 meter area of the above survey no. there is a pond of the Dayra village. So, there are probabilities that the pond water will get polluted.
5. Within 200 meter area of the above survey no. there are,
    i) Karanjgam Primary School
    ii) Karanjgam Primary School (Aagriwad)
    iii) 4 Anganwadis - Anganwadi (Brahmin Faliya), Krishnaniwad, Aagriwad, Rayfaliya
    iv) Karanjgam Government Health Centre
    v) Karanjgam Seva Sahkari Mandal, Government Grain stores. All these will be affected.
6. Are these survey no. N.A certified or not? If these are N.A certified, then which way is going to be used for transportation? How wide this road is? Almost all roads of Karanjgam are 10-12 ft. wide. Please do justify the same.
7. As this company is going to be established in village area, what will be the water source and what will be the system for wastewater disposal?

So, this is our humble request to you for your not granting a permission to the company as the people of our village are totally against this.

We have not any issues, if any Engineering or Plastic industry (Non-polluted) is going to be established in our area.

Thanking You,

Yours Faithfully,

(Maji Sarpanch)
Rajesh Champaklal Nayak.
Prakashbhai Bhikhubhai Koli.
Ajitbhai Bhikhubhai Metha.

To,
Regional Officer,
Gujarat Pollution Control Board
Regional Office, Sarigam.

Subject: Regarding oppose against M/s. Madura Carbon India Ltd.

M/s. Madura Carbon India Ltd is going to be established at Village Karanjgam. In reference to this, the public hearing is going to be held on 19th July 2018. We are against the establishment of the company because the land of the company is surrounded by farming land and residence of tribal community. Establishment of the company will pollute the surrounding air quality and water resources. People living in the surrounding area will be affected due to the noise generation. Nearby village is Manda. People living in village Manda and the surrounding area are going to be affected due to company's Air, water and noise. Due to this people in surrounding are going to face lots of problems. Hence, we strictly oppose the establishment of the company.

From,

Yours Faithfully,

S/d
Sarpanch
Gram Panchayat, Manda
Ta: Umbergaon, Dist. Valsad

Applicant: Hiteshbhai Uttambhai Dhodi.

Karanjgam, Ta. Umbergaon,

Dist. Valsad.

To,
Regional office,
Gujarat Pollution Control Board
Bhandarwad, Sarigam.

Subject: Application of objection

The facts of the applicant's objection are,

1. I, applicant, living at the address mentioned above and the livelihood of my family depends on farming. I am a backward community social worker.
2. According to the awarded ToRs the proposed project for manufacturing of Carbon Black 230000 TPA and Captive Power Generation – Green Power (45 MW) at survey no. 3705, 3708, 3719, 3725, 3738, 4108, 4110, 4318, Village: Karanj, Taluka: Umbergaon, Dist.: Valsad, public hearing is applicable, which is going to be held on 19th July, 2019 by Gujarat pollution control board, Sarigam. We have found some issues as given below:
    i. The purchased land by M/s. Madura Carbon India Ltd. at Village Karanjgam (Fansa), Ta. Umbergaon, is an agricultural land. The applicant is having the agricultural land and there are mango trees too. Along with this, on the mentioned survey numbers, residence of the applicants are also situated. In spite of this, company has made the fake documents. Hence, please cancel the NA permission immediately.
    ii. If the establishment of the M/s. Madura Carbon India Ltd would happen, a havoc situation will arise that the native people might have to abandon their land. In our area there are rural roads only, and around this land, there are residential area of the whole Karanjgam. So, from this land the roads are made for transportation. These roads are forcefully closed for transportation by the owners of M/s. Madura Carbon India Ltd. Fake maps and the documents are made for the approval of the project.
    iii. Air quality will get polluted due to the establishment of M/s. Madura Carbon India Ltd. Our residential area are just 10-20 feet away from the proposed project. The godown are supposed to be made for storing the waste generation. So, due to this arrangements, the tribal community of the surrounding area are going to be affected. The fertile land is also there within this area.
    iv. The land purchased by M/s. Madura Carbon, is actually the land which was given to the tribal community as per the 73AA under PESA act. So, if this land is going to be given to the company then the poor tribal area farmers will become landless.
    v. Our land is under acquisition of the Sarigam GIDC right from the starting. There are almost 3000 companies, and for around 385 employees it is not acceptable that whole population around the proposed project area be suffering from the polluted water, air and land. We request for cancelling the approval to M/s. Madura Carbon India Ltd, as in future the severe impact are going to occur. Hence, it is our request to Gujarat Pollution Control Board for not granting any permission to the project.
    vi. This land is having the residential area next to it and right beside there is a Gram Panchayat. Along with this, Sub health centre, co-operative society, Anganwadi, Schools, Pond, Temples are located. Government has planned an underground canal from the land which is purchased

by M/s. Madura Carbon India Ltd. For this underground project, government has already spent lakhs of rupees and this project can severely be affected due to the proposed project.

Applicant,

Hitanshu U. Dhodi.

Applicant: Sanjaykumar M. Patel.
(R.T.I Activist), social Worker,
Kalgam, Beside Primary School,
Ta. Umbergaon
Dist. Valsad.

To,
Regional officer,
Gujarat Pollution Control Board
Regional Sarigam Office, Sarigam, Bhandarwada,
Ta. Umbergaon, Dist. Valsad.

Subject: For the proposed project for manufacturing of Carbon Black 23000 TPA and Captive Power Generation –Green Power (45 MW) at survey no. 3705, 3708, 3719, 3725, 3738, 4108, 4110, 4318, Village: Karanj, Taluka: Umbergaon, Dist.: Valsad, public hearing is going to be held on 19th July, 2019 by company, and there are some issues which are not clarified and the justification is required - regarding.

Respected Sir,

With Jay Bharat, we wish to state that for the proposed project for manufacturing of Carbon Black 2,30,000 TPA and Captive Power Generation – -Green Power (45 MW) at survey no. 3705, 3708, 3719, 3725, 3738, 4108, 4110, 4318, Village: Karanj, Taluka: Umbergaon, Dist.: Valsad, the Off gas generated during the manufacturing of Carbon Black will be utilized for the captive power generation. The executive summary of the project is shown only as a small book. According to the rule of public hearing, the environment impact report was not available at the regional office of the Gujarat Pollution Control Board, Sarigam. We even have asked for the environment impact report to the responsible administrator of M/s. Madura Carbon, but due to their busy schedule they have not provided us the environment impact report. As this environment impact report is not available, it seems like that the details of the environment impact report are still incomplete. We have found that there are serious matters regarding the environmental aspects which are not described properly in the executive summary unit has published. We need the justification from GPCB and the company regarding the loss of the environmental aspects.

In the executive summary of the proposed project of carbon black manufacturing along with the captive power generation, a table has been made of the environmental impacts. So, we request for the justification for certain questions which are not apparent.

<u>Air Pollution</u>

Question 1: What will be the capacity of Boilers in Ton per hours and what pollutants will emit from it? What will be the potential of it? Which machineries will be required for its prevention?

Question 2: From where the VOC (Volatile Organic Compound) will be generated from the reactor? What is the system for its prevention? What preventive measures the company will use for odor control?

Question 3: Within the 10 km radius, ambient air quality monitoring has been carried out by Precitech laboratories Vapi, on 10 locations. Please provide us those 10 location’s name and the details of the monitoring report.

Question 4: What preventive measures will be taken for reducing noise pollution? It is not clear.

Unit has said that greenbelt will be developed, which is not appropriate, because companies never developing the greenbelt and the noise pollution keeps on increasing. So, please clarify whether company is going to use any technology for preventing noise pollution.

Question 5: Due to the increase of air and noise pollution, the protected birds living in the nearby forest are going to be affected and there are possibilities of their species to reach to the extinct level. And the survey for the same is not carried out by forest department. What measures will be taken for preventing the protected birds and wildlife creatures? The details for the same is not described.

Question 6: The data of water consumption and the wastewater generation is appeared to be fake. According to the bifurcation of the water consumption in the executive summary,

Domestic wastewater- 1,00,000 L/day

Industrial wastewater-2,47,000 L/day

From this,

30,000 L/day – will be recycled through ETP

84000 L/day – will be sent to MEE (Multi effective Evaporator)

1,14,000 L/day

Now,

2,47,000

-1,14,000

1,33,000 Litre – where this wastewater will be treated?

The unit has not given any clarification regarding the discharge and treatment of wastewater of about 1,33,000 L/day. Is company going to discharge this wastewater in surrounding area and will spread the pollution?

Question 7: How far the unit of M/s. Madura Carbon is from residential are, schools and colleges? How far the unit shall be from residential area, schools and colleges for the approval?

Question 8: Due to the establishment of M/s. Madura Carbon, it is mentioned that about 385 people will be employed, which is very low for this huge project. According to the law 85% of the total employment will be given to the local people only, so is company going to give written undertaking for the same?

Question 9: During the manufacturing of Carbon black, Pyrolysis process is going to be used which is restricted in Gujarat state, then how this unit will get an approval from Gujarat Pollution Control board? Please do justify this matter.

The aforesaid points are very severe as far as the environmental and social aspects are concerned, so we request to take this in consideration for public hearing. Until the clarification for the same will be provided by the company or responsible government department, we are against the establishment of the unit. We are ready to go to high courts or green Tribunal court in the view to get justice if not any satisfactorily justification of our queries mentioned above.

Yours Faithfully,

Hitanshu U. Dhodi.

From: Bharatbhai B. Jadav
At & Post: Bhilad (Tal: Umargam)
Mob: 89802 57373 / 94268 09624

To,
The Collector saheb
Valsad Distt.

19.07.2019

Respected Sir,

SUB: My objection for granting Environmental Clearance to MUDRA CARBON INDIA LTD @ Karaggam (Karang), Near SARIGAM, Rly Stn-Bhilad, Taluka: Umargam, Dist-Valsad.

In the above mentioned subject, I hereby submit my strong objection to granting Environmental Clearance to Mudra Carbon India Ltd @ above mentioned address, on following grounds legal & Scientific.

In similar manufacturing unit @ Tanda, Hosiarpur, Punjab, a direction for the shifting the unit to other place was ordered by The Principal Bench, National Green Tribunal(NGT) New Delhi order dated 30.05.2019,and for the ready reference the Para is quoted as under.

Item: 3

Court No: 1

BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI
Original application No: 931/2018

Received during PH.

Sarabjit Singh & others (applicant(s)
Versus
State of Punjab Respondent(s)

Date of Hearing: 30.05.2019,

Versus
State of Punjab Respondent(s)
Date of hearing: 30.05.2019
CORAM: HON'BLE MR. JUSTICE ADARSH KUMAR GOEL, CHAIRPERSON
HON'BLE MR. JUSTICE S.P. WANGDI, JUDICIAL MEMBER
HON'BLE MR. JUSTICE K. RAMAKRISHNAN, JUDICIAL MEMBER
HON'BLE DR. NAGIN NANDA, EXPERT MEMBER
For Applicant(s):
For Respondent (s): Ms. Richa Kapoor, Advocate for PPCB

ORDER

1. Question for consideration is the remedial action against the pollution caused by the Universal Carbon Factory at Tanda, Hoshiarpur Road, Hoshiarpur Punjab. Vide order dated 21.12.2018, a report was sought in the matter from the Punjab Pollution Control Board (PPCB).
2. Accordingly, report dated 01.05.2019 has been filed which acknowledges the violations for which notice under Section 31A of the Air (Prevention and Control of Pollution) Act, 1981 was issued and unit has been directed to be shifted by April 2020.
3. Further I am attaching herewith a research paper which is survey report of European Cabon black workers, which is self explanatory.

British J7ournal of Industrial Medicine 1993;50: 1082-1096
Respiratory health effects of carbon black: a survey of European carbon black workers
Kerry Gardiner, Nicholas W Trethowan, J Malcolm Harrington, Charles E Rossiter,
Ian A Calvert

Abstract
A study population of 3086 employees was identified in 18 carbon black production plants in seven European countries.
Respiratory health questionnaires, spirometry, and chest radiographs were used to estimate effects on health and personal
monitoring procedures were employed to measure current exposure to inspirable and respirable dust along with sulphur and carbon
monoxide.
Conclusions
Our study found a correlation between small opacity profusion and dust exposure. A similar exposure- effect relation was found for respiratory
symptoms and spirometry.
The overall results of this survey indicate that exposure to carbon black dust is associated with some increased prevalence of respiratory

SYMPYONS, SMALL DECREMENTS, in LUNGS function, and the accumulation of dust in the lungs

They are consistent with non specific irritant dust effect, but the planned follow up studies are required to explore further whether these exposures cause parenchymal lungs damage as opposed to benign parenchymal deposition of carbon black.

In the light of information it is detrimental for the public residing the vicinity of area will be affected by health and increase in the pM2.5 and 10 in the area. Already there is stiff resistance for already existing units for shifting so giving additional permission would still further increase the hardships of local public at large.

So, look in to the matter and consider my request for not to granting Environmental clearance in the larger interest of PUBLIC and residence of the area.

Thanking You
Yours faithfully

Bharat.B.Jadav

o/c Note: Copy order issued by The National Green Tribunal is attached here with for your ready ref. **attached 2 pages.** And respiratory health effects of carbon black – **attached 4 pages.**

Copy to:
(1) G.P.C.B.
Sanjam
(2) Modra carbon India Ltd

Item No. 03

Court No. 1

BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI

Original Application No. 931/2018

Sarabjit Singh & Ors.

Applicant(s)

Versus

State of Punjab

Respondent(s)

Date of hearing: 30.05.2019

CORAM: **HON'BLE MR. JUSTICE ADARSH KUMAR GOEL, CHAIRPERSON**
HON'BLE MR. JUSTICE S.P. WANGDI, JUDICIAL MEMBER
HON'BLE MR. JUSTICE K. RAMAKRISHNAN, JUDICIAL MEMBER
HON'BLE DR. NAGIN NANDA, EXPERT MEMBER

For Applicant(s):
For Respondent (s): Ms. Richa Kapoor, Advocate for PPCB

ORDER

1. Question for consideration is the remedial action against the pollution caused by the Universal Carbon Factory at Tanda, Hoshiarpur Road, Hoshiarpur Punjab. Vide order dated 21.12.2018, a report was sought in the matter from the Punjab Pollution Control Board (PPCB).

2. Accordingly, report dated 01.05.2019 has been filed which acknowledges the violations for which notice under Section 31A of the Air (Prevention and Control of Pollution) Act, 1981 was issued and unit has been directed to be shifted by April 2020.

3. We are surprised at the attitude of the PPCB. Once pollution is being caused, 'Precautionary', 'Sustainable Development' and 'Polluter Pays' principles have to be applied. No pollution can be allowed to continue under any circumstances. The polluting activities must be

stopped forthwith, prosecution initiated and compensation recovered for the extent of damage caused which should be adequate to recover the cost of restoration and deterrent having regard to the financial capacity of the polluters.

4. Let such action be taken in accordance with law and a further report furnished to this Tribunal within one month by e-mail at judicial-ngt@gmail.com.

List for further consideration on 14.08.2019.

It is made clear that failure of performance of duty by the PPCB may lead to coercive action against the Chairman and the Member Secretary of the PPCB.

Adarsh Kumar Goel, CP

S.P. Wangdi, JM

K. Ramakrishnan, JM

Dr. Nagin Nanda, EM

May 30, 2019
Original Application No. 931/2018
DV

British Journal of Industrial Medicine 1993;50:1082-1096

Respiratory health effects of carbon black: a survey of European carbon black workers

Kerry Gardiner, Nicholas W Trethowan, J Malcolm Harrington, Charles E Rossiter, Ian A Calvert

Abstract

A study population of 3086 employees was identified in 18 carbon black production plants in seven European countries. Respiratory health questionnaires, spirometry, and chest radiographs were used to estimate effects on health and personal monitoring procedures were employed to measure current exposure to inspirable and respirable dust along with sulphur and carbon monoxide. The low concentrations of gaseous contaminants made the generation of their current and cumulative exposure indices impossible. Low responses from some plants restricted the final analysis to 1742 employees in 15 plants (81% response rate) for respiratory symptoms and spirometry, and 1096 chest radiographs from 10 plants (74% response rate). In total, 1298 respirable and 1317 inspirable dust samples, as well as 1301 sulphur dioxide and 1322 carbon monoxide samples were collected. This study is the first to include a comprehensive and concurrent assessment of occupational exposure to carbon black dust and its associated gaseous contaminants. Cough, sputum, and the symptoms of chronic bronchitis were found to be associated with increasing indices of current exposure. Lung function tests also showed small decreases in relation to increasing dust exposure in both smokers and non-smokers. Nearly 25% of the chest radiographs showed small opacities of category 0/1 or greater. These were strongly associated with indices of cumulative dust exposure. The findings are consistent with a non-irritant effect of carbon black dust on the airways combined with dust retention in the lungs. Further cross sectional studies are planned to investigate whether long term exposure to carbon black dust causes damage to the lung parenchyma.

(*British Journal of Industrial Medicine* 1993;50:1082-1096)

Carbon black has been produced in one form or another for over two thousand years. The Chinese and Hindus used it as a colourant for ink and lacquers and produced it by burning animal and vegetable oil in porcelain pots.[1] The Romans manufactured carbon black, which they used for murals and paintings. Commercial carbon black production for printing inks began in Pennsylvania (USA) in 1840, but the discovery at the beginning of the 20th century that carbon black was a valuable reinforcing filler for rubber, extended its uses. New methods of production—primarily the oil furnace process—has increased annual world wide production to over six million tonnes.[2] Twenty per cent of this output comes from 20 plants in Western Europe (18 of these plants were members of the European Carbon Black Committee (ECBC) at the time of this study).

In most carbon black processes, a liquid or gaseous hydrocarbon feedstock is pyrolysed at 1300–1850°C.[3] The resultant molecular fragments polymerise in the vapour phase to polycyclic aromatic species that condense to form liquid nuclei. Subsequent carbon deposition and coalescence gives spherical particles with diameters from 5 to 50 nm (furnace and channel process) up to 500 nm (thermal process). These primary particles form aggregates that agglomerate leading to larger visible fluffy particles. Products with differing specifications can thus be obtained from each carbon black process although there is a degree of overlap. The oil furnace process is the most versatile and therefore is usually the method of manufacture (17 out of 20 European plants use only the furnace process). In general, there are a number of grades

Institute of Occupational Health, University of Birmingham, University Road West, Birmingham B15 2TT
K Gardiner, N W Trethowan, J M Harrington, I A Calvert
10 Myrchen Road, Knotty Green, Beaconsfield, Bucks HP9 2AS
C E Rossiter

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Accepted 22 February 1993

Destruction of manuscripts

From 1 July 1985 articles submitted for publication will not be returned. Authors whose papers are rejected will be advised of the decision and the manuscripts will be kept under security for three months to deal with any inquiries and then destroyed.

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in FEV_1 and FVC. The size of the decrement was rarely stated and so comparison is difficult.

Some of our results suggest that the carbon black is exerting a short term effect at the site of deposition, and the lack of cumulative effect may be due either to a retrospective exposure index that is too imprecise or to the effects of carbon black being acute and not chronic. The second phase of the study is underway, and we plan to investigate the potential effects of carbon black over time. This should be relatively easy, as most workers move from jobs of high exposure to those of a lesser exposure over time and it is also hoped to examine retirees. Further, a more detailed retrospective exposure index is proposed with questionnaires for both plant and individual participants.

Conclusions

Our study found a correlation between small opacity profusion and dust exposure. A similar exposure-effect relation was found for respiratory symptoms and spirometry.

The overall results of this survey indicate that exposure to carbon black dust is associated with some increased prevalence of respiratory symptoms, small decrements in lung function, and the accumulation of dust in the lungs. They are consistent with a non-specific irritant dust effect, but the planned follow up studies are required to explore further whether these exposures cause parenchymal lung damage as opposed to benign parenchymal deposition of carbon black.

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Sr. No.	Industry	Parameter	Standards
1	2	3	4
[1][18.	*OMITTED*		
19.	**CALCIUM CARBIDE**	Particulate Matter Emission	
		- Kiln	250 milligramme per normal cubic metre.
		- Arc Furnace	150 milligramme per normal cubic metre.
20.	**CARBON BLACK**	Particulate matter Emission	150 milligramme per normal cubic metre.
21.	**COPPER, LEAD AND ZINC SMELTING**	Particulate Matter Emission in Concentrator	150 milligramme per normal cubic metre.
		Emission of Oxides of Sulphur in Smelter & convertor	Off-gases must be utilized for sulphuric acid manufacture. The limits of sulphur dioxide emission from stock shall not exceed 4 kilogramme per tonne of concentrated (one hundred per cent acide produced).
22.	**NITRIC ACID (EMISSION OXIDES OF NITROGEN)**	Emission of Oxides of Nitrogen	3 kilogramme of oxides of nitrogen per tonne of weak acid (before concentration) produced.
[2][23.	**SULPHURIC ACID PLANT**	Emission standards Limiting concentration in mg/Nm^3, unless stated	
		Plant capacity for 100% concentration of Sulphuric Acid (tonne/day)	

1 Sr. No.18 relating to **"Aluminum"** and entries relating thereto omitted by Rule 2(II) of the Environment (Protection) First Amendment Rules, 2006 notified by G.S.R. 46(E), dated 3.2.2006.

2 Substituted by Rule 2(I) of the Environment (Protection) Third Amendment Rules, 2008 notified by G.S.R. 344(E), dated 7.5.2008.

Annexure-C8-Gujarati to English

Applicant: Vinay Fulchand Sheth.
Fansa, Via Bhilad,
Ta. Umbergaon, Dist. Valsad.
Mob. No. 7021775994
Date: 19/07/2019

To,
Honorable Member Secretary,
Gujarat Pollution Control Board,
Paryavaran Bhavan, Sector 10/A,
Gandhinagar – 382010.

Respected Sir,

SUBJECT: Representations regarding public hearing for upcoming project for manufacturing of carbon black & captive power generation (green power) of M/s. Madura Carbon India Ltd.

Kindly note that, according to notification of Ministry of Environment, Forest and Climate Change, New Delhi, public hearing is going to be held on by M/s. Madura Carbon India Ltd. for manufacturing of Carbon Black. We have presenting below points by which the environment is adversely going to be affected.

1. The executive summary of the proposed project is not trustworthy as it is incomplete, misguiding and information are contrast. So that should not be accepted. We demand that Ministry of Environment and Forests shall make a neutral committee of environmental experts and shall make a revised Environment Impact Assessment Report of the proposed project so that the mistakes can be rectified.
2. On page no. 1 of executive summary, it is shown that 33,00,000 L/day water is going to be used and will be sourced from Damanganga canal distributary. In the current situation farmers are not provided optimum amount of water for irrigation purpose. Moreover drinking water demand of Vapi town cannot be met even from the dam water. So, if this 33,00,000 L/day water will be supplied to the unit then a havoc situation will arise for farmers and even Vapi town will not be provided the drinking water. Hence, the water issues will become more dangerous.
3. In the surrounding area of 10 km, due to the emission of the boiler, which is going to be used for the project, the temperature of area may increase up to 3-4 ^{0}C. But no study is carried out for the same in the executive summary.
4. It is shown on page no. 6 of executive summary, that during the manufacturing of the Carbon Black, PM, SO_x, NO_x, will emit from the vapor bag collector. Chances of cancer may increase to the people living in the surrounding area of 10 km. But no study is carried out for the same in the executive summary.
5. What would be the quantity of the coal used for the project and what preventive measure shall be taken if the coal would openly be transferred by conveyor belt? How the particulates will be prevented from getting dispersed in the surrounding area? In the executive summary, no studies have been carried out that for regarding the impacts on nearby mango farms.
6. On page no. 4, it is shown that, noise pollution will be around 885 dB, which is a result after all the preventive measures. If, this much of noise pollution would arise then it will adversely affect

the health of the people living in surrounding area. The auditory senses of people will be affected. But no study is carried out for the same in the executive summary.

7. If any emergency arise in the proposed project, i.e. Fire accidents. Approximately two, 12 meter wide roads will be required in case of accidents for transportation of fire fighting vehicles, trucks, and people. There are no information provided in the executive summary if any other accident would occur, then how wide roads will be required? And where there are no roads, how these land is permitted as non-agricultural?
8. On page no. 5 of the executive summary it is shown that only 8.95% area is covered with trees, which is a fake data. There are plenty of mango and sapota (chiku) gardens are located in the surrounding area. Moreover there is a forest area covered with plenty of trees. These will adversely be affected due to the emission of PM, SO2, NO2.
9. No assurance has been given by project proponent for the preventive measures which are shown on the pages 6-11. Hence necessary steps should be taken for the same.
10. The project should not be given clearance certificate because if this project would be permitted then the peace and the environmental balance will be disturbed.
11. On page no. 2 it is shown that 385 people will be employed. Non-technical employment will be given to 160 people. So, it is very unfair to destruct the environment on a large scale for such employment.
12. This area is very pleasant and having a moderate climate. There are many opportunities of development along with maintaining environment. In this area, better opportunities shall be provided for farming and tourism development. If, after spending 415 crore of amount, only 160 people are going to be employed, then the proponent can increase employment by investing this money by farming and tourism development.

It is clear from the above points that this report is incomplete and misguiding. This report is violating the EIA notification, 2006 for public hearing. We request that this public hearing shall be cancelled.

We hope that you will consider our application and will take considerable steps for preventing environment and the surrounding people from destruction.

Yours faithfully,

S/d

Annexure-C9-Gujarati to English

Applicant: Shashikant J. Patel
(On letterhead of Bharitya Kisan Sangh)
Village: Saronda, Ta. Umbergaon
Dist. Valsad

To,
The District Collector,
District: Valsad.
Valsad

Subject: Application of objection against the establishment of M/s. Madura Carbon India Ltd. for manufacturing of Carbon Black and Captive power generation at Karanjgam.

For the proposed project for manufacturing of Carbon Black 23000 TPA and Captive Power Generation – Green Power (45 MW) at survey no. 3705, 3708, 3719, 3725, 3738, 4108, 4110, 4318, Village: Karanj, Taluka: Umbergaon, Dist.: Valsad, public hearing is going to be held on 19th July, 2019 by company and we have objections .

1. The generated Carbon black may affect lungs of human due to its inhalation. The respiratory system gets affected and there are possibilities of disease like cancer.

2. Due to the usage of hydrocarbon, poisonous gases like Sulphur Dioxide and Carbon monoxide will get dispersed in the surrounding environment and will adversely affect human health. Once Sulphur Dioxide comes in a contact with the humidity of air which converts Sulphur Dioxide in Sulphuric acid and that becomes the reason of the acid rain. Acid rain will be very harmful for the croplands. As India an agricultural country, farmers should be given prime importance before industrial units.

3. During a current year, the production of mangoes in the in Pardi, Umbergaon, Vapi of Valsad district are observed very low than the previous year. One of the reasons for this is air pollution. Hence, units which are increasing air pollution shall not be permitted in this area.

4. Around the proposed project, By and large there is a community of scheduled caste, and scheduled tribe. There are two primary schools and one Anganwadi. So, the students will be affected because of the pollution.

5. Our country's lakes are rivers are drying. Hence, when we need to be very precise for usage of water, unit is about to use 3220 KLD water, which is not acceptable. Although, company is going to use huge quantity of water, company has not shown a proper plan for rain water harvesting. This clearly shows that the company is not concerned for the environment.

6. There are plenty of units of Vapi and Sarigam, which have failed giving the proper disposal to their Solid and liquid waste. So, the solid and liquid waste coming out of the unit will pollute the surrounding environment. Right beside the unit, there is a pond. The water of pond will also be polluted and it will directly impact human, vegetation and animals of the surrounding area.

7. The prime condition for converting any industrial land as NA is that there must be 40’ of approach road. While, here there is just a street way of 10 feet. This shows wrong intentions of the unit by providing fake maps. Hence, request to cancel it.

By considering the above points, we request you for not giving environmental permission to M/s. Madura Carbon Black Ltd.

Indian Agricultural Union,
Shashikant Patel
President
Valsad District

Annexure-C10-Gujarati to English

To,
Public Hearing Officer
and on Duty Representative for Public Hearing
Moje Karnjgam, Ta. Umbergaon, Dist. Valsad.

Subject: Regarding presenting application of objection as per the public notice published in the Sandesh newspaper by Gujarat Pollution Control Board on the date: 17-07-2019.

I, the objection representative, Mr. Shankarbhai Mangalabhai Warli – former member of assembly 182, Umbergaon, Kanadu, Ta. Umbergaon and Moje Fansa (Karanjgam), Survey no. 3705 and the tribal farmers all living at – Moje Fansa, Ta. Umbergaon, Dist. Valsad.

The reason of our objection application is:

1) Applicant of this work – Tajdin Hasanali Halani, Taufiq Tajdin Halani and Abhi Hitesh Dattani, lives at B-23, Girnar Khushbu Plaza, near Vishal Agro Mall, GIDC, Vapi, Dist. Valsad.
2) Gautam Bipin Kalra - Director of M/s. Madura Carbon India Ltd., who has purchased the land for industrial purpose.
3) It is our objection that the land of survey no. 3705, 3708, Moje Fansa, Ta. Umbergaon, is being used for agricultural purpose, but this land is now owned by Gautam Bipin Kalra, it is noted by no. 6977. We have come to know that these survey no. are going to be used for the manufacturing of Carbon black and Captive power generation (Green power).
4) The unit is surrounded by the agricultural land. The owners of these land are tribal people. They have represented their objection to the former MLA for not sanctioning the unit. It is our strong belief that the unit is not going to comply any rules and regulation after establishment of the company. For the protection of the tribal community, many rules are made, i.e. PEST Act. According to PEST act, Gramsabha shall take decision only after asking everyone's approval before transferring the land, but (2) have not complied that condition. Hence, the approval shall be cancelled. Hence, please order for cancellation of the same.
5) According to the records, these survey nos. are shown as Moje Fansa revenue, while (2) have shown these plot no. as Moje Karanjgam which is fake. Hence the application of the same shall be cancelled, because according to the order given by collector of Valsad, order no. Jasusha/tenant/63rule36/reg.25/18 vashi. Collector office, J. S. branch, paragraph no. (6), in future if is found that fake evidences are represented or any actual details are intentionally kept hidden then that approval can be cancelled. Hence, please order for cancellation of the same.
6) Applicant have not taken any permission of several tribal farmer's agricultural land, which is in the surrounding area of the project site. For this matter, the surrounding Gram Panchayat have taken objections against this matter. So, please do order for cancelling the same. If this would not have been done then the villages of the applicant along with the surrounding villages of the project site will be

extremely affected due to this project. And this loss will not be compensated by money. So, please do order to cancel the demands of (1) and (2). If this would not happen then, we, applicants will have to do the movement against this project.
If required, please grant us the permission for providing more proofs.

Venue: Land of Karanjgam survey no.

Signature of the applicants,

Tribal farmer's names

i) Uttambhai Gajiyabhai Dhodi.
ii) Dahyabhai Budhiyabhai Dhodi.
iii) Vestiben Jaganbhai.
iv) Manchhiben Navshabhai

Annexure:

Copy of 7/12 document

Copy of 7/12 document for applicable survey no.

Annexure-C11-Gujarati to English

Shri Chhotubhai Nanubhai Joshi
Add.: Near Ambamata Temple
Agniwad, Karajgam
Taluka: Umargam, Dist: Valsad,
Mob. No. 9638789763

To,
The Collector,
Valsad.

Subject: Regarding purchase of 12 to 13 Guntha land of Survey number 514/1, M. Po. Karajgam which we had purchased and the was transferred in the name of Gujarat Industrial Development Board.

Sir,

It is to inform you that we have purchased 12 to 13 Guntha land of Survey number 514/1, M. Po. Karajgam from Shri Anilbhai Nanubhai Bhoi, which was stamped on paper dated 19/03/1998. Also we had paid the amount of sale to Shri Anilbhai Nanubhai Bhoi. Now, the land of survey no. 514/1, is taken by Gujarat Industrial Development Board & listed in 7/12 list. Due to this, we are in very loss. Also no compensation amount as well as land acquisition is obtained by us. So this application to inform you that either arrange to provide compensation amount or provide land acquisition to us.

Thanks,

Yours Faithfully,

Shri Chhotubhai Nanubhai Joshi

Annexure-C12-Gujarati to English

Applicant
Pankaj K. Rai (Upsarpanch)
Office: tran rasta, near to Alkapark,
Sarigam-396155
Ta,Umargam
Dist, Valsad

To,
Regional officer
Gujarat Pollution Control Board,
Sarigam, Ta, Umargam

Subject: **Regarding environmental public hearing dated 19/07/2019 of M/s. Madura Carbon India Ltd. located in Karajgam of Umargam Taluka.**

According to the above subject, a public hearing of Madura Carbon lndia Limited is being held at Karanjangam today on the 19/07/2019 of this day, in which as applicants we represent our demand that approval for establishment of company should be allowed subject to binding to the conditions under the consent of gram panchayat, social welfare, local employment, development of village under the CSR activity, rules and guidelines of the Ministry of Environment, Forest & Climate Change & conditions of the Gujarat Pollution Control Board.

Your's truly,
S/d
Pankaj K. Rai
Deputy Sarpanch
Gram Panchayat, Sarigam
Ta: Umbergaon, Dist. Valsad

To,
The Collector,
Collector Office, Valsad

Subject: **Regarding support to the company which is going to be established at Karanjgam.**

We are the residents of the address mentioned above. We are in favor and we welcome the company which is having a public hearing today. Few people are against the company and have set wrong propaganda for their personal benefits. We have a strong belief that our village will be more developed due to the establishment of the company. People of village will get better employment opportunities. Hence, we request to give approval to the company.

Yours Faithfully,

S/d
(526 representatives)

Annexure C-532

Maroli Gram Panchayat

Date: 19/07/2019

To,
Collector
Collector Office,
Valsad.

It is to inform you that Public Hearing of Madura Carbon Industries Ltd. was organized on dated 19-7-2019 and we are in support of this company. If the company will provide employment to local people then we have no objection against company.

Sd/-
Sarpanch
Gram Panchayat Maroli,
Ta. Umargam, Dist. Valsad

Annexure C-533

Karajgam Gram Panchayat

Date: 19/07/2019

To,
Collector,
Collector Office Valsad,
Valsad.

Subject: Regarding Madura Carbon India Ltd. Company

Respected Sir,

It is request to you that,

If Madura Carbon India Ltd. establish at At & Po. Karajgam then employment opportunity will arise for the local people of Gram Panchayat. In addition financial growth rate will increase. As stated by Madura Carbon India Ltd. company, if company is pollution free then we Sarpanchshree, Vice-Sarpanchshree and members of Gram Panchayat have no objection against the company. Gram Panchayat resolution regarding the same are submitted with this.

Sd/-
Sarpanch
Karajgam Panchayat Maroli,
Ta. Umargam, Dist. Valsad

Annexure C-534

Karajgam Gram Panchayat

Date: 19/07/2019

To,
Collector,
Collector Office,
Valsad.

It is to inform you that Public Hearing of Madura Carbon Industries Ltd. was organized on dated 19-7-2019 and we are in support of this company. If the company will provide employment to local people then we have no objection against company.

Sd/-
Sarpanch
Gram Panchayat Tadgam,
Ta. Umargam, Dist. Valsad

Annexure C-535

Gram Panchayat Koliwad

Date: 19/07/2019

To,
Collector,
Collector Office,
Valsad.

It is to inform you that Public Hearing of Madura Carbon Industries Ltd. was organized on dated 19-7-2019. If this company after obtaining due permissions from necessary government department and GPCB and other relevant department establish according to their guidelines then we do not have any objections against this company. And if this company will provide employment to the local villagers then we have no objection with this company.

Sd/-
Sarpanch
Gram Panchayat Koliwad,
Ta. Umargam, Dist. Valsad

Annexure C-536

Gram Panchayat Mamakwada

Date: 19/07/2019

To,
Collector,
Collector Office,
Valsad.

It is to inform you that Public Hearing of Madura Carbon Industries Ltd. was organized on dated 19-7-2019 and we are in support of this company. If the company will provide employment to local people then we have no objection against company.

Sd/-
Sarpanch
Gram Panchayat Mamakwada,
Ta. Umargam, Dist. Valsad

Annexure C-537

Gram Panchayat Fadsa

Date: 19/07/2019

To,
Collector,
Collector Office,
Valsad.

It is to inform you that Public Hearing of Madura Carbon Industries Ltd. was organized on dated 19-7-2019 and we are in support of this company. If the company will provide employment to local people then we have no objection against company.

Sd/-
Sarpanch
Gram Panchayat Fadsa,
Ta. Umargam, Dist. Valsad

Annexure D1-D547

GUJARAT POLLUTION CONTROL BOARD
REGIONAL OFFICE, SARIGAM
S. No. 253/2, Ahir Faliya, Bhandarwad, Sarigam:396 155
Ta: Umbergaon, Dist Valsad
Website: www.gpcbxgn.gujarat.gov.in

Annexure-D

A statement showing written replies given by Project Proponent of **M/s. Madura Carbon India Limited** at Survey No. 3705, 3708, 3719, 3725, 3738, 4108, 4110, 4318, Village : Karaj, Ta. Umbergaon, Dist: Valsad, (Gujarat), to response and comments received in written format from other concerned persons in the Environment aspects for **M/s. Madura Carbon India Limited** for proposed manufacturing of Carbon Black -230000 TPA & Power Generation – 45 MW, at Survey No. 3705, 3708, 3719, 3725, 3738, 4108, 4110, 4318, Village : Karaj, Ta. Umbergaon, Dist: Valsad, (Gujarat). The Public Hearing held on 19-07-2019 at 11:00 hrs. at Survey No. 3705, 3708, 3719, 3725, 3738, 4108, 4110, 4318, Village : Karaj, Ta. Umbergaon, Dist: Valsad, (Gujarat) as per the Ministry of Environment and Forests, Government of India, New Delhi vide its notification no. 1533(E) dated 14/09/2006 and its subsequent amendment S.O. 3067(E) dated 01/12/2009.

Sr. No.	Comments received in writing from Concerned Persons	Annexure
1	Shri Kantibhai Mohanbhai Patel, Vill: Bhilad, Ta. Umbergam, Dist : Valsad	D-1
2	Dr. Niravbhai Lalitbhai Shah, Vill: Sarigam, Ta. Umbergam, Dist: Valsad	D-2
3	Shri Dalpatbhai Chhotubhai Ghodi, Vill : Karajgam, Ta. Umbergam, Dist : Valsad	D-3
4	Mr. Prabhubhai Satubhai Thakariya, Sarpanch, Gram Panchayat Manda, At & Po. Manda, Ta. Umbergam, Dist : Valsad	D-4
5	Shri Hiteshbhai Uttambhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-5
6	Shri Sanjaybhai M. Patel, At & Po. Kalgam, Ta. Umargam, Dist : Valasad	D-6
7	Shri Bharatbhai B. Jadav, At & Po. Bhilad, Ta. Umbergam, Dist : Valsad	D-7
8	Shri Vinay Fulchand Sheth, At & Po. Fansa, Ta. Umbergam. Dist: Valsad	D-8
9	Shri Shashikant J. Patel, Bharatiya Kishan Sangh, At & Po. Saroda, Ta. Umbergam, Dist: Valsad	D-9
10	Shri Sankarbhai Mangalabhai Varli, Ex MLA, (Fansa-Karajgam) Resi. Kanadu, Ta. Umbargam, Dist. Valsad	D-10
11	Shri Chhotubhai Nanubhai Joshi, Aagriwad, Karajgam, Ta. Umbargam, Dist. Valsad	D-11
12	Shri Pankaj K. Rai, Depty Sarpanch, At & Po. Sarigam, Ta. Umbargam, Dist. Valsad	D-12

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Reply		
D-13 to D-537	**Comments received in writing from Concerned Persons**	**Annexure**
	Shri Charul Lalabhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-13
	Shri Bipinbhai Motibhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-14
	Shri Sunilbhai Vijaybhai, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-15
	Shri Mehulbhai Dilipbhai Patel, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-16
	Shri Pankajbhai Gamanbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-17
	Shri Chotubhai Navjibhai, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-18
	Shri Arjun Shantubhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-19
	Shri, Smitbhai Bharatbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-20
	Shri Amratbhai Budhiyabhai, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-21
	Shri Arvind Mohanbhai Varali, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-22
	Shri Babubhai Ichubbhai Dubda, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-23
	Shri Sunilbhai Chandubhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-24
	Shri Kalpeshbhai Natubhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-25
	Shri Rakeshkumar Rajeshbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-26
	Shri Divyanshbhai Gajubhai, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-27
	Shri Shaileshbhai Limjibhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-28
	Shri Nimeshbhai Hiteshbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-29
	Shri Ganpatbhai Ramanbhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-30
	Shri Badal Dilipbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-31

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	Comments received in writing from Concerned Persons	Annexure
	Shri Sagarbhai Dilipbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-32
	Shri Priyank Jayntibhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-33
	Shri Shantosh Shantilal Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-34
	Ms. Tinaben Lalitbhai Patel, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-35
	Shri Digneshbhai Ishvarbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-36
	Shri Amrutbhai Vishnubhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-37
	Shri Naginbhai Vestabhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-38
	Shri Narendrabhai Navinbhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-39
	Shri Asapbhai Navinbhai Halpati, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-40
	Shri Shaileshbhai Shankarbhai Patel, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-41
	Shri Jagdishbhai Kishanbhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-42
	Shri Ashvin Bhagubhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-43
	Shri Shantubhai Shukkarbhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-44
	Shri Shahilbhai Navinbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-45
	Shri Gulabbhai Shantubhai Bonda, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-46
	Shri Ashokbhai Rameshbhai Valvi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-47
	Shri Dineshbhai Nanubhai Vadvi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-48
	Shri Niteshbhai Amratbhai Vadv, Vill: Karajgam, Ta. Umbergam, Dist : Valsad i	D-49
	Shri Vikramkumar Vinodbhai Valvi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-50
	Shri Ajaybhai Vesitbhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-51

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	Comments received in writing from Concerned Persons	Annexure
	Shri Sunilbhai Ranchodbhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-52
	Shri Kamleshbhai Bhagubhai Vadvi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-53
	Shri Shivkumar Govindbhai Rathti, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-54
	Shri Prakashbhai Harjibhai Vadvi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-55
	Ms. Tejalben Ashokbhai Vadvi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-56
	Ms. Bebiben Rameshbhai Vadvi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-57
	Ms. Hashmita Prakashbhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-58
	Ms. Aebiben Ramanbhai Vadvi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-59
	Ms. Fulvanti Prakashbhai Vadvi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-60
	Shri Umeshbhai Lalubhai Vadvi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-61
	Shri Milanbhai Ranchodbhai Rayat, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-62
	Shri Govindbhai Laxmanbhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-63
	Ms. Ashaben Shivkumar Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-64
	Ms. Naynaben Govindbhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-65
	Ms. Minaben Dineshbhai Vadvi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-66
	Shri Rajeshbhai Galubhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-67
	Ms. Savitaben Rajeshbhai Vadvi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-68
	Shri Ashvinbhai Bhagubhai Vadvi , Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-69
	Shri Uttambhai Bhagubhai Vadvi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-70
	Shri Mohanbhai Gandabhai halpati, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-71

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	Comments received in writing from Concerned Persons	Annexure
	Ms. Champuben Mohanbhai, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-72
	Shri Rupeshbhai Dhirubhia Ahir, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-73
	Shri Sailehbhai Prabhubhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-74
	Ms. Anjuben Prathambhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-75
	Shri Prathambhai Barjubhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-76
	Shri Ratilal Kanjibhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-77
	Ms. Nayanaben Ratilal Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-78
	Shri Dashrathbhai Morarbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-79
	Ms. Umaben Ranchhodbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-80
	Shri Ranchodbhai Diwarbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-81
	Ms. Induben Rameshbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-82
	Shri Dewangkumar Rameshbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-83
	Shri Alpeshkumar Rameshbhai dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-84
	Ms. Jashiben Diwarbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-85
	Ms. Chancharben Ashokbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-86
	Shri Ashokbhai diwarbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-87
	Ms. Dilataben Babubhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-88
	Ms. Kamliben Babubhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-89
	Shri Vishalbhai Shaileshbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-90
	Ms. Ankitaben Amrutbha dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-91

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	Comments received in writing from Concerned Persons	Annexure
	Ms. Pinkiben Mangeshbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-92
	Ms. Hanshaben Amratbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-93
	Ms. Bhartiben Lalabhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-94
	Ms. Ponamben Charul Dholi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-95
	Shri Navinbhai Vasubhai Dholi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-96
	Ms. Amishben Pinkalbhai dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-97
	Shri Gulabhai Vasubha dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-98
	Ms. Ushaben Gulabbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-99
	Ms. Kamlaben Navinbhai dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-100
	Ms. Sitaben Mukeshbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-101
	Ms. Gajariben Govindbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-102
	Ms. Vanitaben Kamleshbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-103
	Shri Kamleshbhai Govindbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-104
	Ms. Bhavnaben Ranjanbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-105
	Shri Ranjitbhai Vasubhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-106
	Ms. Kantaben Manilal Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-107
	Shri Manilal Budhiyabhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-108
	Ms. Sunandaben Snatoshbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-109
	Ms. Jayshreeben Alpeshbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-110
	Shri Harshilbhai Shaileshbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-111

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	Comments received in writing from Concerned Persons	Annexure
	Ms. Sumitraben Shileshbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-112
	Shri Shaileshbhai budhiyabhai dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-113
	Ms. Hemaben rajeshbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-114
	Shri Mangeshbhai Navinbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-115
	Ms. Sejalben Rajnikant Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-116
	Ms. Hanshaben Prakashbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-117
	Shri Prakashbhai Govindbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-118
	Shri Ronakbhai Dharmeshbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-119
	Ms. Pushpaben Dharmeshbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-120
	Ms. Madhuriben Vajirbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-121
	Ms. Diwaliben Premabhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-122
	Ms. Manjuben Sapatbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-123
	Shri Sandipbhai jairambhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-124
	Ms. Ravinaben Jairambhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-125
	Ms. Chibubhai Navjibhai Varali, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-126
	Shri Lakhubhai Navjibhai Varali, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-127
	Shri Navinbhai Chganbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-128
	Ms. Hanshaben Navinbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-129
	Ms. Rinkuben Ganeshbai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-130
	Shri Ganeshbhai Ranambhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-131

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	Comments received in writing from Concerned Persons	Annexure
	Shri Ramanbhai Nakrabhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-132
	Ms. Kamuben Ramanbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-133
	Ms. Jayshreeben Bhagubhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-134
	Ms. Hinaben Arvindbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-135
	Ms. Jayshriben Santoshbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-136
	Shri Shantubhai Gokudbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-137
	Ms. Pushopaben Arvindbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-138
	Ms. Minakshiben Himeshbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-139
	Shri Arvindbhai Dhodubhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-140
	Ms. Champaben Babubhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-141
	Ms. Minaben Motibhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-142
	Shri Girishbhai Motibhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-143
	Shri Motibhai Babubhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-144
	Shri Manishbhai Rajeshbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-145
	Shri Akshybhai Gajubhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-146
	Ms. Ambaben Gajubhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-147
	Ms. Sarsvatiben Akshrbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-148
	Shri Umeshbhai Divarbhai Patel, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-149
	Ms. Priyankaben Umedbhai Patel, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-150
	Ms. Kamuben Divarbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-151

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	Comments received in writing from Concerned Persons	Annexure
	Shri Arvindbhi Divarbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-152
	Shri Shantubhai Beliyabhai , Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-153
	Ms. Bebliben Shantubhai, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-154
	Ms. Nirmlaben Ajaybhai Baraf, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-155
	Shri Ajaybhai Shantubhi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-156
	Ms. Rasilaben Vilasbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-157
	Ms. Sumitraben Ganeshbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-158
	Shri Govindbhai Chaganbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-159
	Ms. Rachalben Govindbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-160
	Ms. Durgitaben Dhrmeshbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-161
	Ms. Amitaben Bipinbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-162
	Shri Bipinbhai Govindbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-163
	Shri Mehulbhai Rameshbhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-164
	Shri Ravindrabhai Ganeshbhai Karekar, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-165
	Shri Mayurbhai Pravinbhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-166
	Shri Bhailubhai MAganbhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-167
	Shri Pramodbhai Bhagvavbhai Karekar, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-168
	Ms. Jayshreeben Vinodbhai Karekar, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-169
	Ms. Rekhaben Uttambhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-170
	Ms. Manishben Mehulbhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-171

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	Comments received in writing from Concerned Persons	Annexure
	Shri Mrunal A. Patel, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-172
	Ms. Jayshreeben Pramodbhai Karekar, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-173
	Shri Rajibhai Raghlabhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-174
	Ms. Badiben Vishnubhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-175
	Ms. Arunaben Sureshbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-176
	Shri Sureshbhai Jayubhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-177
	Shri Jayubhai Ukkadbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-178
	Ms. Jasiben Jayubhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-179
	Ms. Kalavati Manishbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-180
	Shri Manishbhai Vishnubhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-181
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	Shri Jigneshbhai Sonkubhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-183
	Shri Hiteshbhai Chotubhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-184
	Ms. Paruben Chotubhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-185
	Shri Maniyabhai Gadiyabhai Dubada, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-186
	Ms. Lilaben Kiranbhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-187
	Shri Amrutbhai Lallubhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-188
	Shri Shantubhai Somabhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-189
	Ms. Joshnaben Prabhubhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-190
	Ms. Kankuben Ramanbhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-191

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	Ms. Vaishaliben NAvinbhai Patkar, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-192
	Ms. Miraben Dilipbhai Patkar, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-193
	Ms. Chantuben Ramanbhai Patkar, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-194
	Ms. Jashiben NAvinbhai Patkar, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-195
	Shri Vilashbhai Chotubhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-196
	Shri Arvindbhai Tuljibhai Tokiya, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-197
	Shri Dharmeshbhai Antubhai Savta, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-198
	Ms. Hemaben Antubhai Savta, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-199
	Ms. Nilimaben Dharmeshbhai Savta, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-200
	Shri Antubhai Samjibhai Savta, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-201
	Ms. Kinjalben Subhalbhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-202
	Ms. Sitaben Subhashbhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-203
	Ms. Manishaben Asvinbhai Patkar, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-204
	Ms. Hansaben Chintubhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-205
	Shri Vishalbhai Babubhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-206
	Shri Chintubhai Chandubhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-207
	Shri Sachinkumar Amrutbhai Vasti, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-208
	Shri Dilipbhai Divarbhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-209
	Shri Ramanbhai Divarbhai Patkar, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-210
	Shri Akshykumar Arjunbhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-211

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	Shri Vishnubhai Ramanbhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-212
	Shri Asvinbhai Dilipbhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-213
	Shri Yogeshbhai Lakshmanbhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-214
	Shri Gulabbhai Ishvarbhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-215
	Shri Ashvinbhai Shantubhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-216
	Shri Sunilbhai Anilbhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-217
	Shri Rakeshkumar Babubhai Pagi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-218
	Shri Babubhai Madhyabhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-219
	Ms. Hemaben Sadevbhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-220
	Ms. Maniben Maganbhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-221
	Ms. Sangitaben Uttambhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-222
	Ms. Chandanben Jayantibhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-223
	Ms. Radhaben Dharmeshbhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-224
	Ms. Lilaben Manshukbhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-225
	Ms. Vaishali Bharatbhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-226
	Shri Lakshmanbhai Ramjibhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-227
	Shri Niraj M. Bhatt, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-228
	Ms. Pujaben Niravbhai Naik, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-229
	Shri Chandrkant Narayanbhai Nayak, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-230
	Shri Bipinbhai Balubhai Dubda, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-231

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	Ms. Kalavatiben Vasubhai Baral, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-232
	Shri Bharatbhai Devubhai Dubda, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-233
	Shri Jigneshbhai S. Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-234
	Shri Aadeshbhai Naginbhai Dubda, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-235
	Shri Bablabhai Vasiyabhai, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-236
	Shri Ashvinbhai Ramanbhai Varli , Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-237
	Shri Babrbhai Janshabhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-238
	Shri Anitkumar Iniyabhai Dubda, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-239
	Ms. Ranjanben Parmbhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-240
	Ms. Ramilaben Ganeshbhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-241
	Ms. Jashiben Sureshbhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-242
	Ms. Jashiben Ishvarbhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-243
	Shri Parmbhai Ramjibhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-244
	Ms. Champaben Chaganbhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-245
	Ms. Jashuben Sabubhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-246
	Ms. Paniben Lalabhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-247
	Shri Anilbhai Lasimanibhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-248
	Shri Ashwinbhai Gomitbhai , Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-249
	Ms. Sudhaben Asvinbhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-250
	Shri Bhagubhai Amaratbhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-251

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	Shri Sureshbhai Varitibhai , Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-252
	Shri Amaratbhai Radhubhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-253
	Shri Parvatiben Sanubha Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-254
	Ms. Laliben Nileshbhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-255
	Ms. Panuben Lakshmanbhai varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-256
	Shri Chandrabhai Keshubhai Patel, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-257
	Ms. Manjulaben Bhagubhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-258
	Shri Rameshbhai Verakbhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-259
	Ms. Ambiben Rameshbhai, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-260
	Shri Ranjanbhai Rajeshbhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-261
	Ms. Lakshmiben Prakashbhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-262
	Ms. Sardaben Saileshbhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-263
	Ms. Jayantiben Nitinbhai, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-264
	Ms. Sevatiben Vinoddbhai Vadvi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-265
	Ms. Champaben Jagubhai Vadvi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-266
	Ms. Rekhaben Vijaybhai Rapat, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-267
	Ms. Savitaben Prtapbhai Rapat, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-268
	Ms. Bhartiben Asvinbhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-269
	Shri Jayeshbhai Amratbhai Vadvi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-270
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	Shri Vijaybhai Prabhubhai Sapat, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-273
	Shri Rameshbhai Shukarbhai Vadvi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-274
	Shri Jayantibhai Amratbhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-275
	Ms. Nikitaben Jayantibhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-276
	Shri Vijaybhai Vestabhai, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-277
	Ms. Kokilaben Vijaybhai, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-278
	Ms. Baliben Dharajibhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-279
	Shri Narmadbhai Bhokhubhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-280
	Ms. Sumaben Asvinbhai, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-281
	Shri Bipinbhai Karsan Karekar, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-282
	Shri Manilal Dipakbhai Dubda, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-283
	Shri Rakeshbhai Ishvarbhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-284
	Shri Chimabhai Kishanbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-285
	Ms. Manishaben Vijaybhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-286
	Shri Vasantbhai Gopajibhai, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-287
	Shri Kamleshbhai Manubhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-288
	Shri Amrishbhai Chvilbhai, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-289
	Shri Nayneshbhai Dipakbhai Hadpati, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-290
	Ms. Hemaben Mukeshbhai Hadpati, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-291

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	Shri Manishbhai Mukeshbhai Hadpati, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-293
	Ms. Shilaben Vilakalbhai Hadpati, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-294
	Shri Ganeshbhai Bhadliya Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-295
	Shri Gulabbhai Chotubhai Varli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-296
	Shri Dipakbhai L. Aahir, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-297
	Shri Ashokbhai Jaganbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-298
	Shri Rakeshbhai Sureshbhai Varali, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-299
	Shri Navanitbhai Vishnubhai Varali, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-300
	Shri Ajaybhai Navinbhai Varali, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-301
	Shri Rahul Arvindbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-302
	Ms. Kunta Nareshbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-303
	Shri Varali Kiran Gulabbhai, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-304
	Shri Naresh Gaman Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-305
	Shri Dhirubhai Govindbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-306
	Shri Aashish Santubhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-307
	Shri Badvi vinodbhai Sureshbhai, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-308
	Shri Bhikhubhai Mahudubhai Varla, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-309
	Shri Roshan Mavera Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-310
	Shri Dilipbhai Anjubhai Varali, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-311

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	Shri Sushil Shanya Halpati, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-313
	Shri Tejash Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-314
	Shri Amit, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-315
	Shri Hiteshbhai Bhagubhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-316
	Shri Nitinbhai Prakash Varali, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-317
	Shri Rajeshbhai Mehulbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-318
	Shri Rekhaben Kalpeshbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-319
	Shri Kaushik Babu Halpati, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-320
	Shri Sumanbhai Babubhai Halpati, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-321
	Shri Sureshbhai Devalabhai Varali, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-322
	Ms. Kokila Anilbhai Varali, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-323
	Ms. Mayuri Sureshbhai Varali, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-324
	Shri Anilbhai Sureshbhai Varali, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-325
	Ms. Sarmilaben Sureshbhai Varali, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-326
	Shri Mangubhai Kalityabhai, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-327
	Ms. Vaishali Dipakbhai Halpati, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-328
	Ms. Divyaben Dipakbhai Halpati, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-329
	Ms. Parvatiben Mohanbhai Halpati, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-330
	Ms. Parvatiben Navinbhai Halpati, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-331

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	Shri Santibhai Devajibahi Garuda, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-333
	Shri Ishwarbhai Radhlabhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-334
	Shri Visalbhai Karsanbhai Ahir, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-335
	Shri Vikeshbhai Jagubhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-336
	Shri Bhavibhai Babubhai Varali, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-337
	Shri Rakeshbhai Navinbhai Patkar, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-338
	Shri Vijaybhai shankarbhai Varali, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-339
	Shri Babubhai Gokulbvhai Halpati, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-340
	Ms. Vanitaben Babubhai, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-341
	Ms. Daxaben Bipinbhai Halpati, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-342
	Shri Rajeshbhai Mangunbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-343
	Shri Parthbhai Giulabbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-344
	Shri Dharmeshbhai Govindbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-345
	Shri Chaganbhai Beliyabhai , Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-346
	Shri Aadesh Naginbhai Halpati, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-347
	Shri Ganjubhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-348
	Shri Dhansukhbhai Lakubhai varali, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-349
	Shri Vijaybhai Chimanbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-350
	Shri Vinodbhai Nalinbhai Varali, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-351

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	Shri Uttambhai Maganbhai Varali, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-353
	Shri Arvindbhai Puniyabhai Varali, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-354
	Shri Atinbhai Laxmanbhai Varali, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-355
	Shri Maheshbhai Ganaptbhai Varali, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-356
	Shri Laxmanbhai Bhikhubhai Varali, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-357
	Shri Vinodbhai Chhotubhai Varali, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-358
	Shri Laxanbhai R Dubla, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-359
	Shri Bhikubhai Lallubhai Halpati, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-360
	Shri Sanjaybhai Ishwarbhai Varali, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-361
	Shri Lalitbhai S Patel, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-362
	Shri Himeshbhai Arvindbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-363
	Shri Pankajbhai Chandubhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-364
	Shri Pintubhai Ishwarbhai Varali, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-365
	Shri Aamitbhai Chaniyabhai Dubla, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-366
	Shri Nakulbhai Babla Varali, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-367
	Shri Shaileshbhai Lakkhanbhai Varali, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-368
	Shri Jigneshbhai Chotubhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-369
	Shri Shaileshbhai Bhikhubhai Varali, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-370
	Shri Patinbhai Babubhai Varali, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-371

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Website: www.gpcbxgn.gujarat.gov.in

	Comments received in writing from Concerned Persons	Annexure
	Shri Naileshbhai Uttambhai Varali, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-372
	Shri Vikalbhai Naginbhai Halpati, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-373
	Shri Sunilbhai Rameshbhai Varali, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-374
	Shri Vijaybhai Damubhai Vari, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-375
	Shri Ganeshbhai Navinbhai Varali, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-376
	Shri Kalpeshbhai Rameshbhai Halpati, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-377
	Shri Haresh Babarbhai Varali, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-378
	Shri Bipinbhai Balubhai Dubla, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-379
	Shri Rameshbhai Mohanbvhai varali, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-380
	Shri Mukeshbhai Govindbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-381
	Ms. Minaben Chabilbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-382
	Shri Hiteshbhai Rameshbhai Varali, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-383
	Shri Rajesh Adesh bhatt, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-384
	Ms. Hetal Adesh Bhatt, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-385
	Shri Adesh Bhalchandra Bhatt, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-386
	Shri Ashok diwar Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-387
	Shri Mohanbhai Rohitbhai Ahir, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-388
	Shri Prakashbhai Mohanbhai Dubla, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-389
	Shri Navin Chibubhai Varali, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-390
	Shri Amar S Oza, Vill: Dhuya, Ta. Umbergam, Dist : Valsad	D-391

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	Comments received in writing from Concerned Persons	Annexure
	Shri Hitesh K Oza, Vill: Manda, Ta. Umbergam, Dist : Valsad	D-392
	Shri Sunil Sampat Halpati, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-393
	Shri Anil Somjibhai Dubla, Vill: Sarigam, Ta. Umbergam, Dist : Valsad	D-394
	Shri Mithun Amratbhai Shingada, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-395
	Shri Shailesh Vasant Patel, Vill: Sarai, Ta. Umbergam, Dist : Valsad	D-396
	Shri Mayurbhai Sureshbhai , Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-397
	Shri Rajeshbhai Shiyabhai, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-398
	Shri Rakeshbhai Ramanbhai, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-399
	Shri Milanbhai Ishvarbhai, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-400
	Shri Kuldipbhai Dhavjibhai, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-401
	Shri Santoshbhai Dashrathbhai, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-402
	Shri Ashokbhai B, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-403
	Ms. Bhavanaben Bhatt, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-404
	Shri Sachinbhai V, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-405
	Shri Dharmishtha Kalpeshbhai Kamli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-406
	Shri Singh Karishna Shyam, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-407
	Shri Hemali N Bhatt, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-408
	Ms. Chandravaliben Bhatt, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-409
	Ms. Divyaben Bhatt, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-410
	Ms. Jayaben Bhatt, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-411

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	Comments received in writing from Concerned Persons	Annexure
	Ms. Sunita Vijay, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-412
	Ms. Divya Paresh, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-413
	Shri Cholara, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-414
	Ms. Sharmishtah S., Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-415
	Shri Snnaram, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-416
	Ms. Pushpa S, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-417
	Ms. Rekhaben Kunteshbhain Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-418
	Shri Kunteshbahi Ishwarlal Bhatt, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-419
	Shri Yuvarajbahi Sudambhai, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-420
	Ms. Dharmistha S Bhatt, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-421
	Shri Shantillal R bhatt, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-422
	Shri Chandrama S. Bhatt, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-423
	Ms. Shobhanaben S Bhatt, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-424
	Shri Ankur Bhatt, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-425
	Ms. Nitikshaben Bhatt, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-426
	Shri Ranjitbhai Dhavdubhai, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-427
	Shri Hiralbhai Arvindbhai, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-428
	Shri Rohithai Ratilalbhai, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-429
	Shri Riteshbhai Jagdishbhai, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-430
	Shri Rustambhai Sureshbhai, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-431

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	Comments received in writing from Concerned Persons	Annexure
	Shri Dilipbhai Rangnath, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-432
	Shri Diipbhia Somabhai, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-433
	Shri Santhoshbhai S., Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-434
	Shri Prakashbhai Bhanubhai, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-435
	Shri Nileshbhai Gulabbhai, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-436
	Shri Dharmeshbhai Dhakalbhai, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-437
	Shri Ankurbhai bablubhai, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-438
	Shri Smitbhal J , Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-439
	Shri Maheshbhai Bhagubhai, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-440
	Shri Dhavalubhai B., Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-441
	Shri Navinbhai K., Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-442
	Shri Aakashbahi Ranchodbhai, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-443
	Shri Maheshbhai Kalubhai, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-444
	Shri Vipulbhai H., Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-445
	Shri Samelbhai D, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-446
	Shri Bapubhai Baibhbhai, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-447
	Shri Prembhai Dhirubhai, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-448
	Shri Hirenbhai Ganeshbhai, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-449
	Shri Sehvagbhai Jahirambhai, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-450
	Shri Nirmalbhai H, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-451

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	Comments received in writing from Concerned Persons	Annexure
	Shri Ganeshbhai P., Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-452
	Shri Ajit Khalpabhai, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-453
	Shri Samirbhai Rasikbhai, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-454
	Shri Sandipbhai Khalpabhai, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-455
	Shri Miteshbhai NalinChandra, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-456
	Shri Jayantibhai H, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-457
	Ms. Premila C Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-458
	Shri Chandrasen R Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-459
	Shri Pravinbhai Ramdasbhai, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-460
	Shri Salim S Bhavani, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-461
	Shri Kisanbhai S, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-462
	Ms. Premila Kishan, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-463
	Ms. Minaben Rajesh Solanki, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-464
	Shri Arvind Laxmanbhai, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-465
	Shri Jaybhai R, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-466
	Shri Ankeshbhai R, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-467
	Shri Rasikbhai M, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-468
	Shri Vishalbhai V., Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-469
	Ms. Radha Ashok, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-470
	Shri Sureshbhai Tulsirambhai, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-471

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	Comments received in writing from Concerned Persons	Annexure
	Shri Raval M., Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-472
	Shri Sachinbhai K, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-473
	Shri Sunilbhai M, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-474
	Ms. Shila Vijaybhai, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-475
	Ms. Jayshreeben N, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-476
	Ms. Hemaben D., Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-477
	Ms. Samiksha , Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-478
	Shri Amit Navinbhai vaarli, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-479
	Ms. Nayanaben Manishbhai, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-480
	Shri Chabilbhai Babubhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-481
	Shri Chetanbhai Babarbhai Varali, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-482
	Ms. Priyankaben Amrishbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-483
	Shri Mukeshbhai veslabhai Halpati, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-484
	Ms. Parvatiben Mangubhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-485
	Shri Kunteshbhai Gokulbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-486
	Shri Jashmin Natvarbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-487
	Shri Jitendra B Varali, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-488
	Ms. Ramilaben Shaileshbhai Pol, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-489
	Shri Shaileshbhai Radhlabhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-490
	Shri Ishubhai Radhlabhai Valrali, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-491

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	Comments received in writing from Concerned Persons	Annexure
	Shri Rajeshbhai Vajirbhai Varali, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-492
	Shri Rameshbhai Gokulbhai Dubla, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-493
	Shri Rajeshbhai Arjunbhai Varali, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-494
	Shri Kiran Manilal Varali, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-495
	Shri Karanbhai Patel, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-496
	Shri Subhashbhai Chotubhai Varali, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-497
	Shri Shivaji Manilalbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-498
	Shri Nileshbhai Bharatbhai Varali, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-499
	Shri Milanbhai Aprbhubahi Singda, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-500
	Shri Nimeshbhai Jairambhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-501
	Shri Ankitbhai Shileshbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-502
	Shri Hetalbhai Ankitbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-503
	Shri Kalpeshbhai Bharatbhai Varali, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-504
	Shri Jigarbhai Nareshbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-505
	Shri Kevalbhai Sureshbhai Varali, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-506
	Shri Dharmeshbhai Laxmanbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-507
	Shri Vilasbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-508
	Shri Anilbhai Arjunbhai Varali, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-509
	Shri Jitendrabahi Ravjibvhai Varali, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-510
	Shri Hashmat Hareshbhai Dhodiya, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-511

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	Comments received in writing from Concerned Persons	Annexure
	Shri Kirtanbhai Vishnubhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-512
	Shri Kalpeshbhai Chibubhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-513
	Shri Ganeshbhai Parshotbhai Varali, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-514
	Ms. Nikitaben shaileshbhai Dhodiya, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-515
	Shri Rajeshbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-516
	Shri Shaileshbhai Manjibhai Dhodiya, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-517
	Shri Hashmukhbhai Rameshbhai, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-518
	Shri Navinbhai Gokulbhai Halpati, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-519
	Shri Koushikbhai Bhamubhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-520
	Shri Rajendra Sanyabhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-521
	Shri Dhruvkumar Amratbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-522
	Shri Abhaybhai Uttambhai Vadiya, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-523
	Shri Sanjay Kishanbhai Varali, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-524
	Shri Prateshbhai Sureshbhai Vadiya, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-525
	Shri Ashokbhai Vasubhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-526
	Shri Vijaybhai Balubhai Dubra, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-527
	Shri Rameshbhai Diwarbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-528
	Shri Rameshbhai Lakhubhai Varali, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-529
	Shri Bharatbhai Babubhai Varali, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-530
	Shrui Santoshbhai Manilalbhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-531

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	Ms. Lataben G. Marilokar, Vill: Maroli, Ta. Umbergam, Dist : Valsad	D-532
	Shri Kamleshbhai Manjibhai Dhodi, Vill: Karajgam, Ta. Umbergam, Dist : Valsad	D-533
	Shri J. N. Patel, Vill: Tadgam, Ta. Umbergam, Dist : Valsad	D-534
	Ms. Sonamben Vikeshbhai Patel, Vill: Kolivad, Ta. Umbergam, Dist : Valsad	D-535
	Shri Patel A. C., Vill: Mamakvada, Ta. Umbergam, Dist : Valsad	D-536
	Ms. Patel Sarojben Ajaybhai, Vill: Fansa, Ta. Umbergam, Dist : Valsad	D-537
	Comments received in Oral from Concerned Persons	
	Ms. Manali Bhoir ,Karanjgam, AAgrivad, Tal.Umbergaon, Dist. Valsad	D-538
	Mr. Prakash Bhikhaji Aarekar (Social Worker, Dy. Sarpanch, Sarigam) Village: Sarigam, Dist. Valsad.	D-539
	Mr. Bhulabhai Aahir,Village: Sarigam Ta. Umbergaon,Dist.: Valsad	D-540
	Mr. Hemant Nayak.Village: Karajgam,Ta. Umbergaon, Dist.: Valsad	D-541
	Mr. Pratik Shankar Varli Village: Kanadu, Ta. Umbergaon, Dist. Valsad	D-542
	Mr. Lalit Pravinchandra Shah, Village: Kanadu Ta. Umbergaon,Dist.: Valsad	D-543
	Mr. Prakash Bhatt, Village: Karaj, Ta. Umbergaon, Dist. Valsad	D-544
	Mr. Navin Patel,Village: Karajgam, Ta. Umbergaon,Dist.: Valsad	D-545
	Mr. Surajkumar Uttambhai Dhodi,Village: Karajgam, Ta. Umbergaon,Dist. Valsad.	D-546
	Mr. Vilas Gohil, Village: Karajgam, Ta. Umbergaon,Dist. Valsad.	D-547

MADURA CARBON

Annexure-D1-Gujarati to English

Acknowledgment copy
Regd. A.D.

To,
The Kantilal Mohanbhai Patel,
Near Railway Phatak,
Siddhi Vinayak Nivas,
Sanjan Road, Bhilad
Dist.: Valsad

Sub: Reply to letter dated 16-07-2019 regarding public hearing of the Madura Carbon India Limited.

Dear Sir,

We reply to your issues are as follows:

(1) The surrounding area will not have suffer due to pollution from the proposed project.

(2) We would like to inform you that for our proposed project, we have planned to take necessary mitigation measures to control air, water and noise pollution.

The overall system will be closed system to control emissions below permissible norms. Plant will be based on fully automated (DCS) system. An automatic leakage detection system will be installed for piping to prevent any leakage. Bag-filters will be a part of the process for collection of Carbon Black and separation from tail gas. The Tail gas generated during the manufacturing of carbon black will be used as fuel in boilers and dryers.

Domestic effluent will be treated in STP and reused for gardening. The industrial effluent from washing will be treated in ETP and reused. Other effluents from utilities will be passed through RO-MEE system and reused. Hence, no effluent will be discharged outside premises.

It will be ensured that noise level will be kept below permissible norms within company premises by providing full enclosure to Turbine and installing DG Set equipped with acoustic enclosure. Regular maintenance will be carried out. Furthermore, the development of greenbelt around the premises will help in attenuation of noise. Thus, as per the above-mentioned mitigation measures, the people living in the surrounding area will not be affected due to the proposed project.

(3) The above-mentioned steps are planned for noise pollution control. So that the level of noise within the plant premises will not increase during the day and night and there will be no threat to human habitation and birds & animals of surrounding area.

(4) For the safety of the environment, the above provisions have been made for the proposed project. Moreover, the hazardous and solid waste generated will be stored and disposed of properly, so that the land will not be affected by any toxicity.

(5) The water requirement will be fulfilled from the industrial quota from Damanganga Canal Distry. The treated effluent will not be discharged outside premises.

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(6) Coal or Carbon Black Feed Stock will not be used for power plant but off-gas/ tail-gas generated during the manufacturing of carbon black will be used as fuel during regular operations. The chimney will be provided with adequate height. The emissions from the chimney will be as per the norms so that no damage will be done.

(7) The need for raw material for the proposed project will be fulfilled from local suppliers. (Local here means national market) CBFS will be purchased from IOCL Vadodara or Reliance Jamnagar.

(8) Pollution will be controlled through the afore-mentioned pollution control measures.

(9) We welcome your suggestions.

(10) The company has obtained an Authentic Map and NOC Certificate from the Forest Department. All necessary measures for pollution mitigation will be implemented so that there will be no negative impact on the reserve Forest.

Reply of the issues mentioned in the points 1) to 9) has been included in our aforementioned answers.

We hope the above-given clarifications are in line with your requirements.

Thanking you,
For,
Madura Carbon India Limited

(Authorized Signatory)

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Annexure D2 - Gujarati to English

MADURA CARBON

To,
Dr. Nirav Lalitbhai Shah.
Sarigam, near to Jain mandir,
Ta.Umargam, Dist.Valsad.
Mo. - 9924966740

Sub: Reply to your letter dated 17-07-2019 and oral representation in public hearing of the Madura Carbon India Limited.

Dear Sir,

We would like to inform you that for our proposed project, we have planned to take necessary mitigation measures to control air, water and noise pollution.

The overall system will be closed system to control emissions below permissible norms. Plant will be based on fully automated (DCS) system. An automatic leakage detection system will be installed for piping to prevent any leakage. Bag-filters will be a part of the process for collection of Carbon Black and separation from tail gas. The Tail gas generated during the manufacturing of carbon black will be used as fuel in boilers and dryers.

Domestic effluent will be treated in STP and reused for gardening. The industrial effluent from washing will be treated in ETP and reused. Other effluents from utilities will be passed through RO-MEE system and reused. Hence, no effluent will be discharged outside premises.

It will be ensured that noise level will be kept below permissible norms within company premises by providing full enclosure to Turbine and installing DG Set equipped with acoustic enclosure. Regular maintenance will be carried out. Furthermore, the development of greenbelt around the premises will help in attenuation of noise. Thus, as per the above mentioned mitigation measures, the people living in the surrounding area will not be affected due to the proposed project.

The health effects shown in the articles you have given are for occupational health. For this point, it is to inform you that the proposed unit will comply with all the necessary steps regarding occupational health and all applicable laws regarding occupational health will be followed. Additionally, the level of carbon black in the air in the unit will be below 1 mg/ m^3 which is much lower than the permissible level of 3.5 mg/ m^3. Thus, carbon black exposure will not cause any serious health problems in surrounding area.

The proposed project will require up to 385 persons, from which employment will be provided to the local people as per the norms.

Considering the above steps, we are giving assurance that the people living in the surrounding area will not be affected due to the proposed project.

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We hope the above-given clarifications are in line with your requirements.

Thanking you,
For,
Madura Carbon India Limited

(Authorized Signatory)

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MADURA CARBON

Annexure-D3 Gujarati to English

To,
Dalpatbhai Chhotubhai Dhodi,
Karajgam Raifadiya,
Taluka: Umargam,
Dist.: Valsad

Sub: Reply to your letter dated 17-07-2019 and oral representation in public hearing of the Madura Carbon India Limited.

Dear Sir,

We reply to your issues are as follows:

(1) We would like to inform you that for our proposed project, we have planned to take necessary mitigation measures to control air, water and noise pollution.

The overall system will be closed system to control emissions below permissible norms. Plant will be based on fully automated (DCS) system. An automatic leakage detection system will be installed for piping to prevent any leakage. Bag-filters will be a part of the process for collection of Carbon Black and separation from tail gas. The Tail gas generated during the manufacturing of carbon black will be used as fuel in boilers and dryers.

Domestic effluent will be treated in STP and reused for gardening. The industrial effluent from washing will be treated in ETP and reused. Other effluents from utilities will be passed through RO-MEE system and reused. Hence, no effluent will be discharged outside premises.

It will be ensured that noise level will be kept below permissible norms within company premises by providing full enclosure to Turbine and installing DG Set equipped with acoustic enclosure. Regular maintenance will be carried out. Furthermore, the development of greenbelt around the premises will help in attenuation of noise. Thus, as per the above-mentioned mitigation measures, the people living in the surrounding area will not be affected due to the proposed project.

(2) The land for the proposed project is non-agriculture land, which is occupied by company. No land under any 73AA has been taken for the proposed project.

(3) The forest area is more than 200 meters away. The company has obtained an authenticated distance map and NOC Certificate from the Forest Department.

(4) The pond is more than 200 meters away. The domestic wastewater @100 kL/day will be treated in STP. Treated water from STP will be used for gardening. Wastewater generated from industrial activities will be 247 kL/day, from which 30 kL/day will be treated in ETP and the treated wastewater will be recyled for plant washing. Remaining water like boiler blowdown, CT blowdown & DM plant reject will be directed to RO. Permeate from RO will be recycled for plant uses. RO Reject @84 kL/day will be evaporated in MEE. 75KLD MEE condensate will be collected in plant water tank, from where it will be recycled for plant uses. Hence, there will be no discharge of treated effluent outside premises. So, no damage will be done to the nearest pond.

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(5) Anganwadi, primary school, health center, cheap grain store etc. are located more than 200 meters from the plant area. With implementation of above-mentioned mitigation measures, it will be ensured that there is no damage to them.

(6) The land for the proposed project is non-agriculture land, which is occupied by company. During operations of the proposed project, Sarigam GIDC road will be used. The road to Karaj village will not be used.

(7) The water requirement will be fulfilled from the industrial quota from Damanganga Canal Distry. The treated effluent will not be discharged outside premises.

We hope the above-given clarifications are in line with your requirements.

Thanking you,

For,
Madura Carbon India Limited

(Authorized Signatory)

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MADURA CARBON

Annexure-D / Gujarati to English

To,
Sarpanch,
Manda Grampanchayat,
At Post. Manda,
Ta. Umbergaon, dist. Valsad.

Subject: **Reply of the letter regarding the public hearing of M/s. Madura Carbon India Ltd.**

Respected Sir,

The overall system will be closed system to control emissions below permissible norms. Plant will be based on fully automated (DCS) system. An automatic leakage detection system will be installed for piping to prevent any leakage. Bag-filters will be a part of the process for collection of Carbon Black and separation from tail gas. The Tail gas generated during the manufacturing of carbon black will be used as fuel in boilers and dryers.

Domestic effluent will be treated in STP and reused for gardening. The industrial effluent from washing will be treated in ETP and reused. Other effluents from utilities will be passed through RO-MEE system and reused. Hence, no effluent will be discharged outside premises.

It will be ensured that noise level will be kept below permissible norms within company premises by providing full enclosure to Turbine and installing DG Set equipped with acoustic enclosure. Regular maintenance will be carried out. Furthermore, the development of greenbelt around the premises will help in attenuation of noise.

Thus, as per the above-mentioned mitigation measures the people living in surrounding area will not be affected due to the proposed project.

We hope the above given clarifications are in line with your requirements.

On behalf of M/s. Madura Carbon India Ltd.

Authorized Signatory

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Annexure-D5-Gujarati to English

Acknowledgement copy

Regd. A.D.

To,
Hiteshbhai Uttambhai Dhodi
At Post. Karajgam
Ta. Umbrgaon, Dist. Valsad

Subject: **Reply of your letter dated: 17/07/2019 regarding the public hearing of M/s. Madura Carbon India Ltd.**

Respected Sir,

We wish to reply the queries raised by you as below:

1. The land for the proposed project is owned by the company and according to statutory provisions land has been converted to non-agricultural land.
2. The land for the proposed project is non-agriculture land, which is occupied by company. During operations of the proposed project, Sarigam GIDC road will be used. The road to Karaj village will not be used.
3. It may please be noted that there is no residential area located in 10-20 ft. distance from the proposed plant site. The solid waste will be disposed as per the guidelines and the solid waste will be stored properly within the plant premises under sheds.
4. The land for the proposed project is owned by the company and this land is non-agricultural. No land which comes under 73-AA is taken for the proposed project.
5. We would like to inform you that for our proposed project, we have planned to take necessary mitigation measures to control air, water and noise pollution.

   The overall system will be closed system to control emissions below permissible norms. Plant will be based on fully automated (DCS) system. An automatic leakage detection system will be installed for piping to prevent any leakage. Bag-filters will be a part of the process for collection of Carbon Black and separation from tail gas. The Tail gas generated during the manufacturing of carbon black will be used as fuel in boilers and dryers.

   Domestic effluent will be treated in STP and reused for gardening. The industrial effluent from washing will be treated in ETP and reused. Other effluents from utilities will be passed through RO-MEE system and reused. Hence, no effluent will be discharged outside premises.

   It will be ensured that noise level will be kept below permissible norms within company premises by providing full enclosure to Turbine and installing DG Set equipped with acoustic enclosure. Regular maintenance will be carried out. Furthermore, the development of greenbelt around the premises will help in attenuation of noise. Thus, as per the above-mentioned mitigation measures, the people living in the surrounding area will not be affected due to the proposed project.

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6. The distance certificate has been provided by Karajgam Grampanchayat, regarding the distance of residential area, school and college. The distance certificate is attached as Enclosure-1. With implementation of above-mentioned mitigation measures, it will be ensured that there is no damage to them.

We hope the above given clarifications are in line with your requirements.

On behalf of M/s. Madura Carbon India Ltd.

Authorized Signatory

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Annexure-D6-Gujarati to English

MADURA CARBON

To,
SanjayKumar M. Patel
(R.T.I Activist)
Social Worker
At post. Kalgam, Next to the Primary School,
Ta. Umbergaon, Dist. Valsad.
Mob. No. 9913039768

Subject: Reply of your letter dated-18/07/2019 and the oral representation in the public hearing of M/s. Madura Carbon India Ltd.

Respected Sir,

We would respectfully wish to inform you that the copies of executive summary of the environment assessment report were distributed amongst the affected villages by GPCB. The copies of environment assessment report were made availabe to Collector Office-Valsad, District Office-Valsad, District Business Centre-Valsad, Town Development Office-Ta. Umbergaon, Dist. Valsad. Regional office of GPCB, Sarigam for the affected people of the surrounding area of the project site. Along with this advertisement was published in the local newspapers.

We wish to offer clarifications to the queries raised by you are as below:

1. For the proposed project, one boiler of 112 TPH and the one boiler of 72 TPH will be installed. Off/ tail gas, which will be generated during the manufacturing of Carbon Black will be used as fuel, for the power generation. No coal will be used for the power plant. Adequate height will be provided to chimney. The emission from the chimney will be below prescribed norms.

2. No VOC will be emitted from process reactor or any other source. Plant will be based on fully automated (D.C.S) system. An Automatic leakage detection system will be installed for piping to prevent any leakage. The off/ tail gas generated during the manufacturing of Carbon Black will be used as fuel in boiler and dryer. Hence, there will be no odour generation from the plant.

3. The details of the ambient air quality carried out within the 10 km radius of the study area have been presented in chapter 3 of the Draft environment impact assessment report. The information regarding the same is also presented below:

The names of the locations where the ambient air quality study has been carried out are as below:

Station Code	Venue	Station Code	Venue	Station Code	Venue
A1	Near Project Site	A5	Manda	A9	Bhilad
A2	Punat	A6	Kalgam	A10	Daheli
A3	Karajgam – Punat Road	A7	Maroli		
A4	Sarigam	A8	Angam		

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The statistical summary of the monitored results of Abmient air quality are as below:

Parameter	Statistical parameter	Station Code										NAAQS
		A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	
PM_{10} ($\mu g/m^3$)	Average	82	72	73	79	70	70	77	74	81	77	100
	Maximum	89	84	88	85	86	78	82	86	87	86	
	Minimum	76	62	67	69	61	60	68	64	73	67	
	98 percentile	89	82	84	85	85	78	82	85	87	85	
$PM_{2.5}$ ($\mu g/m^3$)	Average	38	27	24	34	29	29	29	29	29	30	60
	Maximum	44	35	33	42	33	33	37	37	37	34	
	Minimum	27	19	16	24	24	25	20	21	21	26	
	98 percentile	44	35	31	42	33	33	36	37	37	34	
SO_2 ($\mu g/m^3$)	Average	14	13	11	16	12	13	13	15	15	13	80
	Maximum	22	16	16	19	15	15	19	20	19	17	
	Minimum	9	9	9	9	9	11	9	10	9	11	
	98 percentile	22	16	15	19	15	15	19	19	19	16	
NO_2 ($\mu g/m^3$)	Average	20	16	16	18	14	18	17	18	19	18	80
	Maximum	26	20	20	21	18	22	23	22	23	21	
	Minimum	15	12	11	14	10	13	14	14	13	15	
	98 percentile	26	20	20	21	18	21	22	22	23	21	
*Hg ($\mu g/m^3$)	Average	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	---
	Maximum											
	Minimum											
*TVOC (mg/m^3)	Average	0.033	0.032	0.033	0.031	0.027	0.035	0.028	0.024	0.031	0.033	---
	Maximum	0.039	0.043	0.039	0.044	0.044	0.047	0.039	0.033	0.041	0.045	
	Minimum	0.024	0.023	0.025	0.017	0.019	0.026	0.023	0.018	0.017	0.017	
*CO (mg/m^3)	Average	0.967	0.230	0.352	0.382	0.305	0.395	0.215	0.323	0.365	0.227	2
	Maximum	1.180	0.390	0.530	0.570	0.400	0.480	0.370	0.590	0.460	0.330	
	Minimum	0.820	0.160	0.220	0.280	0.250	0.330	0.110	0.220	0.240	0.120	

Note: * Sample were collected twice in a month for three months.

4. It will be ensured that noise level will be kept below permissible norms within company premises by providing full enclosure to Turbine and installing DG Set equipped with acoustic enclosure. Regular maintenance will be carried out. Furthermore, the development of greenbelt around the premises will help in attenuation of noise.

5. The overall system will be closed system to control emissions below permissible norms. Plant will be based on fully automated (DCS) system. An automatic leakage detection system will be installed for piping to prevent any leakage. Bag-filters will be a part of the process for collection of Carbon Black and separation from tail gas. The Tail gas generated during the manufacturing of carbon black will be used as fuel in boilers and dryers. Moreover, the air dispersion modeling studies indicate that there will not be any significant impact on the reserved forests in the study area.

It will be ensured that noise level will be kept below permissible norms within company premises by providing full enclosure to Turbine and installing DG Set equipped with acoustic enclosure. Regular maintenance will be carried out. Furthermore, the development of greenbelt around the premises will help in attenuation of noise.

MADURA CARBON

The company has obtained an authenticated distance map and NOC Certificate from the Forest Department. The information on the ecological layout of the study area based on the primary survey carried out has been presented in the Annexure-7 of the EIA report and an suggested environmental conservation plan for the Schedule-1 species observed in the region has been presented in Annexure-8 of the EIA report.

6. There will be no discharge outside the plant premises from the proposed project. The balance for wastewater generation is as below:

   Domestic wastewater – 100000 L/d – which will be treated in STP and used for greenbelt

   Industrial wastewater – 247000 L/d – balance is as below:

• Plant washings – reuse after treatment in ETP	- 30000 L/d *(Reuse-1)*
• RO permeate – reuse	- 128000 L/d *(Reuse-2)*
• MEE condensate – reuse	- 75000 L/d *(Reuse-3)*
• MEE evaporation losses	- 14000 L/d (Losses & salts)
• Total reuse	- 233000 L/d
• Total Losses	- 14000 L/d
• TOTAL industrial wastewater	- 247000 L/d

7. The distance certificate has been provided by Karajgam Grampanchayat, regarding the distance of residential area, school and college. The distance certificate is attached as Enclosure-1.

8. We give assurance that 85% of the manpower will be employed from the local villages. Unskilled workers will be employed directly and people will also be trained for skilled man-power requirement for the proposed project.

9. No banned type of pyrolysis process will be carried out for the proposed project.

We hope the above given reply will be satisfactory.

Thanking you,
For Madura Carbon (India) Ltd.

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Annexure-D7-Gujarati to English

Acknowledgment copy
Rgd. A.D.

To,
Shri Bharat B Jadav,
At & Post: Bhilad (Tal: Umbargam),
Mob: 9426809624

Sub: Reply to your letter dated 19-07-2019 and oral representation in public hearing of the Madura Carbon India Limited.

We wish to submit our clarifications against your queries as under:

1. We have gone through your letter and we wish to clarify that the court order mentioned by you in the letter was issued to Universal Carbon, whose product is '*Activated Carbon*', which is generally produced from solid raw-materials like Coal, coconut shells, wood etc. and the same was ordered to relocate because of violation of the Air (Prevention & Control of Air Pollution) Act, 1981 and the notice was issued to them under section 31A of the said act. We further wish to clarify that our product is not '*Activated Carbon*' but it is '*Carbon Black*' which is manufactured using Feed stock oil as raw-material. Also, we have planned adequate & efficient air pollution control & prevention measure to ensure compliance of all the applicable regulatory provisions.

2. We have referred the research paper submitted by you. The main focus of the paper is Occupational Health hazards related with occupational exposure to Carbon Black dust. We wish to inform that for our proposed project, we have already planned to take necessary mitigation measures to control emissions of Carbon Black.

   The overall system will be a closed system to control emissions below permissible norms. Plant will be based on fully automated (DCS) system. An automatic leakage detection system will be installed for piping to prevent any leakage. Bag-filters will be a part of the process for collection of Carbon Black and separation from tail gas. The Tail gas generated during the manufacturing of carbon black will be used as fuel in boilers and dryers. Hence, the emissions will be within the applicable norms.

   The health effects shown in the article you have given are for occupational health. For this point, it is to inform you that the proposed unit will comply with all the necessary steps regarding occupational health and all applicable laws regarding occupational health will be followed. Additionally, the level of carbon black in the air in the unit will be below 1 mg/ m3 which is much lower than the permissible level of 3.5 mg/ m3. Further, necessary specific PPEs like Dust Mask (Specific for PM2.5 e.g. N95 Respirator) & Goggle, minimal exposure hours by minimizing manual work in process plant area. Dedusting system for workplace will ensure that the occupational exposure level will be well below the permissible levels.

We hope the above given clarification and assurances will be satisfactory.

Thanking you,

For Madura Carbon (India) Ltd.

(Authorized Signatory)

MADURA CARBON INDIA LTD
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CIN: U23109MH2017PLC302582

નાયબ વન સંરક્ષકશ્રીની કચેરી,
વલસાડ દક્ષિણ વન વિભાગ - વલસાડ,
જીલ્લા સેવા સદન-૨, ત્રીજો માળ,તીથલ રોડ,
વલસાડ - ૩૯૬ ૦૦૧.

E-mail: dcfvalsouth@gmail.com

Tel No.: (02632) 253809
Fax. : (02632) 259680

ક્રમાંક: ક/જમન/ટે.૧૧/ ૯૪૬-૪૧/૨૦૧૮-૧૯
વલસાડ,તા. ૦૭/૦૩/૨૦૧૯.

પ્રતિ,
શ્રી મદુરા કાર્બન ઈન્ડીયા લી.
અંધેરી (વેસ્ટ) મુંબઈ.

વિષયઃ-ઓથેન્ટીકેટેડ મેપ ઈન્ડીકેટીંગ ડિસ્ટન્સ ફ્રોમ નેશનલપાર્ક, સેન્ચુરીસ, બાયોસ્ફીયર રિઝર્વ, એન્ડ માયગ્રેટરી કોરીડોર ઓફ વાઈલ્ડ એનીમલ ઈંદીસી લોકેટેડ વીથીન ૧૦ કિ.મી. રેડીયલ પેરીફેરી ઓફ પ્રપોઝ્ડ પ્લાન્ટ લોકેટેડ એટ વિલેજ કરંજગામ તા.ઉમરગામ,જી.વલસાડ,ગુજરાત એન્ડ નો ઓબ્જેકશન સર્ટીફિકેટ રિગાર્ડીંગ પ્રપોઝ્ડ પ્રોજેક્ટ ફ્રોમ ફોરેસ્ટ ડિપાર્ટમેન્ટ.

સંદર્ભઃ- (૧) આપનો તા.૧૫/૦૨/૨૦૧૯નો પત્ર.
(૨) મુખ્ય વન સંરક્ષકશ્રી, વલસાડના પત્રાંકઃ જી/જમન/૧૪/૯૫૪૯, તા.૦૬/૦૩/૨૦૧૯.
(૩)અત્રેની કચેરીના પત્રાંકઃક/જમન/૧૧/૯૪૨-૪૩,તા.૦૬/૦૩/૨૦૧૯.

મહાશય,

જણાવવાનું કે, આપની તા.૧૫/૨/૨૦૧૯ ની અરજીમાં બીનજંગલ સર્વે નંબરઃ- [illegible] વાળી જમીનમાં આવેલ આપના પ્રોજેક્ટ પ્લાન થી ૧૦ કિ.મી.ના ત્રિજયામાં ઉકત વિષયમાં દર્શાવેલ વિસ્તારો દર્શાવતો નકશો અને તે અંગેનું "ના વાંધા પ્રમાણપત્ર" મેળવવા મુખ્ય વન સંરક્ષકશ્રી વલસાડને રજૂઆત કરેલ છે.

પ્રસ્તુત અરજીમાં કરેલ રજૂઆત પરત્વે મુખ્ય વન સંરક્ષકશ્રી વલસાડે સંદર્ભ (૨) હેઠળના પત્રથી સદર બાબતે નિયમોનુસાર કાર્યવાહી કરી કરેલ કાર્યવાહીનો અહેવાલ તેમની જાણ હેઠળ આપને પ્રત્યુત્તર આપવા જણાવેલ છે.

પ્રસ્તુત બાબતે અત્રેના વન વિભાગમાં નેશનલ પાર્ક,સેન્ચુરીસ, બાયોસ્ફીયર રિઝર્વ,માયગ્રેટરી કોરીડોર જેવા વિસ્તારો આવેલ નથી. પરંતુ આપના કરંજગામની ઉપર જણાવેલ સ.નં.વાળી બીનજંગલ જમીનથી ૧૦ કિ.મી.ની ત્રિજયામાં અત્રેના વન વિભાગનો કલમ-૨૯ હેઠળનો રક્ષિત અને કલમ-૨૦ હેઠળનો અનામત જંગલ વિસ્તાર આવેલ છે.જે પ્રોજેક્ટ વિસ્તારથી અંદાજે ૮૦૦ મીટર દુર આવેલ છે.અને નકશામાં દર્શાવવામાં આવેલ છે. આપના વધાત પ્રોજેક્ટ પ્લાન બાબતે અત્રેની કચેરીના સંદર્ભપત્ર(૩)માં જણાવેલ શરતોનું પાલન કરવા સબબ સોગંદનામુ આપના તરફથી લખી આપેલ હોય નીચે જણાવેલ શરતો આધિન નીચે સહી કરનાર તરફથી વન સંરક્ષણ તથા વન્ય જીવ સંરક્ષણનાં હિતને ધ્યાનમાં રાખી "ના વાંધા પ્રમાણપત્ર" તથા નકશો આપવામાં આવે છે.

X શરતો X

(૧) જે હેતુસર "ના વાંધા પ્રમાણપત્ર"અને નકશાની માંગણી કરેલ છે. તેના સબંધિત તમામ સરકારશ્રીના વિભાગો/ખાતાઓની પરવાનગીઓ પુર્વે મેળવી લેવાની શરતે આ પ્રમાણપત્ર આપવામાં આવે છે.

(૨) આપના તરફથી આપવામાં આવેલ સોગંદનામામાં લખી આપેલ શરતોનું પાલન [illegible]

(૩) માંગણીવાળા વિસ્તારમાં આપના અથવા આપના વતી કામ કરતા કોઈપણ વ્યકિત દ્વારા સદર વિસ્તાર સિવાય અન્ય વિસ્તારમાં કોઈપણ કામગીરી કરવામાં આવશે નહિં

(૪) માંગણીવાળા વિસ્તારમાં કામ કરતા કામદારો દ્વારા નજીકના જંગલ વિસ્તારમાં પ્રવર્તમાન કાયદાઓની જોગવાઈઓનું ભંગ કરતુ કોઈપણ અપકૃત્ય આચરવામાં આવશે નહિં અને આવો કોઈ અપકૃત્ય માટે આપની જવાબદારી નકકી થશે. તો તે માટે વન વિભાગ દ્વારા લેવાતા પગલા બંધનકર્તા રહેશે.

(૫) નજીકના જંગલ અથવા અભયારણ્યમાં આગ કોઈ નૈસર્ગિક કારણ અથવા બનુ હોવાનું આપના ધ્યાન પર આવશે.તો તે અંગેની જાણ તત્કાળ નજીકના વન વિભાગના અધિકારીશ્રીને કરવાની રહેશે.

(૬) માંગણીવાળા વિસ્તારમાં ઔદ્યોગિક પ્રવૃતિ કરવાથી કોલસા પેદુષણ અને હવામાં ઉડતા રજકણોથી પર્યાવરણને નુકશાની ન થવા પામે અને નજીકના જંગલ વિસ્તારોને નુકશાન ન થવા પામે તેની આપના તરફથી તકેદારી રાખવાની રહેશે.

(૭) માંગણીવાળા વિસ્તાર નજીકના જંગલ વિસ્તારોમાં આપના મજૂરો કે અન્ય ઈસમો ગેરકાયદેસર ખોદકામ, કપાણ,વાહનુક,છીદતી,ખેતી,આગ કે અન્ય વનગુના ન કરે તે માટે સજાગ રહેવુ પડશે.અને આવા કૃત્ય થશે તો નજીકના વનકર્મીને જાણ કરવાની રહેશે.

(૮) વિસ્તરણ વન વિભાગનાં સુરક્ષિત જંગલ તરીકે જાહેર થયેલાં રસ્તાઓ કે ગ્રામ્ય વનોનાં અનુસંધાનમાં જરૂર જણાયે નાયબ વન સંરક્ષકશ્રી, સામાજીક વનીકરણ યોજનાનો અને પંચાયતનો અલગથી અભિપ્રાય આપના દ્વારા મેળવી લેવાનો રહેશે.અને જરૂર જણાયે ભારતીય વન સંરક્ષણ ધારા-૧૯૮૦ની દરખાસ્ત રજુ કરવાની રહેશે.

(૯) ભારતી વન અધિનિયમ-૧૯૨૭,ભારતીય વન્યપ્રાણી સંરક્ષણ અધિનિયમ-૧૯૭૨,ભારતીય વન સંરક્ષણ ધારા-૧૯૮૦ કે અન્ય કાયદાઓની જોગવાઈનું પાલન આપના તરફથી કરવાનું રહેશે.

(૧૦) આપના તરફથી નજીકના વન વિસ્તારોમાં ગેરકાયદેસર રસ્તા બનાવવા નહિં કે વન વિસ્તારોમાંથી રસ્તાનો પસાર કરવાના રહેશે નહિં.

(૧૧) માંગણીવાળી જમીનમાં ભારે વાહનો લાવી કે અન્ય કોઈપણ પ્રકારની મશીનરીથી ઘોંઘાટ પેદા કરી નજીકના જંગલો મુકત વન્યજીવનને અહેસ પહોંચાડવી નહિં.

(૧૨) માંગણીવાળી જમીનની આજુબાજુ આવેલ જંગલની જમીનમાં આગ લાગવાના કિસ્સા બને તો આપના દ્વારા આગ ઓલવવામાં મદદ કરવા કામદારોને સંજોગોને અનુરૂપ મોકલવાના રહેશે.

(૧૩) વન વિભાગ તરફથી સુચવેલ તમામ શરતો પૈકી કોઈપણ શરતનું ભંગ કે ઉલ્લંઘન થશે તો વિભાગ તરફથી આપવામાં આવેલ "ના વાંધા પ્રમાણપત્ર" તથા દસ્તાવેજો આપો આપ રદ થશે.

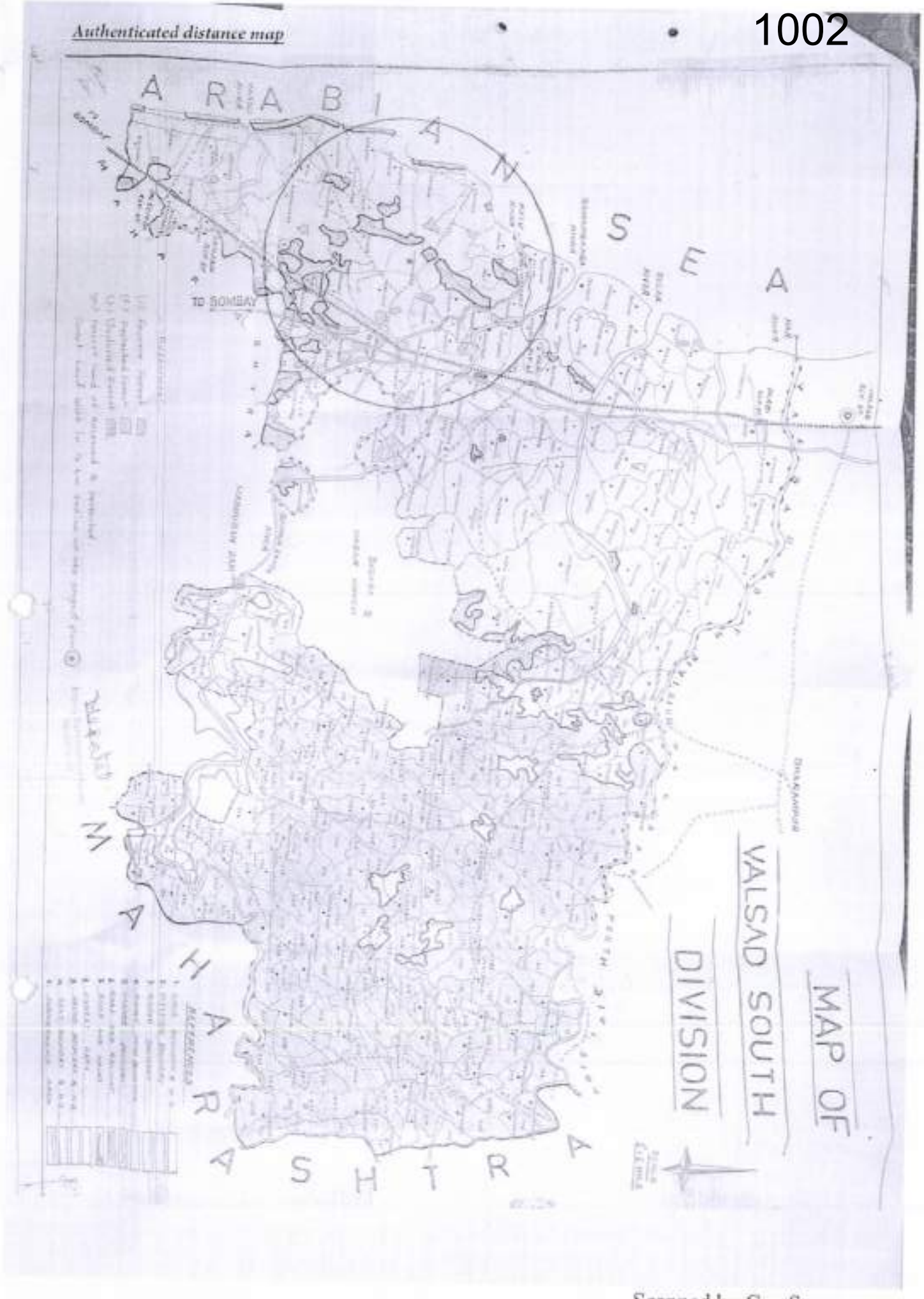
સ્થળ:વલસાડ
તારીખ:૦૬-૩-૨૦૧૯.

નાયબ વન સંરક્ષક
વલસાડ દક્ષિણ

નકલ સાદર રવાના:મુખ્ય વન સંરક્ષકશ્રી વન વર્તુળ,વલસાડ તરફ આપના સંદર્ભપત્ર અન્વયે જાણ થયા વિનંતી છે.

નાયબ વન સંરક્ષક
વલસાડ દક્ષિણ

Authenticated distance map



Scanned by CamScanner

Enclosure-2-Distance certificate

"ONE TEAM ONE VISION ONE MISSION"

કરજગામ ગ્રામ પંચાયત

KARAJGAM GRAM PANCHAYAT

એક કદમ સ્વચ્છતા કી ઓર

સ્વચ્છ ભારત

પ્રે. / પો. કરજગામ, તા. ભિલાડ, તા. ઉમરગામ, જિ. વલસાડ.

સરપંચ: કમલેશભાઇ મંજુભાઇ ધોડી મો. : 9904277330 / 9824124455

જાવક નં. :

તા. ૨૦ / ૦૨ /૨૦૧૮

પ્રમાણપત્ર

આથી આ પ્રમાણપત્ર લખી આપવામાં આવે છે કે,

વલસાડ જિલ્લાના ઉમરગામ તાલુકાના મોજે. ફણસા કરજગામના રે.સર્વે નં. ૩૭૩૮, ૩૭૦૮, ૩૭૧૯, ૩૭૨૫, ૩૭૦૫, અને ૪૩૧૮ વાળી જમીન જે હાલે મદ્રા કાર્બન ઈન્ડિયા લીમીટેડ નામે ચાલી આવે છે. સદર ઉપરોકત તમામ સર્વે નંબરવાળી જમીનની ૫૦૦ મીટરના વિસ્તારમાં રહેણાંક વિસ્તાર, મંદિર, તળાવ, સ્ટેટ હાઈવે, નેશનલ હાઈવે, કોસ્ટલ હાઈવે, સ્કુલ, ઐતિહાસિક સ્મારક કે રેલ્વે લાઈન પસાર થતી નથી.

H. A. Jadeja
તલાટી કમ મંત્રી,
કરજગામ ગ્રામ પંચાયત,
તા. ઉમરગામ, જી. વલસાડ.

Annexure-5 page 137

Certificate

Hence this certificate is given in writing that,

Moje of Umbergamtaluka of Valsad district; Survey No. 3738,3708,3719,3725,3725,3705, and 4318 Vani land of PhansaKarjagam which is currently run by Madura Carbon India Ltd. All the above survey numbered lands within 500 meters of residential area, temple, tension, State highways, national highways, coastal highways, schools, monuments or railways.

Annexure - D8 - Gujarati to English

MADURA CARBON

To,
Vinay Phulchand Sheth,
M. Po.: Fansa, Via Bhilad,
Taluka: Umargam
Dist.: Valsad
M. No.: 7021775994
Date: 19/07/2019

Sub: Reply to your letter dated 19-07-2019 and oral representation in public hearing of the Madura Carbon India Limited.

Dear Sir,

We wish to submit the clarification to the queries raised by you as follows

(1) We wish to inform that the executive summary of the assessment report is made to provide a brief summary of the complete report. For the proposed project, a draft EIA report is prepared containing all the required information in compliance of the TOR. This draft EIA report has been submitted to the GPCB for public hearing. As per the suggestions received during public hearing, the final EIA report will be submitted after necessary corrections, if required.

(2) We wish to inform you that the freshwater requirement will be 2890 KLD. The water requirement will be fulfilled from the industrial quota from Damanganga Canal Distry. A letter of intent indicating the feasibility of supply of water has been obtained from the office of the Executive Engineer, Damanganga Canal Distry

(3) The plant equipment and piping will be insulated to reduce heat loss. In fact, the waste heat will be used in pre-heaters for pre-heating the air before feeding in the reactors

(4) The dispersion modeling is carried out for the predicting the increase in levels of PM, SO_2 and NO_x emissions in the surrounding area due to the proposed project and the same has been presented in the Draft Environment Impact Assessment report. The outcome of the model indicates that the predicted levels of the pollutants will be within the applicable National Ambient Air Quality Standards. So we assure you that there will not be any adverse health impact on the surrounding area.

(5) Coal or any other fuel will not be used for power plant. Off-gas/ tail gas generated during the manufacturing of Carbon Black will be used as fuel in boilers & dryers. So dust will not be generated. The adequate chimney height will be provided for dispersion of flue gas. Emissions from chimney will be according to the standard so that there will be no damage due to the dust in the surrounding area.

(6) On the executive Summary of Page No. 4, the mentioned noise levels are <75 dB(A) during day and <70 dB(A) during night and not 885 dB(A). It will be ensured that noise level will be kept below permissible norms within company premises by providing full enclosure to Turbine and installing DG Set equipped with acoustic enclosure. Regular maintenance will be carried out. Furthermore, the development of greenbelt around the premises will help in attenuation of noise. Thus, as per the above-mentioned mitigation measures, the people living in the surrounding area will not be affected due to noise generation from the proposed project.

(7) During operations of the proposed project, Sarigam GIDC road will be used. The road to Karaj village will not be used.

MADURA CARBON INDIA LTD
Regd. Off.: 1, Janki Centre, Off: Veera Desai Road,
Andheri (W), Mumbai - 400 053. INDIA
T/F: +91-22-2673 0890 (4 Lines)
CIN: U23109MH2017PLC302582

Annexure 28. Hyderabad English 1006

MADURA CARBON

(8) The landuse map of 10 km radial periphery is prepared through the satellite image and ground truthing. The map of the Forest Department is also superimposed on it. The area calculations have been made using GIS software. Accordingly, the forest of 8.95% of the area has been indicated as treeclad area. In addition to that, 32.69% of indicated agricultural land area includes Mango-Chickoo orchards in it.

Coal will not be used as fuel for the proposed project. The proper mitigation measures will be taken to control PM, SO_2, NO_x, so that there will be no damage due to the emissions in the surrounding treeclad area.

(9) We assure that all steps suggested from page no. 6 to 11 in the executive summary will be followed by the company.

(10) We assure that all steps required for the control of pollution will be taken by the company to maintain the environmental balance and peace in the surrounding area.

(11) Apart from assuring to employ local people as per the norms, we also assure to train the unskilled workers to promote them in the skilled category. Moreover, local people will also be given priority for contractual work in the company during establishment as well as during plant operations.

(12) We assure that all steps required for the control of pollution will be taken by the company to maintain the environmental balance and peace in the surrounding area. Also it will be ensured that there will be no damage to the surrounding environment.

We hope the above-given clarifications and assurances will be satisfactory.

Thanking you,
For Madura Carbon India Limited

(Authorized Signatory)

MADURA CARBON INDIA LTD
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T/F: +91-22-2673 0890 (4 Lines)
CIN: U23109MH2017PLC302582

Annexure DG - English & Gujarati

MADURA CARBON

Date: 19/07/2019

To,
Shashikant J. Patel
(On letterhead of Bharitya Kisan Sangh)
Village: Saronda, Ta. Umbergaon
Dist. Valsad
Mob. 9924187914

Sub: Reply to your letter dated 16-07-2019 and oral representation in public hearing of the Madura Carbon India Limited.

Dear Sir,

We wish to reply to your queries as follows:

1) With reference to the health effects mentioned by you in the letter, we wish to inform you that with implementation of all the process control measures, the carbon black level in the work area will be below 1 mg/m^3, which will be much below the approved level (3.5 mg /m^3).

2 & 3) With reference to you concern, we wish to inform you that efficient air pollution control measures will be provided to keep the emissions within the permissible norms so that the pollutants mentioned will not have any serious impacts on the surrounding.

4) We would like to inform you that for our proposed project, we have planned to take necessary mitigation measures to control air, water and noise pollution.

The overall system will be closed system to control emissions below permissible norms. Plant will be based on fully automated (DCS) system. An automatic leakage detection system will be installed for piping to prevent any leakage. Bag-filters will be a part of the process for collection of Carbon Black and separation from tail gas. The Tail gas generated during the manufacturing of carbon black will be used as fuel in boilers and dryers.

Domestic effluent will be treated in STP and reused for gardening. The industrial effluent from washing will be treated in ETP and reused. Other effluents from utilities will be passed through RO-MEE system and reused. Hence, no effluent will be discharged outside premises.

It will be ensured that noise level will be kept below permissible norms within company premises by providing full enclosure to Turbine and installing DG Set equipped with acoustic enclosure. Regular maintenance will be carried out. Furthermore, the development of greenbelt around the premises will help in attenuation of noise. Thus, as per the above-mentioned mitigation measures, the people living in the surrounding area will not be affected due to the proposed project.

5) Water requirement for the project will be provided through the industrial quota of Damanganga Canal. In addition, 233000 liters per day water requirement will be met by the company by recycling of treated wastewater. Apart from this, the company has proposed to save 22,000,000 liters of rainfall per year through Rooftop Rain-water Harvesting System, for which, the company's 1500000 liter capacity fresh water tank will be used for storage. Moreover, the company will also help in carrying out rain-water harvesting activities in surrounding villages under the CER plan.

6) The Company will make arrangements in accordance with the legal provisions for the disposal of solid and liquid waste. The wastewater will be treated and recycled/ reused and will not be discharged outside as explained above in point no. 1. The hazardous and solid waste generated will be stored and disposed of properly as per guidelines. Hence, all steps will be taken to ensure so that there is no possibility of pollution of the water of the lake or the effects of human life, vegetation and animals.

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Annexure D9 - English & Gujarati

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7) During operations of the proposed project, Sarigam GIDC road will be used. The road to Karaj village will not be used.

With the hope that the above-given clarifications will be satisfactory to you.

Thanking you,
For Madura Carbon India Limited

(Authorized Signatory)

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Annexure-D9 - English 1009

D-10

MADURA CARBON

To,
Shankarbhai Mangalabhai Warli
Former MLA 182,
Kanadu, Umbergaon
Ta. Unbergaon.

Subject: Reply to your oral representation regarding the public hearing of M/s. Madura Carbon India ltd.

Respected Sir,

The reply of your points are given as below:

The land for the proposed project is owned by the company and it is NA certified for industrial use.

No land which is covered under 73-AA act has been taken for the proposed unit. Hence, statutory provisions of PESA Act are not applicable. However, it is to inform you that on date: 18th December, 2018, a meeting was held by the Gram Panchayat for the establishment of M/s. Madura carbon India Ltd., and required resolution [No. 24(01)] had been passed.

We hope the above clarifications are satisfactory.

Thanking you,
For Madura Carbon (I) Limited

(Authorized Signatory)

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Annexure D11- English to English

1010

MADURA CARBON

To,
Chhotubhai Nanubhai Joshi
Next to Ambamata Temple,
Agriwad, Karajgam,
Ta. Umbergaon, Dist: Valsad
Mob. No. 9638789763

Subject: Reply to your letter during the public hearing of M/s. Madura Carbon India Limited.

Respected Sir,

We wish to state that the survey no. 514/1 located at Moje Karajgam, is not included in the proposed project of M/s. Madura Carbon India Ltd.

We hope this will clarify the matter.

Thanking you,
For Madura Carbon India Limited

(Authorized Signatory)

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Annexure D12 - Gujarati to English

1011

MADURA CARBON

To,
Pankaj K. Rai. (Dy. Sarpanch)
Sarigam Gram Panchayat,
At Post. Sarigam,
Ta. Umbergaon, Dist. Valsad, Gujarat.
Mob. No. 9924944999

Subject: Reply to letter dated 19-07-2019, regarding public hearing of the Madura Carbon India Limited.

Respected Sir,

We are thankful to you for your support regarding the proposed project, and we give you an assurance that all the legal provisions will be complied.

Thanking you,
For Madura Carbon India Limited

(Authorized Signatory)

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MADURA CARBON

Annexure-D532-Gujarati to English

To,
Mrs. Lataben Marolikar.
Sarpanch,
Maroli Gram Panchayat
At. Maroli
Ta. Umbergaon, Dist. Valsad, Gujarat

Subject: Regarding the written support submitted by you to the project during public hearing of M/s. Madura Carbon India Limited.

Respected Sir,

We are thankful for the support provided by you.

Thanking you,
For Madura Carbon India Limited

(Authorized Signatory)

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MADURA CARBON

Annexure-D533-Gujarati to English

To,
Mr. Kamleshbhai Dhodi.
Sarpanch,
Karajgam Gram Panchayat
At. Karajgam
Ta. Umbergaon, Dist. Valsad, Gujarat

Subject: Regarding the written support submitted by you to the project during public hearing of M/s. Madura Carbon India Limited.

Respected Sir,

We are thankful for the support provided by you.

Thanking you,
For Madura Carbon India Limited

(Authorized Signatory)

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CIN: U23109MH2017PLC302582

MADURA CARBON

Annexure-D534-Gujarati to English

To,
Sarpanch,
Tadgam Gram Panchayat
At. Tadgam
Ta. Umbergaon, Dist. Valsad, Gujarat

Subject: Regarding the written support submitted by you to the project during public hearing of M/s. Madura Carbon India Limited.

Respected Sir,

We are thankful for the support provided by you.

Thanking you,
For Madura Carbon India Limited

(Authorized Signatory)

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MADURA CARBON

Annexure-D535-Gujarati to English

To,
Mrs. Sonamben Patel
Sarpanch,
Koliwad Gram Panchayat
At. Koliwad
Ta. Umbergaon, Dist. Valsad, Gujarat

Subject: Regarding the written support submitted by you to the project during public hearing of M/s. Madura Carbon India Limited.

Respected Sir,

We are thankful for the support provided by you.

Thanking you,
For Madura Carbon India Limited

(Authorized Signatory)

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MADURA CARBON

Annexure-D536-Gujarati to English

To,
Sarpanch,
Mamakwada Gram Panchayat
At. Mamakwada,
Ta. Umbergaon, Dist. Valsad, Gujarat

Subject: Regarding the written support submitted by you to the project during public hearing of M/s. Madura Carbon India Limited.

Respected Sir,

We are thankful for the support provided by you.

Thanking you,
For Madura Carbon India Limited

(Authorized Signatory)

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MADURA CARBON

Annexure-D537-Gujarati to English

To,
Mrs. Sarojben Patel
Sarpanch,
Fansa Gram Panchayat
At. Fansa,
Ta. Umbergaon, Dist. Valsad, Gujarat

Subject: Regarding the written support submitted by you to the project during public hearing of M/s. Madura Carbon India Limited.

Respected Sir,

We are thankful for the support provided by you.

Thanking you,
For Madura Carbon India Limited

(Authorized Signatory)

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Andheri (W), Mumbai - 400 053. INDIA
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MADURA CARBON

To,
Ms. Manali Bhoir
Karanjgam, AAgrivad,
Tal.Umbergaon
Dist. Valsad

Sub: Reply to your oral representation regarding public hearing of the Madura Carbon India Limited.

The reply of your points are given below:

1. **In this project, company has proposed to produce 2,30,000 Carbon Black and 45 MW Captive power (Green Power). Around this company, 2 Anganwadi and 2 primary schools are located. And forest area is also there around the proposed project. So, the children studying in schools and the birds & animals will be affected.**

   We would like to inform you that we have planned to take appropriate steps to prevent air, water and noise pollution for our proposed project.

   The process will be carried out in a fully closed for keeping the emissions below permissible level. Plant will be based on fully automated (DCS) system. An automatic leakage detection system will be installed for piping to prevent any leakage. Bag-filters will be a part of the process for collection of Carbon Black and separation from tail gas. The Tail gas generated during the manufacturing of carbon black will be used as fuel in boilers and dryers.

   Domestic wastewater will be treated in STP and that will be used for gardening. The wastewater generated from washing will be treated in ETP and the treated water will be reused. Wastewater generated from utility will be treated with RO-MEE system and will be reused.

   It will be ensured that noise level will be kept below permissible norms within company premises by keeping the turbine in a closed turbine house. DG Set will be equipped with acoustic enclosure. Regular maintenance will be carried out. Furthermore, the development of greenbelt around the premises will help in attenuation of noise.

   Thus, as per the above-mentioned mitigation measures students of Anganwadi, Primary Schools, and birds and animals of surrounding forest area will not be affected due to the proposed project. Proper care will be taken for the same.

2. **Total 3220 KLD Water is going to be used for the proposed project but only 330 KLD water will be reused. But except this 330 KLD, all other requirement will be fresh water.**

   We would like to inform you that the fresh water requirement for the project will be 2890 KLD and it will be fulfilled from the industrial quota of Damanganaga Canal Distry. The company has obtained letter of intent from the executive engineer of Damanganaga Canal Distry for meeting the primary supply of water for the proposed project. Moreover, requirement of 233000 L/day water will be met by treating it. The company has proposed to conserve 22,000 KL water by rainwater harvesting system. For storing this water company will use the water tank of 15,00,000 litre capacity. This will be used to fulfil the water requirement of the company. Apart from this, company will also participate in carrying out rainwater harvesting in surrounding villages under CER activity.

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3. **110 KLD Domestic water is about to be used for the proposed project, for which the water of the pond which is located nearby will be used. Due to this the villagers will not get drinking water.**

   The fresh water requirement for the project will be fulfilled by the industrial quota of Damanganaga Canal Distry. The company has obtained letter of intent from the executive engineer of Damanganaga Canal Distry for meeting the primary supply of water for the proposed project. Pond water will not be used.

4. **The emission of PM, SO_2 and NO_x is very harmful. Due to this emission the new born babies might would suffer from disease of brain, heart, respiratory disease and skin cancer.**

   The air dispersion modelling is carried out for predicting the increase in levels of PM, SO_2 and NO_x emissions in the surrounding area due to the proposed project and the same has been presented in the Draft Environment Impact Assessment report. It is concluded from the modelling results that the predicted air quality of the surrounding area will be within National Ambient Air Quality Standards. Hence, the chances of such disease are not foreseen.

5. **92 TPH boiler is going to be used and is having the chimney height of 100 m, which is affect the surrounding people. Along with this 4 dryers, 1 boiler (135 TPH) is going to be used which is dangerous for surrounding people.**

   For the proposed project, one boiler of 112 TPH capacity and one boiler of 72 TPH will be installed. The Tail gas generated during the manufacturing of carbon black will be used as fuel in boilers and dryers. No coal will be used for the power plant. For preventing air pollution, efficient air pollution control devices will be installed for the proposed project. Since the pollutants will not create the severe effect as you have mentioned. Adequate height will be provided to chimney. The emissions from the chimney will be according to permissible norms and there will not be any damage.

   The air dispersion modelling is carried out for predicting the increase in levels of PM, SO_2 and NO_x emissions in the surrounding area due to the proposed project and the same has been presented in the Draft Environment Impact Assessment report. It is concluded from the modelling results that the air quality of the surrounding area will be as per National Ambient Air Quality Standards.

6. **Because of the establishment of the company, temperature and humidity will be increased in the surrounding area. In the current situation, there is no rain and the atmosphere is already hot. So, what will happen if this companies will be established?**

   Insulation will be provided to reduce the heat loss of plant machinery and piping. Waste heat will be used for preheating the air before feeding it in the reactor.

7. **You can do the medical check-up of the people living in surrounding area, if after the production the medical check-up would be done, it will be clearly shown that all these people will suffer from medical problems.**

   Medical check-up of the employees will be done in a regular intervals and as a part of the CER activities company will arrange the medical camps in the villages which are surrounded by the project site.

8. **According to the definition of Panchayati Raj, Gramsabha should be held. Even if a small hospital is about to be constructed in a village, Sarpanch shall inform the villagers, but the Sarpanch of our village has yet not made us aware about the establishment of this much of [illegible] any support from the Sarpanch of our village.**

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The land for the proposed project is owned by the company and is NA certified for the industrial purpose. Even though it is to inform you that Gramsabha had addressed an assembly for the establishment of M/s. Madura Carbon India Ltd and required resolution [Resolution no. 24(01)] has been made.

9. **If the company will be established then, there will be no place left for the grazing (Gauchar).**

The land for the proposed project is owned by the company and is NA certified for the industrial purpose.

We hope the above given clarifications are in line with your requirements.

On behalf of M/s. Madura Carbon India Ltd.

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MADURA CARBON

To,
Mr. Prakash Bhikhaji Aarekar (Social Worker, Dy. Sarpanch, Sarigam)
Village: Sarigam,
Dist. Valsad.

Subject: Reply to your oral representation regarding the public hearing of M/s. Madura Carbon India ltd.

The reply of your points are given below:

1. *Jay Krishna Jay Gopal, Sarigam, Karajgam ko mat banao Bhopal.* **We are not against Karajgam, we are against the pollution, "Bagdi chhe hawa, thaki gaya lok khai khai hava" (The people of the surrounding area are tired of inhaling the polluted air), is this hearing is a hearing or it is a tsunami that is not clear. We have faced so many public hearing and in every public hearing the project is being opposed and even though all t. The companies named coromandel and N.R.Agrawal got the approvals in spite of protesting against the companies. So, please ensure that the firm decision would be made for the company, we need development but not by sacrificing our lives.**

   We wish to inform you that we have planned to take proper steps for preventing air, water and noise pollution.

   Plant will be based on fully automated (DCS) system. An automatic leakage detection system will be installed for piping to prevent any leakage. Bag-filters will be a part of the process for collection of Carbon Black and separation from tail gas. The Tail gas generated during the manufacturing of carbon black will be used as fuel in boilers and dryers.

   Domestic wastewater will be treated in STP and that will be used for gardening. The wastewater generated from washing will be treated in ETP and the treated water will be reused. Wastewater generated from utility will be treated with RO-MEE system and will be reused.

   It will be ensured that noise level will be kept below permissible norms within company premises by keeping the turbine in a closed turbine house. DG Set will be equipped with acoustic enclosure. Regular maintenance will be carried out. Furthermore, the development of greenbelt around the premises will help in attenuation of noise. All the mitigation measures suggested in the Environment impact report will be complied by the company. We give an assurance that all the suggested measures will be complied to maintain the balance the environment in the surrounding area.

   Thus, by considering the above mitigation measures the surrounding environment will not be affected. Proper care will be taken for the same.

2. **I have been fighting since last 30 years, but the pollution is not reduced. I have done hunger strike and other steps too but companies are not complying the rules. Companies shall comply what they have assured. If the family of the company holders would be able to live right here with us without AC then we are ready for this project. We are ready to give it in writing on the stamp paper of Rs. 100/- , if they can live here even for a month.**

   All the mitigation measures suggested in the Environment impact report will be complied by the company. We give an assurance that all the suggested measures will be complied to maintain the balance of the environment in the surrounding area.

3. **In Pagipada and Rohitwas there is a huge population of poor people. There is Coromandel and on the other side there is N.R.Agrawal and stone quarry and in between of these, all these poor people are living, for them I am sad. Children are tired of cough and their mothers are tired of taking them to the doctors frequently. That is the reason why the number of clinics and dispensaries are increased in this area. Water is already an issue of this area. Hence, no**

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more pollution should increase and that is our demand. Company is giving an assurance but no actions are being taken if they would not comply the conditions they have assured. People are getting richer only rather than the development of the area.

All the mitigation measures suggested in the Environment impact report will be complied by the company. We give an assurance that all the suggested measures will be complied to maintain the balance the environment in the surrounding area

We hope the above given clarifications are in line with your requirements.

On behalf of M/s. Madura Carbon India Ltd.

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MADURA CARBON

To,

Mr. Bhulabhai Aahir
Village: Sarigam
Ta. Umbergaon,
Dist.: Valsad

Subject: Reply to your oral representation regarding the public hearing of M/s. Madura Carbon India ltd.

The reply of your points are given below

1. **In the process details given, there is no mention of the percentage of COD and BOD before and after treatment of wastewater. Moreover, please let us know about the amount of the oxygen used.**

   Characteristics of wastewater have been mentioned on a page no. 2.9 in draft EIA report.
   As the Domestic wastewater contains the BOD, it will be treated in STP and then will be used for gardening. Due to high TDS, wastewater generated from utility and other source will be treated with RO-MEE system and will be reused. SS content will be there in the washing water. Hence, it does not require secondary treatment. Wastewater from washing, will be treated in the 30 KLD ETP which comprises primary (Oil & Grease separator) and tertiary treatment (Pressure Sand filter).

We hope the above given clarifications are in line with your requirements.

On behalf of M/s. Madura Carbon India Ltd.

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Annexure-D541-Gujarati

MADURA CARBON

પ્રતિ
શ્રી હેમંત નાયક
ગામ : કરજગામ
તા. ઉમરગામ,
જી. વલસાડ

Acknowledgment copy
Hand Delivered

વિષય: મદુરા કાર્બન ઇન્ડિયા લીમીટેડ કંપનીની લોકસુનવણી પ્રસંગે અપના દ્વારા મૌખિક રજુઆતનો પ્રત્યુત્તર.

અમે તમારા મુદ્દાઓ તેમજ તેનો પ્રત્યુત્તર નીચે મુજબ આપીએ છીએ.

1. આ પ્રોજેક્ટ શરૂઆતથી કાઢી નાખો તેની સુનાવણી કરવાની જરૂર નથી, આ પ્લાન્ટ કેમિકલ ઝોનમાં જાય તો સારું છે; કેમ કે કાર્બનની જે અસર છે તેનું શું? ગ્રામપંચાયતને બાહેંધરી આપવામાં આવે છે, તેની વેલ્યું શું? કંપની ન કરે તો ગ્રામપંચાયત શું કરી લેવાની? જી.પી.સી.બી. ક્લોઝર નોટીસ આપે છે તેનાથી શું ફરક પડે છે.

ફ્યુજીટીવ ઉત્સર્જનને નિયંત્રણમાં સંપૂર્ણ પ્રક્રિયા બંધ સિસ્ટમમાં થશે.પ્લાન્ટ સંપૂર્ણપણે સ્વચાલિત (ડી.સી.એસ) સિસ્ટમ પર આધારિત રેહશે.કોઇપણ લીકેજ ન થાય તેમાટે પાઇપિંગને માટે સ્વચાલિત લીકેજ ડિટેકશન સિસ્ટમ લગાડવામાં આવશે. કાર્બન બ્લેકના ઉત્પાદન સમયે કાર્બન બ્લેકના કલેક્શન અને ટેઇલ ગેસના સેપરેશન માટે બેગડ્રિલ્ટર લગાડવામાં આવશે. સૂચિત એકમમાં વ્યવસાયિક-આરોગ્ય બાબતે જરૂરી બધાજ પગલાઓ લેવામાં આવશે તથા આ બાબતે લાગુ પડતા બધા કાયદાઓ નું પાલન કરવામાં આવશે. વધુમાં એકમમાં કાર્યસ્થળમાં હવા માં કાર્બન બ્લેક નું કાર્યસ્થળના માન્ય ધારાધોરણ (OSHA-TWA) થી પણ ઘણું નીચું રહેશે. આમ કાર્બન બ્લેક ના સંપર્ક થી કોઈપણ પ્રકારની ગંભીર સ્વાસ્થ્યની સમસ્યા ઉદભવશે નહિ, તેની પૂરતી કાળજી લેવામાં આવશે.

2. છેલ્લા ૧૦ વર્ષથી કોલીવાડનું પાણી બગડેલ છે. અનેકવાર કંપની અને જી.પી.સી.બી.ની બાંહેધરી છતાં આજની તારીખે પણ પાણી પ્રદૂષિત છે અને કંપનીવાળા પાણીના એક-બે બાટલા ફેંકી જાય અને કહેવાય વિકાસ? સરીગામ, કરજગામ અને માંડાનો વિકાસ એટલે ગંદકી, મોટા-મોટા મચ્છર, હવાનું પ્રદુષણ, પાણી પ્રદુષણ અને રોગચાળો ફાટે એ જુદાં. પ્રદૂષિત વાતાવરણને કારણે ખેતીની આવક પણ ઘટી ગઇ છે.

અમે તમોને જણાવવા માંગીએ છીએ કે અમારા સૂચિત પ્રોજેક્ટ માટે અમો હવા, પાણી અને ધ્વની પ્રદુષણ ના ઉપશમન માટે યોગ્ય પગલાઓ લેવાનું આયોજન કરાયેલ છે. ઘરગથ્થુ ગંદાપાણીને એસટીપી મારફતે શુદ્ધ કરીને બગીચામાં વાપરવામાં આવશે. વોશિંગ દરમ્યાન ઉત્પન્ન થતા ગંદાપાણીને ઈટીપી મારફતે શુદ્ધ કરીને પુનઃ વપરાસ માં લેવામાં આવશે. અન્ય ગંદાપાણીની સ્ટ્રીમ કે જે મુખ્યેત્વે યુટીલીટી માંથી ઉત્પન્ન થશે તેને આરઓ-એમઈઈ સીસ્ટમ વડે શુદ્ધ કરીને પુનઃ વપરાસ માં લેવામાં આવશે. પ્લાન્ટની બહાર કોઈ પણ પ્રકારનાં પાણીનું ડિસ્ચાર્જ થશે નહીં.

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3. આ પાવર પ્રોજેક્ટ અને કાર્બન બનાવવા માટે ૧૨૦૦ થી ૧૮૦૦ ડીગ્રી સે. તાપમાન રીએક્શનમાં વપરાશે તેના લીધે પર્યાવરણનું તાપમાન કેટલુ વધશે તેનો કોઈ અભ્યાસ કરેલ છે? કરજગામમાં ૪૦ થી ૪૨ ડીગ્રી સે. તાપમાન રહે છે અને કાર્બન બ્લેકને કારણે લાંબે ગાળે લોકોને ગળાનું ચેપ, ફેફસામાં ગાંઠ, કેન્સરજન્ય રોગો, હૃદયરોગો થવાંની શક્યતા છે અને કાર્બનના નાના-નાના પાર્ટીકલ હવામાં ઉડતા હોય તે ખુબ જ હેરાન કર્તા છે. જ્યાં પણ અડકે ત્યાંથી નીકળે નહી, કપડાંને અડકે કે ચામડી પર લાગે કે ઝાડપાનને અડકે તો નીકળે નહી, જેથી ૧૦ વર્ષ પછી બધું કાળું થઇ જશે. તેથી અહીં આ પ્લાન્ટ કેમિકલ ઝોનમાં શિફ્ટ કરવામાં આવે તેવી મારી નમ્ર વિનંતી છે આ જમીન પર પ્લાસ્ટિક પ્લાન્ટ, સોલાર પ્લાન્ટ કે જેને સરકાર દ્વારા પ્રોત્સાહન આપવામાં આવે છે તે લાવવામાં આવે.

પ્લાન્ટની મશીનરી અને પાઈપીંગને હીટલોસ ઓછો કરવામાટે ઇન્સ્યુલેશન પૂરું પાડવામાં આવશે. વેસ્ટ હીતનો ઉપયોગ હવાને રીએક્ટરમાં ફીડ કરતાં પહેલાં પ્રીહીટરમાં હીટ કરવા માટે (વેસ્ટ હીટનો ઉપયોગ) થશે.

સૂચિત એકમ વ્યવસાયિક-આરોગ્ય બાબતે જરૂરી બધાજ પગલાઓ નું પાલન કરવા માં આવશે તથા આ બાબતે લાગુ પડતા બધા કાયદાઓ નું પાલન કરવામાં આવશે. વધુમાં એકમમાં કાર્યસ્થળમાં હવા માં કાર્બન બ્લેક નું કાર્યસ્થળના માન્ય ધારાધોરણ (OSHA-TWA) થી પણ ઘણું નીચું રહેશે. આમ કાર્બન બ્લેક ના સંપર્ક થી કોઈપણ પ્રકારની ગંભીર સ્વાસ્થ્યની સમસ્યા ઉદભવશે નહિ.

ઉત્સર્જનને નિયત ધારાધોરણથી નીચું રાખવા સંપૂર્ણ પ્રક્રિયા બંધ સિસ્ટમમાં થશે.પ્લાન્ટ સંપૂર્ણપણે સ્વયાલિત (ડી.સી.એસ) સિસ્ટમ પર આધારિત રેહશે.કોઇપણ લીકેજ ન થાય તેમાટે પાઇપિંગને માટે સ્વયાલિત લીકેજ ડિટેકશન સિસ્ટમ લગાડવામાં આવશે. કાર્બન બ્લેકના ઉત્પાદન સમયે કાર્બન બ્લેકના કલેક્શન અને ટેઇલ ગેસના સેપરેશન માટે બેગફિલ્ટર લગાડવામાં આવશે. કાર્બન બ્લેકની ઉત્પાદન પ્રક્રિયા દરમ્યાન ઉત્પન્ન થતા ટેઇલ ગેસને બોઈલર અને ડ્રાયર માં બળતણ તરીકે વાપરવામાં આવશે.

ઉપરોક્ત જવાબ આપના માટે પર્યાપ્ત હશે એવી આશાસહ

મદ્રા કાર્બન ઇન્ડિયા લીમીટેડ વતી,

MADURA CARBON INDIA LTD
AUTHORISED SIGNATORY

અધિકૃત સહિકર્તા

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MADURA CARBON

To,
Mr. Hemant Nayak.
Village: Karajgam,
Ta. Umbergaon,
Dist.: Valsad

Subject: Reply to your oral representation regarding the public hearing of M/s. Madura Carbon India ltd.

The reply of your points are given below

1. **There is no need for public hearing for the project, we request to remove this project right from the beginning. It is advisable if this unit would locate in the chemical zone, because what about the effect of the carbon? What is the value of the assurance given to the Grampanchayat? What Grampanchayat is supposed to do if the company would not comply the conditions? No difference is made after the companies are issued closer notice by GPCB.**

   The process will be carried out in a completely closed system for controlling fugitive. Plant will be based on fully automated (DCS) system. An automatic leakage detection system will be installed for piping to prevent any leakage. Bag-filters will be a part of the process for collection of Carbon Black and separation from tail gas. The proposed unit will comply with all necessary measures regarding occupational health and all applicable laws will be followed. In addition, the carbon black level in the air will be below 1 mg/m^3, which is very much below the standard 3.5 mg/m^3. A proper care will be taken that people will not suffer from any type of serious health problem after coming in contact with carbon black.

2. **Since last 10 years the water of Koliwad is polluted. In spite of giving the assurance by the company and GPCB the water is polluted till this date. And the company throws one or two water bottles at home, is this the development? Development for Sarigam, Karajgam and Manda is dinginess, mosquitoes, polluted air and water and epidemic outbreaks. Income from agriculture is also decreased due to the polluted environment.**

   We would like to inform you that for our proposed project we have planned to take appropriate steps to reduce air, water and noise pollution. Domestic wastewater will be treated in STP and that will be used for greenbelt. The wastewater generated from washing will be treated in ETP and the treated water will be reused. Wastewater generated from utility will be treated with RO-MEE system and will be reused. No water will be discharged outside the plant.

3. **For manufacturing of Carbon Black and power the temperature will be around 1200-1800 ^{0}C, So, is there any study carried out to know how much the temperature of environment will rise due to this? Currently the temperature of Karajgam stays sround 40-42 ^{0}C and due to Carbon Black people will suffer from throat infection, tumour in lungs, cancer and heart disease. The smaller carbon particles flying in the air are very irritating. If, these carbon particles adheres to the skin, clothes or vegetation, it does not easily separate from where it is attached. Hence, after 10 years everything will become black. So, we request to shift this company to the chemical zone and furthermore we request to bring plastic or solar plant, which is even encouraged by the government.**

   Insulation will be provided to reduce the heat loss of plant machinery and piping. Waste heat will be used for preheating the air before feeding it in the reactor.

   The proposed unit will comply with all necessary measures regarding occupational and public health and all applicable laws will be followed. The carbon black level in the air will be below 1 mg/m^3, which is very much below the standard 3.5 mg/m^3. Thus, any type of serious health problem will not arise from the contact of carbon black.

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The process will be carried out in a completely closed system for keeping the emissions below the prescribed norms. Plant will be based on fully automated (DCS) system. An automatic leakage detection system will be installed for piping to prevent any leakage. Bag-filters will be a part of the process for collection of Carbon Black and separation from tail gas. The Tail gas generated during the manufacturing of carbon black will be used as fuel in boilers and dryers.

We hope the above given clarifications are in line with your requirements.

On behalf of M/s. Madura Carbon India Ltd.

Authorized Signatory

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MADURA CARBON

To,

Mr. Pratik Shankar Varli
Village: Kanadu, Ta. Umbergaon,
Dist. Valsad

Subject: Reply to your oral representation regarding the public hearing of M/s. Madura Carbon India ltd.

The reply of your points are given below:

1. **On the page no. 5 of the executive summary, there are many chemicals are shown emitting outside, but what is PM 2.5 amongst them? The company knows that how it will affect but people are not aware about that. It should be noted that report and application have been given.**

   PM 2.5 is a size of a particle. If particulates less than 2.5 micron would be inhaled then it can affect the lungs, this is why National Ambient Air Quality Standards are set by Indian government. Limit for 60 µg/m3 is set for the particulate matter flying in the air. Plant will be based on fully automated (DCS) system. An automatic leakage detection system will be installed for piping to prevent any leakage. Bag-filters will be a part of the process for collection of Carbon Black and separation from tail gas. The Tail gas generated during the manufacturing of carbon black will be used as fuel in boilers and dryers. The overall system will be closed system to control emissions below permissible norms.

   The written representation received by Mr. Shankar Varli has also been included in the minutes of meeting.

We hope the above given clarifications are in line with your requirements.

On behalf of M/s. Madura Carbon India Ltd.

Authorized Signatory

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Acknowledgment copy

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ગામ : કનાડુ,
તા. ઉમરગામ,
જી. વલસાડ

વિષય: મદુરા કાર્બન ઇન્ડિયા લીમીટેડ કંપનીની લોકસુનવણી પ્રસંગે અપના દ્વારા મૌખિક રજુઆતનો પ્રત્યુત્તર.

અમે તમારા મુદ્દાઓ તેમજ તેનો પ્રત્યુત્તર નીચે મુજબ આપીએ છીએ.

1. આ વિસ્તારમાં હાકુશ કેરીનું વાવેતર ઘણા પ્રમાણમાં થાય છે અને છેલ્લા ઘણા વર્ષોથી કંપની આવવાથી તાપમાનમાં વધારો થવાથી પાકને નુકશાન થઇ રહ્યું છે. જો આ કંપની આવશે તો તેનાંથી તાપમાનમાં પણ વધારો થશે અહીં ૮૦% ખેડૂતો કેરીના પાક પર નભે છે અને તેની જીવાદોરી પણ આંબાની ખેતી છે. મહેરબાની કરીને પણ આવા પ્લાન્ટ કે જ્યાં ગ્રીનબેલ્ટ છે. ઉપરાંત મોટી-મોટી આંબાની વાડીઓ છે, જેને ઘણું નુકશાન થશે તેથી આ કંપનીનો મારો વિરોધ છે.

   પ્લાન્ટની મશીનરી અને પાઈપીંગને હીટલોસ ઓછો કરવામાટે ઇન્સ્યુલેશન પૂરું પાડવામાં આવશે. વેસ્ટ હીતનો ઉપયોગ હવાને રીએક્ટરમાં ફીડ કરતાં પહેલાં પ્રીહીટરમાં હીટ કરવા માટે (વેસ્ટ હીટનો ઉપયોગ) થશે.

   પ્લાન્ટ સંપૂર્ણપણે સ્વચાલિત (ડી.સી.એસ) સિસ્ટમ પર આધારિત રેહશે. કોઇપણ લીકેજ ન થાય તેમાટે પાઇપિંગને માટે સ્વચાલિત લીકેજ ડિટેકશન સિસ્ટમ લગાડવામાં આવશે. કાર્બન બ્લેકના ઉત્પાદન સમયે કાર્બન બ્લેકના કલેક્શન અને ટેઇલ ગેસના સેપરેશન માટે બેગફિલ્ટર લગાડવામાં આવશે. ઉત્સર્જનને નિયત ધારાધોરણથી નીચું રાખવા સંપૂર્ણ પ્રક્રિયા બંધ સિસ્ટમમાં થશે.

   સૂચિત પ્રોજેક્ટ બાદ આસપાસના વિસ્તારમાં PM, SO_x, NO_x ના ઉત્સર્જન મા થતા વધારાની આકરણી કરવા માટે ડીસ્પર્ઝન મોડેલીંગ કરવામાં આવેલ છે, અને તેને ડ્રાફ્ટ ઈ.આઈ.એ. રીપોર્ટમાં દર્શાવવામાં આવેલ છે. આ મોડલિંગ રીપોર્ટ પરથી એવું તારણ મેળવવામાં આવેલ છે કે સૂચિત પ્રોજેક્ટ બાદ આસપાસની વાતાવરણીય હવાની ગુણવત્તા નેશનલ એમ્બીયન્ટ એર ક્વોલીટીના ધારાધોરણ પ્રમાણે રહેશે.

ઉપરોક્ત જવાબ આપના માટે પર્યાપ્ત હશે એ આશાસહ

મદુરા કાર્બન ઇન્ડિયા લીમીટેડ વતી.

MADURA CARBON
AUTHORISED SIGN

અધિકૃત સહિકર્તા

MADURA CARBON INDIA LTD
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CIN: U23109MH2017PLC302582

MADURA CARBON

To,
Mr. Lalit Pravinchandra Shah
Village: Kanadu
Ta. Umbergaon
Dist.: Valsad

Subject: Reply to your oral representation regarding the public hearing of M/s. Madura Carbon India ltd.

The reply of your points are given below:

1. **Hafoos mangoes are being cultivated in a huge amount. Due to the establishment of many companies the temperature is rises and crops are affected. If this company would establish then the temperature will rise in this area too. In this area about 80% of the farmers are depending upon cultivation of mangoes. We are against this company where, there is greenbelt around mongo gardens are. This is going to be affected and that is why we are against this company.**

   Insulation will be provided to reduce the heat loss of plant machinery and piping. Waste heat will be used for preheating the air before feeding it in the reactor.

   Plant will be based on fully automated (DCS) system. An automatic leakage detection system will be installed for piping to prevent any leakage. Bag-filters will be a part of the process for collection of Carbon Black and separation from tail gas. The tail gas generated during the manufacturing of carbon black will be used as fuel in boilers and dryers.

   Air dispersion modelling is carried out for the estimation of PM, SOx, NOx in the surrounding area after proposed project. These results are given in the draft EIA report. It is concluded from the results of modelling report that after proposed project quality of air will be according to the norms of National Ambient Air Quality Standards.

We hope the above given clarifications are in line with your requirements.

On behalf of M/s. Madura Carbon India Ltd.

Authorized Signatory

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Annexure-D54 Gujarati to English

MADURA CARBON

To,

Mr. Prakash Bhatt
Village: Karaj, Ta. Umbergaon,
Dist. Valsad

Subject: Reply to your oral representation regarding the public hearing of M/s. Madura Carbon India ltd.

The reply of your points are given below:

1. **Here, our land is located in the chemical zone. Our crop for the mangoes are failing since last 20 years and we are dependent on it. Our borewell are not efficient anymore since the establishment of the chemical and other plants in our area – Koliwad. The water we extract off the borewell is polluted because of the chemicals. So, we request the Collector to inspect this matter by visiting our home. And please inspect that which is that company providing us two-two bottles at home what even we are not aware. The dangerous plant is going to be established, so we request the collector to take appropriate action for the people of Karajgam village.**

We assure you that we have planned to take proper steps for preventing air, water and noise pollution.

Plant will be based on fully automated (DCS) system. An automatic leakage detection system will be installed for piping to prevent any leakage. Bag-filters will be a part of the process for collection of Carbon Black and separation from tail gas. The Tail gas generated during the manufacturing of carbon black will be used as fuel in boilers and dryers.

Domestic wastewater will be treated in STP and that will be used for greenbelt. The wastewater generated from washing will be treated in ETP and the treated water will be reused. Wastewater generated from utility will be treated with RO-MEE system and will be reused.

It will be ensured that noise level will be kept below permissible norms within company premises by keeping the turbine in a closed turbine house. DG Set will be equipped with acoustic enclosure. Regular maintenance will be carried out. Furthermore, the development of greenbelt around the premises will help in attenuation of noise.

All the mitigation measures suggested in the Environment impact report will be complied by the company. We give an assurance that all the suggested measures will be complied to maintain the balance the environment in the surrounding area.

We hope the above given clarifications are in line with your requirements.

On behalf of M/s. Madura Carbon India Ltd.

Authorized Signatory

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MADURA CARBON

To,
Mr. Navin Patel
Village: Karajgam,
Ta. Umbergaon,
Dist.: Valsad

Subject: Reply to your oral representation regarding the public hearing of M/s. Madura Carbon India ltd.

The reply of your points are given below:

1. **According to the PESA Act 1996, all the rights of Panchayt were given to Gramsabha. All these companies were established without the approval of Garmsabha, hence, we are against these companies. We are against these companies according to PESA Act. Currently the PESA Act is applicable and we do not want any company or factory. We request that any action should be in accordance with PESA Act, 1996.**

The land for the proposed project is owned by the company and is NA certified for the industrial purpose. The land which comes under 73-AA is not taken for proposed project. Hence, PESA Act is not applicable. Even though it is to inform you that Gramsabha had addressed an assembly for the establishment of M/s. Madura Carbon India Ltd and required resolution [Resolution no. 24(01)] has been made.

We hope the above given clarifications are in line with your requirements.

On behalf of M/s. Madura Carbon India Ltd.

Authorized Signatory

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enclosure 1- Distance certificate.

"ONE TEAM ONE VISION ONE MISSION"

કરજગામ ગ્રામ પંચાયત

KARAJGAM GRAM PANCHAYAT

મુ. / પો. કરજગામ, સ્ટે. ભીલાડ, તા. ઉમરગામ, જિ. વલસાડ.

સરપંચ : કમલેશભાઇ મંજુભાઇ ધોડી મો. : 9904277330 / 9824124455

જાવક નં. :

તા. ૨૦ / ૦૨ /૨૦૧૮

પ્રમાણપત્ર

આથી આ પ્રમાણપત્ર લખી આપવામાં આવે છે કે,

વલસાડ જિલ્લાના ઉમરગામ તાલુકાના મોજે. ફણસા કરજગામના રે.સર્વે નં. ૩૭૩૮, ૩૭૦૮, ૩૭૧૯, ૩૭૨૫, ૩૭૦૫, અને ૪૩૧૮ વાળી જમીન જે હાલે મદુરા કાર્બન ઈન્ડિયા લીમીટેડ નામે ચાલી આવે છે. સદર ઉપરોકત તમામ સર્વે નંબરવાળી જમીનની ૫૦૦ મીટરના વિસ્તારમાં રહેણાંક વિસ્તાર, મંદિર, તળાવ, સ્ટેટ હાઈવે, નેશનલ હાઈવે, કોસ્ટલ હાઈવે, સ્કુલ, ઐતિહાસિક સ્મારક કે રેલ્વે લાઈન પસાર થતી નથી.

H.A. Tudedj
તલાટી કમ મંત્રી,
ગ્રામ પંચાયત, કરજગામ,
તા. ઉમરગામ, જી. વલસાડ.

Annexure -5 pages 166

Hence this certificate is given in writing that,

Moje of Umbergamtaluka of Valsad district; Survey No. 3738,3708,3719,3725,3725,3705, and 4318 Vani land of PhansaKarjagam which is currently run by Madura Carbon India Ltd. All the above survey numbered lands within 500 meters of residential area, temple, tension., State highways, national highways, coastal highways, schools, monuments or railways

Annexure-D54 Gujarati to English

MADURA CARBON

To,
Mr. Surajkumar Uttambhai Dhodi,
Village: Karajgam,
Ta. Umbergaon,
Dist. Valsad.

Subject: Reply to your oral representation regarding the public hearing of M/s. Madura Carbon India ltd.

The reply of your points are given below:

1. **I have done M.Sc. in Organic Chemistry, but I was unemployed for almost 6 months since I got my post-graduation degree. When the company is about to be established, assurance for employment is given but when we go for an interview, we, local people are ignored. I request to save the surrounding environment.**

   For proposed project, we will provide employment to the local people according to the rules. Moreover, we assure that training will be provided to unskilled people to promote their skill category. We will give priority to local people for the establishment of the company as well as for the work during the operational stage.

We hope the above clarifications are satisfactory.

Thanking you,
For Madura Carbon India Limited

(Authorized Signatory)

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MADURA CARBON

Acknowledgment copy

Reg. AD.

પ્રતિ
શ્રી વિલાસ ગોહિલ
ગામ: કરજગામ
તા. ઉમરગામ
જી. વલસાડ

વિષય: મદુરા કાર્બન ઇન્ડિયા લીમીટેડ કંપનીની લોકસુનવણી પ્રસંગે આપના દ્વારા મૌખિક રજુઆતનો પત્યુત્તર.

માનીનીય સાહેબ શ્રી

અમે આપ શ્રીની લાગણીને માન આપીએ છીએ અને આપની ચિંતા દુર કરવા બાહેધરી આપીએ છીએ કે અમે જરૂરી બધા જ નીચે મુજબના પ્રદુષણ નિયંત્રણના પગલા લેવાનું આયોજન કરેલ છે.

૧) અમે તમોને જણાવવા માંગીએ છીએ કે અમારા સુચિત પ્રોજેક્ટ માટે અમો હવા, પાણી અને ધ્વની પ્રદુષણ ના ઉપશમન માટે યોગ્ય પગલાઓ લેવાનું આયોજન કરાયેલ છે.
ઉત્સર્જનને નિયત ધારાધોરણથી નીચું રાખવા સંપૂર્ણ પ્રક્રિયા બંધ સિસ્ટમમાં થશે.પ્લાન્ટ સંપૂર્ણપણે સ્વયાલિત (ડી.સી.એસ) સિસ્ટમ પર આધારિત રેહશે. કોઇપણ લીકેજ ન થાય તેમાટે પાઇપિંગને માટે સ્વયાલિત લીકેજ ડિટેકશન સિસ્ટમ લગાડવામાં આવશે. કાર્બન બ્લેકના ઉત્પાદન દરમ્યાન પેદા થતા ઓઇ/ટેઇલ ગેસને બોઇલર અને ડ્રાયરમા બળતણ તરીકે ઉપયોગમાં લેવાશે. કાર્બન બ્લેકના ઉત્પાદન સમયે કાર્બન બ્લેકના કલેક્શન અને ટેઇલ ગેસના સેપરેશન માટે બેગફિલ્ટર લગાડવામાં આવશે. કાર્બન બ્લેકની ઉત્પાદન પ્રક્રિયા દરમ્યાન ઉત્પન્ન થતા ટેઇલ ગેસને બોઈલર અને ડ્રાયર માં બળતણ તરીકે વાપરવામા આવશે.
ઘરગથ્થુ ગંદાપાણીને એસટીપી મારફતે શુદ્ધ કરીને બાગકામ માટે વાપરવામા આવશે. વોશિંગ દરમ્યાન ઉત્પન્ન થતા ગંદાપાણીને ઈટીપી મારફતે શુદ્ધ કરીને પુન: વપરાસ માં લેવામાં આવશે. અન્ય ગંદાપાણીની સ્ટ્રીમ કે જે મુખ્યત્વે યુટીલીટી માંથી ઉત્પન્ન થશે તેને આરઓ-ઇમઈઈ સીસ્ટમ વડે શુદ્ધ કરીને પુન: વપરાસ મા લેવામાં આવશે
કંપની વિસ્તારની અંદર ધ્વનીનું સ્તર ધારાધોરણ મુજબનું રાખવામાટે પાવર-પ્લાન્ટ નું ટર્બાઈન સંપૂર્ણ પણે કવર કરવામાં આવશે. એકોસ્ટીક એન્કલોઝર સાથેનો ડીજી સેટ લગાવવામાં આવશે. સમયોતરે સાધનોનું મેઈન્ટેનન્સ કરવામા આવશે. વધુમાં પ્લાન્ટ વિસ્તારમાં ગ્રીનબેલ્ટ વિકસિત કરવામાં આવશે જે ધ્વની પ્રદુષણ ના વ્યાપને ઘટાડવામા મદદરૂપ થશે. આમ ઉપરોકત પગલાઓ ધ્યાનમાં રાખતા સુચિત પ્રોજેક્ટ થકી આસપાસના વિસ્તારમા વસતા લોકોએ કોઇપણ જાતની તકલીફ ભોગવવી પડશે નહિ.

૨) લગભગ ૩૨૦ જેટલા અનસ્કીલ્ડને સીધી રોજગારી આપીશું અને સ્કીલને ટેકનીકલ તાલીમ આપી રોજગારી આપીશું. એ ઉપરાંત કરાર આધારિત રોજગારી પણ પૂરી પાડવામાં આવશે અને આસપાસના લોકોને પ્રાધાન્ય આપવામાં આવશે.

આશા રાખીએ છીએ કે ઉપરોક્ત આપેલ બાહેધરીથી આપ સંતુષ્ટ થશો એ આશાસહ.

મદુરા કાર્બન ઇન્ડિયા લીમીટેડ વતી.

અધિકૃત સહિકર્તા

MADURA CARBON INDIA LTD
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CIN: U23109MH2017PLC302582

Annexure-547-Gujarati to English

MADURA CARBON

To,
Shree Vilas Gohil,
Village: Karajgam,
Sub Dist.: Umargam,
Dist.: Valsad

Sub: Reply to your oral representation regarding public hearing of the Madura Carbon India Limited.

Dear Sir,

We respect your suggestions we give you an assurance that we have planned to take all the required preventive measures to control pollution.

(1) We would like to inform you that for our proposed project, we have planned to take necessary mitigation measures to control air, water and noise pollution.

The overall system will be closed system to control emissions below permissible norms. Plant will be based on fully automated (DCS) system. An automatic leakage detection system will be installed for piping to prevent any leakage. Bag-filters will be a part of the process for collection of Carbon Black and separation from tail gas. The Tail gas generated during the manufacturing of carbon black will be used as fuel in boilers and dryers.

Domestic effluent will be treated in STP and reused for gardening. The industrial effluent from washing will be treated in ETP and reused. Other effluents from utilities will be passed through RO-MEE system and reused. Hence, no effluent will be discharged outside premises.

It will be ensured that noise level will be kept below permissible norms within company premises by providing full enclosure to Turbine and installing DG Set equipped with acoustic enclosure. Regular maintenance will be carried out. Furthermore, the development of greenbelt around the premises will help in attenuation of noise. Thus, as per the above-mentioned mitigation measures, the people living in the surrounding area will not be affected due to the proposed project.

(2) We will provide direct employment to approximately 320 unskilled people and will provide training to skilled employees. Moreover, we will also provide contractual employment and priority will be given to the local people of surrounding area.

We hope the above-given clarifications are in line with your requirements.

Thanking you,
For,
Madura Carbon India Limited

(Authorized Signatory)

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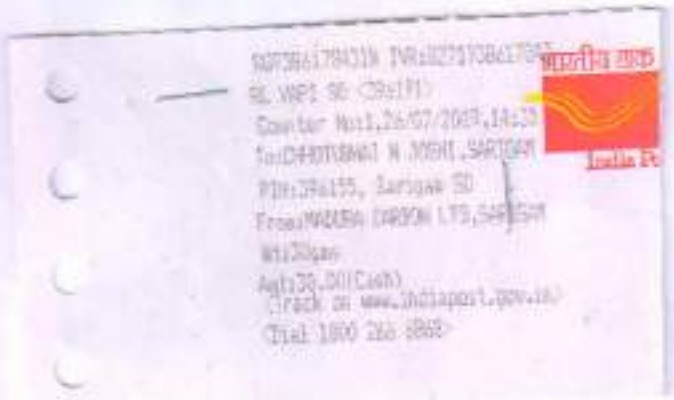
CIN: U23109MH2017PLC302582

Receipt of Replies delivered on hand/RPAD

SR NO	NAME	ADDRESS	Mobile No
1	Sanjay Kumar M Patel	Kalgam,	9913039768
2	Navin Patel	Karajgam	
3	Vinaykulchand Sheth	Fansa	7021775994
4	Sarpanch Shree	Manda	
5	Sankar Mangla Warli	Kanadu	
6	Prakash Bhatt	Karanj	
7	Lalit Pravinchand Shah	Kanadu	
8	Pratik Shankar Warli	Kanadu	
9	Hemant Nayak	Karajgam	
10	Bhulabhai Ahir	Sarigam	
11	Shashikant Patel	Saronda	992418914
12	Prakash Arekar	Sarigam	
13	Nirav Lalit Shah	Sarigam	9924966740
14	Pankaj K Rai	Sarigam	9924944999
15	Dalpat Dhodi	Karanjgam	
16	Kantilal Mohan Patel	Sanjan Road Bhilad	9825274328
17	Hitesh Uttam Dghodi	Kranjgam	
18	Manali Bhoir	Agriwad Karajgam	
19	Suraj Bhoir	Agriwad Karajgam	
20	Chotu Nanu Joshi	Agriwad Karajgam	963878963
21.	Pshant YADAV	BHILAD	
22.	Vilas Mehil	Karajgam	

→ HAND DELIVERY

→ REGD. A.D.

1. 

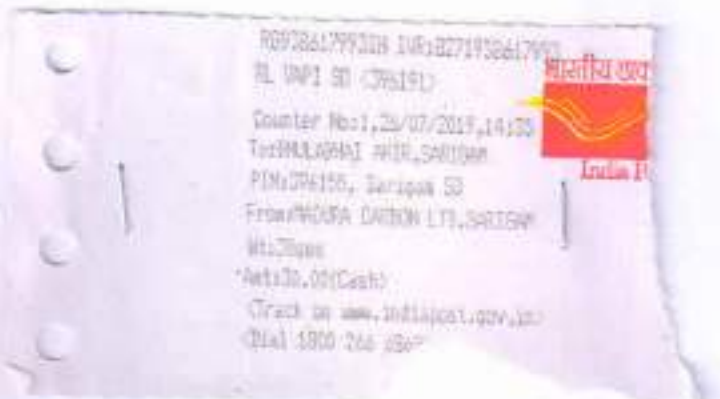
CHOTIBHAI N JOSHI

2.

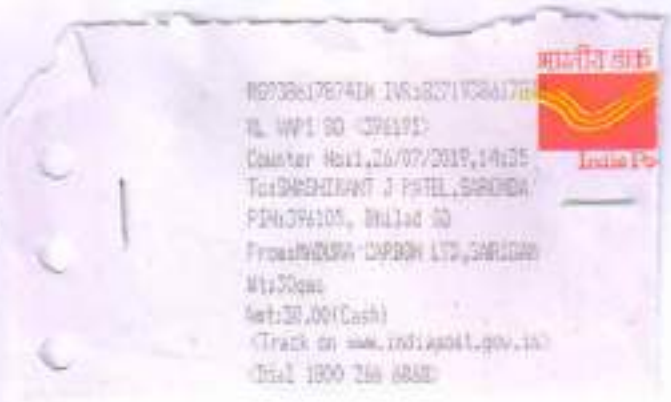
KANTILAL M. PATEL

3.

BHARATBHAI JADAV

4. 

BHULABHAI AHIR.

5. 

SHASHIKANT PATEL

6.

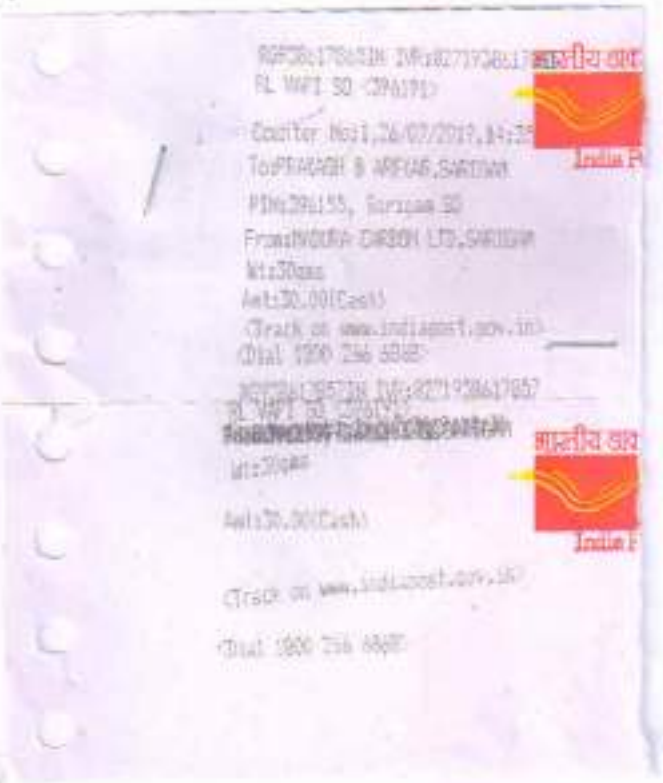
HITESH BHAI DHODI

7.

NAVIN PATEL

8

SURAJKUMAR U DHODI.



9, PRAKASH B. ARLEAKAR

10 Manali Bhoir

Vilas Kohil

TRUE COPY
ADVOCATE

Annexure 6: copy of advertisement

અન્ય સમાચારો
Vapi - Page 7
Wednesday 20, May 2020
દમણગંગા ટાઇમ્સ DAMANGANGA TIMES

જાહેર સુચના

વિષય : સૂચિત પ્રોજેક્ટ કાર્બન બ્લેકના ઉત્પાદન (૨૩૦૦૦ TPA) ની સાથે કેપ્ટીવ પાવર જનરેશન (૪૫MW)ના ઉત્પાદન અંગેની પર્યાવરણીય મંજુરી.

આથી જણાવવામાં આવે છે કે ભારત સરકારના પર્યાવરણ મંત્રાલય, વન અને હવામાન ફેરફાર વિભાગ નવી દિલ્હી દ્વારા Madura Carbon (India) Ltd. સર્વે નં. ૩૭૦૫, ૩૭૦૮, ૩૭૧૯, ૩૭૨૫, ૩૭૩૮, ૪૧૦૮, ૪૧૧૦, ૪૩૧૮, ગામઃ કરંજ, તાલુકો : ઉમરગામ, જીલ્લો : વલસાડ, ગુજરાતને ક્રમાંક J-11011/266/2018-IA-II(I),૧૮મી મે ૨૦૨૦થી કાર્બન બ્લેકના ઉત્પાદન (૨૩૦૦૦TPA)ની સાથે કેપ્ટીવ પાવર જનરેશન (૪૫MW)ના ઉત્પાદન અંગે ઈ.આઈ.એ. અધિનિયમ તારીખ ૧૪ સપ્ટેમ્બર, ૨૦૦૬ અંતર્ગત પર્યાવરણીય મંજુરી મળેલ છે. ઉપરોક્ત પત્રની નકલ ગુજરાત પ્રદૂષણ નિયંત્રણ બોર્ડની કચેરી ઉપરાંત વેબસાઈટ http://parivesh.nic.in પર ઉપલબ્ધ છે.

Annexure 6

Public notice

Subject: Environmental clearance for captive power generation (45MW) components along with production of the proposed project Carbon Black (230000 TPA) It is learned that Madura Carbon (India) by the Ministry of Environment, Forests and Climate Change, New Delhi, Government of India. Ltd. Survey No. 3705,3708,3719,3725,3738,4108,4110,4318, Village: Karanjangam, Taluka: Umbergam, District: Valsad Gujara, J-11011/266/2018/-IA-II(I), Captive power generation (45MW) with production of Carbon Black (230000 TPA) from 18th May 2020 Environmental clearance has been obtained under EIA Act dated September 14, 2006 regarding the production of. Copy of the above character is available on the website in addition to the office of Gujarat Pollution Control Board.

MADURA CARBON

Submitted by Hand delivery to Mr. Saurabh Upadhyay on 26 Feb 2020

Date: 25/02/2020

To,
The Member Secretary,
EAC(Ind-2),
MoEF&CC,
New Delhi

Subject: Proposed project for manufacturing of Carbon Black (2,30,000 TPA) & Power Generation (45 MW) at 3705, 3708, 3719, 3725, 3738, 4108, 4110, 4318, Village: Fansa (Karajgam), Taluka: Umbergaon, Dist.: Valsad, Gujarat by Madura Carbon India Ltd. **– reg. submission of additional details.**

Dear Sir,

Our case was considered today at serial no. 17.3 in the 17th meeting of EAC (Ind-2). The committee desired for submission of additional details for further consideration of our project.

With reference to the subject matter, we wish to submit the details/ clarifications desired by the Committee during the presentation of our project as under:

1. **Letter confirming that the project site does not fall under the Critically polluted areas declared by CPCB.**
   An order issued by the GPCB indicating the Critically Polluted Areas in Gujarat is attached as ***Annexure-1***. It may please be noted thatVillage Fansa (Karajgam) where our project is proposed – is not located in the attached maps. This may please be considered as a proof that our project site does not fall in the CPAs.

2. **Copy of the forwarding letter of the Minutes of meeting of the PH forwarded by the Member Secretary, Gujarat Pollution Control Board and Action plan for representation by Public during PH.**
   Please find attached a copy of the Letter from MS, GPCB as ***Annx-2***and Action plan as***Annx-3***.

3. **Greenbelt in 33% of the plot area.**
   As recommended by the Committee, we agree to carry of greenbelt with adequate 5 to 10m width along the boundary and in 33% of the total plot area.

4. **Carrying out for Risk Assessment with 3D modeling**
   As recommended by the Committee, we shall carry out the Risk Assessment through 3D modeling for the process safety measures and implement all the mitigation measures suggested in the RA report.

We assure

Madura Carbon India Limited Karjgam

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MADURA CARBON

5. **Commitment for budget allocation of RS. 10 Crore for CER activities.**
   We agree to allocate a budget of Rs. 10 Crore for CER activities. The amount will be spent on the following activities based on the need assessment survey carried out –
   - Strengthening of School infrastructure,
   - Strengthening of Anganwadi infrastructure,
   - Construction of household toilets,
   - Strengthening Green Environment,
   - Rainwater harvesting as a part of PM's Jalshakti Abhiyan,
   - Village Street lights LED Bulb,
   - Renovation Work of building,
   - Supply of Furniture to rural Institutions,
   - Strengthening Village Gram Panchayat

   We shall also consult with the Collectorate Office, Valsad for further requirements.

6. **Reply to the letter of Mr. DalpatDodhi received through the MP – Shri K. C. Patel**
   Attached please find the pointwise response to the letter written by Mr. DalpatDodhi as ***Annexure-4***.

7. **Letter from the Consultant regarding the validity of the NABET accreditation.**
   The letter from our Consultant M/s. Precitech Laboratories Pvt. Ltd. Is submitted as***Annexure-5.***

8. **Translation of the Non-agriculture certificate obtained from the District Collector.**
   The translation of the NA certificate is attached as***Annexure-6.***

9. **A copy of the forwarding letter of the Wildlife conservation plan submitted to the Forest Department for authentication.**
   Please find a copy of the letter as ***Annexure-7.***

10. **Justification for considering not applying for 1(d) as a sub-activity along with 5(e) in the Form-1.**
    - With reference to the above subjected matter, kindly note that we had proposed the project for manufacturing of Carbon Black @230000 TPA & Power Generation @45MW.
    - The proposed project falls primarily under item no. 5(e) i.e. "Petroleum products and petrochemical based processing such as production of carbon black and electrode grade graphite (processes other than cracking and reformation and not covered under the complexes)" and under the category A as it is not located in GIDC, as per the EIA notification, 14 September 2006 (& amendments).
    - Moreover, the project of power generation (green power) of 45 MW falls under item no. 1(d) i.e. Thermal Power Plants and under the category B (<50 MW and ≥ 5 MW (all other fuels except biomass and municipal solid non-hazardous waste).

Madura Carbon India Limited Karjgam

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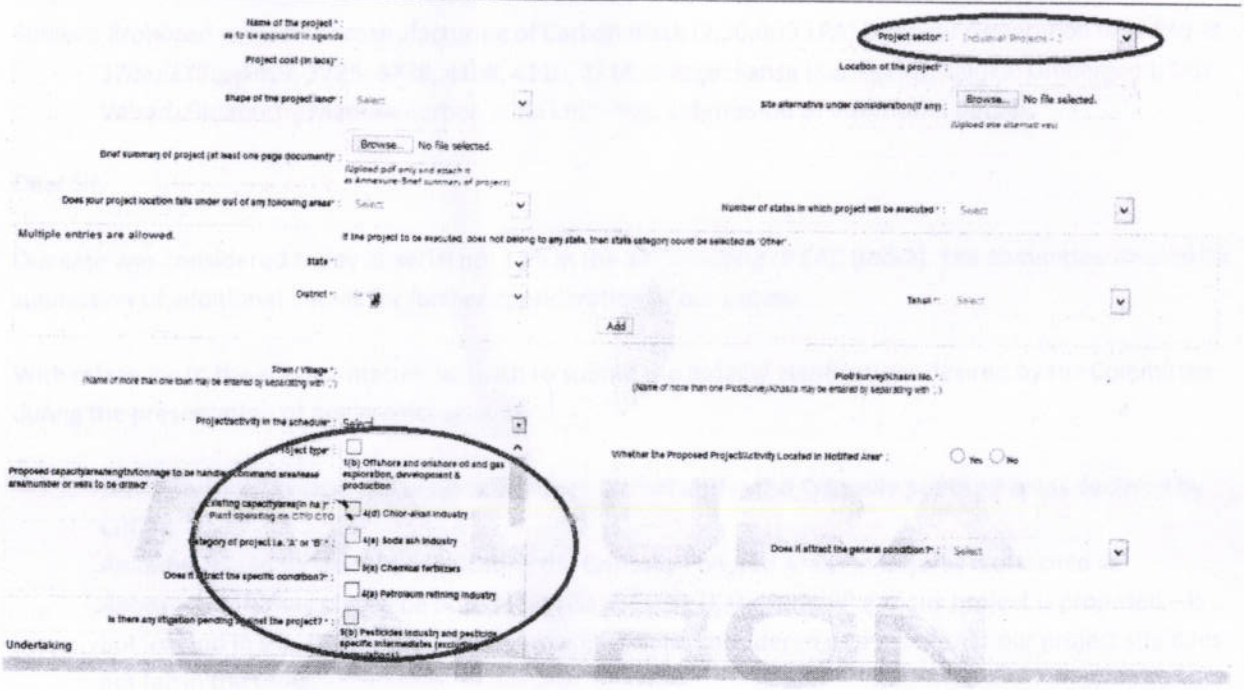
- While filling the online form-1, after selecting project sector – Industrial 2, only category 5(e) shows in project/ activity listed and 1(d) is not available in the options. The screenshot of the same is shown for your kind reference.
- As 5(e) is our major activity, we had selected 5(e) in our project/ activity in Schedule section.

Fig-1: Screenshot of options while filing online Form-1



- However, we have mentioned the same in the PFR and the EIA report and in our product list.
- Hence, we request you to please consider our application under 5(e) as well as under 1(d).

We hope the you find the above submission in order and request you to kindly process our application further for grant of EC and oblige.

Thanking you,

For MADURA CARBON INDIA LTD.

Madura Carbon India Limited Karjgam

(Authorized Signatory)

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A -1 A

Gujarat Pollution Control Board
Paryavaran Bhavan, Sector-10-A
Gandhinagar

Office Order

Sub: Mechanism for environmental management of critically and severally Polluted Area and considerations of activities/Projects in such areas in compliance to Hon'ble NGT order dated 23/08/2019 in the matter of O.A. No. 1038/2018-reg.

With reference to CPCB letter no. CPCB/IPC-VII/CEPI/NGT/2019 dated 25/10/2019 mechanism prepared by MoEF&CC for grant Consent to Establishment/Consent to Operate to those projects / activities of Red / Orange categories located in CPAs/ SPAs which are not covered under the provisions of the EIA notification,2006 are delineated.

Accordingly, it is required to prescribe the additional conditions deemed fit in the CTE / CTO of the projects / activities of Red/ Orange categories in the CPAs / SPAs of Gujarat.

After detailed discussion with industries associations of the CPA / SPAs of Gujarat and consultation with other stakeholders, it is decided to prescribe following additional conditions (deemed fit on case to case basis) considering the framework given in the letter of CPCB dated 25/10/2019.

These additional conditions will be applicable to the following CPAs/ SPAs of the Gujarat. Considering the mechanism, the 5 km from the boundary of each CPA/ SPA should be considered as the area of influence and the additional conditions stipulated for the new / expansion project will be made applicable to all such projects in this area. Map of the respective areas obtained from BISAG is enclosed herewith as Annexure-1.

1. Vapi GIDC Estate
2. Sachin & Pandesara GIDC Estate (Considering monitoring carried out by CPCB in these areas)
3. Ankleshwar Cluster (Ankleshwar and Panoli GIDC estate)
4. Nandesari GIDC & PCC Area (Considering monitoring carried out by CPCB in these areas)
5. Vatva- Narol

6. Aji GIDC estate (Rajkot)
7. Chitra GIDC estate (Bhavnagar)

Specific Conditions stipulated in Critically Polluted Areas (CPA) / Severely Polluted Areas (SPA).

Additional conditions under Air Act:

a) Unit shall adhere to stringent air pollutants standards i.e. 80 % of existing flue gas and process emission standards in the CPA.
b) Unit shall adhere to stringent air pollutants standards i.e. 90 % of existing flue gas and process emission standards in the SPA.
c) Following air pollution control measures shall be provided for the flue gas emission sources like Boiler, Thermic Fluid Heaters etc. (As Applicable)

Stipulated APCM in Red / Orange category industrial units of CPA/ SPA	
Steam generation capacity (in TPH)	**Type of APCM**
Less than 1	Multi Cyclone
1 to <3	Multi Cyclone + Water Scrubber
3 to <6	Bag filter + Water Scrubber
≥ 6	ESP+ Water Scrubber

d) Unit shall provide at least two stage scrubbing system of appropriate media for the control of the process gas emission.
e) Unit shall install and commission Continuous Emission Monitoring System- CEMS (as per CPCB guidelines for relevant parameters) which shall be connected with GPCB/CPCB server (In case of large and medium red category industries)
f) All common facilities shall install CEMS (as per CPCB guidelines for relevant parameters) which shall be connected with GPCB/CPCB server to the Stacks provided with Common Multiple Effect Evaporator (CMEE), Common Spray Dryer, Common incinerator etc.
g) The unit shall adhere to Sector specific guidelines/ SOP published by GPCB / CPCB from time to time for effective fugitive emission control. (like guidelines for: Stone crushing units, Coal handling units, spent solvent handling and management, spent acid management, Decontamination of drums, containers etc.)

h) Unit shall take adequate measures to control odour nuisance from the industrial activities which may include measures like- use of masking agent with atomizer system (water curtain), closed / automatic material handling system, containment of the odour vulnerable areas etc.

i) Unit shall not use Pet-coke, furnace oil, LSHS as a fuel.

j) Unit shall adopt sectoral Best Available Technology-BAT (Like Use of Induction Furnace, Electric Arc Furnace instead of Cupola furnace in foundry industry, Caustic Recovery System in Cotton Textile units etc.)

k) Unit shall provide green belt of 40% of the plot area, using concept of the social forestry and development of green belt outside project premises in adjacent areas.

l) Unit shall provide Wall to Wall carpeting in vehicle movement areas within premises to avoid dusting.

Additional conditions under the Water Act:

1. Unit shall only use treated effluent for preparation of lime and other slurry in ETP. No fresh water shall be utilized in ETP.

2. In the case, if the Industry is not a member of CETP and domestic waste water generation is more than 10 KLPD, industry shall install STP of adequate capacity and treated sewage shall be reused / recycled to the maximum extent.

3. In case of Large and Medium Red Category industry, the unit shall install system for continuous monitoring of effluent quality / quantity as per CPCB guidelines for relevant parameters (like pH, Flow, Temperature, TOC/COD, NH_3-N etc.) and shall be connected to GPCB server. In case, if the industry is a member of CETP, unit shall install flow meter.

4. If the water consumption of the unit is more than 50 KLPD, Unit shall submit detailed water harvesting plan (off site).

5. The unit shall explore Techno-Economic feasibility of Zero Liquid Discharge (ZLD) and if feasible, ZLD should be adopted.

Additional conditions under the Hazardous Waste Management Rules:

1. Unit shall strictly carry out handling, storage and disposal of fly-ash, slag, red-mud, de-inking sludge etc. (High Volume- Low Effect Wastes) as per prevailing guidelines and its disposal at designated locations approved by the Board.

2. Industry shall dispose its hazardous wastes through co-processing, pre-processing to the extent possible prior its disposal to incineration/ landfill as per provisions of Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.

3. Industry shall strictly comply with all the measures specified in guidelines for spent solvent management, spent acid management, and other guidelines/directions published from time to time by GPCB and/or CPCB, etc.

4. Unit shall carry out transportation of hazardous wastes through GPS mounted vehicles only.

Other General Conditions:

1. Unit shall submit report of compliance of the conditions of EC every year to the Board prepared by third party.

2. Unit shall enhance CER fundallocation to at least 1.5 times the slabs given in the OM dated 01.05.2018 for SPA and 2 times for CPA in case of Environmental Clearance.

You are required to prescribe relevant additional conditions as above henceforth while granting CTE / CTO of Red / Orange categories located in CPAs/ SPAs.

(N.M.Tabhani)
Member Secretary

No. GPCB/P-1/CEPI-12/ 526552 **Date: 11.11.2019**

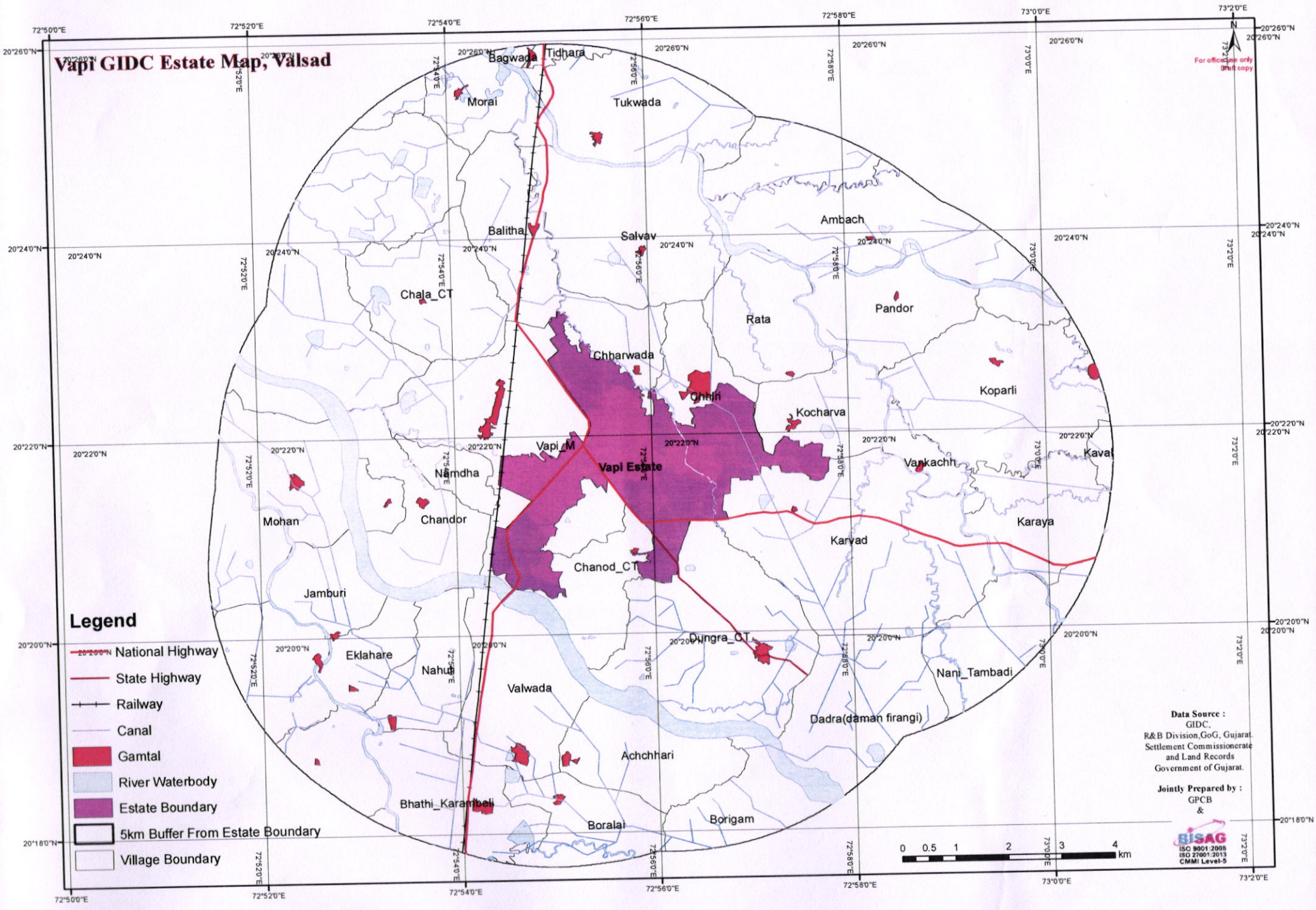
To,

1. All Unit Heads
2. All Regional Officers...**For necessary action please.**

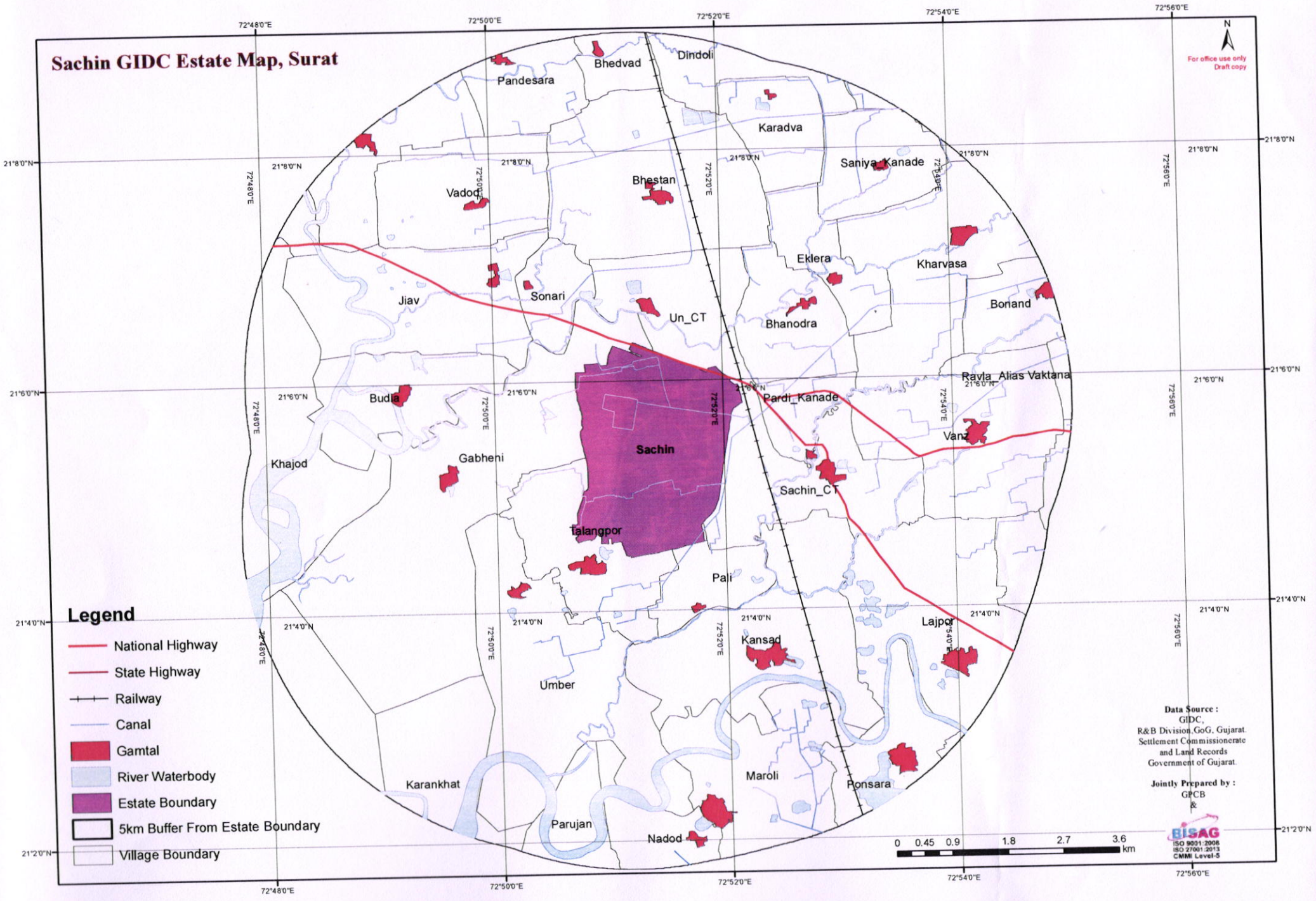
Copy to:

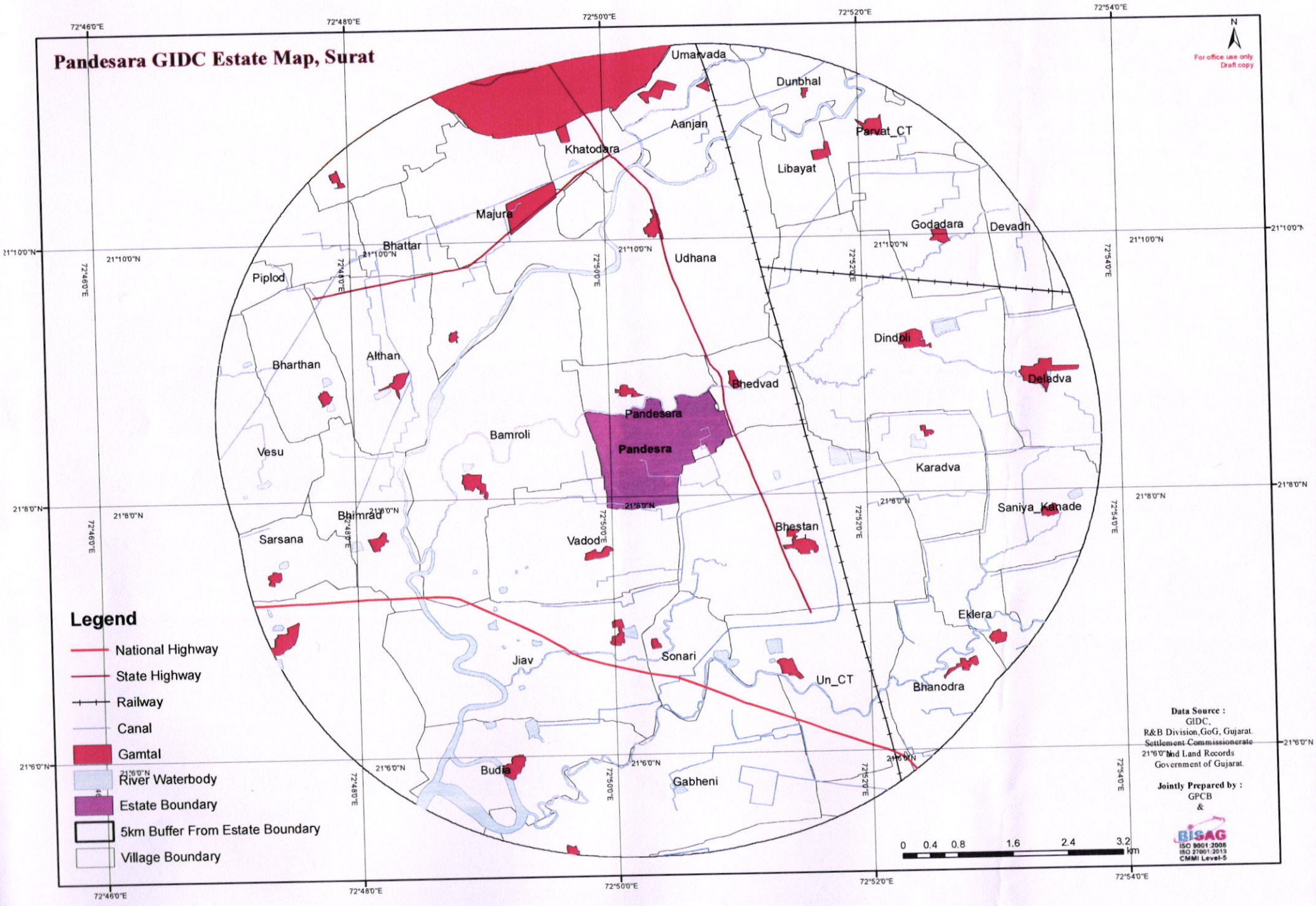
1. Chairman Office
2. Member Secretary Office
3. All Vigilance Officers… for necessary action
4. Respective File
5. IT Cell-for display on Board Website.

149/c

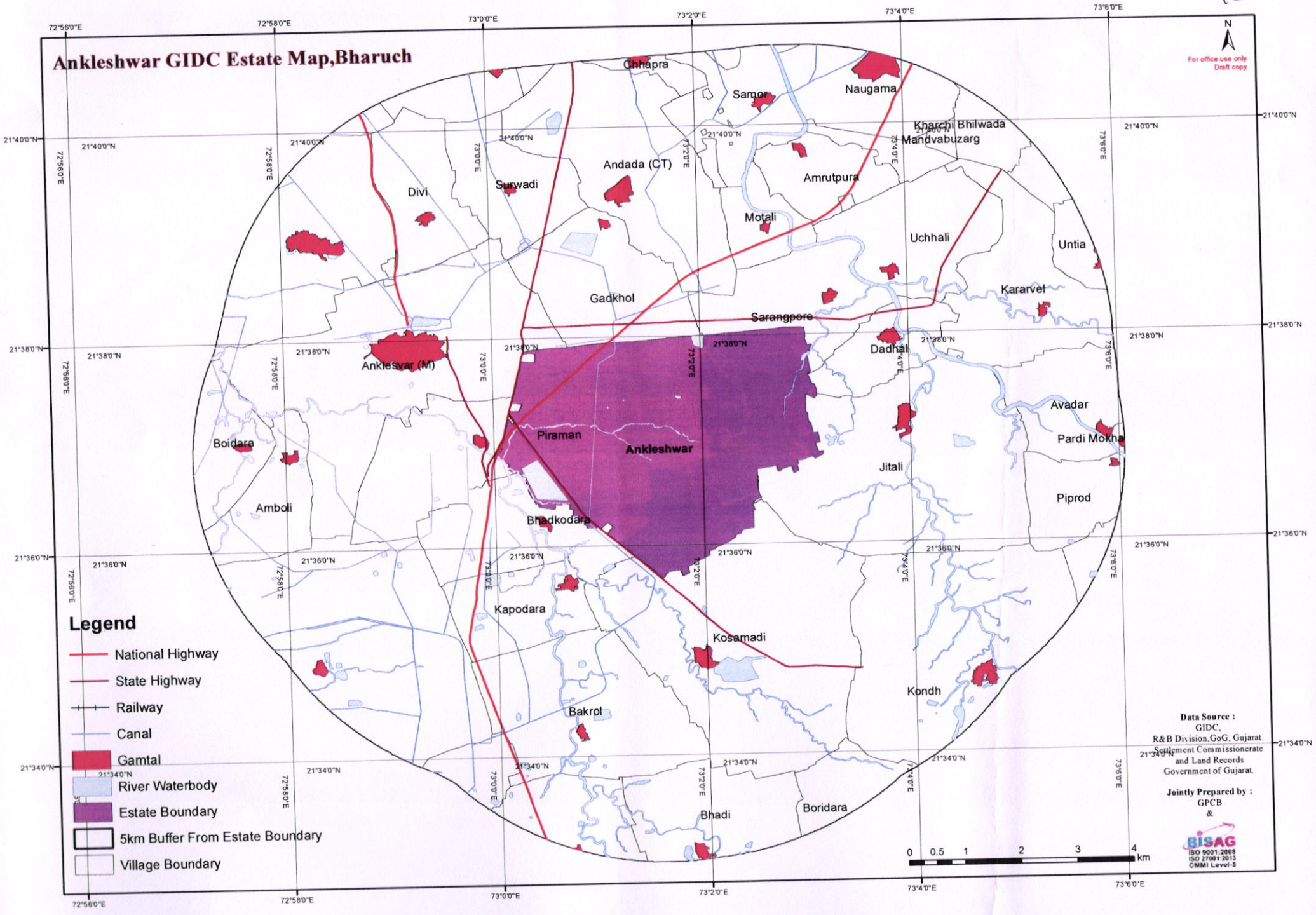

Vapi GIDC Estate Map, Valsad
Bagwada
Tidhara
Morai
Tukwada
Balitha
Salvav
Ambach
Chala_CT
Rata
Pandor
Chharwada
Ghhiri
Koparli
Kocharva
Vapi_M
Vapi Estate
Namdha
Vankachh
Kaval
Mohan
Chandor
Karaya
Karvad
Chanod_CT
Jamburi
Dungra_CT
Eklahare
Nahuli
Nani_Tambadi
Valwada
Dadra(daman firangi)
Achchhari
Bhathi_Karambeli
Boralai
Borigam
Legend
National Highway
State Highway
Railway
Canal
Gamtal
River Waterbody
Estate Boundary
5km Buffer From Estate Boundary
Village Boundary
For office use only
Data Source :
GIDC,
R&B Division,GoG, Gujarat.
Settlement Commissionerate
and Land Records
Government of Gujarat.
Jointly Prepared by :
GPCB
&
BISAG
ISO 9001:2008
ISO 27001:2013
CMMI Level-5
0 0.5 1 2 3 4 km

1054

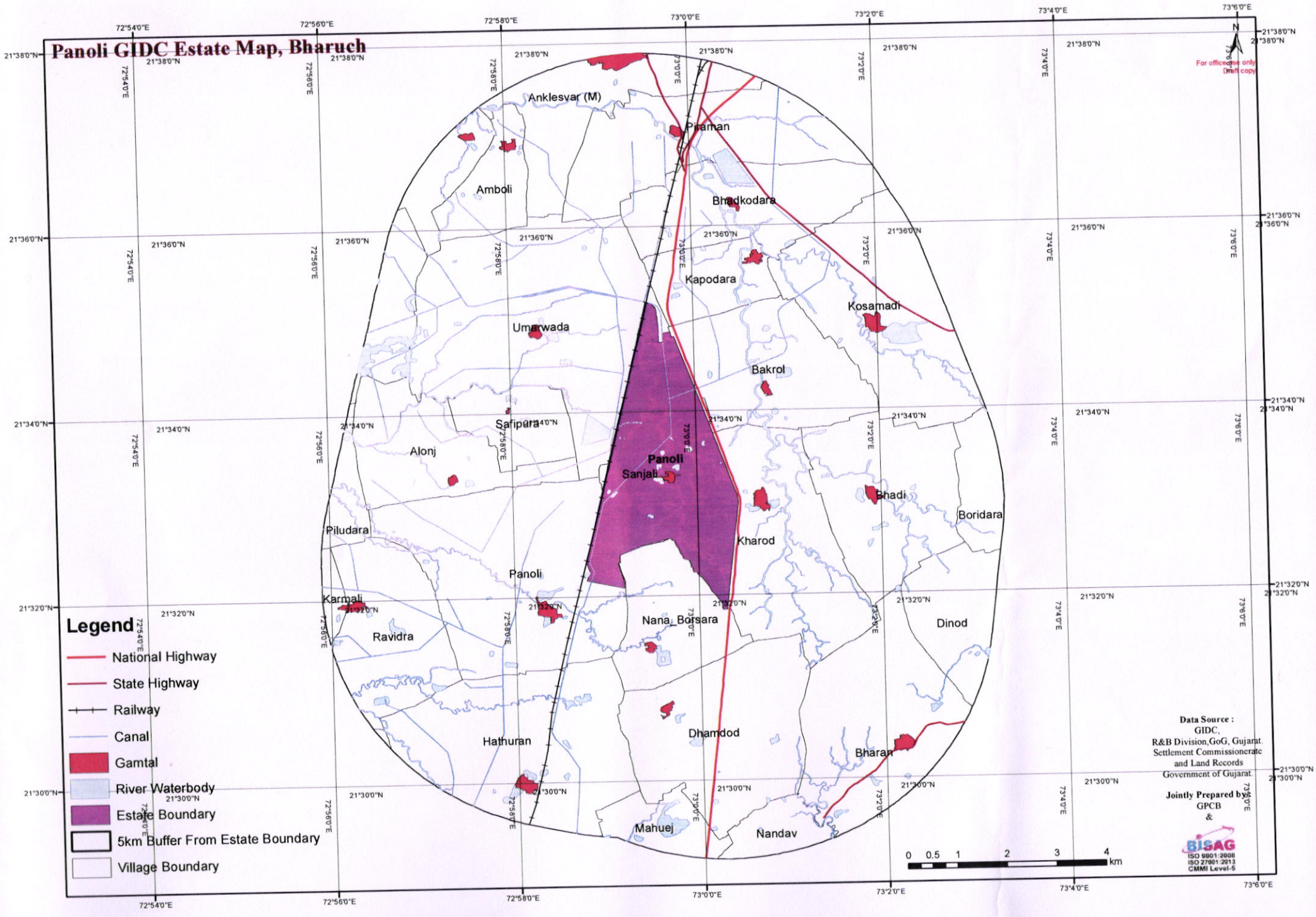

Sachin GIDC Estate Map, Surat
For office use only
Draft copy
Pandesara
Bhedvad
Dindoli
Karadva
Saniya_Kanade
Vadod
Bhestan
Eklera
Kharvasa
Jiav
Sonari
Un_CT
Bhanodra
Boriand
Ravla_Alias Vaktana
Budla
Pardi_Kanade
Vanz
Sachin
Khajod
Gabheni
Sachin_CT
Talangpor
Pali
Lajpor
Kansad
Umber
Karankhat
Maroli
Ponsara
Parujan
Nadod
Legend
National Highway
State Highway
Railway
Canal
Gamtal
River Waterbody
Estate Boundary
5km Buffer From Estate Boundary
Village Boundary
0 0.45 0.9 1.8 2.7 3.6 km
Data Source :
GIDC,
R&B Division,GoG, Gujarat.
Settlement Commissionerate
and Land Records
Government of Gujarat.
Jointly Prepared by :
GPCB
&
BISAG
ISO 9001:2008
ISO 27001:2013
CMMI Level-5


Pandesara GIDC Estate Map, Surat
For office use only
Draft copy
Umarvada
Dunbhal
Aanjan
Parvat_CT
Khatodara
Libayat
Majura
Godadara
Devadh
Bhattar
Udhana
Piplod
Dindoli
Bharthan
Althan
Deladva
Bhedvad
Pandesara
Pandesra
Bamroli
Vesu
Karadva
Saniya_Kanade
Bhimrad
Sarsana
Vadod
Bhestan
Eklera
Jiav
Sonari
Un_CT
Bhanodra
Budia
Gabheni
Legend
National Highway
State Highway
Railway
Canal
Gamtal
River Waterbody
Estate Boundary
5km Buffer From Estate Boundary
Village Boundary
0 0.4 0.8 1.6 2.4 3.2 km
Data Source :
GIDC,
R&B Division,GoG, Gujarat.
Settlement Commissionerate
and Land Records
Government of Gujarat.
Jointly Prepared by :
GPCB
&
BISAG
ISO 9001:2008
ISO 27001:2013
CMMI Level-5

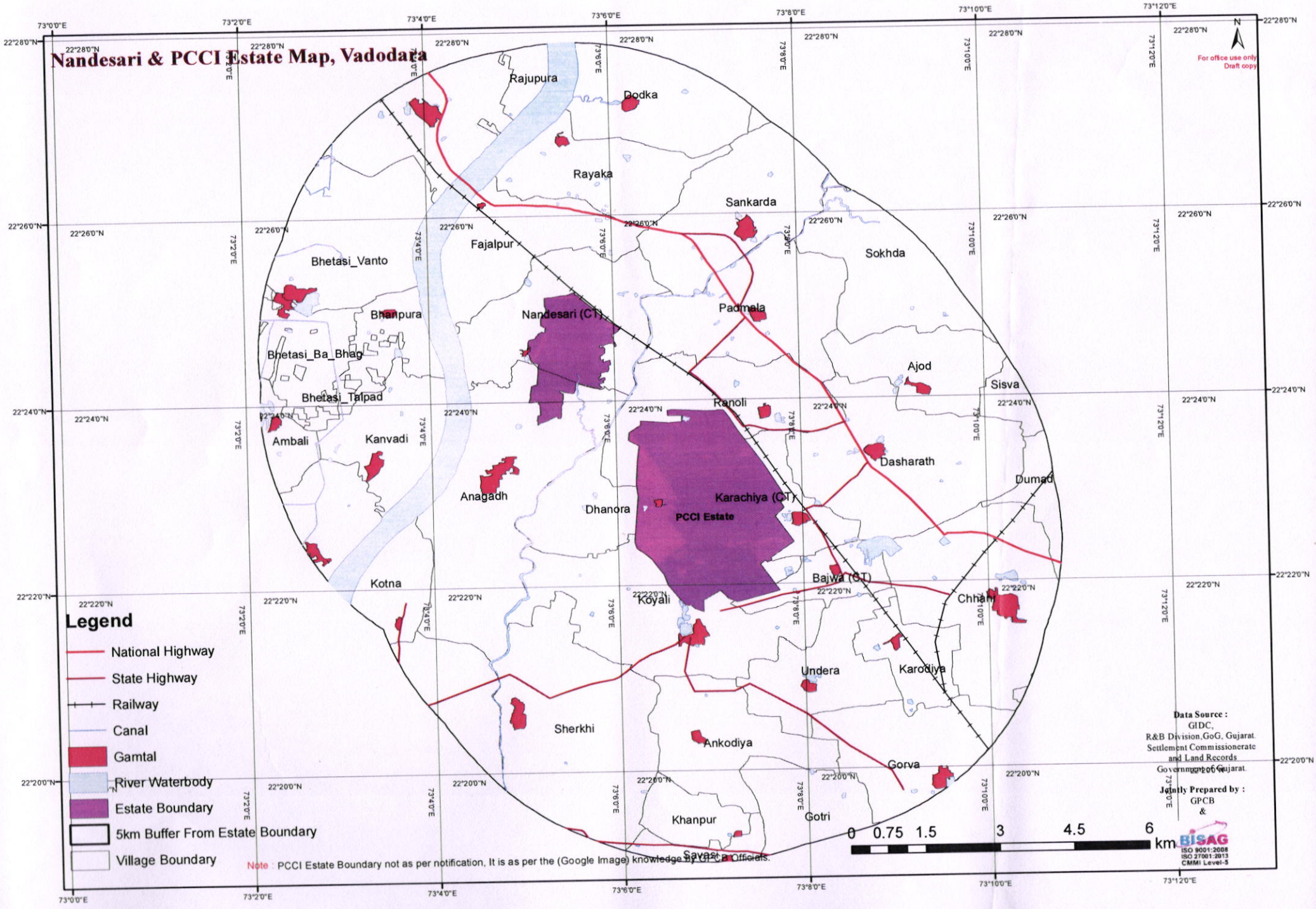
1056 137/c

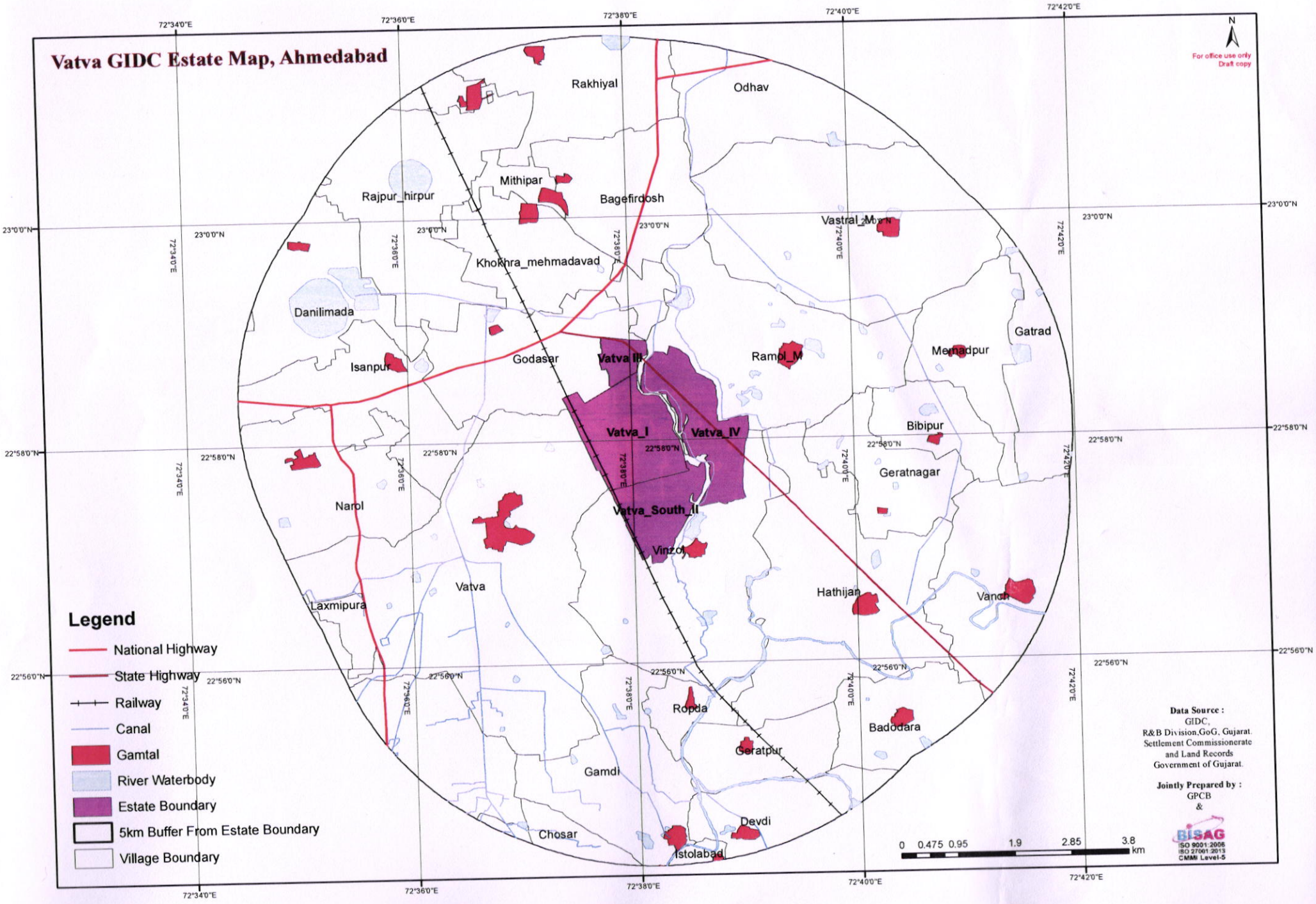

Ankleshwar GIDC Estate Map,Bharuch
For office use only
Draft copy
Chhapra
Samor
Naugama
Kharchi Bhilwada
Mandvabuzarg
Andada (CT)
Amrutpura
Surwadi
Divi
Motali
Uchhali
Untia
Gadkhol
Karanvel
Sarangpore
Dadhal
Ankleshvar (M)
Piraman
Ankleshwar
Avadar
Pardi Mokha
Boidara
Jitali
Amboli
Bhadkodara
Piprod
Kapodara
Kosamadi
Kondh
Bakrol
Bhadi
Boridara
Legend
National Highway
State Highway
Railway
Canal
Gamtal
River Waterbody
Estate Boundary
5km Buffer From Estate Boundary
Village Boundary
Data Source :
GIDC,
R&B Division,GoG, Gujarat.
Settlement Commissionerate and Land Records Government of Gujarat.
Jointly Prepared by :
GPCB
&
BISAG
ISO 9001:2008
ISO 27001:2013
CMMI Level-5
0 0.5 1 2 3 4 km

Panoli GIDC Estate Map, Bharuch



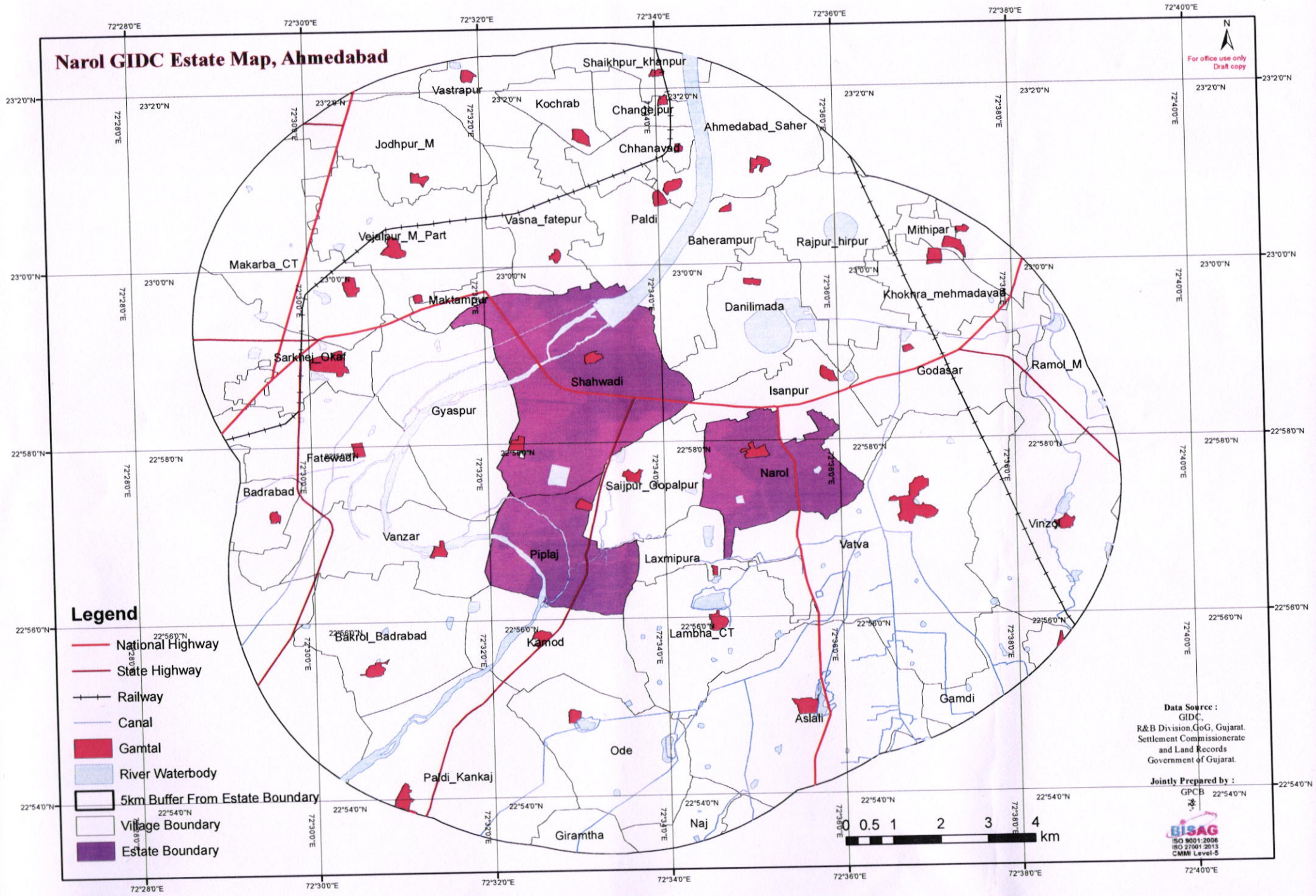
1058 139/c


Nandesari & PCCI Estate Map, Vadodara
For office use only
Draft copy
Rajupura
Dodka
Rayaka
Sankarda
Fajalpur
Sokhda
Bhetasi_Vanto
Bhanpura
Nandesari (CT)
Padmala
Bhetasi_Ba_Bhag
Ajod
Sisva
Bhetasi_Talpad
Ranoli
Ambali
Kanvadi
Dasharath
Dumad
Anagadh
Dhanora
Karachiya (CT)
PCCI Estate
Kotna
Bajwa (CT)
Koyali
Chhani
Undera
Karodiya
Sherkhi
Ankodiya
Gorva
Khanpur
Gotri
Savasta
Legend
National Highway
State Highway
Railway
Canal
Gamtal
River Waterbody
Estate Boundary
5km Buffer From Estate Boundary
Village Boundary
Note : PCCI Estate Boundary not as per notification, It is as per the (Google Image) knowledge by GPCB Officials.
Data Source :
GIDC,
R&B Division,GoG, Gujarat.
Settlement Commissionerate and Land Records Government of Gujarat.
Jointly Prepared by :
GPCB
&
0 0.75 1.5 3 4.5 6 km
BISAG
ISO 9001:2008
ISO 27001:2013
CMMI Level-5

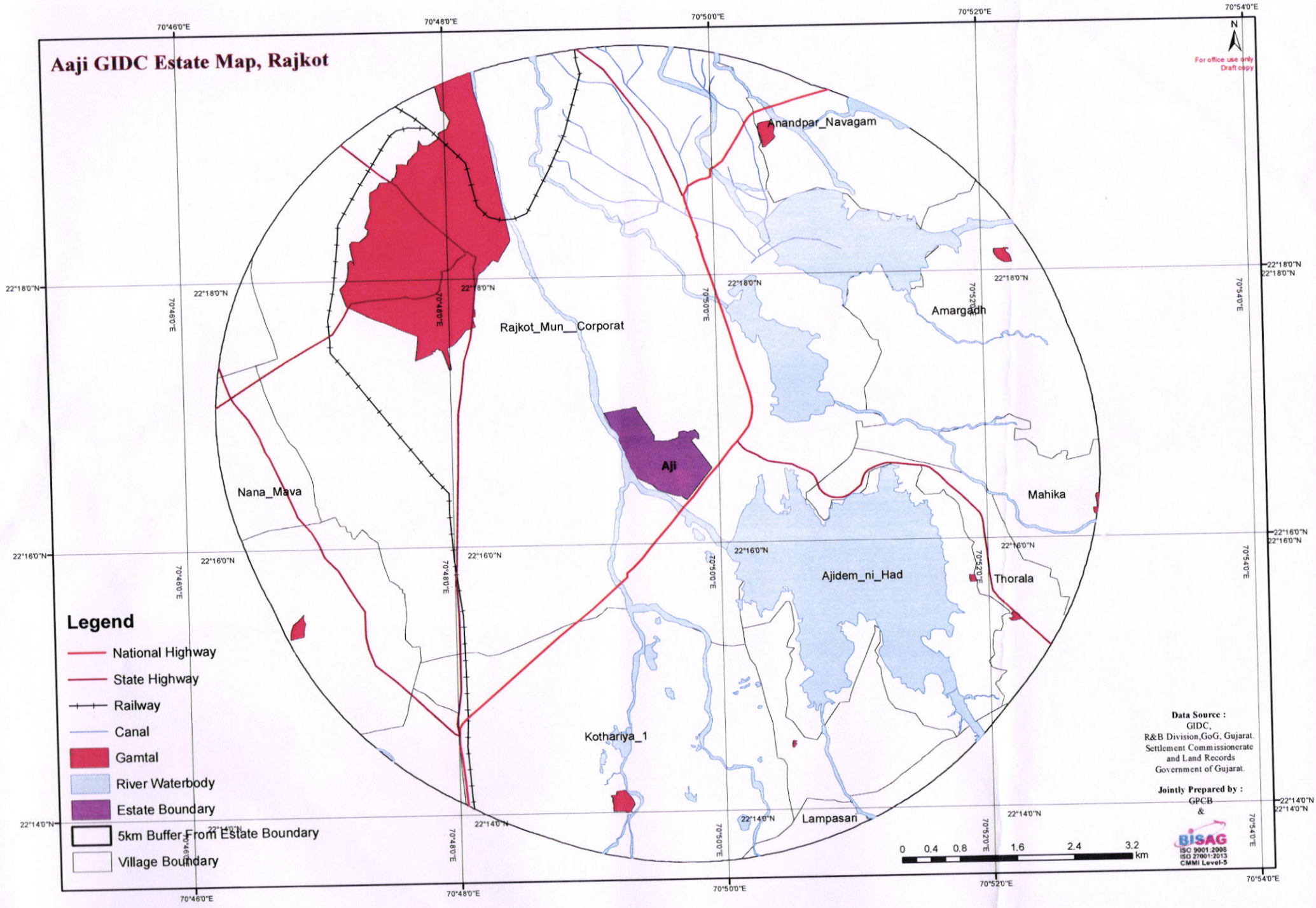

Vatva GIDC Estate Map, Ahmedabad
For office use only
Draft copy
Rakhiyal
Odhav
Mithipar
Rajpur_hirpur
Bagefirdosh
Vastral_M
Khokhra_mehmadavad
Danilimada
Gatrad
Godasar
Vatva_III
Rampl_M
Memadpur
Isanpur
Vatva_I
Vatva_IV
Bibipur
Geratnagar
Narol
Vatva_South_II
Vinzol
Vatva
Hathijan
Vanch
Laxmipura
Ropda
Badodara
Geratpur
Gamdi
Devdi
Chosar
Istolabad
Legend
National Highway
State Highway
Railway
Canal
Gamtal
River Waterbody
Estate Boundary
5km Buffer From Estate Boundary
Village Boundary
Data Source :
GIDC,
R&B Division,GoG, Gujarat.
Settlement Commissionerate
and Land Records
Government of Gujarat.
Jointly Prepared by :
GPCB
&
BISAG
ISO 9001:2008
ISO 27001:2013
CMMI Level-5
0 0.475 0.95 1.9 2.85 3.8
km
72°34'0"E
72°36'0"E
72°38'0"E
72°40'0"E
72°42'0"E
23°0'0"N
22°58'0"N
22°56'0"N

A -1 A

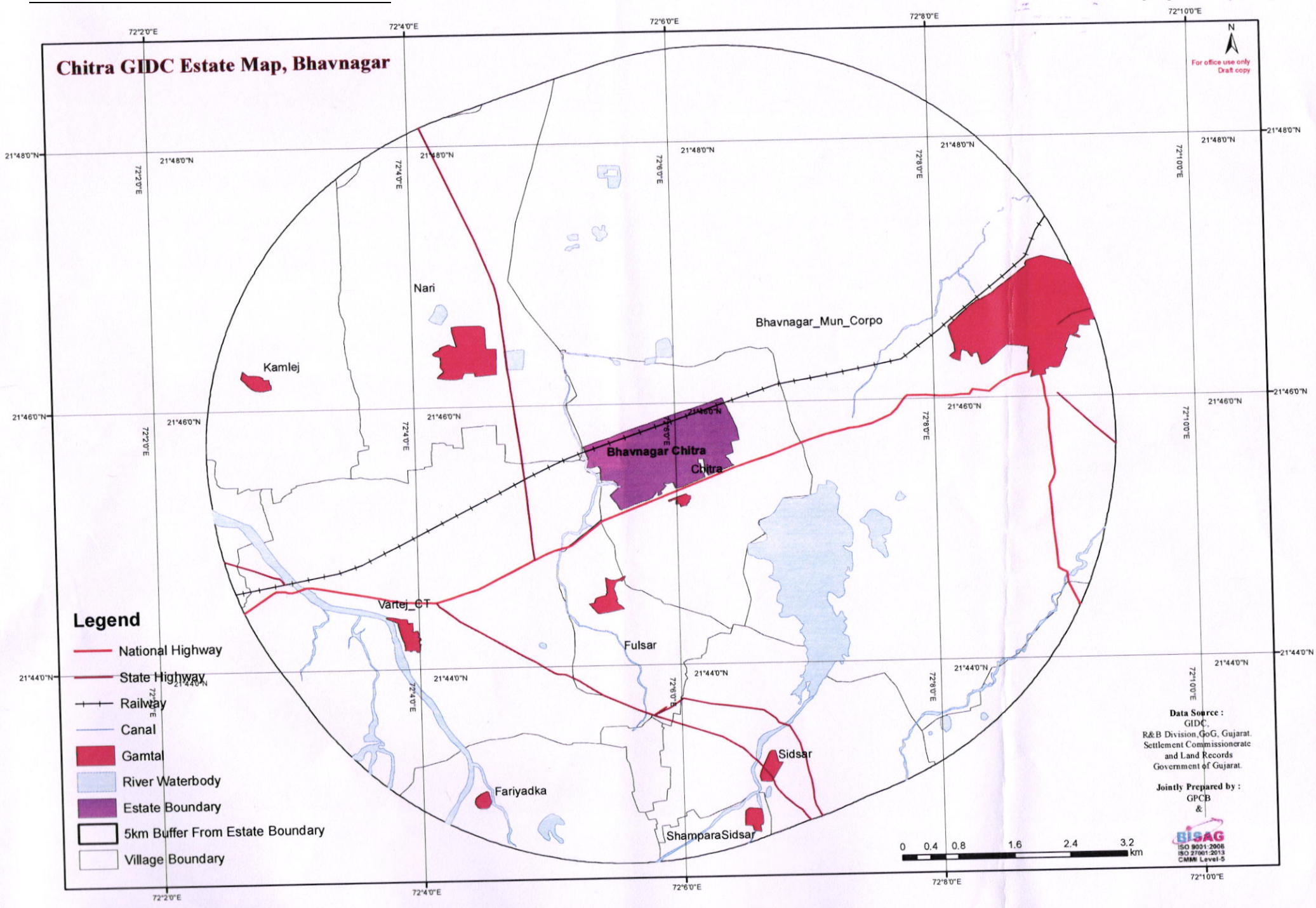
1060


Narol GIDC Estate Map, Ahmedabad
For office use only
Draft copy
N
Shaikhpur_khanpur
Vastrapur
Kochrab
Changaipur
Ahmedabad_Saher
Chhanavad
Jodhpur_M
Vasna_fatepur
Paldi
Vejalpur_M_Part
Baherampur
Rajpur_hirpur
Mithipar
Makarba_CT
Maklampur
Danilimada
Khokhra_mehmadavad
Sarkhej_Okaf
Shahwadi
Godasar
Ramol_M
Isanpur
Gyaspur
Fatewadi
Narol
Badrabad
Saijpur_Gopalpur
Vinzol
Vanzar
Vatva
Piplaj
Laxmipura
Bakrol_Badrabad
Kamod
Lambha_CT
Gamdi
Aslali
Ode
Paldi_Kankaj
Giramtha
Naj
Legend
National Highway
State Highway
Railway
Canal
Gamtal
River Waterbody
5km Buffer From Estate Boundary
Village Boundary
Estate Boundary
0 0.5 1 2 3 4 km
Data Source :
GIDC,
R&B Division,GoG, Gujarat.
Settlement Commissionerate
and Land Records
Government of Gujarat.
Jointly Prepared by :
GPCB
BISAG
ISO 9001:2008
ISO 27001:2013
CMMI Level-5

1061 135/c


Aaji GIDC Estate Map, Rajkot
For office use only
Draft copy
Anandpar_Navagam
Rajkot_Mun__Corporat
Amargadh
Aji
Nana_Mava
Mahika
Ajidem_ni_Had
Thorala
Kothariya_1
Lampasari
Legend
National Highway
State Highway
Railway
Canal
Gamtal
River Waterbody
Estate Boundary
5km Buffer From Estate Boundary
Village Boundary
0 0.4 0.8 1.6 2.4 3.2 km
Data Source :
GIDC,
R&B Division,GoG, Gujarat.
Settlement Commissionerate and Land Records
Government of Gujarat.
Jointly Prepared by :
GPCB
&
BISAG
ISO 9001:2008
ISO 27001:2013
CMMI Level-5

1062 133/c


Chitra GIDC Estate Map, Bhavnagar
For office use only
Draft copy
Nari
Kamlej
Bhavnagar_Mun_Corpo
Bhavnagar Chitra
Chitra
Vartej_CT
Fulsar
Sidsar
Fariyadka
ShamparaSidsar
Legend
National Highway
State Highway
Railway
Canal
Gamtal
River Waterbody
Estate Boundary
5km Buffer From Estate Boundary
Village Boundary
Data Source :
GIDC,
R&B Division,GoG, Gujarat.
Settlement Commissionerate
and Land Records
Government of Gujarat.
Jointly Prepared by :
GPCB
&
BISAG
ISO 9001:2008
ISO 27001:2013
CMMI Level-5
0 0.4 0.8 1.6 2.4 3.2 km
72°2'0"E
72°4'0"E
72°6'0"E
72°8'0"E
72°10'0"E
21°48'0"N
21°46'0"N
21°44'0"N

GUJARAT POLLUTION CONTROL BOARD
Paryavaran Bhavan, Sector 10 A, Gandhinagar 382 010
Phone: 079 – 23232152, 23241514, Fax: 079 – 23222784 Website: www.gpcb.gujarat.gov.in

No. GPCB/PH/2019-20/SRG-4/ 576866

14 AUG 2019

Time Limit
By RPAD/H.D.

To,
The Director,
IA Division,
Ministry of Environment, Forest and Climate Change
Indira Paryavaran Bhavan,
Aliganj, Jorbagh Road,
New Delhi-110003.

Sub: To furnish a copy of the Public Hearing proceeding.

Ref: [1] Notification no. S.O. 1533 dated September 14, 2006 published by the Ministry of Environment, Forests & Climate Change, Government of India, New Delhi.
[2] MoEF&CC's Notification no. S.O.948 dated 12.6.2007 and the Forest and Environment Department, Government of Gujarat's GR no. ENV/10.2006/176/P, dated 25.7.2007.
[3] Request Application of from **M/s Madura Carbon India Ltd** to organize Public Hearing.

Sir,

Based on request received for public hearing from of **M/s Madura Carbon India Ltd for Proposed manufacturing of Carbon Black – 230000 TPA & Power Generation – 45 MW, at Survey no. 3705, 3708, 3719, 3725, 3738, 4108, 4110, 4318, Village: Karanj, Ta: Umbergaon, Dist. Valsad,** Public hearing was organized on **19/07/2019 at 11.30 hrs, at Survey No. 3705, 3708, 3719, 3725, 3738, 4108, 4110, 4318, Village: Karanj, Ta. Umbergaon, Dist. Valsad.**

The Public Hearing proceeding along with CD and VCD is enclosed herewith for your information and further necessary action please.

Yours faithfully,

(G. H. Trivedi)
Senior Environmental Engineer

Encl: As above (Original copy)
Copy to:

1. District Collector, Collector Office,
   District: **Valsad...** for information Please.
2. The Unit Head, **Sarigam.**
   …Along with the original case file of aforesaid applicant for further suitable action.
3. The Regional Officer, **Sarigam...** for further suitable action, if any.
4. **M/s Madura Carbon India Ltd.**
   At Survey no. 3705, 3708, 3719, 3725, 3738, 4108, 4110, 4318, Village: Karanj, Ta: Umbergaon, Dist. Valsad... Along with a copy of Public Hearing proceeding, CD and VCD for necessary further action please.
5. File Copy.

Sr. No.	Query raised by	Key Issues	Action Plan	Budget to be allocated
1	Mr. Shashikant Chhaganji Patel (Bharatiy Kisan Sangh, President Valsad District), Vill : Saronda, Dist : Valsad	• He represented that emitted toxic gases like SO_2 and CO gas from the industries will cause ample damage to the crop. • SO_2 emitted into the atmosphere from the stack is converted into Sulfuric Acid which results into acid rain and damages agriculture crop. So we are against this project.	• DeSOx & DeNOx system will be installed to control SO_2 & NO_2 emission. • The CEMS (Continuous Emission Monitoring System) for monitoring of the pollutants from the stacks will be installed with proposed stack which, will be attached to CPCB server. • Regular third-party monitoring for ambient air quality will be carried out. • Monitoring will also be done in surrounding area to check air quality regularly.	• Capital cost for DeSOx – 20 Cr. • Capital cost for DeNOx – 5 Cr. • Capital cost for CEMS – 30 Lakhs • Operational cost for DeSOx – 3.1 Cr./annum • Operational cost for DeNOx – 1.1 Cr./annum • Monitoring expenses – 0.8 Lakhs/annum
		• Company will use 3220 KLD water from Damanganga river whereas villagers are not getting enough water and company has not planned even one liter of rainwater harvesting. So it is not appropriate to give permission to this project.	• As per the Final EIA report, total water requirement will be 3115 KLD (Domestic: 50 KLD & Industrial: 2965 KLD) out of which, 2525 KLD will be fresh water & remaining 590 KLD will be recycled. • Surface water will be used from Damanganga Canal Distry. • Flow meter will be provided for keeping record of fresh water consumption. • Apart from this, the company has proposed to save 34800 kL/Annum of rainwater per year through Rain-water Harvesting System. A 50000 KL capacity pond will be used for storage of harvested rain water. Moreover, the company will also help in carrying out rain-water harvesting activities in surrounding villages under the CER plan.	• Capital cost for ETP & STP – 0.97 Cr. • Operational Cost –0.4 Cr./annum • Capital cost for RO & MEE – 10.5 Cr. • Operational Cost – 19 Cr./annum • RWH in surrounding villages as part of CER – 5.5 Lakhs/annum
		• There should be 40 feet road in case of industrial NA whereas there is only 12 feet narrow gully. So how come large vehicle will pass from here in the future? Investigation should be done in the same as to how NA obtained for the land and permission of this industrial unit should be cancelled.	• Company has planned to use GIDC road for transportation.	

2	Ms. Manali Bhoir, Vill: Karajgam, Agriwad, Ta.: Umargam, Dist : Valsad	• She represented that the company will manufacture 2,30,000 Ton carbon black per year. In that 45 MW green power and captive power will be generated and there are two Aanganwadi, Primary Schools & Forest Area in the surrounding villages. So damage will be caused to animals and children.	• It is planned to take appropriate steps to prevent air, water and noise pollution for our proposed project. • The process will be carried out in a fully closed system to ensure no loss of product – Carbon Black – also ensuring control of particulate emissions. Plant will be based on fully automated (DCS) system. An automatic leakage detection system will be installed for piping to prevent any leakage. Bag-filters will be a part of the process for collection of Carbon Black and separation from tail gas. The Tail gas generated during the manufacturing of carbon black will be used as fuel in boilers and dryers. • DeSOx & DeNOx system will be installed to control SO_2 & NO_2 emission. • The CEMS (Continuous Emission Monitoring System) for monitoring of the pollutants from the stacks will be installed with proposed stack which, will be attached to CPCB server. • Regular third-party monitoring for ambient air quality will be carried out. • Monitoring will also be done in surrounding area to check air quality regularly. • Water balance is revised in Final EIA report. • The total domestic wastewater generated will be treated in STP. Treated water from STP will be used for gardening. • Industrial wastewater generated from utility installations will be partly recycled for lime slurry preparation & remaining in RO-2. • Scrubber bleed-off along with plant washing will be diverted to ETP. Treated water from ETP will partly be recycled for plant washing & remaining will be diverted to RO-2.	• Capital cost for DeSOx – 20 Cr. • Capital cost for DeNOx – 5 Cr. • Capital cost for integrated Bagfilter – 45 Cr. • Capital cost for CEMS – 30 Lakhs • Operational cost for DeSOx – 3.1 Cr./annum • Operational cost for DeNOx – 1.1 Cr./annum • Monitoring expenses – 3 Lakhs/annum • Operational cost for integrated Bag-filter – 2 Cr./annum • Capital cost for ETP & STP – 0.97 Cr. • Operational Cost –0.4 Cr./annum • Capital cost for RO & MEE – 10.5 Cr. • Operational Cost – 19 Cr./annum • Monitoring expenses – 3 Lakhs/annum

			• ETP treated water along with remaining industrial wastewater will be diverted to RO. • Reject from RO-1 and RO-2 will be diverted to MEE. RO permeate and MEE condensate will be recycled. • ZLD will be followed. • Proper metering facilities will be provided. • Regular in-house and third-party monitoring for wastewater management will be carried out.	
			• It will be ensured that noise level will be kept below permissible norms within company premises by providing full enclosure to Turbine and installing DG Set equipped with acoustic enclosure. • Regular maintenance will be carried out. • Furthermore, adequate greenbelt will be developed for attenuation of noise. • Regular Noise monitoring will be carried out. • Regular Health Check-up will also be carried out in Schools & Anganwadi of surrounding villages under the CER program.	• Capital cost for Noise Control – 0.5 Cr. • Operational Cost – 0.1Cr./annum • Monitoring expenses – 3 Lakhs/annum • Health checkup – 0.1 Cr./annum
		• 3220 KLD water will be used and will also reused but only conserved and reused 330 KLD water will be reused and fresh water will be used for the remaining requirement. • 110 KLD domestic water will be used from the pond of our village. So villagers will not get drinking water.	• Water balance is revised in Final EIA report. After revision, total water requirement will be 3115 KLD (Domestic: 50 KLD & Industrial: 2965 KLD) out of which, 2525 KLD will be fresh water & remaining 590 KLD will be recycled. • Surface water will be used from Damanganga Canal Distry. • Flow meter will be provided for keeping record of fresh water consumption.	--as above—
		• SO2, PM and NOx are emission from this project which is very harmful gases can causes brain diseases to new born babies, Heart diseases & respiratory diseases & skin	• DeSOx & DeNOx system will be installed to control SO2 & NO2 emission. • The CEMS (Continuous Emission Monitoring System) for monitoring of the pollutants from the	--as above—

		cancer. • Height of stack attached to 2 Nos. 92 TPH boilers is 100 meter and due to this air affect surrounding people, also 4 driers, 1 No. 135 TPH Boiler and 1 No. DG set will be used which is risky for people. • Temperature and air moisture will be increased due to the upcoming project. At present it's hot and it's not raining. Collector Sir is well aware about what will happen if this carbon company will be setup. • You can carry out Medical checkup of the surrounding people right now and after establishment of the company and starting of production, there will be problem in their medical report. • According to definition of Panchayati Raj, Sarpanch should inform villagers by conducting gramsabha even for a small hospital. Sarpanch has not informed villagers for such a big carbon company and our village sarpanch is not supporting us. • Grazing (Gauchar) land will be lost due to upcoming company.	stacks will be installed, which will be attached to CPCB server. • Regular third-party monitoring for ambient air quality will be carried out. • Monitoring will also be done in surrounding area to check air quality regularly. • Waste heat will be used for preheating the air and feed stock before feeding it in the reactor and for steam generation through Waste heat recovery Boiler. • Further, insulation will be provided to reduce the heat loss from all heat emitting plant machinery and piping. • Medical check-up of the employees will be done half yearly and as a part of the CER activities company will arrange the medical camps in the villages which are surrounded by the project site. • Env Management Cell of the company will ensure that all mitigations are being implemented and that no grazing land will be affected.	• Included in CapEX of Plant & Machinery – 268.5 Cr. • Health checkup – 0.1 Cr./annum Detail head-wise cost break up as per Exhibit-1
3	Mr. Prakash Bhikhaji Aarekar, (Social Worker, Ex. Sarpanch, Sarigam)	• Jay Krishna Jay Gopal, Sarigam, Karajgam ko mat banao Bhopal • He represented that we, the people of Karaj village are not against this project but we are against the pollution. • Whether this is Hearing (Sunaavani) or Tsunami. We attend every hearing and every	• It is planned to take appropriate steps to prevent air, water and noise pollution for our proposed project. • The process will be carried out in a fully closed system to ensure no loss of product – Carbon Black – also ensuring control of particulate	• As above • Detail head-wise cost break up as per Exhibit-1

		hearing is hampered and everyone gets approval. Despite of 100% opposition of villagers during public hearing for Coromandal and N.R. Aggarwal, permission to both the company has been granted. Please give a definite decision of this hearing. We want development but not at the cost of our lives. • I am fighting for the last 30 years but the pollution is not stopping. I have also done hunger strike, strikes and I am tired of doing everything but company is not obeying. We are ready, if employees of the company are ready to live here without AC with their family. If those people stay for a month, we will write an undertaking on a stamp paper of Rs.100. • Poor people lives in Pagipada and Rohitwas. They are surrounded by Coromandal, N.R. Agarwal and stone quarry. So that's why we are feeling sad. Children are tired of cough and mothers are tired of carrying their children to the clinic. That's why clinics and dispensary numbers have been increased here and there is a problem of water as well. And we demand that there should be no pollution. Companies gives undertaking and action should be taken against the company but the action is not taken. Instead of the development of the village, there is development of pocket.	emissions. Plant will be based on fully automated (DCS) system. An automatic leakage detection system will be installed for piping to prevent any leakage. Bag-filters will be a part of the process for collection of Carbon Black and separation from tail gas. The Tail gas generated during the manufacturing of carbon black will be used as fuel in boilers and dryers. • DeSOx & DeNOx system will be installed to control SO_2 & NO_2 emission. • The CEMS (Continuous Emission Monitoring System) for monitoring of the pollutants from the stacks will be installed with proposed stack, which will be attached to CPCB server. • Regular third-party monitoring for ambient air quality will be carried out. • Monitoring will also be done in surrounding area to check air quality regularly. • The total domestic wastewater generated will be treated in STP. Treated water from STP will be used for gardening. • Industrial wastewater generated from utility installations will be partly recycled for lime slurry preparation & remaining in RO-2. • Scrubber bleed-off along with plant washing will be diverted to ETP. Treated water from ETP will partly be recycled for plant washing & remaining will be diverted to RO-2. • ETP treated water along with remaining industrial wastewater will be diverted to RO. • Reject from RO-1 and RO-2 will be diverted to MEE. RO permeate and MEE condensate will be recycled. • ZLD will be followed. • Proper metering facilities will be provided.	

			• Regular in-house and third-party monitoring for wastewater management will be carried out. • It will be ensured that noise level will be kept below permissible norms within company premises by providing full enclosure to Turbine and installing DG Set equipped with acoustic enclosure. • Regular maintenance will be carried out. • Furthermore, adequate greenbelt will be developed for attenuation of noise. • Regular Noise monitoring will be carried out. • Regular Health Checkup will also be carried out in Schools & Anganwadi of surrounding villages under the CER program. • Implementation of all the mitigation measures suggested in the Environment impact report ensured by the Env Management Cell.	
4	Mr. Bharat Jadav, Vill : Bhilad, Ta. : Umargam, Dist : Valsad	• He represented that we are against this project. But we will not oppose if the company establishes some another project. • In Punjab, Tanda, Sarabjit Singh and others filed a case in NGT Tribunal for the same kind of company and the hearing was conducted on 30/05/2019 and the H'ble court has ordered immediately to shift the company by April 2020. • This company is harmful to the human body. Human lungs, trees and leaves will be damaged due to carbon. We do not have any objections if the company will bring another product. We are strictly against this company.	• The process will be carried out in a completely closed system for controlling fugitive emissions with bag-filters as part of the process. Plant will be based on fully automated (DCS) system. An automatic leakage detection system will be installed for piping to prevent any leakage. Bag-filters will be a part of the process for collection of Carbon Black and separation from tail gas. The proposed unit will comply with all necessary measures regarding occupational health and all applicable laws will be followed. Additionally, the level of carbon black in the air within the unit will be much lower than the permissible norms of exposure prescribed by OSHA & NIOSH. • DeSOx & DeNOx system will be installed to control SO_2 & NO_2 emission. • The CEMS (Continuous Emission Monitoring System) for monitoring of the pollutants from the stacks will be installed with proposed stack, which	• As above • Detail head-wise cost break up as per Exhibit-1

			will be attached to CPCB server. • Regular third-party monitoring for ambient air quality will be carried out. • Monitoring will also be done in surrounding area to check air quality regularly. • Display board showing air emission levels along with other details will be provided beside the gate of company.	
5	Mr. Bhulbhai Ahir, Vill : Sarigam, Ta. : Umargam, Dist : Valsad	• He represented that in their process they (company) have not mentioned percentage of COD and BOD before treatment of wastewater and also COD & BOD after treatment in ETP should be disclosed. Moreover, he inquired to disclose consumption of oxygen.	• As per the Final EIA report, The total domestic wastewater generated will be treated in STP. Treated water from STP will be used for gardening. • The total domestic wastewater generated will be treated in STP. Treated water from STP will be used for gardening. • Industrial wastewater generated from utility installations will be partly recycled for lime slurry preparation & remaining in RO-2. • Scrubber bleed-off along with plant washing will be diverted to ETP. Treated water from ETP will be recycled for plant washing & remaining will be diverted to RO-2. • ETP treated water alongwith remaining industrial wastewater will be diverted to RO. • Reject from pre-treatment RO & RO-2 will be diverted to MEE. • Permeate from RO & Condensate from MEE will be recycled for non-potable & industrial use. • Regular in-house and third-party monitoring for wastewater quality (pH, O&G, TSS, TDS, BOD, COD etc.) management will be carried out.	• As above • Detail head-wise cost break up as per Exhibit-1
6	Mr. Hemant Naik, Vill : Karaj, Ta. : Umargam, Dist : Valsad	• He represented that this project should be rejected and there is no need for public hearing. • It is better to establish this plant in chemical zone. What about impacts of carbon? • What about the value of undertaking given to		• As above • Detail head-wise cost break up as per Exhibit-1

		Grampanchayat? What will grampanchayat do if the company doesn't follow the same? • GPCB issue closure notices which do not make any impact (on them).		
		• Water of Koliwad has been polluted for the last 10 years. Despite of guarantee of company & GPCB, water is still polluted. Company throws 1-2 water bottles. Is this development? Development of Sarigam, Karaj and Manda means dirt, mosquitoes, air pollution, water pollution and epidemic. Income from agriculture is reduced due to polluted climate.	• The total domestic wastewater generated will be treated in STP. Treated water from STP will be used for gardening. • Industrial wastewater generated from utility installations will be partly recycled for lime slurry preparation & remaining in RO-2. • Scrubber bleed-off along with plant washing will be diverted to ETP. Treated water from ETP will partly be recycled for plant washing & remaining will be diverted to RO-2. • ETP treated water along with remaining industrial wastewater will be diverted to RO. • Reject from RO-1 and RO-2 will be diverted to MEE. RO permeate and MEE condensate will be recycled. • ZLD will be followed. • Proper metering facilities will be provided. • Regular in-house and third-party monitoring for wastewater management will be carried out.	• As above • Detail head-wise cost break up as per Exhibit-1
		• Whether any study regarding increase in temperature due to reaction at 12000 C to 18000 C in the power project and manufacturing of carbon has been carried out or not? • Temperature of Karaj village remains 400 C to 420 C. and due to carbon black there are possibilities of throat infection, tumor in the lungs, cancer, cardiovascular diseases to the people in the long term and tiny dust particles of carbon causes nuisance. They stick to clothes, skin and trees and hard to remove.	• Waste heat will be used for preheating the air and feed stock before feeding it in the reactor and for steam generation through Waste heat recovery Boiler. • Further, insulation will be provided to reduce the heat loss from all heat emitting plant machinery and piping. • The process will be carried out in a completely closed system for controlling fugitive emissions with bag-filters as part of the process. Plant will be based on fully automated (DCS) system. An	• As above • Detail head-wise cost break up as per Exhibit-1

		So everything will turn black after 10 years. So we request you to shift this plant in chemical zone. Projects like plastic plant, solar plant should be established on this land which is encouraged by the Government.	automatic leakage detection system will be installed for piping to prevent any leakage. Bag-filters will be a part of the process for collection of Carbon Black and separation from tail gas. The proposed unit will comply with all necessary measures regarding occupational health and all applicable laws will be followed. Additionally, the level of carbon black in the air within the unit will be much lower than the permissible norms of exposure prescribed by OSHA & NIOSH. • Regular third-party monitoring for ambient air quality will be carried out. • Monitoring will also be done in surrounding area to check air quality regularly.	
7	Mr. Vinay Fulchand Sheth, Vill : Fansa, Ta.: Umargam, Dist : Valsad	• He represented that report of the company is incomplete, inadequate and misleading. No toxic gas will be generated as mentioned in the presentation. But as mentioned on page no. 6 of the report, toxic gases like PM, SOx, NOx will be emitted.	• The process will be carried out in a completely closed system for controlling fugitive emissions with bag-filters as part of the process. Plant will be based on fully automated (DCS) system. An automatic leakage detection system will be installed for piping to prevent any leakage. Bag-filters will be a part of the process for collection of Carbon Black and separation from tail gas. The proposed unit will comply with all necessary measures regarding occupational health and all applicable laws will be followed. Additionally, the level of carbon black in the air within the unit will be much lower than the permissible norms of exposure prescribed by OSHA & NIOSH. • DeSOx & DeNOx system will be installed to control SO2 & NO2 emission. • The CEMS (Continuous Emission Monitoring System) for monitoring of the pollutants from the stacks will be installed with proposed stack, which will be attached to CPCB server. • Regular third-party monitoring for ambient air quality will be carried out. • Monitoring will also be done in surrounding area to check air quality regularly.	• As above • Detail head-wise cost break up as per Exhibit-1

			• Display board showing air emission levels along with other details will be provided beside the gate of company.	
		• As mentioned on page no. 5 of the report, there are trees in 8.95% area only which is too distant from the truth. Because there are many trees and greenery in the surrounding area. There is a possibility of harm to agriculture, trees and humans of this area.	• To ensure adequate green cover in the area, Company will implement plantation under its Greenbelt development plan and Green environment activity under CER.	• As above • Detail head-wise cost break up as per Exhibit-1
		• Company has ensured zero discharge, but if ETP stops working, it should be restarted immediately, even due care by CETP is not being taken, in this situation how and where water will be discharged?	• STP and ETP will be installed and wastewater management as per the EIA report will be ensured for recycle/reuse of treated wastewater. • ZLD will be followed. • Uninterrupted continuous operations of STP and ETP will be ensured through installation of High Efficiency equipment and necessary automation. • For emergency purpose, guard pond will be provided.	
		• Company is going to establish the plant by investing Rs.415 Crore. It is mentioned in their report that 385 persons will get employment out of which only 160 nontechnical persons will be employed. We can create more employment by investing Rs.415 Crore in agriculture. • It is illusory that the project will be beneficial for employment. • All the outsider people are being employed in Sarigam GIDC and in such a case local people suffer and also have to suffer from lung diseases and cancer and also don't get employment and not get benefited. Then such type development by Gujarat Govt. or any	• Total employment will be provided to around 760 numbers through direct and contractual employment with priority to local villagers based on their skills. • Around 80-85% of local skilled & unskilled persons will be employed after providing training.	

		other Govt, it is an inappropriate. • This type of development the cost of our destruction is not acceptable to us. Agriculture should be developed. Government also wants to increase the share of agriculture in GDP and increase the income of the farmers as well. Short term development is harmful for the agriculture, farmers and the country and action should be taken keeping in mind long term development.		
8	Dr. Nirav Shah, Vill : Sarigam, Ta.: Umargam, Dist : Valsad	• He represented that company has given positive feedback in their EIA report and negative feedback has not been mentioned in the report. • It is mentioned in page no.8 of the report that trees of surrounding area, land, farming land will be affected by PM, SO2 and NO2 emission from the project. There will be harmed & reduced in vegetation due to long term effect, who will be responsible? Kindly give the answer. • I have got the factsheet published by N.J. Health Institute, USA. Carbon black is a hazardous substance as per the said factsheet and it causes lung cancer, skin diseases, throat cancer and other cancers. I request you to pay attention on the factsheet.	• The process will be carried out in a completely closed system for controlling fugitive emissions with bag-filters as part of the process. Plant will be based on fully automated (DCS) system. An automatic leakage detection system will be installed for piping to prevent any leakage. Bag-filters will be a part of the process for collection of Carbon Black and separation from tail gas. The proposed unit will comply with all necessary measures regarding occupational health and all applicable laws will be followed. Additionally, the level of carbon black in the air within the unit will be much lower than the permissible norms of exposure prescribed by OSHA & NIOSH. • DeSOx & DeNOx system will be installed to control SO2 & NO2 emission. • The CEMS (Continuous Emission Monitoring System) for monitoring of the pollutants from the stacks will be installed with proposed stack, which will be attached to CPCB server. • Regular third-party monitoring for ambient air quality will be carried out. • Monitoring will also be done in surrounding area to check air quality regularly.	• As above • Detail head-wise cost break up as per Exhibit-1
9	Mr. Pratik Shankar Varli Vill : Kanad,	• He represented that company has given EIA report, in which they mentioned on page no.5 that many type chemicals will be released.	• The process will be carried out in a completely closed system for controlling fugitive emissions with bag-filters as part of the process. Plant will be	• As above • Detail head-wise cost break up as per

	Ta.: Umargam, Dist : Valsad	What is $PM_{2.5}$? Many companies already know the effect of $PM_{2.5}$, but the people don't know its effect. Please take note of report and representation given herewith	based on fully automated (DCS) system. An automatic leakage detection system will be installed for piping to prevent any leakage. Bag-filters will be a part of the process for collection of Carbon Black and separation from tail gas. The proposed unit will comply with all necessary measures regarding occupational health and all applicable laws will be followed. Additionally, the level of carbon black in the air within the unit will be much lower than the permissible norms of exposure prescribed by OSHA & NIOSH. • The CEMS (Continuous Emission Monitoring System) for monitoring of the pollutants from the stacks will be installed with proposed stack, which will be attached to CPCB server. • Regular third-party monitoring for ambient air quality will be carried out. • Monitoring will also be done in surrounding area to check air quality regularly. • Display board showing air emission levels along with other details will be provided beside the gate of company.	• Exhibit-1
10	Mr. Dalpatbhai Chhotubhai Dhodi Vill: Karajgam, Ta: Umargam, Dist : Valsad	• He represented that we are strictly against this project in this area because the Government forms new laws but the laws are not being implemented. PESA Act has been implemented in the year 2018-19. There are 70% tribal in our village and they even don't have money when they fell ill. So if such a big company establishes here, it will be a major problem and can be harmful. So I request you to give justice to the people considering provisions of recently formed PESA Act in the year 2018-19.	• Company will ensure to comply to the applicable statutory provisions. • Implementation of all the mitigation measures suggested in the Environment impact report will be ensured by the Env Management Cell.	• As above • Detail head-wise cost break up as per • Exhibit-1
11	Mr. Lalit Pravinchandra Shah Vill : Kanadu,	• He represented that Alfonzo mangos are being grown in this area in a large number. Crop has been damaged for the last few years due to establishment of companies and	• DeSOx & DeNOx system will be installed to control SO2 & NO2 emission. • The CEMS (Continuous Emission Monitoring System) for monitoring of the pollutants from the	• As above • Detail head-wise cost break up as per • Exhibit-1

	Ta : Umargam, Dist : Valsad	change in temperature. Temperature will increase due to establishment of this company. 80% of farmers depend upon mango crop for their livelihood which will be damaged. We are against this company as it will damage many huge Ambawadis and greenbelt in this area.	stacks will be installed with proposed stack, which will be attached to CPCB server. • Regular third-party monitoring for ambient air quality will be carried out. • Monitoring will also be done in surrounding area to check air quality regularly. • Waste heat will be used for preheating the air and feed stock before feeding it in the reactor and for steam generation through Waste heat recovery Boiler. • Further, insulation will be provided to reduce the heat loss from all heat emitting plant machinery and piping.	
12	Mr. Prakash Bhatt Vill : Karaj, Ta.: Umargam, Dist : Valsad	• He represented that we possess land in chemical zone. Crop gets failed for the last 20 years. Crop of our Ambawadi gets failed and our livelihood depends on it. Our bores are failed due to establishment of chemical and other plants in koliwad and getting chemical containing water. I request H'ble Collector to visit our home for inspection and we don't know which company sent two-two water bottles at our home. As this dangerous plant is going to be established, we request H'ble Collector to take appropriate actions taking an account of villagers of Karaj village.	• It is planned to take appropriate steps to prevent air, water and noise pollution for our proposed project. • The process will be carried out in a fully closed system to ensure no loss of product – Carbon Black – also ensuring control of particulate emissions. Plant will be based on fully automated (DCS) system. An automatic leakage detection system will be installed for piping to prevent any leakage. Bag-filters will be a part of the process for collection of Carbon Black and separation from tail gas. The Tail gas generated during the manufacturing of carbon black will be used as fuel in boilers and dryers. • DeSOx & DeNOx system will be installed to control SO_2 & NO_2 emission. • The CEMS (Continuous Emission Monitoring System) for monitoring of the pollutants from the stacks will be installed with proposed stack, which will be attached to CPCB server.	• As above • Detail head-wise cost break up as per • Exhibit-1

			• Regular third-party monitoring for ambient air quality will be carried out. • Monitoring will also be done in surrounding area to check air quality regularly. • The total domestic wastewater generated will be treated in STP. Treated water from STP will be used for gardening. • Industrial wastewater generated from utility installations will be partly recycled for lime slurry preparation & remaining in RO-2. • Scrubber bleed-off along with plant washing will be diverted to ETP. Treated water from ETP will partly be recycled for plant washing & remaining will be diverted to RO-2. • ETP treated water along with remaining industrial wastewater will be diverted to RO. • Reject from RO-1 and RO-2 will be diverted to MEE. RO permeate and MEE condensate will be recycled. • ZLD will be followed. • Proper metering facilities will be provided. • Regular in-house and third-party monitoring for wastewater management will be carried out. • Implementation of all the mitigation measures suggested in the Environment impact report will be ensured by the Env Management Cell.	
13	Mr. Sanjay Patel Vill : Kalgam, Ta : Umargam Dist : Valsad	• He represented that I have nine questions and reply should be given by GPCB and Company's Director because their executive summary report is misleading. • How much TPH boiler will be installed? They have mentioned in their report to install bag filter. Filtration of Alkali Scrubber has to be	• The process will be carried out in a fully closed system to ensure no loss of product – Carbon Black – also ensuring control of particulate emissions. Plant will be based on fully automated (DCS) system. An automatic leakage detection system will be installed for piping to prevent any leakage. Bag-filters will be a part of the process for	• As above • Detail head-wise cost break up as per Exhibit-1

		installed for 0.3 TPH boiler, Bag filter has to be installed in case of boiler upto 10 TPH, ESP has to be installed for boiler more than 10 TPH capacity which is not mentioned anywhere in the report. Toxic dust through bag filter will be dispersed in air and it is said that it will not cause any air pollution which is false statement. Clarify which type of filtration will be installed for Boiler. • Question no.2; Management of VOCs generated from the reactor is not mentioned. Mitigation measures of odour generated from the heat are not mentioned. (Other) Rubber companies are situated within 500 meter of Agriwad (Karajgam) here. School students are suffering due to these (Rubber) companies. Despite of having techniques, we are not able to prevent odour. So give details of VOCs to be generated and its mitigation measures. • Ambient air monitoring has been carried out in the area of 10 km radius at 10 locations to assess quality of ambient air by M/s. Precitech Laboratory. Give the details of 10 locations, names of persons accompanied while monitoring and name of village and school where monitoring was carried out and	collection of Carbon Black and separation from tail gas. The Tail gas generated during the manufacturing of carbon black will be used as fuel in boilers and dryers. • DeSOx & DeNOx system will be installed to control SO_2 & NO_2 emission. • The CEMS (Continuous Emission Monitoring System) for monitoring of the pollutants from the stacks will be installed with proposed stack, which will be attached to CPCB server. • Regular third-party monitoring for ambient air quality will be carried out. • Monitoring will also be done in surrounding area to check air quality regularly. • Tank design will be ensured as per the statutory norms. • LDAR program will be carried out as part of routine schedule.	

		because report given by them is false. So we request to carry out monitoring again. • It is told by the company that greenbelt will be developed by to reduce noise pollution. If the greenbelts were developed by the industries of Sarigam, there would be a forest like the Dangs in this area. • When N. R. Aggarwal company obtained permission to use coal, they promised to develop the greenbelt and they submitted the report to the Government to plant 25,000 trees. But when inspection was carried out in consultation with the Forest Department, it was revealed that there were only 500 trees planted by them. Greenbelt's claims are absurd and false. • Arrange to carry out survey by forest department for wildlife and birds of surrounding area. There is fear of extinction of wildlife and birds of surrounding area due to air and noise pollution. Mention the actions taken by the company for the same and if the actions are not taken then close the company or permission should not be granted to the company. • The company will generate 1,00,000 liter domestic wastewater per day and 2,47,000 industrial wastewater per day from which 30,000 liter wastewater will be treated in ETP and 84,000 liter wastewater will be evaporated, 1,40,000 liter wastewater is	• It will be ensured that noise level will be kept below permissible norms within company premises by providing full enclosure to Turbine and installing DG Set equipped with acoustic enclosure. • Regular maintenance will be carried out. • Furthermore, adequate greenbelt will be developed for attenuation of noise. • Regular Noise monitoring will be carried out. • As per the revised water balance in Final EIA report, Total water requirement will be 3115 KLD (Domestic: 50 KLD & Industrial: 2965 KLD) out of which, 2525 KLD will be fresh water & remaining 590 KLD will be recycled. • ETP, STP, RO & MEE will be installed to ensure implementation of ZLD.	

		added. It is not mentioned that where will remaining 1,33,000 liter wastewater be discharged. It is not mentioned that whether this wastewater be discharged in sewer drain or under the ground or transported by tankers. • Rubber companies are located in Agriwad. The school is located within 100 meters from Dashmash Rubber and children are suffering there. There is population within 200 meter and even school-colleges within 500meter radius from where we are standing, so criteria should be decided accordingly and arrangement should be made accordingly. • It is said that employment will be generate by M/s Madura Carbon (India) Ltd. at Village Karaj and 385 persons will be employed which is very less. According to the Government rule 85% of local employment should be provided, whenever there is an issue of employment to local people, they will say that you are not qualified & not educated. Then what the employment to the people will be given for water irrigation from this left wastewater? Please clarify the same and If the company submit affidavit to the H'ble Collector, then only permission for production should be granted.	• Flow meter will be provided for keeping record of freshwater consumption and recycle of treated wastewater. • Total employment will be provided to around 760 numbers through direct and contractual employment with priority to local villagers based on their skills. • Around 80-85% of local skilled & unskilled persons will be employed after providing training.	

		• It is shown that there are three such companies in Gujarat. These companies have been established before the year 2004, no permission has been granted to such company after the year 2004. • M/s Madura Carbon (India) Ltd. at Karaj will carry out pyrolysis process in their plant, which is prohibited by Gujarat Pollution Control Board. Then how Gujarat Pollution Control Board will give permission to this plant? Gujarat Pollution Control Board should clarify the same.		
14	Shri Pankaj Rai, Vill.: Sarigam, Ta.: Umargam, Dist.: Valsad.	• He presented that Madura Company is situated at Sarigam and it is in operation. It has provided employment mostly to local people and many people employed they are present here. Company is also helping in development work in village under CSR. Gram Sarigam is getting revenue. It earns by providing house number. It is a textile division. NOC was given to Coromandal its name is Sabero when Sarigam was Gram Panchayat. Mangozeb (Pesticide) is a product produced by Coromandal Company. Pesticides used by the farmers in crops are in the form of Mangozeb. And one such company produces company kaltar and used it in farming. • There is a company in Sarigam which produces Ferrous which is used in farming of onion and potato. Aarti Drugs is also in Sarigam and it produces drugs which are used to prevent disease like plague which	• --	• --

		was used in Surat. In the Public hearing of the N.R. Agrawal which was in Sarigam people present here to oppose were present there then why didn't they opposed there. This company is going to be established at Karajgam. Approval should be given to the company only after consent of Grampanchayat Karaj and by considering public interest, local employment and development of the village and surrounding villages as per norms of MoEF&CC and GPCB.		
15	Shri Vilash Gohil, Vill.: Karajgam, Ta.: Umargam Dist.: Valsad.	• He represented that I am illiterate. This company should not establish here in any situation. If this company will establish here then we 200 boys & 250 ladies will burn our self in oppose of this company. People present here want business. There is no need to establish such a huge plant only to employ 160 people. Those who want job can go to 450 companies in Sarigam GIDC. • This Chemical Company should be established in Bharuch and Ankleshwar which has chemical zone. Why company has came to pollute village and has come to request us. • Amongst the people present here, 50% people are in favour of the company and rest 50% are against the company. If 90% people are in favour of the company and 10% against the company, if 10% people are against then it doesn't matter. All the companies are established here. Sir, i will burn myself if this company permitted to be setup here. If the Karajgam is not aware, I will make aware adivasis of Umargam Taluka, I will go to Valsad District, I will go to Gandhinagar and even report to Shri	• It is planned to take appropriate steps to prevent air, water and noise pollution for our proposed project. • Implementation of all the mitigation measures suggested in the Environment impact report will be ensured by the Env Management Cell. • Total employment will be provided to around 760 numbers through direct and contractual employment with priority to local villagers based on their skills. • Around 80-85% of local skilled & unskilled persons will be employed after providing training.	• As above • Detail head-wise cost break up as per • Exhibit-1

		Narendra Modi, I will go alone. How many companies are going to be established in Sarigam? Is there less chemical companies in this area? Population of our village is 2300, out of which only 200 people are working and rest of the people are earning from home. So we don't want such a huge company only for 160 people. We suggest you to setup school or university. R.K. Rubber is situated at the distance of 200 meter. Nobody has got employment in that company. Madura Carbon should not be established here. Otherwise we are ready to burn ourselves. • This is to inform H'ble Collector that we are ready to buy this land if you allot us half-half acre land by Khalsa. • This company will not provide employment to the people even if it is going to be established here.		
16	Shri Kamlesh Manjibhai Dhodi, (Sarpanch) Vill.: Karajgam, Ta.: Umargam, Dist.: Valsad.	• He represented that there are possibilities of cancer these days due to smoking and smoke of vehicles. People are opposing the company for their self-interest only. • Where were the people of Aagrivad village during the establishment of Royal Company, Shotra Company and A.K. Rubber and why didn't they opposed the company? We are not against this company.	• --	• --
17	Shri Navin Patel, Vill.: Karaj, Ta.: Umargam, Dist.: Valsad.	• He represented that PESA Act 1996 was enforced in the year 2018 and by enforcement of the said act all the powers of the Panchyat was transferred to Gram Sabha. This company is going to be established without the permission Gram Sabha, so we are opposing this company. We are opposing this company under PESA Act. PESA Act is being implemented at present and we don't want any type of plant	• Company will ensure to comply to the applicable statutory provisions.	• --

		or factory. We request that all the procedures should be followed as per PESA Act 1996.		
18	Smt. Varshaben Raval, Vill.: Khatalwada, Ta.: Umargam, Dist.: Valsad	• She represented that thousands of people will get employment by the establishment of this company. So this company should be established.	• --	• --
19	Shri Pintu Gohil, Vill.: Sarigam, Ta.: Umargam, Dist.: Valsad.	• He represented that we don't need development, we have less needs, and we neither want development nor employment. We will earn on our own, we don't want development. We are against this company.	• --	• --
20	Shri Lalitbhai Shaileshbhai Patel, Vill.: Karaj, Ta.: Umargam Dist.: Valsad.	• He represented that people form Sarigam of Bhilad came and represented here but till today they never came to our Karajgam to ask us that how we are living. Now when the company is going to be established here and we are about to get employment then all people came here to oppose the company. But we are not opposing this company.	• --	• --
21	Shri Surajkumar Uttambhai Dhodi Vill.: Karajgam, Ta.: Umargam, Dist.: Valsad	• He represented that I have completed M.Sc. in Organic Chemistry. After completing my post-graduation, I was unemployed for six months. Whenever any company establishes, commits to provide employment to local people. Whenever interviews conducted local people are not selected for employment. It is my request to protect the environment.	• Total employment will be provided to around 760 numbers through direct and contractual employment with priority to local villagers based on their skills. • Around 80-85% of local skilled & unskilled persons will be employed after providing training.	--

Exhibit-1: Budgetary Provisions

Table A: Budgetary Provisions for EHS in Capex planning (For Proposed Project)

Sr. No.	Purpose	Capital Cost in Crore (INR)
1.	ETP & STP – 0.97 Cr.	0.97
	RO & MEE – 10.5 Cr.	10.5
2.	CEMS	0.30
	Bag Filter (in Process)	45.0
	DeSOx	20.0
	DeNOx	5.0
3.	Noise Control	0.5
4.	Safety instruments	4.2
5.	Greenbelt Development	0.3
6.	Rainwater Harvesting	0.5
	TOTAL	**42.27**

Table B: Budgetary Provisions for EHS in Opex planning

Sr. No.	Purpose	Annual Recurring Cost (Crores INR)
1.	ETP, STP, Operational Cost	0.40
2.	MEE& RO Operational Cost	19.0
3.	Air pollution control device: DeSOx	3.1
4.	Air pollution control device: DeNOx	1.1
5.	Air pollution control device: Bag filters	2.0
6.	Fees for Common disposal facilities	0.30
7.	Noise Control	0.10
8.	Env. Monitoring expenses	0.03
9.	Safety instruments maintenance	0.10
10.	Environment & safety training	0.02
11.	Occupational Health & Medical surveillance	0.10
12.	Green belt maintenance	0.20
13.	Rainwater Harvesting	0.05
14.	CER	0.66
	TOTAL	**27.16**

MADURA CARBON

Date: 25/02/2018

To,
The Member Secretary,
EAC (Ind-2),
MoEF&CC,
New Delhi

Sub: Reply to the letter submitted to The Secretary, MoEF&CC by Dalpatbhai Chhotubhai Dhodi, At & Post-Karajgam Rai Faliya, Tal: Umargam, Dist.: Valsad, Pin code-396155, Gujarat, regarding public consultation of M/s. Madura Carbon India Limited. At Fansa (Karanjgam), Tal: Umargam, Dist.: Valsad, Gujarat.

Dear Sir,

As per the above subject matter kindly find our point wise reply as under:

1. **The EIA report submitted by the said company is full of misinformation, Misleading and incomplete.**

Reply. We wish to inform that the Executive Summary of the EIA report was made available to the public to provide a brief summary of the complete Draft EIA report. The draft EIA report was prepared containing all the required information in compliance of the TOR. This draft EIA report was submitted to the GPCB for public hearing. Necessary correction has been made in the Final EIA report after public hearing with additional mitigation measures to control air, water and noise pollution as per the suggestions received during public hearing.

2. **As per the EIA report manufacturing of carbon black will result into the emission of highly hazardous gasses like Nox, Sox and Carbon particles ashes etc. from the, bag collector which will be affect the people living in about 10 km project.**

Reply. We would like to inform you that for our proposed project, we have planned to take necessary mitigation measures to control air, water and noise pollution.

The overall system will be closed system to control emissions below permissible norms. Plant will be based on fully automated (DCS) system. An automatic leakage detection system will be installed for piping to prevent any leakage. Bag-filters will be a part of the process for collection of Carbon Black and separation from tail gas. The Tail gas generated during the manufacturing of carbon black will be used as fuel in boilers and dryers. Moreover, after the public hearing while finalizing the EIA report we have proposed to install additional DeSOx (FGD) & DeNOx (SCR/SNCR) system to control SO_2 & NO_2 emission.

The dispersion modeling is carried out for the predicting the increase in levels of PM, SO_2 and NO_x emissions in the surrounding area due to the proposed project and the same has been presented in the Final EIA report. The outcome of the model indicates that the predicted levels of the pollutants will be within the applicable National Ambient Air Quality Standards. So, we assure you that there will not be any adverse health impact on the surrounding area

3. **Due is the emission of hot given from the boiler of this project the temperature of the 10 km area around the project will increase by 3^0 to 4^0 Celsius.**

MADURA CARBON

Reply. Waste heat will be used for preheating the air and feed stock before feeding it in the reactor and for steam generation through Waste heat recovery Boiler. Further, insulation will be provided to reduce the heat loss from all heat emitting plant machinery and piping. Thus, heat emission from the plant will be negligible and issue of temperature increase in surrounding area will be significantly controlled.

4. **The project is located at a place where not less than 1500 people live at a distance of just 200 meters from the project and about 1 lakh people reside in 10 km area around the project location.**

Reply. The distance certificate has been issued by Talati cum Mantri of Karajgam Grampanchayat, regarding the distance of residential area, school and college. The distance certificate is attached as ***Enclosure-1***.

5. **The project is located in the ecologically sensitive area the area around this project has many mango, chikoo, coconut, orchards and other agricultural land and forest and just 300 meters from the location. This area has lakhs tress & the area has very rich flora and fauna. The air pollution caused by this project will destroy the rich flora and fauna of the area.**

Reply. We would like to inform you that for our proposed project, we have planned to take necessary mitigation measures to control air, water and noise pollution. The overall system will be closed system to control emissions below permissible norms. Plant will be based on fully automated (DCS) system. An automatic leakage detection system will be installed for piping to prevent any leakage. Bag-filters will be a part of the process for collection of Carbon Black and separation from tail gas. The Tail gas generated during the manufacturing of carbon black will be used as fuel in boilers and dryers. Moreover, after the public hearing while finalizing the EIA report, we have proposed to install additional DeSOx (FGD) & DeNOx (SCR/SNCR) system to control SO2 & NO2 emission.

Furthermore, the company has obtained an Authentic Map and NOC from the Forest Department. Copy of the same is attached as Enclosure-2. The nearest forest is situated at approximately 800m from the proposed site. All necessary measures for pollution mitigation will be implemented so that there will be no negative impact on the surrounding agricultural land or reserve Forest area.

6. **There are nursery and primary school, primary health center, panchayat office etc. just 500 meters from the location and the lives of the children will be endangered by the air pollution of this project.**

Reply. The distance certificate has been issued by Talati cum Mantri of Karajgam Grampanchayat, regarding the distance of residential area, school and college. The distance certificate is attached as ***Enclosure-1***. Moreover, as described above, the company has decided to take all necessary measures for pollution mitigation so that there will be no negative impact on the surrounding area.

7. **The EIA report mention that the project will use 29 lakh liter water per day from Daman Ganga canal project. Daman Ganga canal project is not able to meet the requirement of farmers for the irrigation of from lands and if they divert this water is this project the agriculture of the area will suffer a lot water requirement of this project is huge. It is going to consume about 40% of the total water used by the nearby Sarigam Gujarat Development corporation (GIDC).**

Reply. The water requirement for the project will be provided through the industrial quota of Damanganga Canal and 'In-principal approval' has been obtained from the 'Executive Engineer, Damanganga Canal Distry. Dn. No. 3'. Copy of the same is attached as ***Enclosure-3***.

As per the Final EIA report, the total water requirement for proposed project will be 3115 KLD, out

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CIN: U23109MH2017PLC302582

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of which 2525 KLD will be fresh water & remaining 590 KLD will be recycled water. Apart from this, the company has proposed to save 34800 kL/Annum of rainwater per year through Rain-water Harvesting System. A 50000 KL capacity pond will be used for storage of harvested rain water. Moreover, the company will also help in carrying out rain-water harvesting activities in surrounding villages under the CER plan.

8. **Noise pollution by this projected will be more than 85 db this will affect adversely the people living just 200 meters from the location and the wild life of the nearby forest.**

Reply. It will be ensured that noise level will be kept below permissible norms within company premises by providing full enclosure to Turbine and installing DG Set equipped with acoustic enclosure. Regular maintenance will be carried out. The noise within the plant operation area will be maintained below 85 dB(A), which will attenuate with the provision of adequate greenbelt around the plant boundary. Thus, as per the above-mentioned mitigation measures, the people living in the surrounding area will not be affected due to noise generation from the proposed project.

9. **The environment protection measures that the company process will increase the cost pf production of the project. Which in turn will make the project unviable in such an eventually the company is likely to keep these environment protection measures only on paper and the whole area which is inhabited by lakhs of people will destroyed.**

Reply. Financial feasibility of the project has already been carried out considering all expenses towards environmental protection and other expenses for CER. The company is committed to protect the environment and health of the people in the surrounding area. Company has also planned to be the key player in the area for social upliftment and welfare.

10. **Gujarat Pollution Control Board has miserably failed in protecting the environment of the area from the polluting chemical factories already situated in nearby sarigam GIDC in spite of innumerable companies from the local people, the air pollution caused by these factories has already taken heavy toll of the local people. We are enclosing the photographs of the air pollution caused by these chemical factories here with for your kind consideration.**

Reply. This point is not related to our proposed project. However, we assure that we shall take all above-mentioned measures for control of any air pollution from our plant.

11. **Gujarat Pollution Control Board has miserably failed the underground water of the nearby area. Like Karanjgam, Manda, Sarigam, Punat etc. Around the nearby area sarigam GIDC the chemical factories of sarigam GIDC blatantly flout all environmental protection measures that they had promised on paper. All underground water of the area is completely polluted and the locals have to depend on costly water brought from for away areas. Similarly of the promise which this company given for zero discharge of water is not kept we the locals will further supplier. The nearby ponds and other water resources will all be polluted.**

Reply. The project will adopt Zero liquid discharge scheme. All wastewater will be treated and reused. Hence, there will be no disposal of wastewater outside premises to any land, pond or nallah. Moreover, no ground water will be withdrawn. Hence, company will not create any threat to water resources of the area.

12. **The carbon partials that will be emitted from the vapour bag collector of the company will cause lung cancer, though at infection, bronchitis, accumulation of dust in lungs etc. the adverse effect on the health of humans was apprehended by the British journal of industries medicine 1993:50: 1086-1096.**

Reply. The process will be carried out in a completely closed system for controlling fugitive emissions with

MADURA CARBON

bag-filters as part of the process. Plant will be based on fully automated (DCS) system. An automatic leakage detection system will be installed for piping to prevent any leakage. Bag-filters will be a part of the process for collection of Carbon Black and separation from tail gas. The proposed unit will comply with all necessary measures regarding occupational health and all applicable laws will be followed. Additionally, the level of carbon black in the air within the unit will be much lower than the permissible norms of exposure prescribed by OSHA & NIOSH.

13. **The Gram Sabha of Karanjgam village passed a resolution on 26/08/19 rejecting the earlier no objection given to this project. Which are based on misinformation and environmental hazards that this project is going to cause. the copy of the resolution is enclosed here with.**

Reply. We wish to state the earlier order dtd. 06/11/2018 was passed by the **Gram Panchayat** of Karajgam under the *'Gujarat Panchayat Act, 1993'* as part of the procedure of grant of NA conversion of the land survey nos. allocated to Madura Carbon India Ltd. for their upcoming project of Manufacturing of Carbon black along with power generation. Whereas the resolution passed on the said date of 26/08/2019 was passed by the **Gram sabha**.

The clause no. 94 of the *'Gram Panchayat Act, 1993'* and Section 6 of the *'Gujarat Provisions of the Panchayats (Extension to the Scheduled Areas) Rules, 2017'* delineates the Roles & Responsibilities of the **Gram Sabha.** Accordingly, **Gram Sabha** can only discuss the issues & make recommendations to the **Gram Panchayats**, but it cannot overrule the decision of Panchayats. Considering the same, the **Gram Sabha** does not have any legal rights to supersede the decision taken by the **Gram Panchayat** under the aforesaid Act and Rules.

Furthermore, as per the clause no. 249(1) of the 'Gram Panchayat Act, 1993', only the **Taluka Development Officer (TDO)** has the right to review or to overrule any resolution passed by the **Gram Panchayat**. Hence, the said resolution passed by the **Gram Sabha** on 26/08/19 does not stand legitimate under the provisions of *'Gram Panchayat Act, 1993'* and *'Gujarat Provisions of the Panchayats (Extension to the Scheduled Areas) Rules, 2017'*.

Furthermore, it may also please be noted that we commit to implement all the mitigation measures proposed and suggested in our Final EIA report and to abide by all the conditions of the environmental regulations to ensure that there is no environmental hazard from our operations.

We hope the above-given clarifications are in line with your requirements.

Thanking you,

For Madura Carbon India Limited,

(Authorized Signatory)

MADURA CARBON INDIA LIMITED ★ MUMBAI

A -4

Enclosure-1: English translation of Certificate issued by Talati cum Mantri of Gram Panchayat, Karajgam

CERTIFICATE

This is to certify that land covered under Revenue Survey No. 3718, 3708, 3719, 3725, 3705 and 4318 of Umbergaon Taluka of Valsad District is owned by MADURA CARBON INDIA LIMITED totally and there is no Residential Area, Temple, Pond, State Highway, National Highway, Coastal Highway, School, Historical Sites or Railway Line in 500m area from these Survey numbers.

S/d

Talathi Cum Mantri

Grampanchayat Karajgam

Taluka Umbergam,

Dist Valsad

સત્યમેવ જયતે

નાયબ વન સંરક્ષકશ્રીની કચેરી,
વલસાડ દક્ષિણ વન વિભાગ – વલસાડ,
જીલ્લા સેવા સદન–૨, ત્રીજો માળ,તીથલ રોડ,
વલસાડ – ૩૯૬ ૦૦૧.

E-mail: dcfvalsouth@gmail.com

Tel No.: (02632) 253809
Fax. : (02632) 259680

ક્રમાંકઃ ક/જમન/ટે.૧૧/ ૯૪૪-૪૫ /૨૦૧૮–૧૯
વલસાડ,તા. ૦૭/૦૩/૨૦૧૯.

પ્રતિ,
શ્રી મદુરા કાર્બન ઈન્ડીયા લી.
અંધેરી (વેસ્ટ) મુંબઈ.

વિષયઃ–ઓથેન્ટીકેટેડ મેપ ઈન્ડીકેટીંગ ડિસ્ટન્સ ફ્રોમ નેશનલપાર્ક, સેન્ચુરીસ, બાયોસ્ફીયર રિઝર્વ, એન્ડ માયગ્રેટરી કોરીડોર ઓફ વાઈલ્ડ એનીમલ ઈટીસી લોકેટેડ વીથીન ૧૦ કિ.મી. રેડીયલ પેરીફેરી ઓફ ધ પ્લાન્ટ લોકેટેડ એટ વિલેજ કરંજગામ તા.ઉમરગામ,જી.વલસાડ,ગુજરાત એન્ડ નો ઓબ્જેકશન સર્ટીફિકેટ રિગાર્ડીંગ ધ પ્રપોઝલ પ્રોજેકટ ફ્રોમ ફોરેસ્ટ ડિપાર્ટમેન્ટ.

સંદર્ભઃ– (૧) આપનો તા.૧૫/૦૨/૨૦૧૯નો પત્ર.
(૨) મુખ્ય વન સંરક્ષકશ્રી, વલસાડના પત્રાંકઃ બ/જમન/૧૪/૯૫૪૯, તા.૦૬/૦૩/૨૦૧૯.
(૩)અત્રેની કચેરીના પત્રાંકઃક/જમન/૧૧/ ૯૪૨–૪૩.તા.૦૬/૦૩/૨૦૧૯.

મહાશય,

જયભારત સહ ઉપરોકત વિષયનાં અનુસંધાને જણાવવાનું કે, આપની તા.૧૫/૨/૨૦૧૯ ની અરજીમાં બીનજંગલ સર્વે નંબરઃ– ૩૬૩/૩/૪,૩૬૩/૩/૧,૪૭૯/૭,૩૫૦/૫/૧,૩૫૦/૫/૪,૪૭૯/૧/૧,૪૭૯/૧,૪૮૧/૧/૧ વાળી જમીનમાં આવેલ આપના પ્રોજેકટ પ્લાન થી ૧૦ કિ.મી.ના ત્રિજયામાં ઉકત વિષયમાં દર્શાવેલ વિસ્તારો દર્શાવતો નકશો અને તે અંગેનું "ના વાંધા પ્રમાણપત્ર" મેળવવા મુખ્ય વન સંરક્ષકશ્રી વલસાડને રજુઆત કરેલ છે.

પ્રસ્તુત અરજીમાં કરેલ રજુઆત પરત્વે મુખ્ય વન સંરક્ષકશ્રી વલસાડે સંદર્ભ (૨) હેઠળના પત્રથી સદર બાબતે નિયમોનુસાર કાર્યવાહી કરી કરેલ કાર્યવાહીનો અહેવાલ તેમની જાણ હેઠળ આપને પ્રત્યુત્તર આપવા જણાવેલ છે.

પ્રસ્તુત બાબતે અત્રેના વન વિભાગમાં નેશનલ પાર્ક,સેન્ચુરીસ, બાયોસ્ફીયર રિઝર્વ,માયગ્રેટરી કોરીડોર જેવા વિસ્તારો આવેલ નથી. પરંતુ આપના કરંજગામની ઉપર જણાવેલ સ.નં.વાળી બીનજંગલ જમીનથી ૧૦ કિ.મી.ની ત્રિજયામાં અત્રેના વન વિભાગનો કલમ–૨૯ હેઠળનો રક્ષિત અને કલમ–૨૦ હેઠળનો અનામત જંગલ વિસ્તાર આવેલ છે.જે પ્રોજેકટ વિસ્તારથી અંદાજે ૮૦૦ મીટર દુર આવેલ છે.અને નકશામાં દર્શાવવામાં આવેલ છે. આપના હયાત પ્રોજેકટ પ્લાન બાબતે અત્રેની કચેરીના સંદર્ભપત્ર(૩)માં જણાવેલ શરતોનું પાલન કરવા સબબ સોગંદનામુ આપના તરફથી લખી આપેલ હોય નીચે જણાવેલ શરતો આધિન નીચે સહી કરનાર તરફથી વન સંરક્ષણ તથા વન્ય જીવ સંરક્ષણનાં હિતને ધ્યાનમાં રાખી "ના વાંધા પ્રમાણપત્ર" તથા નકશો આપવામાં આવે છે.

X શરતો X

(૧) જે હેતુસર "ના વાંધા પ્રમાણપત્ર"અને નકશાની માંગણી કરેલ છે. તેના સબંધિત તમામ સરકારશ્રીના વિભાગો/ખાતાઓની પરવાનગીઓ પૂર્વે મેળવી લેવાની શરતે આ પ્રમાણપત્ર આપવામાં આવે છે.

(૨) આપના તરફથી આપવામાં આવેલ સોગંદનામુમાં લખી આપેલ શરતોનું પાલન કરવાનું રહેશે.

(૩) માંગણીવાળા વિસ્તારમાં આપના અથવા આપના વતી કામ કરતા કોઈપણ વ્યકિત દ્વારા સદર વિસ્તાર સિવાય અન્ય વિસ્તારમાં કોઈપણ કામગીરી કરવામાં આવશે નહિં

(૪) માંગણીવાળા વિસ્તારમાં કામ કરતા કામદારો દ્વારા નજીકના જંગલ વિસ્તારમાં પ્રવર્તમાન કાયદાઓની જોગવાઈઓનું ભંગ કરતૃ કોઈપણ અપકૃત્ય આચરવામાં આવશે નહિં અને આવો કોઈ અપકૃત્ય માટે આપની જવાબદારી નકકી થશે. તો તે માટે વન વિભાગ દ્વારા લેવાતા પગલા બંધનકર્તા રહેશે.

(૫) નજીકના જંગલ અથવા અભ્યારણ્યમાં આવુ કોઈ ગેરકૃત્ય થયેલ અથવા થતુ હોવાનું આપના ધ્યાન પર આવશે.તો તે અંગેની જાણ તત્કાળ નજીકના વન વિભાગના અધિકારીશ્રીને કરવાની રહેશે.

(૬) માંગણીવાળા વિસ્તારમાં ઔધોગિક પ્રવૃતિ કરવાથી ફેલાતા પંદુષણ અને હવામાં ઉડતા રજકણોથી પર્યાવરણને નુકશાની ન થવા પામે અને નજીકના જંગલ વિસ્તારોને નુકશાન ન થવા પામે તેની આપના તરફથી તકેદારી રાખવાની રહેશ.

(૭) માંગણીવાળા વિસ્તાર નજીકના જંગલ વિસ્તારોમાં આપના મજુરો કે અન્ય ઈસમો ગેરકાયદેસર ખોદકામ, કપાણ,વાહતુક,છીદણી,ખેતી,આગ કે અન્ય વનગુના ન કરે તે માટે સજાગ રહેવુ પડશે.અને આવા કૃત્ય થશે તો નજીકના વનકર્મીને જાણ કરવાની રહેશે.

(૮) વિસ્તરણ વન વિભાગનાં સુરક્ષિત જંગલ તરીકે જાહેર થયેલાં રસ્તાઓ કે ગ્રામ્ય વનોનાં અનુસંધાનમાં જરૂર જણાયે નાયબ વન સંરક્ષકશ્રી, સામાજીક વનીકરણ યોજનાનો અને પંચાયતનો અલગથી અભિપ્રાય આપના દ્વારા મેળવી લેવાનો રહેશે.અને જરૂર જણાયે ભારતીય વન સંરક્ષણ ધારા–૧૯૮૦ની દરખાસ્ત રજુ કરવાની રહેશે.

(૯) ભારતી વન અધિનિયમ–૧૯૨૭,ભારતીય વન્યપ્રાણી સંરક્ષણ અધિનિયમ–૧૯૨૭,ભારતીય વન સંરક્ષણ ધારા–૧૯૮૦ કે અન્ય કાયદાઓની જોગવાઈનું પાલન આપના તરફથી કરવાનું રહેશે.

(૧૦) આપના તરફથી નજીકના વન વિસ્તારોમાં ગેરકાયદેસર રસ્તા બનાવવા નહિં કે વન વિસ્તારોમાંથી વાહનો પસાર કરવાના રહેશે નહિં.

(૧૧) માંગણીવાળી જમીનમાં ભારે વાહનો લાવી કે અન્ય કોઈપણ પ્રકારની મશીનરીથી ઘોંઘાટ પેદા કરી નજીકના જંગલો મુકત વન્યજીવનને ખલેલ પહોંચાડવી નહિં.

(૧૨) માંગણીવાળી જમીનની આજુબાજુ આવેલ જંગલની જમીનમાં આગ લાગવાના કિસ્સા બને તો આપના દ્વારા આગ ઓલવવામાં મદદ કરવા કામદારોને સંજોગોને અનુરૂપ મોકલવાના રહેશે.

(૧૩) વન વિભાગ તરફથી સૂચવેલ તમામ શરતો પૈકી કોઈપણ શરતનું ભંગ કે ઉલ્લંઘન થશે તો વિભાગ તરફથી આપવામાં આવેલ"ના વાંધા પ્રમાણપત્ર" તથા દસ્તાવેજો આપો આપ રદ થશે.

સ્થળ:વલસાડ
તારીખ:૦૭/૦૩/૨૦૧૯.

નાયબ વન સંરક્ષક
વલસાડ દક્ષિણ

નકલ સાદર રવાના:મુખ્ય વન સંરક્ષકશ્રી વન વર્તુળ,વલસાડ તરફ આપના સંદર્ભપત્ર અન્વયે જાણ થવા વિનંતી છે.

નાયબ વન સંરક્ષક
વલસાડ દક્ષિણ

Enclosure-2: English translTn of NOC letter & authentic map from forest dept.

Sr. No.: C/JMN/T. 11/944-45/2018-19

Valsad, Date: 07/03/2019

To,

M/s. Madura Carbon India Ltd.

Andheri (West) Mumbai.

Subject: Authentic map indicating distance from national park, centuries, Biosphere Reserve, and migratory corridor of wild animals etc. located within 10 km radial periphery of the plant located at Village: Karanjgam, Ta.: Umbergaon, Dist.: Valsad, Gujarat and no objection certificate regarding the proposal project from forest department.

Reference: 1) Letter of Date: 15/02/2019.
2) Chief Forest Conservator, Valsad. Letter No.: B/JMN/14/9549, Date: 06/03/2019
3) Letter no. of the regional office: C/JMN/11/942-43. Date: 06/03/2019.

Respected Sir,

With reference to the above subjected matter, it is to inform you that in your application dtd. 15/02/2019, it is requested for obtaining Map and “No Objection Certificate” for your project in Non-forest land of survey no.: 363/3/4, 363/3/1, 479/7, 350/5/1, 350/5/4, 479/1/1, 479/1, 481/1/1.

With regard to the application presented, as per the letter Ref. (2), Chief Conservator of Forest, has taken an action as per rule, and have asked for the reply on the report of the action taken.

As per the presented matter, no National park, Centuries, Biosphere Reserve, Migratory corridors are included in the forest area. But, protected area under clause-29 and reserved forest area under clause-20 is included in the 10 km radius area from aforesaid non-forest land of Karanjgam, which is around 800 meter far and shown in the map. Regarding your project, an affidavit is signed to comply the conditions said in the Ref. letter (3) and by considering the same, the forest and wild-life conservation, “No Objection Certificate” and map is sanctioned.

Annexure-4

Conditions

1. This “No Objection Certificate” is sanctioned on the prerequisite of obtaining permissions of all concerned government sections/ accounts before time.
2. All the conditions written in the affidavit shall be complied.
3. Not any work shall be done except from the area which is asked by you or any other person on behalf of you.
4. No objectionable work shall be done by the workers of the project area in the nearer forest area which might breach the current provision of laws or any tortious work. For this, the action taken by forest department will be applicable/binding.
5. The nearer Forest Departments shall be immediately informed if any tortious work observed in the nearest Forest area or centuries.
6. Proper vigilance shall be taken by the unit for preventing damage to the environment of the nearest forest area due to particulate matter & pollution due to industrial activities from the project area.
7. Workers of the unit shall not be involved in any illegal excavation, farming, fire, harvesting or any other crimes related to forest area. And if any of these activities observed than the unit shall inform the nearby forest worker.
8. Opinion shall be obtained by the unit from Deputy Forest Conservator, Social forestry scheme and Panchayat for the roads or village forests which are published/announced as safe forests by the Forest Department of Extension and if required, Indian Forest Protection Act-1980 shall be proposed.
9. Provision of laws of Indian Forest Act-1927, Indian Wildlife Conservation Act-1927, Indian Forest Protection Act-1980 shall be complied by the unit.
10. Neither illegal roads shall be constructed nor any vehicles shall be passed through nearby Forest area.
11. The nearby wild animals shall not be disturbed by bringing heavy vehicles or by producing noise from the machineries.
12. If, fire irrupts in the forest area surrounding the project site, workers shall be sent for extinguishing fire as the case may be.
13. If any of the condition, amongst the suggested from Forest Department violated then the “No Objection Certificate” & other documents will get cancelled.

S/d
Deputy Conservator of Forests,
Valsad South

Deputy Conservator of Forest
Valsad South.

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"ONE TEAM ONE VISION ONE MISSION"

કરજગામ ગ્રામ પંચાયત
KARAJGAM GRAM PANCHAYAT

મુ. / પો. કરજગામ, સ્ટે. ભીલાડ, તા. ઉમરગામ, જિ. વલસાડ.

સરપંચ : કમલેશભાઇ મંજીભાઇ ધોડી મો. : 9904277330 / 9824124450

એક કદમ સ્વચ્છતા की ओर

જાવક નં. :

તા. ૨૭ / ૦૨ /૨૦૧૮

પ્રમાણપત્ર

આથી આ પ્રમાણપત્ર લખી આપવામાં આવે છે કે,

વલસાડ જિલ્લાના ઉમરગામ તાલુકાના મોજે. ફણસા કરજગામના રે.સર્વે નં. ૩૭૩૮, ૩૭૦૮, ૩૭૧૯, ૩૭૨૫, ૩૭૦૫, અને ૪૩૧૮ વાળી જમીન જે હાલે મદુરા કાર્બન ઈન્ડિયા લીમીટેડ નામે ચાલી આવે છે. સદર ઉપરોકત તમામ સર્વે નંબરવાળી જમીનની ૫૦૦ મીટરના વિસ્તારમાં રહેણાંક વિસ્તાર, મંદિર, તળાવ, સ્ટેટ હાઈવે, નેશનલ હાઈવે, કોસ્ટલ હાઈવે, સ્કુલ, ઐતિહાસિક સ્મારક કે રેલ્વે લાઈન પસાર થતી નથી.

H. A. Tadvi
તલાટી કમ મંત્રી,
ગ્રામ પંચાયત, કરજગામ,
તા. ઉમરગામ, જી. વલસાડ.

Annexure 7 – PAGES 50

Moje of Umbergamtaluka of Valsad district; Survey No. 3738,3708,3719,3725,3725,3705, and 4318 Vani land of PhansaKarjagam which is currently run by Madura Carbon India Ltd. All the above survey numbered lands within 500 meters of residential area, temple, tension, State highways, national highways, coastal highways, schools, monuments or railways.

A -4 E -3 -

1098

No. DCDD-3/PB-2/Madura Carbon/2031

Govt. Of Gujarat
Narmada, Water Resources,
Water Supply & Kalpsar
Department

Office of
The Executive Engineer,
Damanganga Canal Distry. Dn. No. 3,
National Highway No. 8, Balitha
(Vapi)
Phone No. 0260-2401312
Fax No. 0260-2423462
E-mail :- dcdd3vapi@gmail.com

DATE : 20 -06-2019

To,
Director,
Madura Carbon India Ltd,
Village- Fansa (karajgam),
Ta- Umargam, Dist- Valsad

Sub:- "In Principle Approval" for availability and supply of water to upcoming Project Madura Carbon India Ltd at Fansa (Karajgam), Ta-Umargam, Dist. Valsad.
Ref:- Your Letter Dated:- 14-06-2019.

With reference to above subject, It is to inform you that it is feasible to supply 2900 KL/Day water (Raw Water) from Ch. 1653 mt. of Khatalwada Distributory Canal passing from village Karajgam, Ta- Umargam for your upcoming Industrial Project at Survey No.3305, 3708, 3719, 3725, 3788, 4108, 4110 & 4118 of village Fansa (Karajgam), Ta- Umargam with following conditions.

Conditions:-

(1) The requirement will be fulfilled with availability of water at that time.

(2) The demand of water is considered first come first served basis.

(3) If your application for actual sanction is not received by this office within 12 months from the date of this letter, the acceptance will automatically cancel.

(4) The point of supply of water will be decided at the time of actual demand.

(5) Unit has to agree with the prevailing rules & rate of the Narmada, Water Resources, Water Supply & Kalpsar Department of Gujarat Government.

(6) Availability of water is calculated on the basis of present irrigation which may be increased in future. In this circumstances water supplied to farmers & for drinking purpose is prime importance and applicant has to make alternative arrangement at their own cost to meet the water requirement in future.

It is for favour of your kind information and further necessary action please.

(S.D.Patel)
Executive Engineer
Damanganga Canal Distry Dn.No.3
Balitha (Vapi)

Copy to the Deputy Executive Engineer, Damanganga Canal Sub Dn. No.15, Bhilad for information with reference to Your Office Letter No:- ઙનપેવિ-૧૫/પીબી/૩૮૮, તા.૧૮-૦૬-૨૦૧૯.

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precitech
Laboratories PVT. LTD.

Date: 25/02/2020

To
The Member Secretary,
Expert Appraisal Committee (Industry-2),
MoEF&CC,
New Delhi

Subject: **Regarding clarification of validity of our organization under QCI-NABET Scheme.**

Dear Sir,

With reference to the above subject matter, we wish inform you that our validity has expired on 5th Nov 2019, but we have submitted our application for accreditation on the online portal of QCI-NABET and currently our application is under processing in Phase-3a. A screenshot of the same is attached along with as Enclosure-1.

We request you to please also consider that since our application is under process, we are also in the latest list of 'Accredited EIA consultant organization' under serial number 125, as uploaded by QCI-NABET on its official portal http://nabet.qci.org.in/status-amp-register.

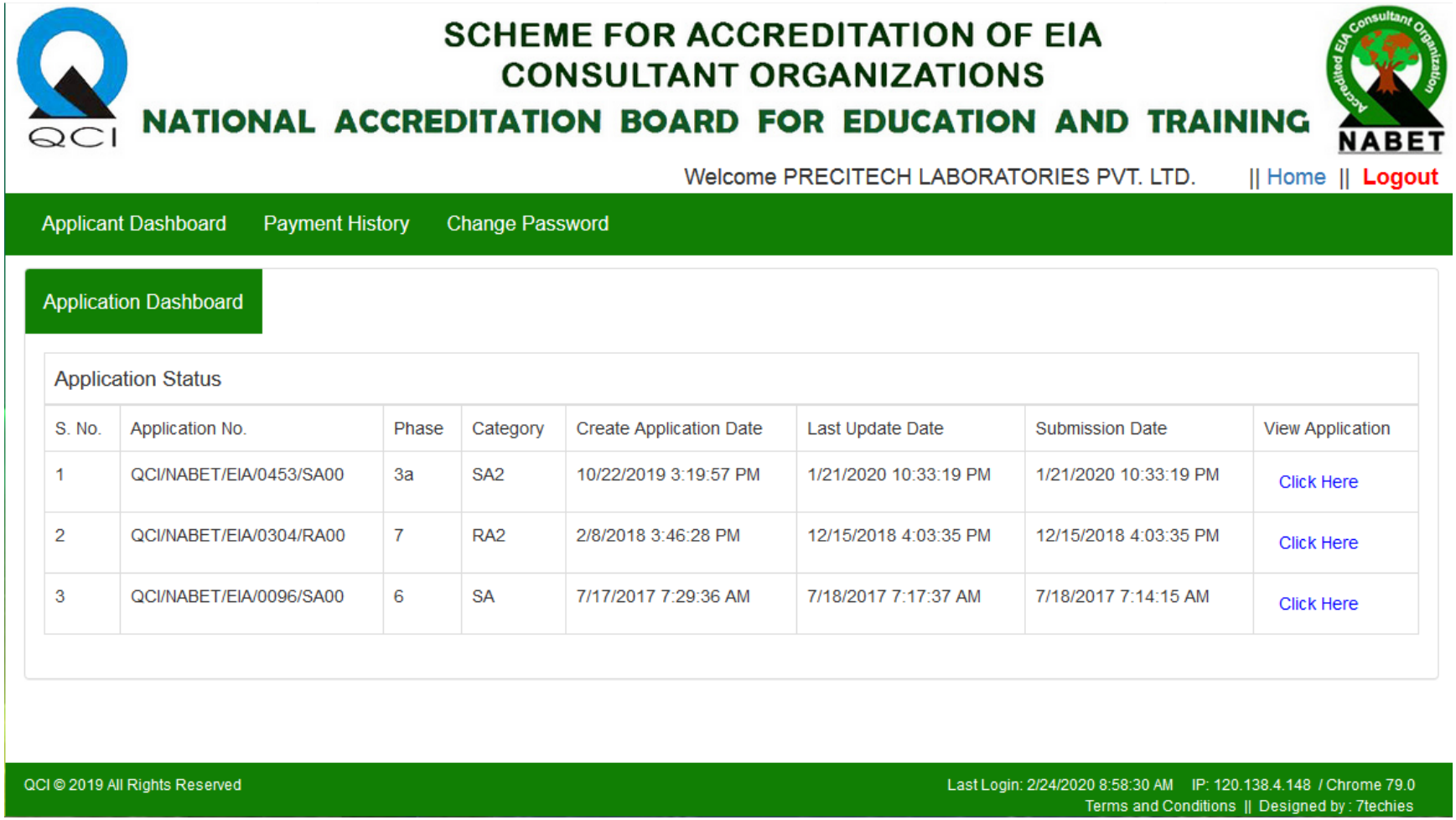
We hope you will give due consideration to our submission.

Thanking you,

Yours truly,
For PRECITECH LABORATORIES PVT. LTD.

(Authorized Signatory)

Enclosure-1: Status of online application as on 25th Feb 2020



SCHEME FOR ACCREDITATION OF EIA CONSULTANT ORGANIZATIONS

NATIONAL ACCREDITATION BOARD FOR EDUCATION AND TRAINING

Welcome PRECITECH LABORATORIES PVT. LTD. || Home || Logout

Applicant Dashboard | Payment History | Change Password

Application Dashboard

Application Status

S. No.	Application No.	Phase	Category	Create Application Date	Last Update Date	Submission Date	View Application
1	QCI/NABET/EIA/0453/SA00	3a	SA2	10/22/2019 3:19:57 PM	1/21/2020 10:33:19 PM	1/21/2020 10:33:19 PM	Click Here
2	QCI/NABET/EIA/0304/RA00	7	RA2	2/8/2018 3:46:28 PM	12/15/2018 4:03:35 PM	12/15/2018 4:03:35 PM	Click Here
3	QCI/NABET/EIA/0096/SA00	6	SA	7/17/2017 7:29:36 AM	7/18/2017 7:17:37 AM	7/18/2017 7:14:15 AM	Click Here

QCI © 2019 All Rights Reserved

Last Login: 2/24/2020 8:58:30 AM IP: 120.138.4.148 / Chrome 79.0

Terms and Conditions || Designed by : 7techies

Enclosure-2: List of Accredited Consultants as on QCI-NABET's website

Scheme for Accreditation of EIA Consultant Organizations

S. No.	Consultant Organization	Scope of Accreditation			
		As per 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)
125	**Precitech Laboratories Private Limited** (formerly known as Precitech Laboratories) **Address:** 1st Floor Bhanujyot Complex, Plot No. C5/27, Opp Oriental Ins. Co. Ltd., Nr. GIDC Char Rasta Vapi - 396195 **Email:**vapi@precitechlab.com, rhb@precitechlab.com; dr.hmbhatt@precitechlab.com, rujul.h.bhatt@gmail.com **Tel.:** 0260-2425542, 2420995, 2424901, 3298985, 09825121185, 9925008673 *Conditions apply*	4	Thermal power plants	B	1 (d)
		9	Cement plants	B	3 (b)
		17	Pesticides industry and pesticide specific intermediates (excluding formulations)	A	5 (b)
		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	B	7 (e)

Source link: http://nabet.qci.org.in/status-amp-register

THE COLLECTOR & DISTRICT MAGISTRATE COURT, VALSAD
New Collector Court, Tithal Road, Valsad 396 001
Phone No. 02632 – 244274 / 244279
email: collector_val@gujarat.gov.in

Order No. 11/25/05/001/2019/2078-84
Date : 09/04/2019

THE FOLLOWING POINTS HAVE BEEN READ.

1. Applicant Shri Madura Cotton India Ltd.
   Residing at Unit 1, Banking Centre, Beers Desai Road, Andheri (West), Mumbai 400 028, dated 16/03/2019, their online application along-with the affidavit.
2. Under section 48, 56, 66 and 67 of the Mumbai Land & Revenue Act, 1879.
3. Under section 87, 100, 101, 102 of the Gujarat Land & Revenue Act 1972.
4. As per the order of the Government related with land & revenue BKP/1006/425/K. dated 01/07/2008
5. As per the circular of the Government related with land & Revenue BKP/102018/327/A dated 08/05/2018
6. As per the order of the Government related with land & revenue S/TP/12209/769/11/H1. dated 31/03/2011
7. As per the case details available on the IRCMS portal.

ORDER

As per the application received under point no.1, which the applicant M/s. Madura Carbon India Ltd, have requested for declaring the plot which is currently lying at post Fansa, Taluka Umargam, District Valsad, bearing survey / block number 3705 and having a total area of 3,491.00 sq. mtr, to be declared as a Non-Agricultural zone, under the Gujarat Land & Revenue Act 1879, under section 65.

The details of the possessor is as falls in the claimed properties 7/12 documents

Survey / Block No. T. P. No. F. P. No.	Total Area of Measurement (sq.mtr.)	Name of the Possessors (Account No. 1787)	Type of Land (As per 7/12)
Survey / Blk. No. 3705 Old Survey No./ Blk. No. 363/3/1 T. P. No. --- F. P. No. ---	3,491.00	Madura Carbon India Ltd. – Director Shri. Gautam Vipan Kalra	As per old conditions

Details of the taxes received are as follows.

Details of the tax	Head	Total Area (sq.mtr)	Rate Per sq.mtr	Total Amount Rs.
Transfer fees	569-0035-00-800-01	3,491.00	8.00	27,928..00
Special Cess	570-0035-00-101-01	3,491.00	0.15	523.65
Local Fund	574-0029-00-103-01	3,491.00	0.15	523.65
Education Cess	575-0045-00-108-01	3,491.00	0.15	523.65
Measuring Fees	577-0029-00-106-01	3,491.00	--	1,800.00
			Total Rs.	31,298.95

Above said all facts taken into consideration and record Mauje Fansa, Tal. Umargam, Dist. Valsad Survey/Block No. 3705 admeasuring 3,491.00 sq. mtr. land on below mentioned terms and conditions applicable Gujarat Land Revenue Act 1879 U/s 65 N.A. Land purpose necessary permission herein order is passed.

TERMS:

1) On receipt of the said order within 2 months as per Model "M" covenant will be received.
2) Dist. Inspector of Land Records office measurement fees to be deposited on the strength of the said order and approved plans amendment letter to be executed and the said Amendment Letter after approval from Revenue Department questioned N.A. Land / Plot registered document presented plan and lay-out plan to be approved by competent authorities.
3) Applicant every year except farming (special cess) Rs. 0.15 ps per sq. mtr. Rs. 523.65 and as per norms Local Fund and Education Cess to be paid and in this respect time to time will be applicable for necessary subject to change.
4) As per Valsad City Planner approved plans town planning scheme construction work to be done and within 3 years development work to be completed.
5) Government Revenue Dept. Resolution No. BKP/1093/A dated 13/09/1993 as resolved Joint / Common Plot and Roadside land will be of Society and all plot holders jointly ownership accounted and as per above owner will not have any right.
6) Government Revenue Dept. dated 07/08/1991 Circular No. BKP-1091/1756/A under provisions regarding Construction Control with respect to non-authorized construction Mahanagarpalika / City Area Board standard measures have to be taken.
7) From the said land petroleum / water and/or any other type of pipeline is passing therein reference necessary permission to be obtained from Development Authority No. Objection Certificate to be obtained and thereafter development work to be carried out.
8) Government Revenue Dept. dated 01/07/2008 Resolution No. BKP/1006/425/A mentioned below mentioned terms to be followed:-

    i) Dist. Inspector of Land Records issued measurement sheet or therein original remark limit mentioned. Presented plan and lay-out plan to be approved by competent authorities.
    ii) Before commencing development plans to be approved from competent authorities. But applicant without obtaining necessary permission for N.A. Land shall not entitled to get the permission.
    iii) Urban development board approved town planning scheme construction work to be done as per norms of G.D.C.R. and Zoning Rules.
    iv) As per Approved plans Health and Safety Department drainage water to be managed.
    v) Applicant under Ribbon Development Rules to take due care of roadside.
    vi) Flour mill, cinema/touring cinema/theatre purpose N.A. Land permission Dist. Magistrate necessary permission to be obtained and thereafter further proceedings to be carried out.
    vii) Petrol/ diesel, kerosene, CNG,LPG, pump installation purpose N.A. Land permission before development work Dist. Magistrate permission to be obtained
    viii) Indian Explosive accordingly magnetise, fireworks, explosive purpose N.A. Land permission before development work Dist. Magistrate permission to be obtained.
    ix) Questioned land is nearby railway Station then space to be left and construction work to be carried out.
    x) Questioned land adjacent any electric wire grid/ high tension power or pole existing therein accordingly applicable rules to be followed and to do construction work.
    xi) N.A. Land demanded such land if nearby aerodrome then distance therein construction height "No Objection Certificate" to be obtained and all rules to be followed under Civil Aviation.
    xii) O.N.G.C. existing pipe line / well case applicant have to followed related norms.
    xiii) Narmada Canal / Other canal nearby land applicant suggested construction to be maintained regarding distance to follow as per rules.
    xiv) Applicant / as and where necessary Central Government or State Government Act Protected Monuments declare historical stature 100 meter distance to be maintained.

9) Questioned land Nagarplaika / Mahanagarpalika / City Development Board whatsoever necessary permission issued under rules and regulations to be followed and development work to be carried out.
10) The said land rainwater harvest underground passing / accumulation for every house / highrise building per the said land above percolating management to be done and rainwater drainage management to be maintained and development work to be carried out.

11) Questioned land site erected construction work will be not as per Local society norms then the local society shall take action. Wherein it will not affected by this order.

Above said instruction to be followed strictly and whereas if you are failed to do so then breach of terms officer will be liable to take strict action.

12) Applicant above said if any terms breach is committed then under Land Revenue Act u/s 67 punishment steps will be taken and as per law accordingly Applicant is liable for any other punishment whatsoever order deem fit and proper penalty or type will be taken and/or possession will be continued with applicant.

13) Above said terms whatever it may be althoughagaisnt the said order constructed and/or additional any house or building by way of collector for time period duration to shift or to make changes ordered then the same shall be legally and resolved duration not shifted then whatsoever expenses occurred shall be recovered from applicant under Land Revenue Cess.

Furthermore, above said terms and conditions to be followed herein as per details Affidavit declared facts on the strength questioned land to be used as N.A. Land necessary permission is awarded.

Sd/-
(C. R. Kharsan) Collector, Valsad

R.P.A.D.
Madura Cotton India Ltd.
Unit 1, Banking Centre,
Beers Desai Road,
Andheri (West),
Mumbai 400 028,
Copy forwarded:

1) City Planner, Valsad City Planner Office,
2) Mamlatdar, Tal. Umargam, Dist. Valsad (Order applicable Village Record of Rights to be followed)
3) Dist. Inspector Land Record, Dist. Valsad.
4) Talati Cum Mantri, Fansa.
5) Tal. Development Officer, Umargam.
6) Dep. Collector, Pardi.

'The said order as per E-dhara centre, Umargam Mutation No. 7010 to Mauje Fansa, Tal. Umargam, Dist. Valsad registered'.

THE COLLECTOR & DISTRICT MAGISTRATE COURT, VALSAD
New Collector Court, Tithal Road, Valsad 396 001
Phone No. 02632 – 244274 / 244279
email: collector_val@gujarat.gov.in

Order No. 10/25/05/001/2019/2071-77
Date : 09/04/2019

THE FOLLOWING POINTS HAVE BEEN READ.

1. Applicant Shri Madura Cotton India Ltd.
   Residing at Unit 1, Banking Centre, Beers Desai Road, Andheri (West), Mumbai 400 028, dated 16/03/2019, their online application along-with the affidavit.
2. Under section 48, 56, 66 and 67 of the Mumbai Land & Revenue Act, 1879.
3. Under section 87, 100, 101, 102 of the Gujarat Land & Revenue Act 1972.
4. As per the order of the Government related with land & revenue BKP/1006/425/K. dated 01/07/2008
5. As per the circular of the Government related with land & Revenue BKP/102018/327/A dated 08/05/2018
6. As per the order of the Government related with land & revenue S/TP/12209/769/11/H1. dated 31/03/2011
7. As per the case details available on the IRCMS portal.

ORDER

As per the application received under point no.1, which the applicant M/s. Madura Carbon India Ltd, have requested for declaring the plot which is currently lying at post Fansa, Taluka Umargam, District Valsad, bearing survey / block number 3708 and having a total area of 945.00 sq. mtr, to be declared as a Non-Agricultural zone, under the Gujarat Land & Revenue Act 1879, under section 65.

The details of the possessor is as falls in the claimed properties 7/12 documents

Survey / Block No. T. P. No. F. P. No.	Total Area of Measurement (sq.mtr.)	Name of the Possessors (Account No. 1787)	Type of Land (As per 7/12)
Survey / Blk. No. 3708 Old Survey No./ Blk. No. 363/3/4 T. P. No. --- F. P. No. ---	945.00	Madura Carbon India Ltd. – Director Shri. Gautam Vipan Kalra	As per old conditions

Details of the taxes received are as follows.

Details of the tax	Head	Total Area (sq.mtr)	Rate Per sq.mtr	Total Amount Rs.
Transfer fees	569-0035-00-800-01	945.00	8.00	7,560.00
Special Cess	570-0035-00-101-01	945.00	0.15	141.75
Local Fund	574-0029-00-103-01	945.00	0.15	141.75
Education Cess	575-0045-00-108-01	945.00	0.15	141.75
Measuring Fees	577-0029-00-106-01	945.00	--	1,800.00
			Total Rs.	9,785.25

Above said all facts taken into consideration and record Mauje Fansa, Tal. Umargam, Dist. Valsad Survey/Block No. 3708 admeasuring 945.00 sq. mtr. land on below mentioned terms and conditions applicable Gujarat Land Revenue Act 1879 U/s 65 N.A. Land purpose necessary permission herein order is passed.

TERMS:

1) On receipt of the said order within 2 months as per Model "M" covenant will be received.
2) Dist. Inspector of Land Records office measurement fees to be deposited on the strength of the said order and approved plans amendment letter to be executed and the said Amendment Letter after approval from Revenue Department questioned N.A. Land / Plot registered document presented plan and lay-out plan to be approved by competent authorities.
3) Applicant every year except farming (special cess) Rs. 0.15 ps per sq. mtr. Rs. 141.75 and as per norms Local Fund and Education Cess to be paid and in this respect time to time will be applicable for necessary subject to change.
4) As per Valsad City Planner approved plans town planning scheme construction work to be done and within 3 years development work to be completed.
5) Government Revenue Dept. Resolution No. BKP/1093/A dated 13/09/1993 as resolved Joint / Common Plot and Roadside land will be of Society and all plot holders jointly ownership accounted and as per above owner will not have any right.
6) Government Revenue Dept. dated 07/08/1991 Circular No. BKP-1091/1756/A under provisions regarding Construction Control with respect to non-authorized construction Mahanagarpalika / City Area Board standard measures have to be taken.
7) From the said land petroleum / water and/or any other type of pipeline is passing therein reference necessary permission to be obtained from Development Authority No. Objection Certificate to be obtained and thereafter development work to be carried out.
8) Government Revenue Dept. dated 01/07/2008 Resolution No. BKP/1006/425/A mentioned below mentioned terms to be followed:-

    i) Dist. Inspector of Land Records issued measurement sheet or therein original remark limit mentioned. Presented plan and lay-out plan to be approved by competent authorities.
    ii) Before commencing development plans to be approved from competent authorities. But applicant without obtaining necessary permission for N.A. Land shall not entitled to get the permission.
    iii) Urban development board approved town planning scheme construction work to be done as per norms of G.D.C.R. and Zoning Rules.
    iv) As per Approved plans Health and Safety Department drainage water to be managed.
    v) Applicant under Ribbon Development Rules to take due care of roadside.
    vi) Flour mill, cinema/touring cinema/theatre purpose N.A. Land permission Dist. Magistrate necessary permission to be obtained and thereafter further proceedings to be carried out.
    vii) Petrol/ diesel, kerosene, CNG,LPG, pump installation purpose N.A. Land permission before development work Dist. Magistrate permission to be obtained
    viii) Indian Explosive accordingly magnetise, fireworks, explosive purpose N.A. Land permission before development work Dist. Magistrate permission to be obtained.
    ix) Questioned land is nearby railway Station then space to be left and construction work to be carried out.
    x) Questioned land adjacent any electric wire grid/ high tension power or pole existing therein accordingly applicable rules to be followed and to do construction work.
    xi) N.A. Land demanded such land if nearby aerodrome then distance therein construction height "No Objection Certificate" to be obtained and all rules to be followed under Civil Aviation.
    xii) O.N.G.C. existing pipe line / well case applicant have to followed related norms.
    xiii) Narmada Canal / Other canal nearby land applicant suggested construction to be maintained regarding distance to follow as per rules.
    xiv) Applicant / as and where necessary Central Government or State Government Act Protected Monuments declare historical stature 100 meter distance to be maintained.

9) Questioned land Nagarplaika / Mahanagarpalika / City Development Board whatsoever necessary permission issued under rules and regulations to be followed and development work to be carried out.
10) The said land rainwater harvest underground passing / accumulation for every house / highrise building per the said land above percolating management to be done and rainwater drainage management to be maintained and development work to be carried out.

11) Questioned land site erected construction work will be not as per Local society norms then the local society shall take action. Wherein it will not affected by this order.

Above said instruction to be followed strictly and whereas if you are failed to do so then breach of terms officer will be liable to take strict action.

12) Applicant above said if any terms breach is committed then under Land Revenue Act u/s 67 punishment steps will be taken and as per law accordingly Applicant is liable for any other punishment whatsoever order deem fit and proper penalty or type will be taken and/or possession will be continued with applicant.

13) Above said terms whatever it may be althoughagaisnt the said order constructed and/or additional any house or building by way of collector for time period duration to shift or to make changes ordered then the same shall be legally and resolved duration not shifted then whatsoever expenses occurred shall be recovered from applicant under Land Revenue Cess.

Furthermore, above said terms and conditions to be followed herein as per details Affidavit declared facts on the strength questioned land to be used as N.A. Land necessary permission is awarded.

Sd/-
(C. R. Kharsan) Collector, Valsad

R.P.A.D.
Madura Cotton India Ltd.
Unit 1, Banking Centre,
Beers Desai Road,
Andheri (West),
Mumbai 400 028,
Copy forwarded:

1) City Planner, Valsad City Planner Office,
2) Mamlatdar, Tal. Umargam, Dist. Valsad (Order applicable Village Record of Rights to be followed)
3) Dist. Inspector Land Record, Dist. Valsad.
4) Talati Cum Mantri, Fansa.
5) Tal. Development Officer, Umargam.
6) Dep. Collector, Pardi.

'The said order as per E-dhara centre, Umargam Mutation No. 7012 to Mauje Fansa, Tal. Umargam, Dist. Valsad registered'.

THE COLLECTOR & DISTRICT MAGISTRATE COURT, VALSAD
New Collector Court, Tithal Road, Valsad 396 001
Phone No. 02632 – 244274 / 244279
email: collector_val@gujarat.gov.in

Order No. 13/25/05/001/2019/2092-99
Date : 09/04/2019

THE FOLLOWING POINTS HAVE BEEN READ.

1. Applicant Shri Madura Cotton India Ltd.
   Residing at Unit 1, Banking Centre, Beers Desai Road, Andheri (West), Mumbai 400 028, dated 16/03/2019, their online application along-with the affidavit.
2. Under section 48, 56, 66 and 67 of the Mumbai Land & Revenue Act, 1879.
3. Under section 87, 100, 101, 102 of the Gujarat Land & Revenue Act 1972.
4. As per the order of the Government related with land & revenue BKP/1006/425/K. dated 01/07/2008
5. As per the circular of the Government related with land & Revenue BKP/102018/327/A dated 08/05/2018
6. As per the order of the Government related with land & revenue S/TP/12209/769/11/H1. dated 31/03/2011
7. As per the case details available on the IRCMS portal.

ORDER

As per the application received under point no.1, which the applicant M/s. Madura Carbon India Ltd, have requested for declaring the plot which is currently lying at post Fansa, Taluka Umargam, District Valsad, bearing survey / block number 3719 and having a total area of 17,190.00 sq. mtr, to be declared as a Non-Agricultural zone, under the Gujarat Land & Revenue Act 1879, under section 65.

The details of the possessor is as falls in the claimed properties 7/12 documents

Survey / Block No. T. P. No. F. P. No.	Total Area of Measurement (sq.mtr.)	Name of the Possessors (Account No. 1787)	Type of Land (As per 7/12)
Survey / Blk. No. 3719 Old Survey No./ Blk. No. 479/1/1 T. P. No. --- F. P. No. ---	17,910.00	Madura Carbon India Ltd. – Director Shri. Gautam Vipan Kalra	As per old conditions

Details of the taxes received are as follows.

Details of the tax	Head	Total Area (sq.mtr)	Rate Per sq.mtr	Total Amount Rs.
Transfer fees	569-0035-00-800-01	17,910.00	8.00	1,43,280.00
Special Cess	570-0035-00-101-01	17,910.00	0.15	2,686.50
Local Fund	574-0029-00-103-01	17,910.00	0.15	2,686.50
Education Cess	575-0045-00-108-01	17,910.00	0.15	2,686.50
Measuring Fees	577-0029-00-106-01	17,910.00	--	2,400.00
			Total Rs.	1,53,739.50

Above said all facts taken into consideration and record Mauje Fansa, Tal. Umargam, Dist. Valsad Survey/Block No. 3719 admeasuring 17,190.00 sq. mtr. land on below mentioned terms and conditions applicable Gujarat Land Revenue Act 1879 U/s 65 N.A. Land purpose necessary permission herein order is passed.

TERMS:

1) On receipt of the said order within 2 months as per Model "M" covenant will be received.
2) Dist. Inspector of Land Records office measurement fees to be deposited on the strength of the said order and approved plans amendment letter to be executed and the said Amendment Letter after approval from Revenue Department questioned N.A. Land / Plot registered document presented plan and lay-out plan to be approved by competent authorities.
3) Applicant every year except farming (special cess) Rs. 0.15 ps per sq. mtr. Rs. 2,686.50 and as per norms Local Fund and Education Cess to be paid and in this respect time to time will be applicable for necessary subject to change.
4) As per Valsad City Planner approved plans town planning scheme construction work to be done and within 3 years development work to be completed.
5) Government Revenue Dept. Resolution No. BKP/1093/A dated 13/09/1993 as resolved Joint / Common Plot and Roadside land will be of Society and all plot holders jointly ownership accounted and as per above owner will not have any right.
6) Government Revenue Dept. dated 07/08/1991 Circular No. BKP-1091/1756/A under provisions regarding Construction Control with respect to non-authorized construction Mahanagarpalika / City Area Board standard measures have to be taken.
7) From the said land petroleum / water and/or any other type of pipeline is passing therein reference necessary permission to be obtained from Development Authority No. Objection Certificate to be obtained and thereafter development work to be carried out.
8) Government Revenue Dept. dated 01/07/2008 Resolution No. BKP/1006/425/A mentioned below mentioned terms to be followed:-

    i) Dist. Inspector of Land Records issued measurement sheet or therein original remark limit mentioned. Presented plan and lay-out plan to be approved by competent authorities.
    ii) Before commencing development plans to be approved from competent authorities. But applicant without obtaining necessary permission for N.A. Land shall not entitled to get the permission.
    iii) Urban development board approved town planning scheme construction work to be done as per norms of G.D.C.R. and Zoning Rules.
    iv) As per Approved plans Health and Safety Department drainage water to be managed.
    v) Applicant under Ribbon Development Rules to take due care of roadside.
    vi) Flour mill, cinema/touring cinema/theatre purpose N.A. Land permission Dist. Magistrate necessary permission to be obtained and thereafter further proceedings to be carried out.
    vii) Petrol/ diesel, kerosene, CNG,LPG, pump installation purpose N.A. Land permission before development work Dist. Magistrate permission to be obtained
    viii) Indian Explosive accordingly magnetise, fireworks, explosive purpose N.A. Land permission before development work Dist. Magistrate permission to be obtained.
    ix) Questioned land is nearby railway Station then space to be left and construction work to be carried out.
    x) Questioned land adjacent any electric wire grid/ high tension power or pole existing therein accordingly applicable rules to be followed and to do construction work.
    xi) N.A. Land demanded such land if nearby aerodrome then distance therein construction height "No Objection Certificate" to be obtained and all rules to be followed under Civil Aviation.
    xii) O.N.G.C. existing pipe line / well case applicant have to followed related norms.
    xiii) Narmada Canal / Other canal nearby land applicant suggested construction to be maintained regarding distance to follow as per rules.
    xiv) Applicant / as and where necessary Central Government or State Government Act Protected Monuments declare historical stature 100 meter distance to be maintained.

9) Questioned land Nagarplaika / Mahanagarpalika / City Development Board whatsoever necessary permission issued under rules and regulations to be followed and development work to be carried out.
10) The said land rainwater harvest underground passing / accumulation for every house / highrise building per the said land above percolating management to be done and rainwater drainage management to be maintained and development work to be carried out.

11) Questioned land site erected construction work will be not as per Local society norms then the local society shall take action. Wherein it will not affected by this order.

Above said instruction to be followed strictly and whereas if you are failed to do so then breach of terms officer will be liable to take strict action.

12) Applicant above said if any terms breach is committed then under Land Revenue Act u/s 67 punishment steps will be taken and as per law accordingly Applicant is liable for any other punishment whatsoever order deem fit and proper penalty or type will be taken and/or possession will be continued with applicant.

13) Above said terms whatever it may be althoughagaisnt the said order constructed and/or additional any house or building by way of collector for time period duration to shift or to make changes ordered then the same shall be legally and resolved duration not shifted then whatsoever expenses occurred shall be recovered from applicant under Land Revenue Cess.

Furthermore, above said terms and conditions to be followed herein as per details Affidavit declared facts on the strength questioned land to be used as N.A. Land necessary permission is awarded.

Sd/-
(C. R. Kharsan) Collector, Valsad

R.P.A.D.
Madura Cotton India Ltd.
Unit 1, Banking Centre,
Beers Desai Road,
Andheri (West),
Mumbai 400 028,
Copy forwarded:

1) City Planner, Valsad City Planner Office,
2) Mamlatdar, Tal. Umargam, Dist. Valsad (Order applicable Village Record of Rights to be followed)
3) Dist. Inspector Land Record, Dist. Valsad.
4) Talati Cum Mantri, Fansa.
5) Tal. Development Officer, Umargam.
6) Dep. Collector, Pardi.

'The said order as per E-dhara centre, Umargam Mutation No. 7011 to Mauje Fansa, Tal. Umargam, Dist. Valsad registered'.

THE COLLECTOR & DISTRICT MAGISTRATE COURT, VALSAD
New Collector Court, Tithal Road, Valsad 396 001
Phone No. 02632 – 244274 / 244279
email: collector_val@gujarat.gov.in

Order No. 236/25/05/001/2019/3840-47
Date : 21/06/2019

THE FOLLOWING POINTS HAVE BEEN READ.

1. Applicant Shri Madura Cotton India Ltd.
   Residing at Unit 1, Banking Centre, Beers Desai Road, Andheri (West), Mumbai 400 028, dated 14/06/2019, their online application along-with the affidavit.
2. Under section 48, 56, 66 and 67 of the Mumbai Land & Revenue Act, 1879.
3. Under section 87, 100, 101, 102 of the Gujarat Land & Revenue Act 1972.
4. As per the order of the Government related with land & revenue BKP/1006/425/K. dated 01/07/2008
5. As per the circular of the Government related with land & Revenue BKP/102018/327/A dated 08/05/2018
6. As per the order of the Government related with land & revenue S/TP/12209/769/11/H1. dated 31/03/2011
7. As per the case details available on the IRCMS portal.

ORDER

As per the application received under point no.1, which the applicant M/s. Madura Carbon India Ltd, have requested for declaring the plot which is currently lying at post Fansa, Taluka Umargam, District Valsad, bearing survey / block number 3725 and having a total area of 17,236.00 sq. mtr, to be declared as a Non-Agricultural zone, under the Gujarat Land & Revenue Act 1879, under section 65.

The details of the possessor is as falls in the claimed properties 7/12 documents

Survey / Block No. T. P. No. F. P. No.	Total Area of Measurement (sq.mtr.)	Name of the Possessors (Account No. 1787)	Type of Land (As per 7/12)
Survey / Blk. No. 3725 Old Survey No./ Blk. No. 479/1 T. P. No. --- F. P. No. ---	17,236.00	Madura Carbon India Ltd. – Director Shri. Gautam Vipan Kalra	As per old conditions

Details of the taxes received are as follows.

Details of the tax	Head	Total Area (sq.mtr.)	Rate Per sq.mtr	Total Amount Rs.
Transfer fees	569-0035-00-800-01	17,236,00	8.00	1,37,888.00
Special Cess	570-0035-00-101-01	17,236.00	0.15	2,585.00
Local Fund	574-0029-00-103-01	17,236.00	0.15	2.585.00
Education Cess	575-0045-00-108-01	17,236.00	0.15	2,585.00
Measuring Fees	577-0029-00-106-01	17,236.00	--	2,400.00
			Total Rs.	1,48,043.00

Above said all facts taken into consideration and record Mauje Fansa, Tal. Umargam, Dist. Valsad Survey/Block No. 3725 admeasuring 17,236.00 sq. mtr. land on below mentioned terms and conditions applicable Gujarat Land Revenue Act 1879 U/s 65 N.A. Land purpose necessary permission herein order is passed.

TERMS:

1) On receipt of the said order within 2 months as per Model "M" covenant will be received.
2) Dist. Inspector of Land Records office measurement fees to be deposited on the strength of the said order and approved plans amendment letter to be executed and the said Amendment Letter after approval from Revenue Department questioned N.A. Land / Plot registered document presented plan and lay-out plan to be approved by competent authorities.
3) Applicant every year except farming (special cess) Rs. 0.15 ps per sq. mtr. Rs. 2,585.00 and as per norms Local Fund and Education Cess to be paid and in this respect time to time will be applicable for necessary subject to change.
4) As per Valsad City Planner approved plans town planning scheme construction work to be done and within 3 years development work to be completed.
5) Government Revenue Dept. Resolution No. BKP/1093/A dated 13/09/1993 as resolved Joint / Common Plot and Roadside land will be of Society and all plot holders jointly ownership accounted and as per above owner will not have any right.
6) Government Revenue Dept. dated 07/08/1991 Circular No. BKP-1091/1756/A under provisions regarding Construction Control with respect to non-authorized construction Mahanagarpalika / City Area Board standard measures have to be taken.
7) From the said land petroleum / water and/or any other type of pipeline is passing therein reference necessary permission to be obtained from Development Authority No. Objection Certificate to be obtained and thereafter development work to be carried out.
8) Government Revenue Dept. dated 01/07/2008 Resolution No. BKP/1006/425/A mentioned below mentioned terms to be followed:-

    i) Dist. Inspector of Land Records issued measurement sheet or therein original remark limit mentioned. Presented plan and lay-out plan to be approved by competent authorities.
    ii) Before commencing development plans to be approved from competent authorities. But applicant without obtaining necessary permission for N.A. Land shall not entitled to get the permission.
    iii) Urban development board approved town planning scheme construction work to be done as per norms of G.D.C.R. and Zoning Rules.
    iv) As per Approved plans Health and Safety Department drainage water to be managed.
    v) Applicant under Ribbon Development Rules to take due care of roadside.
    vi) Flour mill, cinema/touring cinema/theatre purpose N.A. Land permission Dist. Magistrate necessary permission to be obtained and thereafter further proceedings to be carried out.
    vii) Petrol/ diesel, kerosene, CNG,LPG, pump installation purpose N.A. Land permission before development work Dist. Magistrate permission to be obtained
    viii) Indian Explosive accordingly magnetise, fireworks, explosive purpose N.A. Land permission before development work Dist. Magistrate permission to be obtained.
    ix) Questioned land is nearby railway Station then space to be left and construction work to be carried out.
    x) Questioned land adjacent any electric wire grid/ high tension power or pole existing therein accordingly applicable rules to be followed and to do construction work.
    xi) N.A. Land demanded such land if nearby aerodrome then distance therein construction height "No Objection Certificate" to be obtained and all rules to be followed under Civil Aviation.
    xii) O.N.G.C. existing pipe line / well case applicant have to followed related norms.
    xiii) Narmada Canal / Other canal nearby land applicant suggested construction to be maintained regarding distance to follow as per rules.
    xiv) Applicant / as and where necessary Central Government or State Government Act Protected Monuments declare historical stature 100 meter distance to be maintained.

9) Questioned land Nagarplaika / Mahanagarpalika / City Development Board whatsoever necessary permission issued under rules and regulations to be followed and development work to be carried out.
10) The said land rainwater harvest underground passing / accumulation for every house / highrise building per the said land above percolating management to be done and rainwater drainage management to be maintained and development work to be carried out.

11) Questioned land site erected construction work will be not as per Local society norms then the local society shall take action. Wherein it will not affected by this order.

Above said instruction to be followed strictly and whereas if you are failed to do so then breach of terms officer will be liable to take strict action.

12) Applicant above said if any terms breach is committed then under Land Revenue Act u/s 67 punishment steps will be taken and as per law accordingly Applicant is liable for any other punishment whatsoever order deem fit and proper penalty or type will be taken and/or possession will be continued with applicant.

13) Above said terms whatever it may be althoughagaisnt the said order constructed and/or additional any house or building by way of collector for time period duration to shift or to make changes ordered then the same shall be legally and resolved duration not shifted then whatsoever expenses occurred shall be recovered from applicant under Land Revenue Cess.

Furthermore, above said terms and conditions to be followed herein as per details Affidavit declared facts on the strength questioned land to be used as N.A. Land necessary permission is awarded.

Sd/-
(C. R. Kharsan) Collector, Valsad

R.P.A.D.
Madura Cotton India Ltd.
Unit 1, Banking Centre,
Beers Desai Road,
Andheri (West),
Mumbai 400 028,
Copy forwarded:

1) City Planner, Valsad City Planner Office,
2) Mamlatdar, Tal. Umargam, Dist. Valsad (Order applicable Village Record of Rights to be followed)
3) Dist. Inspector Land Record, Dist. Valsad.
4) Talati Cum Mantri, Fansa.
5) Tal. Development Officer, Umargam.
6) Dep. Collector, Pardi.

‘The said order as per E-dhara centre, Umargam Mutation No. 7052 to Mauje Fansa, Tal. Umargam, Dist. Valsad registered’.

THE COLLECTOR & DISTRICT MAGISTRATE COURT, VALSAD
New Collector Court, Tithal Road, Valsad 396 001
Phone No. 02632 – 244274 / 244279
email: collector_val@gujarat.gov.in

Order No. 235/25/05/001/2019/3824-31
Date : 21/06/2019

THE FOLLOWING POINTS HAVE BEEN READ.

1. Applicant Shri Madura Cotton India Ltd.
   Residing at Unit 1, Banking Centre, Beers Desai Road, Andheri (West), Mumbai 400 028, dated 14/06/2019, their online application along-with the affidavit.
2. Under section 48, 56, 66 and 67 of the Mumbai Land & Revenue Act, 1879.
3. Under section 87, 100, 101, 102 of the Gujarat Land & Revenue Act 1972.
4. As per the order of the Government related with land & revenue BKP/1006/425/K. dated 01/07/2008
5. As per the circular of the Government related with land & Revenue BKP/102018/327/A dated 08/05/2018
6. As per the order of the Government related with land & revenue S/TP/12209/769/11/H1. dated 31/03/2011
7. As per the case details available on the IRCMS portal.

ORDER

As per the application received under point no.1, which the applicant M/s. Madura Carbon India Ltd, have requested for declaring the plot which is currently lying at post Fansa, Taluka Umargam, District Valsad, bearing survey / block number 3738 and having a total area of 4,037.00 sq. mtr, to be declared as a Non-Agricultural zone, under the Gujarat Land & Revenue Act 1879, under section 65.

The details of the possessor is as falls in the claimed properties 7/12 documents

Survey / Block No. T. P. No. F. P. No.	Total Area of Measurement (sq.mtr.)	Name of the Possessors (Account No. 1787)	Type of Land (As per 7/12)
Survey / Blk. No. 3738 Old Survey No./ Blk. No. 481/1/1 T. P. No. --- F. P. No. ---	4,037.00	Madura Carbon India Ltd. – Director Shri. Gautam Vipan Kalra	As per old conditions

Details of the taxes received are as follows.

Details of the tax	Head	Total Area (sq.mtr)	Rate Per sq.mtr	Total Amount Rs.
Transfer fees	569-0035-00-800-01	4,037.00	8.00	32,296..00
Special Cess	570-0035-00-101-01	4,037.00	0.15	606.00
Local Fund	574-0029-00-103-01	4,037.00	0.15	606.00
Education Cess	575-0045-00-108-01	4,037.00	0.15	606.00
Measuring Fees	577-0029-00-106-01	4,037.00	--	1,800.00
			Total Rs.	35,914.00

Above said all facts taken into consideration and record Mauje Fansa, Tal. Umargam, Dist. Valsad Survey/Block No. 3738 admeasuring 4,037.00 sq. mtr. land on below mentioned terms and conditions applicable Gujarat Land Revenue Act 1879 U/s 65 N.A. Land purpose necessary permission herein order is passed.

TERMS:

1) On receipt of the said order within 2 months as per Model "M" covenant will be received.
2) Dist. Inspector of Land Records office measurement fees to be deposited on the strength of the said order and approved plans amendment letter to be executed and the said Amendment Letter after approval from Revenue Department questioned N.A. Land / Plot registered document presented plan and lay-out plan to be approved by competent authorities.
3) Applicant every year except farming (special cess) Rs. 0.15 ps per sq. mtr. Rs 606.00 and as per norms Local Fund and Education Cess to be paid and in this respect time to time will be applicable for necessary subject to change.
4) As per Valsad City Planner approved plans town planning scheme construction work to be done and within 3 years development work to be completed.
5) Government Revenue Dept. Resolution No. BKP/1093/A dated 13/09/1993 as resolved Joint / Common Plot and Roadside land will be of Society and all plot holders jointly ownership accounted and as per above owner will not have any right.
6) Government Revenue Dept. dated 07/08/1991 Circular No. BKP-1091/1756/A under provisions regarding Construction Control with respect to non-authorized construction Mahanagarpalika / City Area Board standard measures have to be taken.
7) From the said land petroleum / water and/or any other type of pipeline is passing therein reference necessary permission to be obtained from Development Authority No. Objection Certificate to be obtained and thereafter development work to be carried out.
8) Government Revenue Dept. dated 01/07/2008 Resolution No. BKP/1006/425/A mentioned below mentioned terms to be followed:-

    i) Dist. Inspector of Land Records issued measurement sheet or therein original remark limit mentioned. Presented plan and lay-out plan to be approved by competent authorities.
    ii) Before commencing development plans to be approved from competent authorities. But applicant without obtaining necessary permission for N.A. Land shall not entitled to get the permission.
    iii) Urban development board approved town planning scheme construction work to be done as per norms of G.D.C.R. and Zoning Rules.
    iv) As per Approved plans Health and Safety Department drainage water to be managed.
    v) Applicant under Ribbon Development Rules to take due care of roadside.
    vi) Flour mill, cinema/touring cinema/theatre purpose N.A. Land permission Dist. Magistrate necessary permission to be obtained and thereafter further proceedings to be carried out.
    vii) Petrol/ diesel, kerosene, CNG,LPG, pump installation purpose N.A. Land permission before development work Dist. Magistrate permission to be obtained
    viii) Indian Explosive accordingly magnetise, fireworks, explosive purpose N.A. Land permission before development work Dist. Magistrate permission to be obtained.
    ix) Questioned land is nearby railway Station then space to be left and construction work to be carried out.
    x) Questioned land adjacent any electric wire grid/ high tension power or pole existing therein accordingly applicable rules to be followed and to do construction work.
    xi) N.A. Land demanded such land if nearby aerodrome then distance therein construction height "No Objection Certificate" to be obtained and all rules to be followed under Civil Aviation.
    xii) O.N.G.C. existing pipe line / well case applicant have to followed related norms.
    xiii) Narmada Canal / Other canal nearby land applicant suggested construction to be maintained regarding distance to follow as per rules.
    xiv) Applicant / as and where necessary Central Government or State Government Act Protected Monuments declare historical stature 100 meter distance to be maintained.

9) Questioned land Nagarplaika / Mahanagarpalika / City Development Board whatsoever necessary permission issued under rules and regulations to be followed and development work to be carried out.
10) The said land rainwater harvest underground passing / accumulation for every house / highrise building per the said land above percolating management to be done and rainwater drainage management to be maintained and development work to be carried out.

11) Questioned land site erected construction work will be not as per Local society norms then the local society shall take action. Wherein it will not affected by this order.

Above said instruction to be followed strictly and whereas if you are failed to do so then breach of terms officer will be liable to take strict action.

12) Applicant above said if any terms breach is committed then under Land Revenue Act u/s 67 punishment steps will be taken and as per law accordingly Applicant is liable for any other punishment whatsoever order deem fit and proper penalty or type will be taken and/or possession will be continued with applicant.

13) Above said terms whatever it may be althoughagaisnt the said order constructed and/or additional any house or building by way of collector for time period duration to shift or to make changes ordered then the same shall be legally and resolved duration not shifted then whatsoever expenses occurred shall be recovered from applicant under Land Revenue Cess.

Furthermore, above said terms and conditions to be followed herein as per details Affidavit declared facts on the strength questioned land to be used as N.A. Land necessary permission is awarded.

Sd/-
(C. R. Kharsan) Collector, Valsad

R.P.A.D.
Madura Cotton India Ltd.
Unit 1, Banking Centre,
Beers Desai Road,
Andheri (West),
Mumbai 400 028,
Copy forwarded:

1) City Planner, Valsad City Planner Office,
2) Mamlatdar, Tal. Umargam, Dist. Valsad (Order applicable Village Record of Rights to be followed)
3) Dist. Inspector Land Record, Dist. Valsad.
4) Talati Cum Mantri, Fansa.
5) Tal. Development Officer, Umargam.
6) Dep. Collector, Pardi.

‘The said order as per E-dhara centre, Umargam Mutation No. 7053 to Mauje Fansa, Tal. Umargam, Dist. Valsad registered’.

THE COLLECTOR & DISTRICT MAGISTRATE COURT, VALSAD
New Collector Court, Tithal Road, Valsad 396 001
Phone No. 02632 – 244274 / 244279
email: collector_val@gujarat.gov.in

Order No. 844/25/05/001/2019/9169-76
Date : 16/11/2019

THE FOLLOWING POINTS HAVE BEEN READ.

1. Applicant Shri Madura Cotton India Ltd.
   Residing at Unit 1, Banking Centre, Beers Desai Road, Andheri (West), Mumbai 400 028, dated 06/11/2019, their online application (No. 3250500139366) and the affidavit.
2. Under section 48, 56, 66 and 67 of the Mumbai Land & Revenue Act, 1879.
3. Under section 87, 100, 101, 102 of the Gujarat Land & Revenue Act 1972.
4. As per the order of the Government related with land & revenue BKP/1006/425/K. dated 01/07/2008
5. As per the circular of the Government related with land & Revenue BKP/102018/327/A dated 08/05/2018
6. As per the order of the Government related with land & revenue S/TP/12209/769/11/H1. dated 31/03/2011
7. As per the case details available on the IRCMS portal.

ORDER

As per the application received under point no.1, which the applicant M/s. Madura Carbon India Ltd, have requested for declaring the plot which is currently lying at post Fansa, Taluka Umargam, District Valsad, bearing survey / block number 4108 and having a total area of 2,725.00 sq. mtr, to be declared as a Non-Agricultural zone, under the Gujarat Land & Revenue Act 1879, under section 65.

The details of the possessor is as falls in the claimed properties 7/12 documents

Survey / Block No. T. P. No. F. P. No.	Total Area of Measurement (sq.mtr.)	Name of the Possessors (Account No. 1787)	Type of Land (As per 7/12)
Survey / Blk. No. 4108 Old Survey No./ Blk. No. 479/9 T. P. No. --- F. P. No. ---	2,725.00	Madura Carbon India Ltd. – Director Shri. Gautam Vipan Kalra	As per old conditions

Details of the taxes received are as follows.

Chalan paid in bank dated 15/11/2019 No. 57000013551003514111192604 7

Details of the tax	Head	Total Area (sq.mtr)	Rate Per sq.mtr	Total Amount Rs.
Transfer fees	569-0035-00-800-01	2,725.00	8.00	21,800..00
Special Cess	570-0035-00-101-01	2,725.00	0.15	409.00
Local Fund	574-0029-00-103-01	2,725.00	0.15	409.00
Education Cess	575-0045-00-108-01	2,725.00	0.15	409.00
Measuring Fees	577-0029-00-106-01	2,725.00	--	1,800.00
			Total Rs.	24,827.00

Above said all facts taken into consideration and record Mauje Fansa, Tal. Umargam, Dist. Valsad Survey/Block No. 4108 admeasuring 2,725.00 sq. mtr. land on below mentioned terms and conditions applicable Gujarat Land Revenue Act 1879 U/s 65 N.A. Land purpose necessary permission herein order is passed.

TERMS:

1) On receipt of the said order within 2 months as per Model "M" covenant will be received.
2) Dist. Inspector of Land Records office measurement fees to be deposited on the strength of the said order and approved plans amendment letter to be executed and the said Amendment Letter after approval from Revenue Department questioned N.A. Land / Plot registered document presented plan and lay-out plan to be approved by competent authorities.
3) Applicant every year except farming (special cess) Rs. 0.15 ps per sq. mtr. Rs 409.00 and as per norms Local Fund and Education Cess to be paid and in this respect time to time will be applicable for necessary subject to change.
4) As per Valsad City Planner approved plans town planning scheme construction work to be done and within 3 years development work to be completed.
5) Government Revenue Dept. Resolution No. BKP/1093/A dated 13/09/1993 as resolved Joint / Common Plot and Roadside land will be of Society and all plot holders jointly ownership accounted and as per above owner will not have any right.
6) Government Revenue Dept. dated 07/08/1991 Circular No. BKP-1091/1756/A under provisions regarding Construction Control with respect to non-authorized construction Mahanagarpalika / City Area Board standard measures have to be taken.
7) From the said land petroleum / water and/or any other type of pipeline is passing therein reference necessary permission to be obtained from Development Authority No. Objection Certificate to be obtained and thereafter development work to be carried out.
8) Government Revenue Dept. dated 01/07/2008 Resolution No. BKP/1006/425/A mentioned below mentioned terms to be followed:-

    i) Dist. Inspector of Land Records issued measurement sheet or therein original remark limit mentioned. Presented plan and lay-out plan to be approved by competent authorities.
    ii) Before commencing development plans to be approved from competent authorities. But applicant without obtaining necessary permission for N.A. Land shall not entitled to get the permission.
    iii) Urban development board approved town planning scheme construction work to be done as per norms of G.D.C.R. and Zoning Rules.
    iv) As per Approved plans Health and Safety Department drainage water to be managed.
    v) Applicant under Ribbon Development Rules to take due care of roadside.
    vi) Flour mill, cinema/touring cinema/theatre purpose N.A. Land permission Dist. Magistrate necessary permission to be obtained and thereafter further proceedings to be carried out.
    vii) Petrol/ diesel, kerosene, CNG,LPG, pump installation purpose N.A. Land permission before development work Dist. Magistrate permission to be obtained
    viii) Indian Explosive accordingly magnetise, fireworks, explosive purpose N.A. Land permission before development work Dist. Magistrate permission to be obtained.
    ix) Questioned land is nearby railway Station then space to be left and construction work to be carried out.
    x) Questioned land adjacent any electric wire grid/ high tension power or pole existing therein accordingly applicable rules to be followed and to do construction work.
    xi) N.A. Land demanded such land if nearby aerodrome then distance therein construction height "No Objection Certificate" to be obtained and all rules to be followed under Civil Aviation.
    xii) O.N.G.C. existing pipe line / well case applicant have to followed related norms.
    xiii) Narmada Canal / Other canal nearby land applicant suggested construction to be maintained regarding distance to follow as per rules.
    xiv) Applicant / as and where necessary Central Government or State Government Act Protected Monuments declare historical stature 100 meter distance to be maintained.

9) Questioned land Nagarplaika / Mahanagarpalika / City Development Board whatsoever necessary permission issued under rules and regulations to be followed and development work to be carried out.
10) The said land rainwater harvest underground passing / accumulation for every house / highrise building per the said land above percolating management to be done and rainwater drainage management to be maintained and development work to be carried out.

11) Questioned land site erected construction work will be not as per Local society norms then the local society shall take action. Wherein it will not affected by this order.

Above said instruction to be followed strictly and whereas if you are failed to do so then breach of terms officer will be liable to take strict action.

12) Applicant above said if any terms breach is committed then under Land Revenue Act u/s 67 punishment steps will be taken and as per law accordingly Applicant is liable for any other punishment whatsoever order deem fit and proper penalty or type will be taken and/or possession will be continued with applicant.

13) Above said terms whatever it may be althoughagaisnt the said order constructed and/or additional any house or building by way of collector for time period duration to shift or to make changes ordered then the same shall be legally and resolved duration not shifted then whatsoever expenses occurred shall be recovered from applicant under Land Revenue Cess.

Furthermore, above said terms and conditions to be followed herein as per details Affidavit declared facts on the strength questioned land to be used as N.A. Land necessary permission is awarded.

Sd/-
(C. R. Kharsan) Collector, Valsad

R.P.A.D.
Madura Cotton India Ltd.
Unit 1, Banking Centre,
Beers Desai Road,
Andheri (West),
Mumbai 400 028,
Copy forwarded:

1) City Planner, Valsad City Planner Office,
2) Mamlatdar, Tal. Umargam, Dist. Valsad (Order applicable Village Record of Rights to be followed)
3) Dist. Inspector Land Record, Dist. Valsad.
4) Talati Cum Mantri, Fansa.
5) Tal. Development Officer, Umargam.
6) Dep. Collector, Pardi.

'The said order as per E-dhara centre, Umargam Mutation No. 7141 to Mauje Fansa, Tal. Umargam, Dist. Valsad registered'.

THE COLLECTOR & DISTRICT MAGISTRATE COURT, VALSAD
New Collector Court, Tithal Road, Valsad 396 001
Phone No. 02632 – 244274 / 244279
email: collector_val@gujarat.gov.in

Order No. 12/25/05/001/2019/2085-91
Date : 09/04/2019

THE FOLLOWING POINTS HAVE BEEN READ.

1. Applicant Shri Madura Cotton India Ltd.
   Residing at Unit 1, Banking Centre, Beers Desai Road, Andheri (West), Mumbai 400 028, dated 16/03/2019, their online application along-with the affidavit.
2. Under section 48, 56, 66 and 67 of the Mumbai Land & Revenue Act, 1879.
3. Under section 87, 100, 101, 102 of the Gujarat Land & Revenue Act 1972.
4. As per the order of the Government related with land & revenue BKP/1006/425/K. dated 01/07/2008
5. As per the circular of the Government related with land & Revenue BKP/102018/327/A dated 08/05/2018
6. As per the order of the Government related with land & revenue S/TP/12209/769/11/H1. dated 31/03/2011
7. As per the case details available on the IRCMS portal.

ORDER

As per the application received under point no.1, which the applicant M/s. Madura Carbon India Ltd, have requested for declaring the plot which is currently lying at post Fansa, Taluka Umargam, District Valsad, bearing survey / block number 4110 and having a total area of 45,271.00 sq. mtr, to be declared as a Non-Agricultural zone, under the Gujarat Land & Revenue Act 1879, under section 65.

The details of the possessor is as falls in the claimed properties 7/12 documents

Survey / Block No. T. P. No. F. P. No.	Total Area of Measurement (sq.mtr.)	Name of the Possessors (Account No. 1787)	Type of Land (As per 7/12)
Survey / Blk. No. 4110 Old Survey No./ Blk. No. 350/5/1 T. P. No. --- F. P. No. ---	45,271.00	Madura Carbon India Ltd. – Director Shri. Gautam Vipan Kalra	As per old conditions

Details of the taxes received are as follows.

Details of the tax	Head	Total Area (sq.mtr)	Rate Per sq.mtr	Total Amount Rs.
Transfer fees	569-0035-00-800-01	45,271.00	8.00	3,62,168..00
Special Cess	570-0035-00-101-01	45,271.00	0.15	6,790.65
Local Fund	574-0029-00-103-01	45,271.00	0.15	6,790.65
Education Cess	575-0045-00-108-01	45,271.00	0.15	6,790.65
Measuring Fees	577-0029-00-106-01	45,271.00	--	4,200.00
			Total Rs.	3,86,739.95

Above said all facts taken into consideration and record Mauje Fansa, Tal. Umargam, Dist. Valsad Survey/Block No. 4110 admeasuring 45,271.00 sq. mtr. land on below mentioned terms and conditions applicable Gujarat Land Revenue Act 1879 U/s 65 N.A. Land purpose necessary permission herein order is passed.

TERMS:

1) On receipt of the said order within 2 months as per Model "M" covenant will be received.
2) Dist. Inspector of Land Records office measurement fees to be deposited on the strength of the said order and approved plans amendment letter to be executed and the said Amendment Letter after approval from Revenue Department questioned N.A. Land / Plot registered document presented plan and lay-out plan to be approved by competent authorities.
3) Applicant every year except farming (special cess) Rs. 0.15 ps per sq. mtr. Rs 6,790.65 and as per norms Local Fund and Education Cess to be paid and in this respect time to time will be applicable for necessary subject to change.
4) As per Valsad City Planner approved plans town planning scheme construction work to be done and within 3 years development work to be completed.
5) Government Revenue Dept. Resolution No. BKP/1093/A dated 13/09/1993 as resolved Joint / Common Plot and Roadside land will be of Society and all plot holders jointly ownership accounted and as per above owner will not have any right.
6) Government Revenue Dept. dated 07/08/1991 Circular No. BKP-1091/1756/A under provisions regarding Construction Control with respect to non-authorized construction Mahanagarpalika / City Area Board standard measures have to be taken.
7) From the said land petroleum / water and/or any other type of pipeline is passing therein reference necessary permission to be obtained from Development Authority No. Objection Certificate to be obtained and thereafter development work to be carried out.
8) Government Revenue Dept. dated 01/07/2008 Resolution No. BKP/1006/425/A mentioned below mentioned terms to be followed:-

    i) Dist. Inspector of Land Records issued measurement sheet or therein original remark limit mentioned. Presented plan and lay-out plan to be approved by competent authorities.
    ii) Before commencing development plans to be approved from competent authorities. But applicant without obtaining necessary permission for N.A. Land shall not entitled to get the permission.
    iii) Urban development board approved town planning scheme construction work to be done as per norms of G.D.C.R. and Zoning Rules.
    iv) As per Approved plans Health and Safety Department drainage water to be managed.
    v) Applicant under Ribbon Development Rules to take due care of roadside.
    vi) Flour mill, cinema/touring cinema/theatre purpose N.A. Land permission Dist. Magistrate necessary permission to be obtained and thereafter further proceedings to be carried out.
    vii) Petrol/ diesel, kerosene, CNG,LPG, pump installation purpose N.A. Land permission before development work Dist. Magistrate permission to be obtained
    viii) Indian Explosive accordingly magnetise, fireworks, explosive purpose N.A. Land permission before development work Dist. Magistrate permission to be obtained.
    ix) Questioned land is nearby railway Station then space to be left and construction work to be carried out.
    x) Questioned land adjacent any electric wire grid/ high tension power or pole existing therein accordingly applicable rules to be followed and to do construction work.
    xi) N.A. Land demanded such land if nearby aerodrome then distance therein construction height "No Objection Certificate" to be obtained and all rules to be followed under Civil Aviation.
    xii) O.N.G.C. existing pipe line / well case applicant have to followed related norms.
    xiii) Narmada Canal / Other canal nearby land applicant suggested construction to be maintained regarding distance to follow as per rules.
    xiv) Applicant / as and where necessary Central Government or State Government Act Protected Monuments declare historical stature 100 meter distance to be maintained.

9) Questioned land Nagarplaika / Mahanagarpalika / City Development Board whatsoever necessary permission issued under rules and regulations to be followed and development work to be carried out.
10) The said land rainwater harvest underground passing / accumulation for every house / highrise building per the said land above percolating management to be done and rainwater drainage management to be maintained and development work to be carried out.

11) Questioned land site erected construction work will be not as per Local society norms then the local society shall take action. Wherein it will not affected by this order.

Above said instruction to be followed strictly and whereas if you are failed to do so then breach of terms officer will be liable to take strict action.

12) Applicant above said if any terms breach is committed then under Land Revenue Act u/s 67 punishment steps will be taken and as per law accordingly Applicant is liable for any other punishment whatsoever order deem fit and proper penalty or type will be taken and/or possession will be continued with applicant.

13) Above said terms whatever it may be althoughagaisnt the said order constructed and/or additional any house or building by way of collector for time period duration to shift or to make changes ordered then the same shall be legally and resolved duration not shifted then whatsoever expenses occurred shall be recovered from applicant under Land Revenue Cess.

Furthermore, above said terms and conditions to be followed herein as per details Affidavit declared facts on the strength questioned land to be used as N.A. Land necessary permission is awarded.

Sd/-
(C. R. Kharsan) Collector, Valsad

R.P.A.D.
Madura Cotton India Ltd.
Unit 1, Banking Centre,
Beers Desai Road,
Andheri (West),
Mumbai 400 028,
Copy forwarded:

1) City Planner, Valsad City Planner Office,
2) Mamlatdar, Tal. Umargam, Dist. Valsad (Order applicable Village Record of Rights to be followed)
3) Dist. Inspector Land Record, Dist. Valsad.
4) Talati Cum Mantri, Fansa.
5) Tal. Development Officer, Umargam.
6) Dep. Collector, Pardi.

'The said order as per E-dhara centre, Umargam Mutation No. 7013 to Mauje Fansa, Tal. Umargam, Dist. Valsad registered'.

THE COLLECTOR & DISTRICT MAGISTRATE COURT, VALSAD
New Collector Court, Tithal Road, Valsad 396 001
Phone No. 02632 – 244274 / 244279
email: collector_val@gujarat.gov.in

Order No. 243/25/05/001/2019/3914-20
Date : 21/06/2019

THE FOLLOWING POINTS HAVE BEEN READ.

1. Applicant Shri Madura Cotton India Ltd.
   Residing at Unit 1, Banking Centre, Beers Desai Road, Andheri (West), Mumbai 400 028, dated 14/06/2019, their online application along-with the affidavit.
2. Under section 48, 56, 66 and 67 of the Mumbai Land & Revenue Act, 1879.
3. Under section 87, 100, 101, 102 of the Gujarat Land & Revenue Act 1972.
4. As per the order of the Government related with land & revenue BKP/1006/425/K. dated 01/07/2008
5. As per the circular of the Government related with land & Revenue BKP/102018/327/A dated 08/05/2018
6. As per the order of the Government related with land & revenue S/TP/12209/769/11/H1. dated 31/03/2011
7. As per the case details available on the IRCMS portal.

ORDER

As per the application received under point no.1, which the applicant M/s. Madura Carbon India Ltd, have requested for declaring the plot which is currently lying at post Fansa, Taluka Umargam, District Valsad, bearing survey / block number 4318 and having a total area of 2,881.00 sq. mtr, to be declared as a Non-Agricultural zone, under the Gujarat Land & Revenue Act 1879, under section 65.

The details of the possessor is as falls in the claimed properties 7/12 documents

Survey / Block No. T. P. No. F. P. No.	Total Area of Measurement (sq.mtr.)	Name of the Possessors (Account No. 1787)	Type of Land (As per 7/12)
Survey / Blk. No. 4318 Old Survey No./ Blk. No. 350/5/4 T. P. No. --- F. P. No. ---	2,881.00	Madura Carbon India Ltd. – Director Shri. Gautam Vipan Kalra	As per old conditions

Details of the taxes received are as follows.

Details of the tax	Head	Total Area (sq.mtr)	Rate Per sq.mtr	Total Amount Rs.
Transfer fees	569-0035-00-800-01	2,881.00	8.00	23,048..00
Special Cess	570-0035-00-101-01	2,881.00	0.15	432.00
Local Fund	574-0029-00-103-01	2,881.00	0.15	432.00
Education Cess	575-0045-00-108-01	2,881.00	0.15	432.00
Measuring Fees	577-0029-00-106-01	2,881.00	--	1,800.00
			Total Rs.	26,144.00

Above said all facts taken into consideration and record Mauje Fansa, Tal. Umargam, Dist. Valsad Survey/Block No. 4318 admeasuring 2,881.00 sq. mtr. land on below mentioned terms and conditions applicable Gujarat Land Revenue Act 1879 U/s 65 N.A. Land purpose necessary permission herein order is passed.

TERMS:

1) On receipt of the said order within 2 months as per Model "M" covenant will be received.
2) Dist. Inspector of Land Records office measurement fees to be deposited on the strength of the said order and approved plans amendment letter to be executed and the said Amendment Letter after approval from Revenue Department questioned N.A. Land / Plot registered document presented plan and lay-out plan to be approved by competent authorities.
3) Applicant every year except farming (special cess) Rs. 0.15 ps per sq. mtr. Rs 432.00 and as per norms Local Fund and Education Cess to be paid and in this respect time to time will be applicable for necessary subject to change.
4) As per Valsad City Planner approved plans town planning scheme construction work to be done and within 3 years development work to be completed.
5) Government Revenue Dept. Resolution No. BKP/1093/A dated 13/09/1993 as resolved Joint / Common Plot and Roadside land will be of Society and all plot holders jointly ownership accounted and as per above owner will not have any right.
6) Government Revenue Dept. dated 07/08/1991 Circular No. BKP-1091/1756/A under provisions regarding Construction Control with respect to non-authorized construction Mahanagarpalika / City Area Board standard measures have to be taken.
7) From the said land petroleum / water and/or any other type of pipeline is passing therein reference necessary permission to be obtained from Development Authority No. Objection Certificate to be obtained and thereafter development work to be carried out.
8) Government Revenue Dept. dated 01/07/2008 Resolution No. BKP/1006/425/A mentioned below mentioned terms to be followed:-

    i) Dist. Inspector of Land Records issued measurement sheet or therein original remark limit mentioned. Presented plan and lay-out plan to be approved by competent authorities.
    ii) Before commencing development plans to be approved from competent authorities. But applicant without obtaining necessary permission for N.A. Land shall not entitled to get the permission.
    iii) Urban development board approved town planning scheme construction work to be done as per norms of G.D.C.R. and Zoning Rules.
    iv) As per Approved plans Health and Safety Department drainage water to be managed.
    v) Applicant under Ribbon Development Rules to take due care of roadside.
    vi) Flour mill, cinema/touring cinema/theatre purpose N.A. Land permission Dist. Magistrate necessary permission to be obtained and thereafter further proceedings to be carried out.
    vii) Petrol/ diesel, kerosene, CNG,LPG, pump installation purpose N.A. Land permission before development work Dist. Magistrate permission to be obtained
    viii) Indian Explosive accordingly magnetise, fireworks, explosive purpose N.A. Land permission before development work Dist. Magistrate permission to be obtained.
    ix) Questioned land is nearby railway Station then space to be left and construction work to be carried out.
    x) Questioned land adjacent any electric wire grid/ high tension power or pole existing therein accordingly applicable rules to be followed and to do construction work.
    xi) N.A. Land demanded such land if nearby aerodrome then distance therein construction height "No Objection Certificate" to be obtained and all rules to be followed under Civil Aviation.
    xii) O.N.G.C. existing pipe line / well case applicant have to followed related norms.
    xiii) Narmada Canal / Other canal nearby land applicant suggested construction to be maintained regarding distance to follow as per rules.
    xiv) Applicant / as and where necessary Central Government or State Government Act Protected Monuments declare historical stature 100 meter distance to be maintained.

9) Questioned land Nagarplaika / Mahanagarpalika / City Development Board whatsoever necessary permission issued under rules and regulations to be followed and development work to be carried out.
10) The said land rainwater harvest underground passing / accumulation for every house / highrise building per the said land above percolating management to be done and rainwater drainage management to be maintained and development work to be carried out.

11) Questioned land site erected construction work will be not as per Local society norms then the local society shall take action. Wherein it will not affected by this order.

Above said instruction to be followed strictly and whereas if you are failed to do so then breach of terms officer will be liable to take strict action.

12) Applicant above said if any terms breach is committed then under Land Revenue Act u/s 67 punishment steps will be taken and as per law accordingly Applicant is liable for any other punishment whatsoever order deem fit and proper penalty or type will be taken and/or possession will be continued with applicant.

13) Above said terms whatever it may be althoughagaisnt the said order constructed and/or additional any house or building by way of collector for time period duration to shift or to make changes ordered then the same shall be legally and resolved duration not shifted then whatsoever expenses occurred shall be recovered from applicant under Land Revenue Cess.

Furthermore, above said terms and conditions to be followed herein as per details Affidavit declared facts on the strength questioned land to be used as N.A. Land necessary permission is awarded.

Sd/-
(C. R. Kharsan) Collector, Valsad

R.P.A.D.
Madura Cotton India Ltd.
Unit 1, Banking Centre,
Beers Desai Road,
Andheri (West),
Mumbai 400 028,
Copy forwarded:

1) City Planner, Valsad City Planner Office,
2) Mamlatdar, Tal. Umargam, Dist. Valsad (Order applicable Village Record of Rights to be followed)
3) Dist. Inspector Land Record, Dist. Valsad.
4) Talati Cum Mantri, Fansa.
5) Tal. Development Officer, Umargam.
6) Dep. Collector, Pardi.

'The said order as per E-dhara centre, Umargam Mutation No. 7058 to Mauje Fansa, Tal. Umargam, Dist. Valsad registered'.

MADURA CARBON

Date: 25-02-2019

To,
The Conservator of Forests,
Forest Department
Valsad Circle, Vanbhavan
Valsad-South Block

Subject: Authorisation of Wild Life Conservation Plan prepared for our proposed unit sited at survey no. 3705, 3708, 3719, 3725, 3738, 4108, 4110, 4318, Village: Fansa (Karajgam), Taluka: Umbergaon, Dist.: Valsad, Gujarat by M/s. Madura Carbon India Ltd..

Dear Sir,

With reference to the above subjected matter, we M/s. Madura Carbon India Ltd., propose manufacturing of Carbon Black & Power Generation (Green Power). To comply with ToRs awarded by MoEFCC for EIA report, we have prepared "Wild Life Conservation Plan" as enclosed herewith. We need to have authentication of the enclosed "Wild Life Conservation Plan" by competent authority. Hence, request you to kindly do needful in this regards.

Kindly confirm the same & guide us for further proceedings.

Thanking you,
Your sincerely,
For Madura Carbon India Ltd.

Authorized Signatory

Encl.: "Wild Life Conservation Plan"

વલસાડ વન વર્તુળ, "વન ભવન
વલસાડ – ૩૯૬ ૦૦૧.

MADURA CARBON INDIA LTD
Regd. Off.: 1, Janki Centre, Off: Veera Desai Road,
Andheri (W), Mumbai - 400 053. INDIA
T/F: +91-22-2673 0890 (4 Lines)
CIN: U23109MH2017PLC302582

MADURA CARBON

WILDLIFE CONSERVATION PLAN

1. WILDLIFE SPECIES IN STUDY AREA:

As observed and described in the baseline ecological status in chapter 3, following important wildlife species are observed:

1. *Pantheraparadus*- Leopard (Sighted rarely in study area) (IUCN Status: Vulnerable, WLA Status: Sch-I)
2. *Pavocristatus*- Common Peafowl (Least Concern, WLA Status: Sch-I)
3. *Varnusbengalensis*- Common Indian monitor (Least Concern, WLA Status: Sch-I)

2. WILDLIFE PROTECTION & CONSERVATION ACTIONS:

The following actions for wildlife protection & conservation shall be taken by Company.

A. Key Actions For Project Site:

- Company has allocated Rs. 50 Lakhs (5 years) for CER activities under head of Greenbelt Environment and necessary additional fund will be allocated timely for the below mentioned wild life protection & conservation actions.
- Proper & efficient implementation of mitigation measures & EMP suggested for Air, Water & Noise environment.
- Regular monitoring of stack Emission & Ambient air quality to be carried out as per monitoring plan.
- Greenbelt development & compensatory afforestation. Company has already developed a matured greenbelt around its premises. Same activity shall be continued further to strengthen greenbelt.
- Company shall ensure that whenever protected common species is observed in premises, they will carefully shift them out of impact prone areas.
- Company shall ensure that whenever any wild life species is found in vicinity of premises, they will call concern authority/party and forest department to get them back in their forest habitat.
- Company shall ensure that all necessary measures for prevention of environmental pollution is provided and working efficiently to ensure that there is no harmful effects on protected species of the area.
- Company shall contribute in the wild life protection activities carried out by forest department, wild life warden and any other NOG/organisation.
- Company shall conduct awareness program in local area for wild life conservation & protection.

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B. Offsite Actions For Wildlife Protection & Conservation:

Generic Actions:

1. Formation of eco-development committees through active participation of all segments of society in planning and decision making.
2. Participatory Rural Appraisal (PRA) technique is to be adopted for mutual interactions and reciprocal arrangements between the protected area management and people.
3. Adoption of simplified Micro-plan format. This will help in incorporating the PRA results in an easier way. Micro-plan should have clear information on objectives, Conservation activities, mutual obligations, approved investments, schedule, monitoring and evaluation mechanisms, indicators of success etc.
4. Women, tribal, scheduled castes, back ward castes, peoples from Panchayat and NGOs should be encouraged to contribute in the formulation of plan and decision making. This will enhance the success probability in a big way.
5. Establishment of Anti-Poaching Camps in and around Forest Areas in association with Forest Department.
6. In association with the concern authorities as mentioned in above point, proper Signages& Boards shall be provided in order to improve the information available to local people, visitors etc. The following activities are suggested:
    a. Proper signage to be put inside the forest area to give details of the flora, fauna, historical sites, details of medical plants, maps to show Forest Area etc.
    b. Hoarding to be put up on the high ways for the publicity of camping sites and other conservation action facility.
    c. Displaying DO's and Don'ts at various locations, camp sites etc.
    d. Public Awareness & Publicity activities as described in subsequent section.

Public Awareness & Publicity:

- The whole task of management will be rendered easy if the local people are made aware about the significance of wildlife and bio-diversity conservation. So regular conservation education programmes should be taken up for the people in and around the sanctuary.
- Organizing experience sharing workshop and use of mass media. Organization of environmental/ awareness camps for sensitization of students, public servants, political leaders, media personnel etc.
- Nature education camps for students and teachers of schools and colleges and for the local population for exposure about forests.
- Workshops for local community leaders like members of gram panchayat, Nagar panchayat and Zillapanchayat and other elected representatives.
- Publishing & Circulation of posters, handbills, pamphlets, brochures etc. Such documents shall include Do's &Don't's as described below:

MADURA CARBON

Do's :

1. Allow the flora and fauna to flourish in its natural environment
2. The use of polythene and plastics is unhealthy for the environment. Kindly use only if necessary.
3. Carry away all non-degradable litter-empty bottles, tins, polythene bags etc. and throw them in municipal dustbins only, so that they can be disposed off properly.
4. Observe the sanctity of holy sites. In case of any offerings, contact the staff of the temple committee only.
5. When taking photographs, respect privacy; ask for prior permission and use restraint
6. In case temporary toilets are set up near campsites, after defecation, cover with mud or sand. Ensure that the spot is at least 50 mtrs. from a water source.

Don'ts :

1. Do not taking away cuttings, seeds and roots etc.
2. Avoid using pollutants, such as detergent, in streams or springs.
3. Do not use wood as fuel to cook food at the camp site and do not destroy the forest wealth of the Western Ghats which are our heritage.
4. Do not leave smoldering cigarettes or make open fires in the forests. Do not consume alcohol, drugs or any other intoxicant.
5. Do not tempt the local children by offering them foodstuff or sweets. Respect local traditions.
6. Do not listen to radios, tape recorders or any other electronic entertainment equipment at high volume to avoid noise pollution.

MADURA CARBON

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CIN: U23109MH2017PLC302582

BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL

WESTERN ZONE BENCH, PUNE AT PUNE

APPEAL NO. 41/2020

Hiteshbhai Uttambhai Dodi
and others ... **APPELLANTS**

V/s

Ministry of Environment, Forestry&
Climate Change and others ... **RESPONDENTS**

VAKALATNAMA

KNOW ALL to whom these present shall come that we, the above named do hereby appoint:

Saurabh Kulkarni,
Advocate

Prashant Bhat
Advocate

M/s.D.V. Kulkarni & Co., Advocates
420, Shaniwar Peth, Near Ahilya Devi School,
Next to Bank of Maharashtra, Pune – 411 030.
Ph(O) 24459027
(Email) sdkadvocate@gmail.com

Hereinafter called the Advocates to be **Respondent No.4' (MADURA CABON INDIA LIMITED)** Advocates in the above noted case & authorize them;

To, act appears and plead in the above noted case in this court or in any other court in which the same may tried or heard.

To sign file, verify and present pleadings, appeals, cross-objections or petitions fee executions review, revision, withdraw compromise or other petitions or affidavits or other documents as may be deemed necessary or proper for the execution of the said case in all its stages.

To file and take back document, to admit &/or deny the document of opposite party

To take execution proceedings.

To appoint and instruct any other Legal practitioner or person authorizing him to exercise the power and authority hereby conferred upon the Advocate whatever they may think fit to do so & sign the power of attorney on.

And I the undersigned do hereby agree to ratify and confirm all acts done by the Advocates or their substitute in the matter as my/our own acts, as if done by me/us intents and purposes.

AND I/We undertake that I/We or My/Our duly authorized agent would appear in court on all hearing &will inform the Advocate for appearance when the case in called

And I/We undersigned do hereby agree not to hold the advocate or his substitute responsible for the result of the said case. The adjournment costs whatever ordered by the Court shall be of the Advocate he shall receive and retain for himself.

And I/We the undersigned do herby agree that in the event of the whole or part of the fee agreed by me/us to be paid to the advocate remaining entitled to withdraw from the prosecution of the said case until the same is paid up. The fee settled is only for the above case and above court for a period of three years only. I/we hereby agree that once the fee is paid I/We will not be entitled for the refund of the same in any case whatsoever.

IN WITNESS WHEREOF we do hereunto set our hand to their presents the contents of which have been understood by us on this 14th day of June 2021

ADVOCATES

For MADURA CARBON INDIA LIMITED

Director

Signature

I am not a member of Advocates Welfare Fund and therefore stamp of Rs.2 is not affixed herewith.

MADURA CARBON

CERTIFIED COPY OF THE RESOLUTION PASSED AT THE MEETING OF THE BOARD OF DIRECTORS OF THE MADURA CARBON INDIA LIMITED HELD ON 5TH OF SEPTEMBER 2020, AT THE REGISTERED OFFICE OF THE COMPANY

TO TAKE LEGAL ACTION AGAINST CASE FILED IN NATIONAL GREEN TRIBUNAL

"**RESOLVED** that the Directors of the company for the purpose of;

1. To appear and act in all courts, civil, revenue or criminal, tribunal whether original or appellate, in connection with the Company's legal proceedings in various courts and / or such other law suits as the Company may have instituted or may institute hereafter to protect and defend the Company's interest or for the realization of Company's money and / or other dues recoveries from other parties AND to sign and verify plaints, written statements, petitions of claims and claim forms B under the Insolvency Code, objection, complaints, memorandum of appeal and petitions and applications of all kinds and to file them in any such Court in India.

2. To appear on behalf of the Company in various legal matters, to sign the papers on behalf of the Company, to engage Lawyers, to sign the papers on behalf of the Company, to swear Affidavits on behalf of the Company and to act and execute all things for the purpose aforesaid.

Sr. No	Name	Designation
1.	Mr. Vipan Ramnath Kalra	Director
2.	Mr. Sanil Radheshyam Kalra	Director
3.	Mr. Gautam Vipan Kalra	Director
4.	Mr. Rishi Kalra	Director

RESOLVED FURTHER THAT persons mentioned from serial no 1 to 4, severally be and is hereby authorized as the true and lawful representative of the Company at various competent Court, Tribunal, Appellate Tribunal, Forum and do all or any of the acts, deeds, things specified hereinafter in connection with filling, representing, appealing, in respect on behalf of the Company."

For **MADURA CARBON INDIA LIMITED**

RISHI KALRA
DIRECTOR
DIN: 00122132