REPORT

OF

OVERSIGHT COMMITTEE

[CONSTITUTED BY THE HON'BLE NATIONAL GREEN TRIBUNAL PRINCIPAL BENCH, NEW DELHI]

ON

INSPECTION-CUM-MONITORING

OF

M/S SAURASHTRA CHEMICALS DIVISION OF NIRMA LIMITED

BIRLASAGAR, PORBANDAR

GUJRAT

IN THE MATTER

OF

APPEAL NO. 45/2020 (WZ)

SAYYED MOHAMMED SABIR USMAN & ANR. VERSUS UNION OF INDIA & ORS.

REPORT OF OVERSIGHT COMMITTEE ON INSPECTION-CUM-MONITORING OF M/S SAURASHTRA CHEMICALS DIVISION OF NIRMA LIMITED, BIRLASAGAR, VILLAGE-CHHAYA, PORBANDAR, DIST- PORBANDAR, GUJARAT IN COMPLIANCE OF ORDER OF HON'BLE NATIONAL GREEN TRIBUNAL, PRINCIPAL BENCH, NEW DELHI IN THE MATTER OF APPEAL NO. 45/2020 (WZ) SAYYED MOHAMMED SABIR USMAN & ANR. VERSUS UNION OF INDIA & ORS.

1.0 PREAMBLE

Hon'ble National Green Tribunal (NGT), Principal Bench, New Delhi passed an order in the matter of Appeal No. 45/2020 (WZ) (in appeal made by Sayyed Mohammed Sabir Usman & Anr. Versus Union of India & Ors.) on 07th July, 2021. The matter is based on the Appeal made by the Appellant(s) on 18.09.2020 before the Hon'ble National Green Tribunal, Western Zone Bench, Pune regarding Environmental Clearance (EC) granted by the Ministry of Environment, Forest & Climate Change (MoEF&CC) on 19.08.2020 for expansion cum modernization of Soda Ash manufacturing unit (from 35,720 TPM to 45020 TPM) and Cogeneration power plant (20 MW to 40 MW) by M/s. Saurashtra Chemicals (Division of Nirma Ltd.) at Birlasagar, Porbandar, Gujarat.

Hon'ble NGT vide its order dated: 07.07.2021 (**Annexure-1**) has constituted six member oversight committee comprising of CPCB, Gujarat Pollution Control Board, District Magistrate, Porbandar, SEIAA, Gujarat, National Institute of Oceanography (NIO) and Chief Wildlife Warden (Forest), Gujarat to visit the site of M/s. Saurashtra Chemicals (Division of Nirma Ltd.) at Birlasagar, Porbandar, Gujarat and ensure the adopted measures covered by the EC and Consent Conditions and compliance of relevant parameters and Hon'ble NGT has disposed the appeal in the said order.

Relevant portion of the order of Hon'ble NGT dated 07.07.2021 is reproduced below:

"8. …….The measures to be so taken are by and large covered by the EC and Consent Conditions. To ensure that the said measures are duly adopted, we constitute a six-member oversight Committee comprising of CPCB, Gujarat Pollution Control Board, District Magistrate, Porbandar,

SEIAA, Gujarat, National Institute of Oceanography (NIO) and Chief Wildlife Warden (Forest), Gujarat. Gujarat Pollution Control Board will be the Nodal Agency for coordination and compliance. The Committee will be free to interact with the stake holders and consider any grievance arising out of violation of environmental norms. Considering the impact of expansion of the project, the Committee may inter alia look into the adequacy of capacity of Effluent Treatment Plant, Air Pollution Control Devices, storage and utilisation of sludge and solid waste,

performance of currently operated sub-marine outfall/other method for utilisation and disposal of effluents, additional measures in view of high load of suspended solids in effluents and other related aspects.

The Committee may also examine other measures for protection of ecology in the area and role to be played by the industry. First meeting of the oversight Committee may be held within one month and visit to the site may be undertaken. Except for visit to the site, other proceedings can be conducted online. Action plan be prepared to ensure compliance of environmental norms by regular monitoring. Wildlife Conservation Plan dated January, 2020 submitted by the project proponent dealing with conservation of wildlife within the circumference of 10 km, including the Bird Sanctuary at Porbandar, be duly executed with such further modifications as may be found necessary."

2.0 CONSTITUTION OF THE JOINT COMMITTEE

In compliance to the NGT order dated 07.07.2021, the six members oversight committee comprising of CPCB, Gujarat Pollution Control Board, District Magistrate, Porbandar, SEIAA, Gujarat, National Institute of Oceanography (NIO) and Chief Wildlife Warden (Forest), Gujarat constituted with following members:

Sr. No.	Name & Designation of Member	Authority/ Institute
1.	Mr. Janesh. K. Vyas (Member of SEAC)	SEIAA, Gujarat
2.	Mr. S. Pradeep Raj Scientist D, CPCB, Regional Directorate, Vadodara	Central Pollution Control Board (CPCB)

3.	Dr. C. Mohandass Senior principal Scientist & Scientist in Charge, CSIR-NIO	CSIR-National Institute of Oceanography (CSIR-NIO) Regional Centre Mumbai
4.	Mr. Deepak Pandya DCF, Porbandar	Chief Wildlife Warden (Forest), Gujarat
5.	Mrs. K. N. Parmar Regional Officer, GPCB, Porbandar	Gujarat Pollution Control Board (GPCB)
6.	Mr. M. K. Joshi Resident Additional Collector, (G.A.S.)	District Magistrate office, Jilla Seva Sadan Kacheri, Porbandar

3.0 APPROACH & ACTIVITIES CARRIED OUT BY THE COMMITTEE

Hon'ble NGT in its order dated: 07.07.2021 directed the Committee to look into the adequacy of Effluent Treatment Plant, Air Pollution Control Devices, storage and utilisation of sludge and solid waste, performance of currently operated sub-marine outfall/other method for utilisation and disposal of effluents, additional measures in view of high load of suspended solids in effluents and other related aspects with respect to the impact to the expansion of the project by Project Proponent, i.e. M/s. Saurashtra Chemicals Division of Nirma Limited. It was also directed that the first meeting of the oversight Committee may be held within one month of the order and to undertake site visit.

In pursuance to the above order, the first meeting of the oversight committee was held on 05.08.2021 at Porbandar followed by discussion with Project Proponent and site Visit of M/s. Saurashtra Chemicals and its surrounding areas during 06.08.2021 & 07.08.2021. The minutes of first meeting of the oversight committee held on 05.08.2021 is attached in **Annexure-2**.

The committee adopted following approach for the compliance of the order:

- Inspection-cum-monitoring at Project Proponent site: Inspection-cum-monitoring was carried out at M/s Saurashtra Chemicals (Division of Nirma Limited), Porbandar during 05.08.2021 and 06.08.2021 to verify the compliance of the relevant conditions as per order.
- Monitoring: The committee requested GPCB to carry out the required monitoring & sampling at M/s Saurashtra Chemicals (Division of Nirma Limited), Porbandar. Accordingly, the Regional Office of GPCB at Porbandar carried out monitoring of

Stacks (Source Emission) attached to various units in the industry, Noise Level monitoring inside the industry's premises, Sampling of Waste water from Open Channel inside the industry & Sump station near sea and Ambient Air Quality Monitoring at upwind & downwind of the factory premises. The sample collected during the visit was analyzed at the Regional Laboratory of GPCB at Jamnagar.

- Visit to water intake line and pumping station of the industry located near the lighthouse was carried out 06.08.2021 and sample of the inlet water was collected during the visit. The sample collected during the visit was sent to the Regional Laboratory of GPCB at Jamnagar for analysis.
- Visit to the sampling point of effluent disposal channel of the industry locate on the sea coast behind the premises of Headquarters of Indian Coast Guard was carried out on 06.08.2021 and the sample of the outlet effluent was collected during the visit. The sample collected during the visit was sent to the Regional Laboratory of GPCB at Jamnagar for analysis.
- The oversight committee visited Porbandar Bird sanctuary on 06.08.2021 to assess the adverse effect on bird sanctuary by the Project Proponent, i.e. M/s. Saurashtra Chemicals (Division of Nirma Ltd.).
- The oversight committee interacted with the representative of Industry and collected various information/Data related to their process, EC status and consent conditions, etc.
- The oversight committee also interacted with various stack holders like fishermen associations, residents of nearby villages, etc.
- The following information was sought from the industry by the oversight committee during the interaction:
    1. Manufacturing Process.
    2. Water Balance.
    3. Analysis reports of Air/ Water samples taken by GPCB/Third party from 2019 to 2021.
    4. Action plan for ecology protection in the surrounding area.
    5. Action plan to ensure compliance of environmental norms by Environment Monitoring Programme.

6. Status of execution of the Wildlife Conservation plan submitted during 2020 with conservation of wildlife within the circumference of 10 kms, including the Bird sanctuary at Porbandar.
7. Details of marine Fish Production in Porbandar & Gujarat from 2015-16 to 2019-20.
8. Solid waste (Fly ash/Grit waste) management details.
9. Fire control arrangement in unit along with fire NOC.

4.0 ABOUT THE INDUSTRY

The respondent Industry, M/s Saurashtra Chemicals Division of Nirma Ltd., is located at Birlasagar, Chhaya Village, Porbandar, in the State of Gujarat and established during 1959 as M/s. Saurashtra Chemicals Limited (SCL). The industry is presently involved in the manufacturing of Soda Ash (Light and Dense) using Solvay process and also manufactures Sodium Bicarbonate (refined and Technical Grade), Caustic Soda Bromine and co-generation Power Plant for captive consumption. The industry (M/s. Saurashtra Chemicals Limited) was taken over by Nirma Group in February 2006 as sick company and amalgamated with M/s. Nirma Limited. Consequence upon the amalgamation, the erstwhile SCL is now known by its present name, M/s Saurashtra Chemicals Division of Nirma Limited.

Since, the industry is operational since six decade, its major plant machineries need more maintenance as well as required to be replacement. The industry has planned to carry out technology up-gradation/ modernization which results in the production capacity of Soda Ash and Cogeneration power plant. Accordingly, the industry has obtained Environmental Clearance (EC) for modernization of Soda Ash plant and co-generation power plant and enhancement of its production capacities.

The location of the Industry, Bird sanctuary, and waste water disposal point are earmarked on Google image and shown in **Figure-1** and the boundary of the industry marked on Google image are shown in **Figure-2**.

Figure-1: *Location of the industry, bird sanctury and wastewater disposal point of the industry*

Figure-2: *Marking of boundary of the industry*

4.1 CONSENTS & ENVIRONMENTAL CLEARANCE

M/s Saurashtra Chemicals Division of Nirma Ltd. has obtained Consolidated Consent for Authorization (CCA) from Gujarat Pollution Control Board (GPCB) vide Consent Order No. AWH-102464, dated: 24.06.2019 with validity up to 31.03.2024 and subsequently obtained

amendment for the CCA vide amendment CCA no. H-111437, issued on 15.02.2021 for the production of following products:

Sr. No.	Name of Products	Existing quantity	Proposed quantity	Total after expansion
1	Soda Ash (Light)	28000 MT/M	0	28000 MT/M
2	Soda Ash (Dense)	5100 MT/M	0	5100 MT/M
	OR			
	Soda Ash (Light)	5100 MT/M	0	5100 MT/M
3	Caustic Lye (100%)	620 MT/M	0	620 MT/M
	OR			
	Soda Ash (Light)	820 MT/M	0	820 MT/M
4	Sodium Bi-Carbonate	1800 MT/M	0	1800 MT/M
	OR			
	Soda Ash (Light)	1800 MT/M	0	1800 MT/M
5	Liquid Bromine	20 MT/M	0	20 MT/M
6	Power (Co-generation Power Plant)	20 MW	20 MW	40 MW
7	Flash Condensate	20 m^3/Hr. (14400 m^3/M)	0	20 m^3/Hr. (14400 m^3/M)
8	Distilled Water	70 m^3/Hr. (50400 m^3/M)	0	70 m^3/Hr. (50400 m^3/M)

** The overall consented quantity of Soda Ash (Light) will be 35720 MT/M.*

Note: This Consolidated Consent and Authorization is also granted for the operation of already existing RO Plant 2 Nos. (Capacity 12,400 M^3/Day), operation of Coal Breeze Briquette Plant (Capacity 300 MT/Day), Modification in effluent treatment (Acid Dosing for Neutralization of Waste Water) & operation of New Turbo Generator of 14.5 MWH capacity.

The copies of the CCA and its amendment are attached as **Annexure-3** for reference.

The industry has obtained Environmental Clearance (EC) from Ministry of Environment, Forest & Climate Change (MoEF&CC), New Delhi vide F. No. J-11011/115/2017-IA-II (I), dated: 19.08.2020 for the Expansion cum modernization of Soda Ash manufacturing unit (from 35,720 TPM to 45020 TPM) and Co-generation power plant (20 MW to 40 MW). The details of existing and proposed products as mentioned in the EC is given in table below:

Sr. No.		Production Capacity (TPM)		
	Product	Existing	Proposed Additional	Total after expansion
1.	Soda Ash (Light)	35720	9300	45020
2.	Caustic Lye (100%)	620	0	620
3.	Soda Ash (Dense)	5100	0	5100
4.	Sodium Bi-Carbonate	1800	600	2400
5.	Power (Co-generation Power Plant)	20 MW	20 MW	40 MW

The copies of the EC granted by MoEF&CC is given in **Annexure-4** for reference.

5.0 COMPLIANCE STATUSES AND ACTION PLANS SUBMITTED BY INDUSTRY

The industry has submitted the compliance status of its CCA. Copy of the same is placed as **Annexure-5**. As per the compliance status submitted by the industry, the industry has produced an average of 13581.715 MT/month of Soda Ash (Light), 758.804 MT/month of Soda Ash (Dense), 941.729 MT/month of Sodium Bi-Carbonate, 8571.666 m^3/month of Flash Condensate, 16885.333 m^3/month of Distilled Water and 11.576 MW of power generation in the Co-generation Power Plant during the year 2020-2021, which are within the consented production capacities.

The daily average trade effluent generated from the industry during the period January to July 2021 are ranging from 102898 KL/day (during January 2021) to 140845 KL/day (during June 2021), which is well within the quantity (169960KL/day) prescribed in the conditions under the Water Act given in the CCA. Reportedly, the treated effluent is being disposed into the Arabian Sea at a discharge point located 270 mtr into the Arabian Sea beyond lowest tide water level through closed submerged pipeline and diffuser system.

GPCB is carrying out sampling of the treated trade effluent at different time intervals and the industry is also carrying out sampling through EPA approved laboratory. As per the data submitted by the industry, the analysis results of the treated waste water samples collected by GPCB and EPA approved laboratory during last one year period are within the discharge norms prescribed by GPCB in CCA.

The daily average sewage from the industry during the period January to July 2021 are ranging from 583 KL/day (during January 2021) to 737 KL/day (during June 2021), which is well within the quantity (1000 KL/day) prescribed in the conditions under the Water Act given in the CCA. Presently, the domestic sewage is being dispose off through septic tank / soak pit system. The industry is in the planning to connect their sewage line to the Porbandar – Chhaya Nagarpalika Sewage line for disposal at the upcoming 19.10 MLD Sewage treatment plant at Porbandar – Chhaya Nagarpalika.

The daily average rejected effluent from the desalination plant from the industry during the period January to July 2021 are ranging from 1036.80 KL/day (during January 2021) to 4319.26 KL/day (during April 2021), which is well within the quantity (5760000 Lit/day, i.e., 5760 KL/day) prescribed in the condition under the Water Act given in the CCA.

The industry is carrying out monthly monitoring of the stacks attached to boilers through EPA approved laboratory. As per the data submitted by the industry, the monitoring results of the stack attached to boiler submitted by EPA approved laboratory during April to July 2021 are within the emission norms prescribed by GPCB in CCA.

As per the details provided by the industry, 1.3 KL of used oil is generated during the period January to July 2021 against the permitted quantity of 2 KL/ Year and not generated any insulating material waste (i.e. glass wool) since last three year against the permitted quantity of 5MT/Year.

The industry is having a valid insurance policy as per “Public Liability Insurance Act – 91” vide Policy no. 0603002720P108302745 which is valid up to 28.10.2021 in accordance to one of the condition mentioned in the CCA issued by GPCB.

The industry has submitted the compliance status of its Environmental Clearance. Copy of the same is placed as **Annexure-6**. As per the compliance status submitted by the industry, the industry has awarded the work to Department of Zoology, School of Science, Gujarat University for study on effect of Soda Ash effluent on marine fish harvesting as per the

condition of EC. Reportedly, the study is under progress and is expected to get over by the end of the year.

The industry has prepared a report on Improvement through proposed modernization for submission to EAC as per the condition of EC. The copy of the said report was made available to the joint committee during the visit. The details of the modernization of the plant are described in subsequent section of this report.

As specified in the EC condition, treated water of 169960 m^3/day shall be discharged to Arabian Sea beyond lowest tide water level through closed pipeline and diffuser system. As per the details provided by the unit, the actual quantity of treated wastewater disposed during the last six months period and the disposal point in the Arabian Sea are in accordance to the specified condition and in line with the consent condition, which are described in earlier section of this report.

As specified in the EC condition, no raw material/solvent prohibited by concerned regulatory authorities from time to time shall be used. As informed by the industry, the two prime raw material for Soda Ash production are salt and limestone, which are procured by the industry from captive salt works and mines and no any other prohibited raw materials are being used for existing project. It was also reported that the current practice will be continued for the proposed modernization project.

As informed by the industry, there is no increase in sea water requirement due to modernization, the water requirement shall remain same as existing quantity, i.e. 176100 Cu.m/day.

As specified in the EC condition, Rainwater harvesting system shall be set up in the premises by construction of storage tanks and water shall be used for various industrial purpose in the unit. No water shall be permitted to pumped into the ground. The industry claim that since the plant is close to the sea coast, it is difficult to harvest the rainwater by installing rain water harvesting structure/system. However, the industry assured that the possibility of roof top rain water collection and reuse will be explored.

The industry uses only one Hazardous Chemical in the plant, i.e. Ammonia, which is being stored in 2 closed carbon steel tanks of 28 MT capacity each. The industry has obtained license from PESO (Petroleum & Explosives Safety Organization) for storage of Ammonia gas in pressure vessels in the premises vide License no. S/HO/GJ/03/274, dated: 28.08.2019, with license validity up to 30.09.2023.

There is no generation of organic residue or spent carbon in the Soda Ash production process. The waste water is 10 to 15 times diluted and discharges into the Arabian Sea through diffuser system. The industry informed that the same process shall be continued for the proposed modernization project also.

The Fly Ash is stored in Fly Ash silos (2 nos. of 300 MT storage capacity each). The industry is having Ash condensing system (through water) and proper system to unload the Fly Ash in to the cement bulker / vehicles to avoid any direct exposure of workers to fly ash & dust. Fly Ash is sold to brick manufacturer/traders and Cement Plant (Ultratech Cement).

For waste minimization measures, the industry is reusing the unburned lime stone back into lime kiln. About 31342 MT of grit waste sold for construction activities. The industry is adopting automated bagging machines which minimizes the spillages and closed conveying system to convey raw materials/fuels, etc. The industry is using 7Kg high pressure hose for cleaning as a step for reducing wastewater generation.

As per the condition of EC, the green belt of at least 5-10 m width shall be developed in nearly 33% of total project area. As per the details provided by the industry, the total plant land area is 5,18,974 sq.mt (128.24 Acres), which is covered on all the four sides by boundary walls. The Greenbelt area is 8256 Sq.mt within plant, additional 247660 sq. mt greenbelt is developed in the Birlasagar colony and 10898 Sq.mt at nearby villages. So total Greenbelt area is 2,66,814 Sq.mt. Approximate plants in the factory premises is 2459 nos. and 21675 nos. in the Birlasagar Colony. The industry is planning to further increase plantation of area up to 15% within premises by allocating 70,000 sq.m. area within the industry premises. The industry has prepared an action plant for additional green belt development every year and brief illustration of the action plan is given in table below:

Planning for development of Greenbelt					
No of trees plantation					
1st Year	2nd Year	3rd Year	4th Year	5th Year	Total
1400	1400	1400	1400	1400	7000
20%	20%	20%	20%	20%	100 %

As per the O.M No.22-65/2017-IA III dated 1st May, 2018 an amount equivalent to 0.75% of proposed capital cost for expansion (Rs.151.78 cr) i.e. Rs.1.14 cr shall be allocated for CER (Corporate Environment Responsibility) and shall be utilized for meeting the issues suggested during public hearing. The industry informed that as per the recommendation of EAC, out of 1.14 Cr. CER amount @ 25 lakhs will be allocated for welfare activities of fisherman as discussed during Public Hearing. The industry has prepared a detailed CER action plan with broad activities. Brief illustration of the CER proposed to be implemented by the industry in 5 years are given in table below:

Type of Activities	Yearly amount to be spent in CER activities (Rs. in Lakhs)					Total amount to be spent (Rs. in Lakhs)
	1st Year	2nd Year	3rd Year	4th Year	5th Year	
1.Infrastructure	5.6	5.6	5.6	5.6	5.6	28
Infrastructure creation in Dharampur Village (i.e. Road development and domestic drainage facilities)						
Infrastructure Creation in Bhod village (i.e. RCC Paver block road)						
Infrastructure creation in Healthcare Center of Dharampur, Bhod, Adityana/Ranavav villages.						
Appliances for Bhod Gram panchayat						
2.Sanitation	6	6	6	6	6	30
Drinking & sanitation facilities in schools						
3.Rain Water Harvesting	2	2	2	2	2	10
Water conservation by rain water harvesting in plant & in nearby villages						
4.Public Hearing issues	5	5	5	5	5	25
Financial assistance for welfare of fisherman association						
Activities related to study the impact of pollution on fish						
5.Green belt development	2	2	2	2	2	10
Plantation in plant & in surrounding villages as per consultation with Forest Dept., Porbandar						
6.Skill Development	3	2	2	2	2	11
Periodical training for skill development (Child care, Women empowerment, Communication skill development etc)						
Total	23.6	22.6	22.6	22.6	22.6	114

The industry has obtained NOC from Gujarat State Fire Prevention Services, Gov. of Gujarat vide letter no. RFO – SFPS/Fire NOC – Industries/83/2020 dated 28/12/2020. The industry has installed appropriate type of fire extinguishers at strategic places throughout the factory. The fire extinguishing lines have 27 nos. of monitors, 89 nos. of hydrant with hose box. Further, fire sensors, water pumps, sprinklers are also in placed to control any fire accident.

The industry has an occupational health center located inside the industry premises as well as in residential area with fully equipped dispensary with full time doctors and supporting staff. Reportedly, all the workers have been medically check-up on regular basis and Form – 32 and other records have been maintained as per Factory Act.

The industry has installed Continuous online monitoring system for flue gas stack and it is digitally displayed on main gate. Transmission work of this data to GPCB and CPCB server are under process. Also, for online continuous monitoring of effluent, the industry has installed web camera with night vision capability and flow meters.

The industry has submitted the action plan for Ecology protection. Copy of the same is placed as **Annexure-7**.

The industry has submitted the action plan of implementation of wildlife conservation plan. Copy of the same is placed as **Annexure-8**.

6.0 ENVIRONMENT MANAGEMENT SYSTEM AT EXISTING PLANT OF M/S SAURASHTRA CHEMICALS DIVISION OF NIRMA LIMITED

6.1 PROPOSED MODERNIZATION

The industry is operational since the year 1959. As plant is operational since six decades, its major plant machineries need more maintenance as well as required to be replace. Considering the above, the industry has planned to carry out technological up-gradation/ modernization of the plant, which results in the enhancement of the existing production capacities of Soda Ash and co-generation power plant. In proposed modernization, there will be replacement and/or addition of plant equipments/ machineries by technological upgradation. The list of equipments/ machineries which is proposed to be replaced/ added are given in table below:

Sr. No.	Name of Equipment	Installed as Existing		Existing to be replace/addition as part of Modernization		Total After Expansion	
		Name	Capacity	Name	Capacity	Name	Capacity

A.	Technology up-gradation by Replacement :						
1.	Slaker - Ball Mill	Slaker – 1 to 3	2250 TPD	Slaker –1 to 3	2250 TPD	Slaker–1 to 3	2250 TPD
		Ball Mill	1500TPD	Ball Mill	1500 TPD	Ball Mill	1500 TPD
2.	Calciner	Calciner– 1 to 6	1800 TPD	One Replace with three Inefficient	800 TPD	Calciner– 1 to 3	1800 TPD
B.	Technology up-gradation by Addition :						
3.	Lime Kiln	Kiln – 1 to 8	2736 TPD	Kiln - 9	536 TPD	Kiln –1 to 9	3272 TPD
4.	Soda Ash Cooler	--	--	Soda Ash Coolers	1500 TPD	Soda Ash Coolers	1500 TPD
5.	RO plant	RO- 1 & 2	12.4 MLD	RO - 3	5 MLD	RO 1 to 3	17.4 MLD
6.	Boilers	Boiler – 8 to 10 (one standby)	240 TPH	All Boiler (regular use)		Boiler – 8 to 10	360 TPH

Replacement of Slaker & Ball mill

Currently, there are three numbers of lime slakers at site. These slakers are of old design and lime recovery is very poor. It is not slaking lime properly which results in to lime loss in grit as well as unslaking lime stone. New slakers will be very efficient and will require less maintenance. Thus there will be reduction in consumption of lime stone and coke per ton of Soda Ash.

Existing ball mill which are more than 50 year old with unique type of gearbox not able to get the support due to non-availability of spare parts resulting in frequent failure. The old ball mills will be replaced with ball mill with modern technology & adequate capacity. Efficient ball mills will result in to reduction of lime per ton of soda ash as well as it increases clearing cycle of distillers.

Replacement of calciner

The function of calciner is to calcine sodium bi-carbonate by heating with 30 kg/cm2 steam. Due to aging of pressure part tubes & manifold fail frequently. To reduce fugitive emission, it is proposed to install one more calciner with modern technology.

Addition of Lime KILN

The function of mixed fired vertical KILN it to calcine calcium carbonate (lime stone) in to Lime. (calcium Oxide). But over a period of time mines reserve is depleted & quality is also deteriorated. To calcine lime stone efficiently, the industry proposed to install KILN with modern technology with higher length by diameter ratio & rotary feeding system. This KILN can produce efficiently active lime. More fraction of lime results in to reduction of lime stone per ton consumption of soda ash. Thereby reducing resources & pollution which is prime concern for old KILNs.

Addition of Soda Ash Cooler

In old technology finished product after calciner with temperature 200 to 220 °C was conveyed pneumatically thereby it was possible to reduce product temperature due to mixing of air. This system requires more power consumption and it also result in to generation of Soda solution. To reduce power consumption to avoid degradation of product, the industry proposed to go for mechanical handling with product cooler which required less power & no deterioration of finished product. Cooler will reduce finish product temperature and will be comfortable to handle finished product during transportation

Addition of New R.O Plant

Earlier, Sea water was used for brine purification for reduction internal consumption of soda ash which requires more lime & Soda Ash. To reduce lime & Soda consumption, it is proposed to make brine in RO water. To meet plant requirement, 5MLD capacity RO plant is proposed.

Regularisation of Boiler

Existing boiler are more than 10-year-old. It requires renovation & time to time maintenance. To sustain production efficiency, it is proposed that boiler & Turbine with latest technology to be installed which can comply with emission norms

6.2 WASTEWATER MANAGEMENT

6.2.1 Domestic Waste Water Management: Presently, approximate 700 KL/D (CC&A quantity for Domestic waste water generation is 1000 KL/D) sewage is being generated from the domestic activities includes plant and colony area which is presently being disposed off through septic tank/soak pit system. Further, the industry has already submitted an application to Porbandar – Chhaya Nagarpalika with reference to connection of their Sewage line to the sewerage line of Porbandar-Chhaya Nagarpalika network which leads to Common Sewage Treatment Plant of Nagarpalika.

6.2.2 Effluent Management: Total industrial wastewater generation is 1,69,960 KLD. Out of which, 58 KLD is from boiler blow down, 11955KLD from process, 19900 KLD from Kiln Scrubber, 6960 KLD from R.O. Reject, 21600 KLD from once through cooling tower, 30,000 KLD from cooling system of Wet section and 79487 KLD sea water for effluent dilution. Cooling water for CPP is being reused up to 10735 KLD.

Online monitoring systems for temperature, pH and Ammonical Nitrogen have been provided at effluent line and it is digitally displayed on main gate. Main effluent is being diluted 10 to 15 times through addition of above said sea water. pH of the effluent is controlled by adding Hydro chloric acid and CO2 gas (40%) in the effluent channel line as per requirement. As effluent channel is open channel, settled solid particles are being removed manually and sold for construction activity, and for filling of low lying area.
Treated effluent travels within plant through an open constructed channel of 1.3 km, followed by 270 mts submerged pipeline. This 270 mts pipeline (2 Nos. x 900 mm dia.) with a diffuser system for proper dispersion is laid submerged in the Arabian Sea.

6.3 AIR POLLUTION CONTROL MANAGEMENT

The sources of air pollution from the production of soda ash and Co-generation power plant and its associated facilities are flue gas emission, process gas emission and fugitive emission. For Soda Ash plant, gaseous emissions are generated from process i.e Ammonia, Carbon Dioxide, Sulphur Dioxide, Nitrogen Oxide and Particulate matter.
To control the above said Air pollution, industry has adopted the following Air Pollution Control Measures:

- Five (5) numbers of dust extraction system and 11 numbers of dust suppression systems are in operation at KILN area to control the air pollution. Further, 3 number of water scrubbers are in use (as well as KILN Stacks are closed during operation time) at KILN area to control the air pollution.
- Industry has 77 nos. of water sprinkling system installed at Coal yard as well as at Crusher house area.
- Brine scrubber is in operation to control the ammonia gas emission from the process Unit. Electrostatic Precipitators have been installed at each boiler to control the SPM from Co-generation power plant.
- Industry has CFBC Boilers with installed arrangement of Lime stone dossing system to control the SOx in Flue gas emissions.
- Coal, Pet Coke, Lime stone, finished goods / products and other materials are being transported through vehicles having been covered with tarpaulin sheets.
- Adequate dust extraction systems have been installed at Godown area. Mostly, loading of finished product have been done through mechanized system.

- Raw materials / fuels are transported through covered conveyer belt at Boilers and process area.
- Industry uses water tankers to sprinkle water on internal Roads.
- All the materials are being transported through covered conveyer belt.
- The Greenbelt area is 8256 Sq.mt within plant which is around 2% of total area, Additional 247660 sq. mt. greenbelt is developed in the Birlasagar colony and 10898 Sq.mt at nearby villages. So total Greenbelt area is 2,66,814 Sq.mt.
- Industry has closed silos having storage capacity of 600 MT for Fly Ash and 200 MT for Bed Ash. Further, Adequate Pneumatic System and unloading telescopic pouch arrangements are available for fly ash handing at plant.
- Closed covered sheds are available for storage of Coal, Pet coke at Coal Yard area.
- Continuous online Monitoring system for flue gas stack has been installed and it is digitally displayed on main gate however it is not connected to GPCB/CPCB server.

6.4 HAZARDOUS WASTE MANAGEMENT

The Industry has two types of Hazardous wastes i.e Used Oil and Discarded Containers having quantity 2 KL/ year and 350 Numbers/ year respectively. And same is being stored at identified storage area only.

Industry has utilized used oil for lubrication of heavy machineries, while discarded drums are being utilized for captive use inside plant premises only. If there are more number of such type of waste generated, then same is being sold to registered recyclers only.

6.5 SOLID WASTE MANAGEMENT (NON – HAZARDOUS)

Industry has Solid waste management procedure to manage the solid waste generated from the premises.

- Plastic waste is being sold to approved recycler i.e M/s Avanti Enterprise, Karoli, Gandhinagar.
- Lime stone dust (0-3 mm) is recovered from screening and it is reused in the boilers for desulfurization to minimize the SO_2 load in the air.
- Lime stone undersize (Below 20 mm) recovered from screening and being sold to cement industries as raw material.
- Hard coke dust recovered from screening is being reused for making briquettes are the same used for fuel in place of hard coke in the kiln.
- Fly ash generated from the cogeneration power plant is being sold to the cement Companies and brick manufacturing units to use as a raw material.
- Grit refeed (unreacted sized lime stone) generated from slaker is reused in kiln.
- Grit reject (Waste) generated from the slaker is sold for reuse in construction activities.

- Solid waste i.e. sand, unburnt lime, clay, etc., generated from the effluent line is collected and reused for filling the low lying area.

7.0 ENVIRONMENT MONITORING DURING COMMITTEE VISIT

Sample of final outlet from ETP, Sea water samples from 100, 200 meter away from discharge line (Both Direction), Waste water sample from process, ambient air quality monitoring at three location within industry premises and one location at bird sanctuary, source emission monitoring attached to various flue gas emission stack and process gas stack, ambient noise were carried out during the site visit to the industry on 05.08.2021 and 06.08.2021 as per the recommendations of the joint committee

The industry is continuous process unit and during site inspection, Source Emission monitoring carried out for following stacks:

Sr. No.	Stack Attached to	Stack Height (Meter)	APCD
1	Air Vent Scrubber (Kiln 1 to 4) (Process Gas Stack)	34	Water Scrubber
2	LCL Tower Gas Exit – Ammonia Scrubber (Process Gas Stack)	60	Brine Scrubber
3	Dust extraction system connected to kiln (Process Gas Stack)	20	Baghouse
4	CFBC Boiler – 8 (Flue Gas Stack)	100	ESP
5	CFBC Boiler – 9 (Flue Gas Stack)		ESP

Ambient monitoring and noise monitoring carried out at following locations:

- Railway Gate near Coal yard, (North-East direction of industry)
- Behind Power Plant (South-East direction of industry)
- Terrace of Laboratory Building (Upwind direction of industry)
- Porbandar Bird Sanctuary, (North-East direction of industry

The samples collected during the visit are sent to the Regional Laboratory of GPCB at Jamnagar for analysis. The analysis results submitted by GPCB's Regional Laboratory are given below:

Table 7.1: Analysis results of Water sampling
Sample collected from open effluent channel near raw material gate

Sr. No.	Parameters	Unit	GPCB Limit for ETP	Sample collected from open effluent channel near raw material gate
1.	Temperature	Centigrade	<45	37
2.	pH	pH Unit	6.5-9.0	8.40
3.	Suspended Solids	mg/L	1300	348
4.	Ammonical Nitrogen	mg/L	50	0.56
5.	Oil and Grease	mg/L	02	BDL

Table 7.2: Analysis result of water sampling
Sample collected from final discharge effluent channel after dilution at entry point of diffuser

Sr. No.	Parameters	Unit	GPCB Limit for ETP	Sample collected from final discharge effluent channel after dilution at entry point of diffuser
1.	Temperature	Centigrade	<45	36
2.	pH	pH Unit	6.5-9.0	6.81
3.	Suspended Solids	mg/L	1300	204
4.	Ammonical Nitrogen	mg/L	50	0.56
5.	Oil and Grease	mg/L	02	BDL

Table 7.3: Analysis result of water sampling

Sr. No.	Sampling Point	Temp (Centigrade)	pH (pH Unit)	Suspended Solids (mg/L)	Ammonical Nitrogen (mg/L)	Oil and Grease (mg/L)
1.	Distiller outlet of wet section	98	10.58	928	0.56	BDL
2.	coast of sea behind Lord's hotel	28	8.13	76	0.56	BDL
3.	Sea intake point of M/s Saurashtra Chemical Ltd. @ pump house	29	8.05	36	0.56	BDL
4.	@ 100 meter away South East Direction from sea discharge point	28	8.08	76	0.56	BDL
5.	@ 200 meter away South East Direction from sea discharge point	28	8.10	48	0.56	BDL
6.	@ 100 meter away North-West Direction from sea discharge point	28	8.40	82	0.56	BDL

7.	@ 200 meter away North West Direction from sea discharge point	28	8.06	86	0.56	BDL

Table 7.4: Analysis results of Source Emission Monitoring (Flue gas and Process gases) Sample collected from stack attached to Gas Exist Air Vent Scrubber (Kiln 1-4)

Sr. No.	Parameters	Unit	GPCB Limit	Result
1.	Particulate Matter (PM_{10})	Mg/Nm^3	150	18
2.	SO_X	ppm	100	3.2
3.	NO_X	ppm	50	2.51

Table 7.5: Analysis results of Source Emission Monitoring (Flue gas and Process gases) Sample collected from stack attached to LCL tower Gas Exist (Ammonia Scrubber)

Sr. No.	Parameters	Unit	GPCB Limit	Result
1.	NH_3	Mg/Nm^3	175	BDL

Table 7.6: Analysis results of Source Emission Monitoring (Flue gas and Process gases) Sample collected from stack attached to kiln – dust extraction system connected to kiln

Sr. No.	Parameters	Unit	GPCB Limit	Result
1.	Particulate Matter (PM_{10})	Mg/Nm^3	150	65

Table 7.7: Analysis results of Source Emission Monitoring (Flue gas and Process gases) Sample collected from stack attached to CFBC Boiler – 8

Sr. No.	Parameters	Unit	GPCB Limit	Result
1.	Particulate Matter (PM_{10})	Mg/Nm^3	150	33
2.	SO_X	ppm	100	18.32
3.	NO_X	ppm	50	38.3

Table 7.8: Analysis results of Source Emission Monitoring (Flue gas and Process gases) Sample collected from stack attached to CFBC Boiler – 9

Sr. No.	Parameters	Unit	GPCB Limit	Result
1.	Particulate Matter (PM_{10})	Mg/Nm^3	150	43
2.	SO_X	ppm	100	21.98
3.	NO_X	ppm	50	31.11

Table 7.9: Results of Noise Monitoring in and around the Industry

NOISE MONITORING RESULTS					
		Day Time*		Night Time*	
Sr. No.	Location	Prescribed Limit*	Measured Value dB(A) Leq	Prescribed Limit*	Measured Value dB(A) Leq
1	Near Coal yard	**75**	73.95	**70**	71.01
2	RM Gate	**75**	73.82	**70**	73.97
3	Kiln -8	**75**	83.55	**70**	83.42
4	Boiler – 8	**75**	77.73	**70**	78.31
5	B/H Power plant	**75**	78.7	**70**	79.05

*Day time: 6.00 a.m. to 10.00 p.m, Night time: 10.00 p.m. to 6.00 a.m.

Table 7.10: Analysis results of Ambient Air Quality Monitoring

Sr. No.	Location	PM_{10} (mg/Nm^3)	SO_2 (mg/Nm^3)	NO_X (mg/Nm^3)
Permissible limit		**100 mg/Nm^3**	**80 mg/Nm^3**	**80 mg/Nm^3**
1	Railway Gate near Coal yard	48	2.60	2.86
2	B/h Power Plant	15	5.86	4.0
3	Terrace of Lab	101	3.26	3.14
4	Bird Sanctuary	9	0.86	9

8.0 INTERACTION WITH THE STAKE HOLDERS

The Committee interacted with various stake holders to know their grievances arising out of violation of environmental norms. The oversight committee interacted with the residents of colony located near Hajuria Palace beside effluent disposal point, representatives of Porbandar Machimnar boat association, Lakdibandar-Porbandar and residents of Chhayya area (behind M/s. Saurashtra Chemical division of Nirma Ltd.). The grievances/ opinions of the stakeholders during the interaction by committee are given in below table:

No.	Stake holder Name	Grievances
Residents of colony located near Hajuria palace beside effluent disposal point.		
1	Marry Almeda	She informed the Committee that sometimes (once in 3 to 6 month) they feel bad smell of gas coming out from M/s. Saurashtra Chemical division of Nirma Ltd. Also, observed dead fish at sea shore a year ago.

2	Veronica Almeda	She hasn't any problem due to industrial activity by M/s. Saurashtra Chemical division of Nirma Ltd.
3	Terence Almeda	It was informed that he observed foaming in sea water sometimes due to industrial activity by M/s. Saurashtra Chemical division of Nirma Ltd. Approximately 2 months ago he has seen foaming in sea water during afternoon hours.
4	Ashwinbhai Jungi (Trustee of Kharva Samaj)	Ashwinbhai Jungi, Trustee of Kharva Samaj, informed that due to industrial wastewater discharge from M/s. Saurashtra Chemical division of Nirma Ltd. into sea, fishing activity is highly affected. There is no production of fish up to 15-20 km from sea shore; they have to go into deep sea for fishing activity up to 50-60 km. Fish catching activity is possible only if they run their boats for 24 hour. Fishing activity is affected and there is no fish in coastal and nearby areas.
5	Jadav Khimji Postariya (Purv Pramukh Machhimar Boat Association)	Jadav Khimji Postariya (Purv Pramukh Machhimar Boat Association) informed that fishing activity is affected due to industrial wastewater disposal of M/s. Saurashtra Chemical division of Nirma Limited since 1958. This unit disposes its treated wastewater as per GPCB norms into sea however fishes are dying due to chemical containing wastewater. Colors of underground rocks are changed into white due to waste water. Earlier fish yield near sea shore was higher but nowadays it has declined. Nowadays they have to go 15 kms far from seashore for fishing. In earlier day their fishing activity was going well but they are in trouble since last 15 years. If unit is treating waste water as per norms than they should have to reuse/recycle it in their plant. They are not treating waste water up to that level that will save life of fish.
Residents of Chhayya area (behind M/s. Saurashtra Chemical division of Nirma Ltd.).		
6	Simaben Pravinbhai Vyas	She is residing at Chhayya area (behind M/s. Saurashtra Chemical division of Nirma Ltd.) for last 12 years. She informed that her family has respiratory problems when gases emitted from the unit.
7	Heeraben Bhikhubhai Odedara , Rajanben Laxmanbhai Keshwala, Gitaben Rana	They are residing at Chhayya area (behind M/s. Saurashtra Chemical division of Nirma Ltd.) for more than 10 years. They informed that coal particles fall on their terrace from flue gases emitted from stacks of Saurashtra Chemical and also because of movement of vehicles. sometimes (once in 3 to 6 month) they feel bad smell of gas coming out from M/s Saurashtra Chemical Ltd.
8	Raniben Khunti	She is residing at Chhayya area (behind M/s. Saurashtra Chemical division of Nirma Ltd.) since 1999. She informed that they suffer from respiratory problems when gases emitted from the unit and also problem of coal particles falling on terrace from flue gases emitted from stack of Saurashtra Chemical and because of movement of vehicles.

9.0 OBSERVATIONS

- The industry has greenbelt area of only 2% (8256 sq. meter) of total area (5,18,974 sq. meter) within plant premises. However, industry has developed additional green belt 247660 sq. meter in Birlasagar Colony and 10898 sq. meter in nearby villages. The industry has prepared an action plan
- As per CPCB guidelines, for Storage of generated fly ash, unit has installed 02 nos. of silos (300 MT each). Further unit has provided ash condensing system. For Bottom ash storage unit has provided 02 nos. of silos (100 MT each).
- No facility is provided for rain water harvesting by unit.
- Looking to the analysis reports of water samples collected during visit, all the parameters are as per permissible limits as per GPCB in consent.
- Looking to the analysis reports of Air samples (stack and AAQM) collected during visit, all the parameters are as per permissible limits as per GPCB consent except one parameter of PM10 in AAQM sample carried out at terrace of lab (upward direction), which is slightly higher than permissible limit, which might be due to vehicular movement on adjacent road.
- Unit has installed continuous online Monitoring system for flue gas stack and it is digitally displayed on main gate which is however not connected to GPCB/CPCB server.
- With consideration of energy conservation and environment betterment, Unit has already replaced most of old lighting system with LED based / advance lighting system in plant.
- Unit has not provided separate energy meter for APCM.
- Looking to the noise measurement data, results are higher than permissible limits as per noise rules, 2000.
- The unit has proposed 1.14 crore for CER activity, which is to be implemented in next 5 years.
- Unit has submitted approved action plan for implementation of wildlife conservation plan.
- To control source of fugitive emission unit has provided water sprinklers at coal yard, dust suppression system at raw material unloading area and loading and unloading of material is done through stacker or reclaimer system.
- Unit has allotted work to Gujarat University, Dept. of Zoology, school of science for study on effect of soda ash effluent on marine fish harvesting, which is under progress.
- Unit has obtained permission from Chief Controller of Explosives (PESO) for storage of ammonia.
- At present, unit has not provided facilities of garland drain around coal handling area. Pucca road is not provided in and around coal storage area.
- As per the report submitted by NIO, the fish catch data of Fisheries Department, Government of Gujarat was referred, which shows slight increment in the quantity of

fish catch in Porbandar region during the 2015 to 2020 (91683 MT in 2015 to 95832 MT in 2020).

- For occupational health surveillance of the workers, unit has provided occupational health center located inside company premises as well as at residential area with fully equipped dispensary with full time doctors and supporting staff. Industry will follow all necessary safeguard during expansion also.
- To address onsite and offsite emergency, the industry is having "Emergency Response and Disaster Management Plan" (ERDMP) in place which has been approved by Disaster Management Authority, Porbandar. The ERDMP will be revised for expansion project activities also.

10.0 RECOMMENDATIONS

In compliance of Hon'ble NGT Order, the oversight committee inspected the site on 05/08/2021 & 06/08/2021. Based on the site inspection & monitoring and discussions had during the visit, the oversight committee recommends the following for consideration:

1. The discharge from effluent channel after dilution at entry point of diffuser shall be monitored on monthly basis by third party NABL accredited laboratory and submit the reports six monthly to GPCB.
2. Unit shall create covered coal storage yard along with facilities of garland drain around coal handling area leading to settling pit. Pucca road shall be made in and around coal storage area.
3. Number of Water sprinklers should be increased and frequency of Water sprinkling should be increased in coal yard area to control fugitive emissions effectively.
4. Unit shall clean effluent channel regularly and also remove sludge from the effluent channel on regular periodic basic and maintain record of same.
5. Emergency Response Disaster plan is to be updated and got certified through Competent Authority and shall be complied with.
6. Execute the action plan for implementation of Wildlife conservation plan and submit the status six monthly to the Forest Department of Gujarat.
7. Execute the action plan for implementation of ecology protection plan, green belt development plan and execution of CER activities as per plan and submit the status six monthly to Gujarat Pollution Control Board .
8. Prepare an action plan to ensure compliance of environment norms by regular quarterly monitoring through E(P)A approved laboratory and submit report to Gujarat Pollution Control Board.
9. Awareness Program regarding safety, Environment Protection etc. shall be imparted to the local public & school children once in six months for next five years at their own cost and submit report to Gujarat Pollution Control Board.

Name & Designation of Member	Signature
Mr. Janesh. K. Vyas (Member of SEAC) SEIAA, Gujarat	
Mr. S. Pradeep Raj Scientist D, Central Pollution Control Board Regional Directorate, Vadodara	
Dr. C. Mohandass Senior principal Scientist, CSIR- National Institute of Oceanography, Regional Centre Mumbai	
Mr. Deepak Pandya DCF, Porbandar Chief Wildlife Warden (Forest), Gujarat	
Mrs. K. N. Parmar Regional Officer, Gujarat Pollution Control Board Regional Office, Porbandar	
Mr. M. K. Joshi Resident Additional Collector, (G.A.S.) District Magistrate office, Jilla Seva Sadan Kacheri, Porbandar	

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Item No. 01 (Pune Bench)

BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI

(By Video Conferencing)

Appeal No. 45/2020(WZ)
(I.A. No. 102/2020)

Sayyed Mohammed Sabir Usman & Anr. Appellant(s)

Versus

Union of India & Ors. Respondent(s)

Date of hearing: 07.07.2021

CORAM: HON'BLE MR. JUSTICE ADARSH KUMAR GOEL, CHAIRPERSON
HON'BLE MR. JUSTICE SUDHIR AGARWAL, JUDICIAL MEMBER
HON'BLE MR. JUSTICE M. SATHYANARAYANAN, JUDICIAL MEMBER
HON'BLE MR. JUSTICE BRIJESH SETHI, JUDICIAL MEMBER
HON'BLE DR. NAGIN NANDA, EXPERT MEMBER

Appellant(s): Mr. Nitin Lonkar, Advocate

ORDER

1. This appeal has been preferred against Environmental Clearance (EC) dated 19.08.2020 granted by the Ministry of Environment, Forest & Climate Change (MoEF&CC) for expansion cum modernization of Soda Ash manufacturing unit (from 35,720 TPM to 45020 TPM) and Co-generation power plant (20 MW to 40 MW) by M/s. Saurashtra Chemicals (Division of Nirma Ltd.) at Birlasagar, Porbandar, Gujarat.

2. The impugned EC shows details of existing and proposed products as follows:-

"

S. No	***Product***	***Production Capacity (TPM)***		
		Existing	***Proposed Additional***	***Total after expansion***
1	*Soda Ash (Light)*	35720	9300	45020
2	*Caustic Lye (100%)*	620	0	620
3	*Soda Ash (Dense)*	5100	0	5100

4	*Sodium Bi-Carbonate*	1800	660	2400
5	*Power (Co-generation Power Plant)*	20 MW	20 MW	40 MW

”

3. Expansion does not require any additional land. The estimated project cost is ₹151.78 crores, excluding existing investment of ₹764.16 crores. Total capital cost earmarked towards environmental pollution control measures is ₹1.25 crores and the recurring cost (operation and maintenance) will be about ₹53.12 lakh per annum. Total existing employment is 1169 persons as direct and 400 persons will be indirect after expansion.

4. The impugned EC records further facts and steps taken which are as follows:-

> **“***5. Porbandar Bird Sanctuary is at a distance of 885 meters in North-west direction. Arabian Sea is flowing at a distance of 0.520 km in SW direction.*
>
> *6. Total water requirement is 176100 m^3/day which will be met from Arabian Sea. The Effluent of 169960 m^3/day quantity will be treated through Effluent Treatment Plant. Treated water will be discharged in to Arabian sea beyond lowest tile water level through closed pipeline and diffuser system. Domestic sewage (1000 KLD) shall be disposed off though septic tank/soak pit system. Power requirement after expansion will be 33.8 MW including existing 24.9MW and will be met from Captive Co-generation power plant & Paschim Gujarat Vij Corporation limited (PGVCL). Existing unit has one DG set of 1500 KVA capacity, is used as standby during power failure. Stack (height 20 m) will be provided as per CPCB norms to the proposed DG sets. Existing unit has 240 TPH (Two boilers with 120 TPH each-regular) and one boiler 120 TPH (Standby) Circulating Fluidized Bed Combustion (CFBC) boilers. Additionally, 120 TPH CFBC boiler (presently stand by) will be in regular use. Electrostatic Precipitators with existing common stack of height of 100m will be installed for controlling the particulate emissions within the statutory limit of 50 mg/Nm^3 for the proposed regularization of boiler.*
>
> *7. The project/activities are covered under category A of item 4(e) 'Soda ash industry' and category B of item 1(d) 'Thermal Power Plants' of the schedule to the Environment Impact Assessment Notification, 2006, and requires appraisal/approval at central level by the sectoral EAC in the Ministry.*

8. The standard terms of reference (ToR) was granted by the Ministry on 24th May, 2019. The public hearing was conducted by the State Pollution Control Board on 10th January, 2020. The public hearing was presided over by the District Magistrate. The main issues raised during the Public Hearing are related to death of fishes due to discharge of effluent by the unit and fish harvesting by fishermen.

9. The proposal for environmental clearance was considered by the EAC (Industry-2) in its meeting held on 11-13 May, 2020. The project proponent and their accredited consultant M/s T.R. Associates, made a detailed presentation through Video Conferencing (VC) and have presented the EIA/EMP report. The Committee found the EIA/EMP report to be satisfactory, complying with the ToR, and recommended the project for grant of environmental clearance.

10. The EAC, constituted under the provision of the EIA Notification, 2006 and comprising of Experts Members/domain experts in various fields, have examined the proposal submitted by the Project Proponent in desired form along with EIA/EMP report prepared and submitted by the Consultant accredited by the QCl/ NABET on behalf of the Project Proponent. The EAC noted that the Project Proponent has given undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the EIA/EMP report. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.

11. The Committee noted that the EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. The Committee has found the baseline data and incremental GLC due to the proposed project within NAAQ standards. The Committee has also deliberated on the public hearing issues, action plan and CER plan and found to be addressing the issues in the study area and the issues raised during the public hearing. The EAC has deliberated the proposal and has made due diligence in the process as notified under the provisions of the EIA Notification, 2006, as amended from time to time and accordingly made the recommendations to the proposal. The Experts Members of the EAC have found the proposal in order and have recommended for grant of Environmental Clearance (EC) subject to further examination vis-a-vis CRZ clearance. In this context, the proposal was processed and forwarded to CRZ for comments on 8th June 2020. CRZ sector has sought certain information which PP has submitted on 30th June 2020 and again forwarded to CRZ on 6th July & 20th July 2020 for comments. CRZ sector has provided the comments on 30.07.2020.

12. The proposal has been further examined in the Ministry and it is observed that EAC has recommended Rs. 3 crore towards the Corporate Environment Responsibility (CER) on expansion cost of Rs. 151.78 crore which should be maximum of Rs. 1.14 crore @ 0.75% of the cost for expansion project as per the Ministry's Office Memorandum No. 22-65/2017-IA.III on CER dated 01.05.2018. Accordingly, the competent

authority in the Ministry has approved the CER cost of Rs. 1.14 crore. The CER funds shall be utilized as per the specific condition no. 14 (xv).

13. The environmental clearance granted to the project/activity is strictly under the provisions of the EIA Notification 2006 and its amendments. It does not tantamount/construe to approvals/consent/ permissions etc. required to be obtained or standards/conditions to be followed under any other Acts/ Rules/ Subordinate legislations, etc., as may be applicable to the project. The project proponent shall obtain necessary permission as mandated under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, as applicable from time to time, from the State Pollution Control Board, prior to construction & operation of the project."

The impugned EC is subject to Specific and General Conditions which include study of impact of pollution on fish harvesting, report on improvements done through modernization. Other conditions are to ensure necessary safeguards for protection of the environment. Manner of discharge of treated water is specified as follows:

> *"(ii) Treated water of 169960 m^3/day shall be discharged to Arabian sea beyond lowest tile level through closed pipeline and diffuser system."*

Other Specific Conditions are as follows:

> *"(xi) Fly ash should be stored separately as per CPCB guidelines so that it should not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing along with the storm water. Direct exposure of workers to fly ash & dust should be avoided.*
>
> *(xii) The company shall undertake waste minimization measures as below:-*
>
> *a. Metering and control of quantities of active ingredients to minimize waste.*
> *b. Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.*
> *c. Use of automated filling to minimize spillage.*
> *d. Use of Close Feed system into batch reactors.*
> *e. Venting equipment through vapour recovery system.*
> *f. Use of high pressure hoses for equipment clearing to reduce wastewater generation."*

5. Main contention on behalf of the appellant is that there should be further safeguards to avoid adverse impact on the adjacent Bird

Sanctuary. Necessary pollution control devises must be installed. Precaution must also be taken to prevent contamination of ground water and damage to the marine life.

6. Violations alleged and safeguards expected have been setup by the appellant as follows:-

> *"a. Because Environment Clearance dated 19.08.2020 is procured in ex-post facto manner and by making substantial change in scope of project.*
>
> *b. Because Application for ToR dated 12.04.2019 and Application dated 13.03.2020 for EC is nothing but defective and suppressing vital information required for appraisal and assessment.*
>
> *c. Because admittedly Project under challenge is established in 1959, whereas first EIA notification is enforced on 04.05.1991. There is substantial increase in the capacity of the Project even after 04.05.1991, but PP failed to obtain the Environment Clearance under EIA Notification-1991 even after 04.05.1991.*
>
> *d. Because there is substantial increase in the capacity of the Project even after 14.09.2006, But PP failed to obtain prior Environment Clearance under EIA Notification-2006 even after 14.09.2006.*
>
> *e. Because there is substantial increase in the capacity of the Project, But PP failed to obtain prior CRZ clearance under CRZ Notification-1991 dated 19.02.1991 and Amended CRZ Notification-2011 dated 06.01.2011.*
>
> *f. Because PP failed to obtain prior Wildlife Clearance under guidelines issued by MoEF & CC vide F. No. 1-9/2007 WL-I(pt) dated 09.02.2011.*
>
> *g. Because Project is sharing boundaries with Porbandar Bird Sanctuary and it is affecting adversely to the Bird Sanctuary due to its water pollution, air pollution, noise, emission of gases etc.*
>
> *h. Because this project is discharging polluted water without scientific treatment and government authorities are intentionally neglecting this pollution at the cost of Mother Nature.*
>
> *i. Because this project has created eminent threat to the marine life and causing serious irreparable damage to the environment, ecology, marine life, costal area from Porbandar to Due and wildlife.*

j. Because it is admitted in Consent to Operate dated 02.12.2014 that, the Project has manufacturing facility of Soda Ash (Light: 28,000 MT/month & Dense: 6,000 MT/ month), Sodium Bicarbonate (1100 MT/month), Caustic Lye (620 MT/month) and Liquid Bromine (20 MT/month).

k. Because it is admitted in 1st meeting of EAC held on 28.12.2016 that, the Project is in operation since 1959 is catering to the manufacturing facility of Soda Ash (Light: 28,000 MT/month & Dense: 6,000 MT/ month), Sodium Bicarbonate (1100 MT/month), Caustic Lye (620 MT/month) and Liquid Bromine (20 MT/month).

l. Because the PP has filed application for ex-post facto EC in 2016 for expansion of Power Plant, which was considered in 1st EAC Meeting held on 28.12.2016 and same application is not placed on MoEF Website intentionally, but Minutes of 1st meeting clearly shows that PP has misleaded to EAC on account of distance of Porbandar City at 3.5 Km, Distance of Arabian Sea at 1.5 Km, Distance of project boundary beyond 500 M from CRZ boundary, EIA Notification-2006, distance of Porbandar Bird Sanctuary at 1.1 Km protected under Wildlife (Protection) Act, 1972, additional fuel non-requirement for increase of capacity to 40 MW, no additional water requirement, use of prohibited fuel of lignite etc.

m. Because the PP has filed amended application for ex-post facto EC in 23.02.2017 for expansion of Power Plant, which was considered in 21st EAC Meeting held on 27.02.2017 with exemption in public hearing & EAC concluded that environment scenario will not change by this expansion in Power Plant and recommended the proposal for grant of EC and then considered in 25th EAC Meeting held on 07.07.2017, however MoEF did not accepted the proposal for grant of EC and EAC decided to issue ToR and accordingly ToR dated 25.08.2017 were issued with conditions of Zero liquid discharge plan, Green Belt of 10 M, 33% of green Cover, Public Hearing, EIA Report, NBWL recommendation wrt to Porbandar Bird Sanctuary, GCZMA recommendation wrt to CRZ Notififcation-2011, study on migration of bird & biodiversity, MoU for Flyash use, Certified Compliance Report of Regional Officers from MoEFCC & GPCB which are not complied in letter & spirit by PP and there is misleading, false & baseless information is submitted to EAC.

n. Because the Director of Environment Department Government of Gujarat has recommended the CRZ proposal to MoEFCC vide its letter dated 20.01.2018 for grant of CRZ Clearance for Replacement of Existing Seawater Intake Pipeline & Enhancement in Seawater Intake by Developing Two Earthen Ponds and Auxiliary Facilities without there being prior EC under EIA Notification-1991 & 2006 and only on the basis of non-complied Consent to Operates from GPCB and based on false & misleading HTL & LTL maps.

o. Because PP filed false, misleading, baseless, misconceived application on 12.02.2018 for Replacement of Existing

Seawater Intake Pipeline & Enhancement in Seawater Intake by Developing Two Earthen Ponds and Auxiliary Facilities before MoEFCC and EAC (CRZ) considered this proposal in its 186th meeting held on 27.03.2018 and recommended the CRZ clearance for replacement of pipeline.

p. *Because PP further approached the EAC with substantial change in the scope of project for replacement of pipeline for intake sea water and decided to left the water from deep sea to avoid the scarcity of water during low tide and therefore the EAC in its 194th meeting held on 27.07.2018 decided to visit the project site and to prepare the visit report to take further decision and case was deferred. But no such report is submitted on record and not placed online on MOEF website of 'Parivesh'.*

q. *Because it is admitted in Application for ToR for expansion through modernization dated 12.04.2019 that, the Project has manufacturing facility of Soda Ash (Light: 35,720 MT/month & Dense: 5100 MT/ month), Sodium Bicarbonate (1800 MT/month), Caustic Lye (620 MT/month) and Liquid Bromine (20 MT/month). It means there is substantial increase in the capacity of production of Soda Ash from 28000 MT/ Month to 35720 MT/ Month and Sodium Bicarbonate from 1100 MT/month to 1800 MT/Month from year 02.12.2014 to 12.04.2019 without obtaining prior mandatory EC.*

r. *Because EAC has not place the minutes of 213th meeting dated 26.04.2019 wherein the proposal for replacement of pipeline for seawater was finally considered before grant of CRZ clearance.*

s. *Because the DCF Porbandar in connivance with PP has misleaded the EAC on account of M/s. Saurashtra Chemicals distance form Eco-sensitive Zone Limits of Porbandar Bird Sanctuary vide its letter dated 04.05.2019.*

t. *Because without EIA, without public hearing, without proposer study, MoEFCC granted CRZ Clearance for replacement of existing seawater intake pipeline vide letter dated 22.05.2019 by manipulating the vital facts wrt to environment, ecology, wildlife, marine life, CRZ, etc. and this CRZ Clearance is considered as base for grant of EC under challenge, therefore many wrongs cumulatively cannot make right thing.*

u. *Because there is no appraisal of the proposal dated 12.04.2019 for expansion through modernization of project by EAC before grant of Terms of reference, also there is no scrutiny of the proposal.*

v. *Because it is admitted in Application for ToR for expansion through modernization dated 12.04.2019 that, the following production capacities those are without prior EC and therefore this application for Prior EC dated 01.04.2020 is illegal as there is completion of project increasing the capacity of production as sought under EC dated 19.08.2020.*

Sr. No.	Name of Product	Existing as per Consent MT/Month	Proposed Expansion MT/Month	Total production Capacity after expansion MT/Month
1	Soda Ash(Light)	35,720	9,300	45,020
2	Soda Ash(Dense)	5100	0	5100
3	Caustic Lye (100 %)	620	0	620
4	Sodium Bi-Carbonate	1800	600	2400
5	Liquid Bromine	20	0	20
6	Power (Co-generation Plant)	20 MW	20 MW	40 W

w. Because MoEF has granted ToR on 25.06.2019 without appraisal of proposal by Expert Committee.

x. Because the public hearing is not conducted in by following due procedure of law and also no objection is incorporated in final EIA Report and none of the objections is considered by the MoEFCC & EAC while grant of EC.

y. Because cumulative environmental impact of three project viz. Seawater intake pipeline upgradation, Expansion of the Power Plant from 20 MW to 40 MW and expansion for capacity increase in production of Soda Ash (Light), Soda Ash(Dense), Caustic Lye (100%), Sodium Bi-Carbonate, Liquid Bromine has not considered together to take appropriate measures of environmental, ecological, marine, wildlife, CRZ & Other social infrastructure issues.

z. Because EIA Report is not incorporated for CRZ clearance issues for ocean water consumption and its related study.

aa. Because conditions imposed in ToR are not incorporated in final EIA and also no submission of final Form-1 & Form-1A.

bb. Because the EIA is not incorporated for new technology and plant is operated on very old machineries having no synchronization with pollution control systems.

cc. Because EIA is not prepared for all three seasons.

dd. Because incomplete process flow diagrams and false energy inputs and outputs and no material and energy balance is incorporated in EIA.

ee. Because incomplete details on requirement of raw materials (sea water, lime-stone, coke, ammonia, additives, etc.), its

source and unscientific storage at the plant are incorporated in EIA.

ff. Because incomplete details on handling ammonia and misleading risk assessment and actual there is no measures are taken are incorporated in EIA.

gg. Because false and misleading details on water balance including water use, quantity of effluent generated, recycled and reused and its impact of discharge to receiving water body are incorporated in EIA.

hh. Because false and misleading details on effluent treatment plant, inlet and treated water quality with specific efficiency of each treatment unit in reduction in respect of all concerned/ regulated environmental parameters are incorporated in EIA.

ii. Because false and misleading details of CO_2 emissions including its quantum per tone of soda ash are incorporated in EIA.

jj. Because false and misleading management plan for solid waste generation (fines of lime stone, grits, brine sludge etc.), storage, utilization and disposal modes are incorporated in EIA.

kk. Because false and misleading compliance of ToR is given in EIA Report.

ll. Because despite of multiple show cause notices, proposed direction and closures from GPCB on multiple occasion, there is no further action.

mm. Because the GPCB has granted the consent on 24.06.2019 in unscientific manner without actual consideration of proposal, site visit, scientific study which clearly shows that the threshold limits imposed by GPCB for various parameters have adverse impact on the human habitants, sea, trees, water bodies, traffic congestion causing air pollution, noise in the area etc.

nn. Because no use & installation of advance Distributed Control System (DCS) and Emergency Shutdown System (ESD) for pollution control & environment protection.

oo. Because process flow used by PP in this project is very old and no advance technology is used for pollution control.

pp. Because no up-gradation of technology for protection of environment and pollution control by way of installation air & water quality monitoring instrumentation system.

qq. Because Concept of granting of ex-post facto Environment Clearance is not allowed in environmental jurisprudence in India.

rr. Because Environment Clearance under challenge is not prior EC and it is nothing but ex-post facto Environment clearance.

ss. Because if the procedure of the post facto Environment Clearance is allowed to be followed, any project proponent would complete his project by causing irreversible damages to the environment and then seek post-facto environmental clearance making the provisions of EIA notification infructuous. The grant of post facto clearance defeats the very purpose of environmental protection law and the mandate of obtaining environmental clearance as per the provisions of EIA Notifications 2006.

tt. Because the environment clearance granted by the State Level Impact Assessment Authority is illegal and has no legal sanctity.

uu. Because the EIA Notification-2006, no were provides the grant of post facto clearance after the completion of the project.

Vv Because the MoEFCC & EAC failed to take any action for the violation of the provision of EIA notification, 2006 and Environment (Protection) Act, 1986.

ww. Because the MoEFCC and its Expert Appraisal Committee is equally liable for allowing the illegal structures of expansion & its Operations and also they are equally liable for granting of ex-post facto Environment Clearance to the project in gross violation of EIA Notification-2006 and other applicable laws.

xx. Because PP has submitted false, baseless & misleading information to MoEFCC & EAC for obtaining ToR & Environment Clearance and therefore PP is guilty of "Suppressio Veri Suggestio Falsi".

yy. Because PP has submitted false misleading compliances to the minutes of MoEFCC & EAC.

zz. Because In Case of Common cause Vs Union of India (2017) 9 SCC 499 to 578, Hon'ble Supreme Court has observed that,

"124. We are not in agreement with learned counsel for the mining lease holders. There is no doubt that the grant of an EC cannot be taken as a mechanical exercise. It can only be granted after due diligence and reasonable care since damage to the environment can have a long term impact. EIA 1994 is therefore very clear that if expansion or modernization of any mining activity exceeds the existing pollution load, a prior EC is necessary and as already held by this Court in M. C. Mehta even for the renewal of a mining lease where there is no expansion or modernization of any activity, a prior EC is necessary. Such importance having been given to an EC, the grant of an ex post facto environmental clearance would be detrimental to the environment and could lead to irreparable degradation of the environment. The concept of an ex post facto or a retrospective EC is completely alien to environmental jurisprudence including EIA 1994 and EIA 2006. We make it clear that an EC will come into force not earlier than the date of its grant."

aaa. Serious violations and illegal acts of respondents are damaging the environment and giving counter blast to the sustainable development.

bbb. As per Item No. 1.1 in form-1, there is no disclosure for "Change of land use if any and the statutory approval from the competent authority be submitted". PP did not disclosed the Non-agricultural permission as well as industrial use of project land. There is no Appraisal & Assessment to this effect. Therefore the Application is defective and grant of such EC is illegal.

ccc. As per Item No. 1.8 in form-1, there is no disclosure for quantity of excavated material as the construction is undertaken by the PP and Ground water level in the excavation site is going to damage. There is no Appraisal & Assessment to this impact of excavation. Therefore the Application is defective and grant of such EC is illegal.

ddd. Because as per Item No. 2.4 in form-1, there is no disclosure for quantity of construction material and PP has suppressed these quantity in the application and these are the natural resources used for the preparation of fine building material having larger adverse impact on the environment and ecology. There is no Appraisal & Assessment to this adverse impact and PP has suppressed the quantity of building material

required for construction in item#2.3 of Form-1, therefore the technical appraisal and Impact Assessment is wrong and therefore the Application is defective and grant of such EC is illegal.

eee. Because PP has not provided the details under item-5 of form-1 of vehicles used for remaining excavation, transportation of building material and their conditions. There is no Appraisal & Assessment to this impact of vehicular pollution. Therefore the Application is defective and grant of such EC is illegal.

*fff. PP has suppressed the defense installation in Item#III.7 in "**ENVIRONMENT SENSITIVITY**", Airport, Naval Operations base within the 15 Kms of the project site, adjoining bird sanctuary, lakes etc. and this is affecting the operations of these establishment.*

ggg. PP has not complied the terms & condition of Consents obtained from GPCB.

hhh. PP has not obtained permission for Ground Water Extraction and PP is extracting huge quantity of ground water from bore well.

iii. PP is operating STP, WTP, ETP etc. in unscientific manner.

jjj. PP has not provided any solid waste disposal system for scientific disposal of hazardous wastes generated from the Plant.

kkk. PP has deep unholy nexus with corrupt bureaucrats, providing funding to the political parties for avoiding legal actions and regularize his illegal activity.

lll. PP is careless, reckless and unapologetic towards the environment protection and to perform his fundamental duties.

mmm. Serious intentional violations and illegal acts of authorities are damaging the environment and giving counter blast to the precautionary principle sustainable development and PP is causing huge irreparable damage to the Environment.

nnn. Thus it is mandatory to stop the project operations & Construction activity for expansion permanently.

ooo. Therefore EC dated 19.08.2020 may kindly be quashed with application of principle of sustainable development for environmental issue."

7. We have heard learned Counsel for the appellants. While it is undisputed that prior EC for expansion in question is mandatory in terms of EIA Notification dated 14.09.2006, in view of judgment of the Hon'ble Supreme Court in *Alembic Chemicals v Rohit Prajapati*[1], the doctrine of proportionality has to be applied. In absence of irreversible damage by the project, quashing of EC is not the only option. The project proponent can be required to take suitable mitigation measures to be overseen by an independent oversight Committee.

8. The measures to be so taken are by and large covered by the EC and Consent Conditions. To ensure that the said measures are duly adopted, we constitute a six member oversight Committee comprising of CPCB, Gujarat Pollution Control Board, District Magistrate, Porbandar, SEIAA, Gujarat, National Institute of Oceanography (NIO) and Chief Wildlife Warden (Forest), Gujarat. Gujarat Pollution Control Board will be the Nodal Agency for coordination and compliance. The Committee will be free to interact with the stake holders and consider any grievance arising out of violation of environmental norms. Considering the impact of expansion of the project, the Committee may inter alia look into the adequacy of capacity of Effluent Treatment Plant, Air Pollution Control Devices, storage and utilisation of sludge and solid waste, performance of currently operated sub-marine outfall/other method for utilisation and disposal of effluents, additional measures in view of high load of suspended solids in effluents and other related aspects. The Committee may also examine other measures for protection of ecology in the area and role to be played by the industry. First meeting of the oversight Committee may be held within one month and visit to the site may be undertaken. Except for visit to the site, other

[1] (*2020) SCC Online SC 347*

proceedings can be conducted online. Action plan be prepared to ensure compliance of environmental norms by regular monitoring. Wildlife Conservation Plan dated January, 2020 submitted by the project proponent dealing with conservation of wildlife within the circumference of 10 km, including the Bird Sanctuary at Porbandar, be duly executed with such further modifications as may be found necessary.

9. If any, grievance survives it is open to the aggrieved parties to take the remedies, in accordance with law.

The appeal is disposed of accordingly.

In view of order in the main matter, I.A. No. 102/2020 also stands disposed of.

A copy of this order be forwarded to CPCB, Gujarat Pollution Control Board, District Magistrate, Porbandar, SEIAA, Gujarat, National Institute of Oceanography and Chief Wildlife Warden (Forest), Gujarat by e-mail for compliance.

Adarsh Kumar Goel, CP

Sudhir Agarwal, JM

M. Sathyanarayanan, JM

Brijesh Sethi, JM

Dr.Nagin Nanda, EM

July 7, 2021
Appeal No. 45/2020(WZ)
AVT

Annexure-2

MINUTES OF MEETING WITH RESPECT TO ORDER OF HON'BLE NGT IN CIVIL APPEAL NO. 45/2020 (WZ) IA NO. 102/2020

As per the order of Hon'ble NGT (WZ) dated 07/07/2021, in the matter Civil Appeal No. 45/2020 (WZ) IA No. 102/2020, the following six members oversight committee was constituted:

Sr. No.	Name & Designation of Members	Organization	Contact details
1.	Shri Janesh. K. Vyas (Member of SEAC)	Representing SEIAA, Gujarat	8347837837 janeshvyas@gmail.com
2.	Shri S. Pradeep Raj Scientist D, CPCB, Regional Directorate, Vadodara	Central Pollution Control Board (CPCB)	9722007220 pradeepraj.cpcp@nic.in
3.	Dr. C. Mohandass Senior principal Scientist & Scientist In Charge, CSIR-NIO	CSIR-National Institute of Oceanography (CSIR-NIO), Regional Centre Mumbai	9422415648 cmohan@nio.org
4.	Shri Deepak Pandaya DCF, Porbandar	Representing Chief Wildlife Warden (Forest), Gujarat	9429551267 dcfpbr@gmail.com
5.	Smt. K.N. Parmar Regional Officer, GPCB, Porbandar	Gujarat Pollution Control Board (GPCB)	9879205066 ro-gpcb-porb@gujarat.gov.in
6.	Shri N. K. Joshi Resident Additional Collector, (G.A.S.)	Representing District Magistrate, Porbandar	9978405191 add-collector-por@gujarat.gov.in

The constituted oversight committee is required to ensure the mitigation measures taken/to be taken by the project proponent (M/s Saurashtra Chemicals Ltd., Porbandar). The order also states that the first meeting of the oversight committee is to be held within one month (i.e. before 07.08.2021) and also undertake the site visit.

Accordingly, the schedule for the meeting and site visit was planned between 05.08.2021 to 07.08.2021.

The first meeting of the oversight committee was held on 05.08.2021 at Porbandar followed by discussion with project proponent & site visit of M/s Saurashtra Chemicals Ltd. was carried out.

Shri Adroja, Plant Head, Mr Ashish Desai and other representatives of M/s Saurashtra Chemicals Ltd. were present during the visit and provided the required information and coordinated the site visit.

The following activities/ points were discussed during the meeting/ visit on 05.08.2021:

- Presentation made by M/s. Saurashtra Chemical Ltd. regarding the status of compliance of their EC (Environmental Clearance) conditions before the committee members.
- Site visit of M/s. Saurashtra Chemical Ltd. was carried out and sample of effluent from the effluent discharge channel inside the premises of the unit was collected, locations for setting up and monitoring AAQ at the upwind and downwind of the factory premises was identified by the committee based on the feasibility and prevailing wind direction and carried out the AAQ monitoring at three locations (one in upwind location and two in down wind locations).
- Noise level monitoring was carried out at five various locations inside the factory premises during day time and night time.
- The unit operations of the factory were inspected by the oversight committee, including their existing captive power plant, RO plant, coal storage and material storage yard. The unit appraised the committee about their expansion plan of their new RO plant (5MLD capacity) and proposed new boiler (120 TPH) and the location for its installation inside the premises.
- The sample collected during the visit will be sent to the laboratory of GPCB's Regional Office at Jamnagar for analysis and submission of results for incorporation in the report of oversight committee.

The following activities/ points were discussed during the meeting/ visit on 06.08.2021:

- Visit to the water intake line and pumping station of the factory located near the lighthouse was carried out and sample of the inlet water was collected.
- The representatives of M/s. Saurashtra Chemical Ltd. briefed the details of pumping station and its installed capacity.
- Visit to the sampling point of effluent disposal channel of the M/s. Saurashtra Chemical Ltd. located on the sea coast behind the premises of Headquarters of Indian Coast Guard was carried out and sample of the outlet effluent was collected.
- Porbandar bird sanctuary which is located about 885m (NW direction) to the industry was visited to verify the effects of industrial activities in the sanctuary, if any. The committee also identified the location for setting up a AAQ monitoring station in the premises of the bird sanctuary.

- Samples of sea water along the sea coast at various locations to righthand and Lefthand side of the effluent disposal point of M/s. Saurashtra Chemical Ltd. were collected.
- The sample collected during the visit will be sent to the laboratory of GPCB's Regional Office at Jamnagar for analysis and submission of results for incorporation in the report of oversight committee.
- The committee interacted with various stake holders to know their grievances arises out of violation of environmental norms. The oversight committee interacted with the residents of colony located near Hajuria Palace beside effluent disposal point, representatives of Porbandar Machimnar boat association, Lakdibandar-Porbandar and residents of Chhayya area (behind M/s. Saurashtra Chemical Ltd.).
- Presentation made by M/s. Saurashtra Chemical Ltd. regarding the status of compliance of their CCA (Consolidated Consent and Authorization) conditions before the committee members.
- Had meeting with Shri Ashok Sharma, IAS, District Collector & Magistrate, Porbandar and briefed the activities carried out by the oversight committee.

The final joint report of the oversight committee incorporating the monitoring results, information sought from the M/s. Saurashtra Chemical Ltd. along with the recommendations shall be submitted separately.

The meeting ended with vote of thanks to all.

Name & Designation of committee Member	**Signatures**
Shri Janesh K. Vyas (Member of SEAC)	
Shri S. Pradeep Raj Scientist-D, CPCB, Regional Directorate, Vadodara	06/08/2021
Dr. C. Mohandass Senior Principal Scientist & Scientist in Charge, CSIR-NIO	6/8/2021
Shri Deepak Pandaya DCF, Porbandar	6/8/21
Smt. K.N. Parmar Regional Officer, GPCB, Porbandar	6/8/2021
Shri M.K. Joshi Resident additional collector, (I.A.S)	06-08

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GPCB

GUJARAT POLLUTION CONTROL BOARD
PARYAVARAN BHAVAN
Sector-10-A, **Gandhinagar** 382 010
Phone : (079) 23222425
(079) 23232152
Fax : (079) 23232156
Website : www.gpcb.gov.in

By R.P.A.D.

In exercise of the power conferred under section-25 of the Water (Prevention and Control of Pollution) Act-1974, under section-21 of the Air (Prevention and Control of Pollution)-1981 and Authorization under rule See rule 6 (2) of the Hazardous Waste (Management and Handling and trans boundary Movement)Rules 2016 framed under the Environmental (Protection) Act-1986.

And whereas Board has received consolidated consent re-application Inward ID No. **157042** dated **08.05.2019** for the **Consolidated Consent and Authorization** (CC & A) of this Board under the provisions/rules of the aforesaid Acts, Consents & Authorization are hereby granted as under:

CONSENTS AND AUTHORIZATION:
(Under the provisions/Rules of the aforesaid environmental acts)

TO,
M/s Saurashtra Chemicals Division Of Nirma Limited,
Bilrlasagar , Vill: Chhaya, Porbandar- 360576,
Ta: & Dist: Porbandar.

1. **Consent Order No.: AWH- 102464 Date of Issue: 24/06/2019.**
2. The consent shall be valid up to **31/03/2024** for the use of outlet for the discharge of treated effluent & air emission and to operate industrial plant for manufacture of the following items / products:

Sr. No	Name of product	Quantity
1.	Soda Ash(Light)	28000 MT/M
2.	Soda Ash(Dense)	5100 MT/M
	OR	
	Soda Ash(Light)	5100 MT/M
3.	Caustic Lye (100%)	620 MT/M
	OR	
	Soda Ash(Light)	820 MT/M
4.	Sodium Bi-Carbonate	1800 MT/M
	OR	
	Soda Ash(Light)	1800 MT/M
5.	Liquid Bromine	20 MT/M
6.	Power (Captive Power Plant)	20 MW
7.	Flash condensate	20 M^3/Hr (14400 M^3/M)
8.	Distilled Water	70 M^3/Hr (50400 M^3/M)

- **The overall Consented quantity of soda Ash(light) will be 35720 MT/M**

Note: This Consolidated Consent and Authorization is also granted for the operation of already Existing RO Plant 2 Nos (capacity 12,400 M^3/Day), operation of Coal Breeze Briquette Plant (capacity 300 MT/Day), Modification in effluent treatment (Acid Dosing for Neutralization of Waste Water) & operation of New Turbo Generator of 14.5 MWH capacity.

3. **CONDITIONS UNDER THE WATER ACT:**

3.1 The quantity of trade effluent to be generated from the factory shall not exceed **169960 KL/day.**

3.2 The quantity of sewage wastewater from the factory shall not exceed **1000 KL/day.**

TRADE EFFLUENT

3.3 The quantity of the treated effluent as per GPCB norms mentioned in Column No.2.

PARAMETERS	GPCB NORMS
pH	6.5 To 9.0
Temperature	45^0 C
Suspended Solids	1300 mg/l
Oil and Grease	02 mg/l
Ammonical Nitrogen	50 mg/l
Bio-assay test	90 % survival of fish after 96 hour in 100 % effluent

- All efforts shall be made to remove color & unpleasant odor as far as practicable.

3.4 The effluent conform to the above standards shall be discharged into Arabian sea beyond lowest tide water level through closed pipeline and Diffuser system.

3.5 Domestic effluent shall be disposed off through septic tank/soak pit system.

3.6 The disposal point mentioned in the condition no: 3.3.2. shall be studied time to time through NIO OR any other competent Authority of Central Govt for safe disposal of effluent into the sea The report should be submitted to this board.

3.7 The quantity of rejected effluent from the desalination plant shall not exceed 57,60,000 Lit/day and rejected waste water shall be used as dilution and total quantity of trade effluent shall not exceed 169960 Kl/day.

3.8 **Additional Conditions Under Water Act ,1974 read with EPA-1986**

1. The applicant shall only receive Ammonium Carbonate scrubbed solution from below mentioned industries for the recycling/reuse/re-processing purpose in existing industrial facility.

Sr No	Name & Address of industry	Ammonium carbonate Quality MT/Month
1	Narayan Organics Pvt Ltd,1107/1& 2,GIDC Ankleshwar, Dist: Bharuch.	400 MT/Month
2	Narayan Industries,Plot No.1303/1 & 2, & 1305/6/A&B,Phase-IV,GIDC-Naroda, Ahmedabad.	400 MT/Month
3	A-One Chemicals, A1/4702, GIDC Ankleshwar Dist: Bharuch.	400 MT/Month
4	A-One Phthalo Colors Pvt Ltd,Unit-I,Plot No.808/A/1&3, Phase-III,GIDC Vapi,Dist: Valsad.	400 MT/Month
5	Dhanlaxmi Pigments Pvt Ltd, Plot No.3020-3021 GIDC Estate,Nr.Garuda Cotex, Panoli Dist: Bharuch.	375 MT/Month
6	M/S.Ishan Dyes & Chemicals Ltd., Plot No.18,GIDC Estate, Phase-I, Vatva, Ahmedabad-382445	300 MT/Month

2. Ammonium Carbonate should be transported through Tanker No.(1) GJ-18 –AU-8025 (2) GJ-18-AU-7125 (3) GJ-18-AU-7075 (4) GJ-18-AU-8890 (5) GJ-18—AU-7332 (6) GJ-18-AU-8245 (7) GJ-25-T-8514 (8) GJ-24 –U – 2982 (9) GJ-24 – U- 2983 with GPS from the generator the above mentioned generator, to the M/S SAURASHTRA CHEMICALS DIVISION OF NIRMA LIMITED,BIRLASAGAR ,VILL: CHHAYA, TA: & DIST: PORBANDAR.
3. For the transportation ,labeling and handling of the Ammonium carbonate solution GPS (Global Positioning System) enabling system along with online manifest system through XGN shall use & put in place while transportation through dedicated vehicles conforming motor Vehicle Act as amended from time to time.
4. The compiled data shall be submitted to the concerned Regional offices of GPCB for verification at the end of every month.
5. The applicant as receptor/generator shall operate adequate EMS (Environmental Management System) regularly & efficiently the condition laid out by GPCB/CPCB/MOEF from time to time.
6. The applicant shall have to provide flow meter to the out let point of the storage facility of Ammonium Carbonate and maintain record for utilization of Ammonium Carbonate.
7. The applicant as receptor/generator shall strictly observe and comply with dully notarized undertaking as submitted to the board vide letter dated.18/05/2015, 20/05/2015 & 22/05/2015.
8. In case of any violation of the permission can be withdrawn at any point of time without prior intimation.
9. Any type of violation under the provisions of water Act, 1974, all concern Receptor/Generator will be held responsible & suitable action may be initiated without prior intimation.
10. All other terms & conditions of Consolidated Consents & Authorization order shall remain unchanged except use of spent ammonia /Ammonia Scrubber solution from above mentioned units as per above mentioned stipulated of this order.
11. Unit shall use Colour Coded dedicated tankers for the transportation of Ammonium Carbonate Solution.
12. Unit shall use GPS Mounted trucks for the transportation & shall give Access to R.O.,V.O- & Hazardous Waste Cell, Gandhinagar.
13. Unit shall obtain permission of CPCB under Rule-11 of Hazardous Waste Rules.
14. Unit shall comply with manifest system.
15. Unit shall comply with the guidelines of CPCB for the Hazardous waste transportation.

4. <u>CONDITIONS UNDER THE AIR ACT</u>:

4.1 The following shall be used as fuel.

SR. NO.	NAME OF FUEL	EXISTING QUANTITY
1.	Coal &/or Lignite &/or Petcoke	33.4 TPH &/or 65.54 TPH &/or 50 TPH
2.	LSHS	52.8 TPD
3.	LDO	2700 KL/Year

- **Petcoke (cap-50 TPH) shall be used as fuel in CBFC boilers 2 Nos and consumption of lime stone dosing shall be increased from 7.98 TPH to 12.53 TPH**

4.2 The applicant shall install & operate air pollution control system in order to achieve norms prescribed below.

4.2.1 The flue gas emission through stack attached shall conform to the following standards:

Stack No.	Stack Attached To	Stack Height (M)	Air Pollution Control Measures	Parameter	Permissible Limit
1.	CFBC Boiler 8 & 9	100	ESP to each boiler	SPM SO_2 NOx	150 mg/Nm^3 100 ppm 50 ppm
2.	D.G. Set-1 (1500 KVA)	20		SPM SO_2 NOx	150 mg/Nm^3 100 ppm 50 ppm

4.2.2 The process emission through various stack/vent of reactors , process vessels shall be conform to the following standards.

Stack No.	Stack Attached To	Stack Height (M)	Air Pollution Control Measures	Parameter	Permissible Limit
1.	Rotary Kiln	23	Ventury scrubber	SPM SO_2 NOx	150 mg/Nm^3 40 mg/Nm^3 25 mg/Nm^3
2.	Ammonia Scrubber	60	Brine Scrubber	NH3	175 mg/Nm3
3.	Air Vent Scrubber (kiln 1 to 4)	34	Sea water	SPM SO_2 NOx	150 mg/Nm^3 40 mg/Nm^3 25 mg/Nm^3
4.	Kiln 1 & 2	45 each	Vent shall be closed during operation		
5.	Kiln 3 & 4	45 each			
6.	Kiln 5	57			
7.	Kiln 6	57			
8.	Kiln 7 & 8	63 each			
9.	Slaker No. 5	20	Water vapour free from any pollutants		
10.	Slaker No. 6	20			
11.	Slaker No. 7	20			
12.	Dust Extraction system connected to kiln 1 to 5	20	Bag House	SPM	150 mg/Nm^3

4.2.3 The concentration of the following parameters in the ambient air within the premises of the industry shall not exceed the limits specified hereunder.

PARAMETER	**PERMISSIBLE LIMIT ANNUAL**	**PERMISSIBLE LIMIT 24 HRS. AVERAGE**
Particulate matter-$_{10}$[PM10]	60 Microgram /NM^3	100 Microgram /NM^3
Particulate matter-$_{2.5}$[PM2.5]	40 Microgram /NM^3	60 Microgram /NM^3
Oxides of Sulphur	50 Microgram /NM^3	80 Microgram /NM^3
Oxides of Nitrogen	40 Microgram /NM^3	80 Microgram /NM^3

4.3. The applicant shall provide portholes, ladder, platform etc at chimney(s) for monitoring the air emissions and the same shall be open for inspection to/and for use of Board's staff. The chimney(s) vents attached to various sources of emission shall be designed by numbers such as S-1, S-2, etc. and these shall be painted/ displayed to facilitate identification.

4.4. The industry shall take adequate measures for control of noise levels from its own sources within the premises so as to maintain ambient air quality standards in respect of noise to less

than 75 dB(A) during day time and 70 dB (A) during night time. Daytime is reckoned in between 6 a.m. and10 p.m. and night time is reckoned between 10 p.m. and 6 a.m.

5. Authorization for the Management & Handling of Hazardous Wastes Form-2 [See rule 6 (2)] Form for grant of authorization for occupier or operator handling hazardous waste.

5.1 M/s Saurashtra Chemicals Division Of Nirma Limited is hereby granted to operate facility for following hazardous wastes on the premises situated at **Bilrlasagar , Vill: Chhaya, Porbandar-360576,Ta: & Dist: Porbandar.**

Sr No	Category of hazardous waste as per the schedules I , II and III of these rules	Authorizes mode of disposal or recycling or utilization or co-processing etc.	Quantity
1	**Schedule-1 Category-5.1 Used Oil**	**Collection, storage, transportation, disposal by re use or selling to registered recycler**	**2 KL/Year**
2	**Schedule-1 Category-33.1 Discarded containers**	**Collection, storage, transportation, disposal by selling to registered recycler unit only**	**350 Nos/Year**
3.	Insulating Material waste (Glass Wool etc.) Non Hazardous Waste	Collection, Storage, Transportation, Disposal and sent to TSDF site	5 MT/Year

5.2 The authorization shall be in force up to **31/03/2024**.

5.3 The authorization is subject to the conditions stated below and such other conditions as may be specified in the rules from time to time under the Environment (Protection) Act-1986.

5.4 TERMS AND CONDITIONS OF AUTHORISATION:

a) The applicant shall comply with the provisions of the Environment (Protection) Act - 1986 and the rules made there under.

b) The authorization shall be produced for inspection at the request of an officer authorized by the Gujarat Pollution Control Board.

c) The persons authorized shall not rent, lend, sell, and transfer of otherwise transport the hazardous wastes without obtaining prior permission of the Gujarat Pollution Control Board.

d) Any unauthorized change in personnel, equipment or working conditions as mentioned in the authorisation order by the persons authorized shall constitute a breach of this authorization.

e) It is the duty of the authorized person to take prior permission of the Gujarat Pollution Control Board to close down the facility.

f) An application for the renewal of an authorization shall be made as laid down in rule 5 (6) (ii).

g) Industry shall submit annual report within 15 days and subsequently by 30th June of every year.

6. <u>GENERAL CONDITIONS</u>: -

6.1 Any change in personnel, equipment or working conditions as mentioned in the consents form/order should immediately be intimated to this Board.

6.2 The waste generator shall be totally responsible for (I.E. Collection, storage, transportation and ultimate disposal) of the wastes generated.

6.3 Records of waste generation, its management and annual return shall be submitted to Gujarat Pollution Control Board in Form – 4 by 30th June of every year.

6.4 In case of any accident, details of the same shall be submitted in Form – 5 to Gujarat Pollution Control Board.

6.5 As per "Public liability Insurance Act – 91" company shall get Insurance policy, if applicable.

6.6 Empty drums and containers of toxic and hazards material shall be treated as per guideline published for "management & handling of discarded containers". Records of the same shall be maintained and forwarded to Gujarat Pollution Control Board regularly.

6.7 In no case any kind of hazardous waste shall be imported without prior approval of appropriate authority.

6.8 In case of transport of hazardous waste to a facility for (I.E. Treatment, Storage and disposal) existing in a state other than the state where hazardous waste are generated, the occupier shall obtain "No Objection certificate" from the state pollution Control Board, the Committee of the concerned state or Union territory Administration where the facility exists.

6.9 Unit shall take all concrete measures to show tangible results in waste generation reduction, voidance, reuse and recycle. Action taken in this regards shall be submitted within three months and also along with Form – 4.

6.10 Industry shall have to display the relevant information with regard to hazardous waste as indicated in the Hon Supreme Court's order in W.P. No.657 of 1995 dated 14th October 2003.

6.11 Industry shall have to display on-line data outside the main factory gate with regard to quantity and nature of hazardous chemicals being handled in the plant, including wastewater and air emissions and solid hazardous waste generated within the factory premises.

For And On Behalf Of
Gujarat Pollution Control Board

(M.V.Patel)
Environment Engineer

NO: GPCB/ CCA/PBR- 21(9)/ ID 19301/

ISSUED TO:

M/S. Saurashtra Chemicals Division Of Nirma Limited,
Bilrlasagar , Vill: Chhaya, Porbandar- 360576,
Ta: & Dist: Porbandar

GPCB

GUJARAT POLLUTION CONTROL BOARD
PARYAVARAN BHAVAN
Sector-10-A, **Gandhinagar** 382 010
Phone : (079) 23222425
(079) 23232152
Fax : (079) 23232156
Website : www.gpcb.gov.in

R.P.A.D.

AMENDMENT OF CONSOLIDATED CONSENT AND AUTHORIZATION (C C & A)
H - 111437

No:GPCB/ CCA/PBR-21(11)/ ID- 19301/

To,
M/s. Saurashtra Chemicals Division Of Nirma Limited,
Birlasagar, Vill: Chhaya-360576,
Ta: & Dist: Porbandar.

Sub:- Amendment of Consolidated Consent and Authorization (CCA) of this Board under the provision the water (prevention and control of this pollution) Act-1981, the air Prevention and Control of pollution)1981 and the Hazardous Waste (Management, Handling & Trans boundary Movement) Rules 2008 framed under the Environmental (Protection) Act-1986.

Ref:

1. Your CCA Amendment application vide Inward ID: 182918, Dated: 25/10/2020.
2. This Board issued Consent to Operate (CCA) vide letter No. GPCB/CCA/PBR-21(9)/ID-19301/512086, Dated.02/07/2019.

Sir,

The validity period of the order will be up to dated 31/03/2024.

The Board has granted Consolidated Consent (CCA) order No-AWH-102464 vide our letter No. GPCB/CCA/PBR-21(9)/ID-19301/512086, Dated.02/07/2019 is amended as under.

1. The condition No. 2 of consent No AWH – 102464 shall be amended as under.

Sr. No	Name of product	Existing quantity	Proposed quantity	Total after expansion
1.	Soda Ash (Light)	28000 MT/M	0	28000 MT/M
2.	Soda Ash (Dense)	5100 MT/M	0	5100 MT/M
	OR			
	Soda Ash (Light)	5100 MT/M	0	5100 MT/M
3.	Caustic Lye (100%)	620 MT/M	0	620 MT/M
	OR			
	Soda Ash(Light)	820 MT/M	0	820 MT/M
4.	Sodium Bi-Carbonate	1800 MT/M	0	1800 MT/M
	OR			
	Soda Ash(Light)	1800 MT/M	0	1800 MT/M
5.	Liquid Bromine	20 MT/M	0	20 MT/M
6.	**Power (Co-generation Power Plant)**	**20 MW**	**20 MW**	**40 MW**
7.	Flash condensate	20 m^3/Hr (14400 m^3/M)	0	20 m^3/Hr (14400 m^3/M)
8.	Distilled Water	70 m^3/Hr (50400 m^3/M)	0	70 m^3/Hr (50400 m^3/M)

- The overall Consented quantity of soda Ash(light) will be 35720 MT/M

Note:

a. This Consolidated Consent and Authorization is also granted for the operation of already Existing RO Plant 2 Nos (capacity 12,400 M^3/Day), operation of Coal Breeze Briquette Plant (capacity 300 MT/Day), Modification in effluent treatment (Acid Dosing for Neutralization of Waste Water) & operation of New Turbo Generator of 14.5 MWH capacity.

b. Now, Turbo Generator having capacity of 20 MW is in regular use to generate addition 20 MW power.

2. The condition No. 3.8 of consent No AWH – 102464 shall be amended as under.

- Unit shall receive Ammonium Carbonate scrubbed solution (30 – 50 % concentration) from below mentioned CPC Blue manufacturing industries for the recycling/reuse/re-processing purpose in existing industrial facility, which is by product of following generating industries.

  i. Narayan Organics Pvt Ltd, 1107/1& 2, GIDC Ankleshwar, Dist: Bharuch.
  ii. Narayan Industries,Plot No.1303/1 & 2, Phase-IV,GIDC-Naroda, Ahmedabad.
  iii. A-One Chemicals, A1/4701-2, GIDC Ankleshwar Dist: Bharuch.
  iv. A-One Phthalo Colors Pvt Ltd, Plot No.808/A-1/3, Phase-III, GIDC Vapi,Dist: Valsad.
  v. Dhanlaxmi Pigments Pvt Ltd, Plot No.3020-3021 GIDC Estate - Panoli, Dist: Bharuch.
  vi. M/S Ushanti Colour chem Pvt Ltd. Plot No. 88/7 Phase – 1, GIDC, Vatva, Ahmedabad.
  vii. M/S Asahi Songwon Colors Ltd. Plot No. 429-432, Vill – Dudhwada, Ta – Padra, Vadodara.
  viii. M/S.Ishan Dyes & Chemicals Ltd., Plot No.18,GIDC Estate, Phase-I, Vatva, Ahmedabad-382445.

- In case of any violation, the permission can be withdrawn at any point of time without prior intimation.
- Any type of violation under the provisions of water act, 1974, all concern receptor / generator will be held responsible & suitable action may be initiated without intimation.

3. The condition No. 4.2.1 of consent No AWH – 102464 shall be amended as under.

Stack No.	Stack Attached To	Stack Height (M)	Air Pollution Control Measures	Parameter	Permissible Limit
1.	CFBC Boiler 8 & 9	100	ESP to each boiler	PM SO_2 NOx Mercury (Hg)	50 mg/Nm^3 600 mg/Nm^3 450 mg/Nm^3 0.03 mg/Nm^3
2.	D.G. Set-1 (1500 KVA)	20		SPM SO_2 NOx	150 mg/Nm^3 100 ppm 50 ppm

4. The condition No. 5.1 of consent No AWH – 102464 shall be amended as under.

M/s Saurashtra Chemicals Division Of Nirma Limited is hereby granted to operate facility for following hazardous wastes on the premises situated at Birlasagar , Vill: Chhaya - 360576, Ta: & Dist: Porbandar.

Sr No	Category of hazardous waste as per the schedules I , II and III of these rules	Authorizes mode of disposal or recycling or utilization or co-processing etc.	Quantity
1.	Schedule-1 Category-5.1 Used Oil	Collection, storage, transportation, disposal by re use or selling to registered recycler	2 KL/Year
2.	Schedule-1 Category-33.1 Discarded containers	Collection, storage, transportation, disposal by selling to registered recycler unit only	350 Nos/Year
3.	Insulating Material waste (Glass Wool etc.) Non Hazardous Waste	Collection, Storage, Transportation, Disposal and sent to TSDF site	5 MT/Year
4.	Plastic Waste (Non Hazardous waste)	Collection, storage, transportation, disposal by selling to Authorized recycler.	100 MT/Year

The other conditions of the Consent to Operate (CCA) vide letter NO. GPCB/CCA/PBR-21(9)/ID-19301/512086, Dated.02/07/2019 shall remain unchanged.

For And On Behalf Of
Gujarat Pollution Control Board

(M.V. Patel)
Environment Engineer

By Speed Post/Online

F. No. J-11011/115/2017-IA-II(I)
Government of India
Ministry of Environment, Forest & Climate Change
Impact Assessment Division
***

Indira Paryavaran Bhavan,
Vayu Wing, 3rd Floor, Aliganj,
Jor Bagh Road, New Delhi-110 003

Dated: 19th August, 2020

To,

M/s Saurashtra Chemicals (Division of Nirma Ltd),
Birlasagar,
District **Porbandar** (Gujarat)

Sub: Expansion cum modernization of Soda Ash manufacturing unit (from 35,720 TPM to 45020 TPM) and Co-generation power plant (20 MW to 40 MW) by M/s Saurashtra Chemicals (Division of Nirma Ltd) at Birlasagar, Porbandar (Gujarat) - Environmental Clearance - reg.

Sir,

This has reference to your online proposal No. IA/GJ/IND2/144203/2019 dated 1st April, 2020 for environmental clearance to the above mentioned project.

2. The Ministry of Environment, Forest and Climate Change has examined the proposal for environmental clearance to the project for expansion cum modernization of Soda Ash manufacturing unit (from 35,720 TPM to 45020 TPM) and Co-generation power plant (20 MW to 40 MW) by M/s Saurashtra Chemicals (Division of Nirma Ltd) in an area of 518974 sqm., at Birlasagar, Porbandar (Gujarat).

3. The details of existing and proposed products is as under:

S. No.	Product	Production Capacity (TPM)		
		Existing	Proposed Additional	Total after expansion
1.	Soda Ash (Light)	35720	9300	45020
2.	Caustic Lye (100 %)	620	0	620
3.	Soda Ash (Dense)	5100	0	5100
4.	Sodium Bi-Carbonate	1800	600	2400
5.	Power (Co-generation Power Plant)	20 MW	20 MW	40 MW

4. Project proponent reported that existing land area is 518974 sqm., no additional land will be required for proposed expansion. The estimated project cost is Rs.151.78 crores excluding existing investment of Rs. 764.16 crores. Total capital cost earmarked towards environmental pollution control measures is Rs.1.25 crores and the recurring cost (operation

and maintenance) will be about Rs.53.12 lakh per annum. Total existing employment is 1169 persons as direct & 400 persons will be indirect after expansion.

5. Porbandar Bird Sanctuary is at a distance of 885 meters in North- west direction. Arabian Sea is flowing at a distance of 0.520 km in SW direction.

6. Total water requirement is 176100 m3/day which will be met from Arabian Sea. The Effluent of 169960 m3/day quantity will be treated through Effluent Treatment Plant. Treated water will be discharged in to Arabian sea beyond lowest tile water level through closed pipeline and diffuser system. Domestic sewage (1000 KLD) shall be disposed off though septic tank/soak pit system. Power requirement after expansion will be 33.8 MW including existing 24.9MW and will be met from Captive Co-generation power plant & Paschim Gujarat Vij Corporation limited (PGVCL). Existing unit has one DG set of 1500 KVA capacity, is used as standby during power failure. Stack (height 20 m) will be provided as per CPCB norms to the proposed DG sets. Existing unit has 240 TPH (Two boilers with 120 TPH each - regular) and one boiler 120 TPH (Standby) Circulating Fluidized Bed Combustion (CFBC) boilers. Additionally, 120 TPH CFBC boiler (presently stand by) will be in regular use. Electrostatic Precipitators with existing common stack of height of 100 m will be installed for controlling the particulate emissions within the statutory limit of 50 mg/Nm3 for the proposed regularization of boiler.

7. The project/activities are covered under category A of item 4(e) 'Soda ash industry' and category B of item 1(d) 'Thermal Power Plants' of the schedule to the Environment Impact Assessment Notification, 2006, and requires appraisal/approval at central level by the sectoral EAC in the Ministry.

8. The standard terms of reference (ToR) was granted by the Ministry on 24th May, 2019. The public hearing was conducted by the State Pollution Control Board on 10th January, 2020. The public hearing was presided over by the District Magistrate. The main issues raised during the Public Hearing are related to death of fishes due to discharge of effluent by the unit and fish harvesting by fishermen.

9. The proposal for environmental clearance was considered by the EAC (Industry-2) in its meeting held on 11-13 May, 2020. The project proponent and their accredited consultant M/s T.R. Associates, made a detailed presentation through Video Conferencing (VC) and have presented the EIA/EMP report. The Committee found the EIA/EMP report to be satisfactory, complying with the ToR, and recommended the project for grant of environmental clearance.

10. The EAC, constituted under the provision of the EIA Notification, 2006 and comprising of Experts Members/domain experts in various fields, have examined the proposal submitted by the Project Proponent in desired form along with EIA/EMP report prepared and submitted by the Consultant accredited by the QCI/ NABET on behalf of the Project Proponent. The EAC noted that the Project Proponent has given undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the EIA/EMP report. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.

11. The Committee noted that the EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. The Committee has found the baseline data and incremental GLC due to the proposed project within NAAQ standards. The Committee has also deliberated on the public hearing issues, action plan and CER plan and found to be addressing the issues

in the study area and the issues raised during the public hearing. The EAC has deliberated the proposal and has made due diligence in the process as notified under the provisions of the EIA Notification, 2006, as amended from time to time and accordingly made the recommendations to the proposal. The Experts Members of the EAC have found the proposal in order and have recommended for grant of Environmental Clearance (EC) subject to further examination vis-a-vis CRZ clearance. In this context, the proposal was processed and forwarded to CRZ for comments on 8th June 2020. CRZ sector has sought certain information which PP has submitted on 30th June 2020 and again forwarded to CRZ on 6th July & 20th July 2020 for comments. CRZ sector has provided the comments on 30.07.2020.

12. The proposal has been further examined in the Ministry and it is observed that EAC has recommended Rs. 3 crore towards the Corporate Environment Responsibility (CER) on expansion cost of Rs. 151.78 crore which should be maximum of Rs. 1.14 crore @ 0.75% of the cost for expansion project as per the Ministry's Office Memorandum No. 22-65/2017-IA.III on CER dated 01.05.2018. Accordingly, the competent authority in the Ministry has approved the CER cost of Rs. 1.14 crore. The CER funds shall be utilized as per the specific condition no. 14 (xv).

13. The environmental clearance granted to the project/activity is strictly under the provisions of the EIA Notification 2006 and its amendments. It does not tantamount/construe to approvals/consent/ permissions etc. required to be obtained or standards/conditions to be followed under any other Acts/ Rules/ Subordinate legislations, etc., as may be applicable to the project. The project proponent shall obtain necessary permission as mandated under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, as applicable from time to time, from the State Pollution Control Board, prior to construction & operation of the project.

14. Based on the proposal submitted by the project proponent and recommendations of the EAC (Industry-2), Ministry of Environment, Forest and Climate Change hereby accords **Environmental clearance to the project for expansion cum modernization of Soda Ash manufacturing unit (from 35,720 TPM to 45020 TPM) and Co-generation power plant (20 MW to 40 MW) by M/s Saurashtra Chemicals (Division of Nirma Ltd) at Birlasagar, Porbandar, Gujarat,** under the provisions of the EIA Notification, 2006, and the amendments therein, subject to compliance of the terms and conditions as under:-

A. Specific Condition

(i) The EAC recommended that PP shall conduct a study on effect of pollution on fish harvesting by a reputed organization and submit the report within 6 months for further appraisal before the EAC. PP shall prepare a report on improvement done through modernization in existing process technology and reduction/alternation/reuse of existing raw material, fuel, CO_2 emission. These Report shall be submitted to the EAC within 6 months for further appraisal.

(ii) Treated water of 169960 m3/day shall be discharged to Arabian sea beyond lowest tile water level through closed pipeline and diffuser system.

(iii) No raw material/solvent prohibited by the concerned regulatory authorities from time to time, shall be used.

(iv) To control source and the fugitive emissions, suitable pollution control devices shall be installed to meet the prescribed norms and/or the NAAQS. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.

(v) Total water requirement shall not increase 176100 cum/day proposed to be met from Sea.

(vi) Rainwater harvesting system shall be set up in the premises by construction of storage tanks and water shall be used for various industrial purpose in the unit. No water shall be permitted to pumped in the ground.

(vii) Process effluent/any wastewater shall not be allowed to mix with storm water. The storm water from the premises shall be collected and discharged through a separate conveyance system.

(viii) Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm, and solvent transfer through pumps.

(ix) Process organic residue and spent carbon, if any, shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF.

(x) The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time.

(xi) Fly ash should be stored separately as per CPCB guidelines so that it should not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing along with the storm water. Direct exposure of workers to fly ash & dust should be avoided.

(xii) The company shall undertake waste minimization measures as below:-
a. Metering and control of quantities of active ingredients to minimize waste.
b. Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.
c. Use of automated filling to minimize spillage.
d. Use of Close Feed system into batch reactors.
e. Venting equipment through vapour recovery system.
f. Use of high pressure hoses for equipment clearing to reduce wastewater generation.

(xiii) The green belt of at least 5-10 m width shall be developed in nearly 33% of the total project area, mainly along the plant periphery, in downward wind direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.

(xiv) All the commitments made to the public during public hearing/consultation shall be satisfactorily implemented.

(xv) As per Ministry's OM No. 22-65/2017-IA.III dated 1st May 2018, an amount equivalent to 0.75% of proposed capital cost for expansion (Rs. 151.78 Cr) i.e. Rs. 1.14 crore shall be allocated for Corporate Environment Responsibility (CER). The CER funds shall be utilized for meeting the issues suggested during public hearing. The CER plan shall be completed before commissioning of the expansion project. This CER amount shall be spent for fisherman welfare activity.

(xvi) For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.

(xvii) The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire-fighting system shall be as per the norms.

(xviii) Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act. Workers shall be provided with adequate safety kits/mask for protection from carbon black/coal tar dust, if any, occur in the factory.

(xix) Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.

(xx) Mitigating measures suggested during process safety and advanced risk assessment studies shall be carried out.

14.1. General Condition:

(i) No further expansion or modifications in the plant, other than mentioned in the EIA Notification, 2006 and its amendments, shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change/SEIAA, as applicable. In case of deviations or alterations in the project proposal from those submitted to this Ministry for clearance, a fresh reference shall be made to the Ministry/SEIAA, as applicable, to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.

(ii) The energy source for lighting purpose shall be preferably LED based, or advanced having preference in energy conservation and environment betterment.

(iii) The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under the Environment (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).

(iv) The company shall undertake all relevant measures for improving the socio-economic conditions of the surrounding area. CER activities shall be undertaken by involving local villages and administration and shall be implemented. The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment.

(v) The company shall earmark sufficient funds towards capital cost and recurring cost per annum to implement the conditions stipulated by the Ministry of Environment, Forest and Climate Change as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so earmarked for environment management/ pollution control measures shall not be diverted for any other purpose.

(vi) A copy of the clearance letter shall be sent by the project proponent to concerned Panchayat, Zilla Parishad/Municipal Corporation, Urban local Body and the local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal.

(vii) The project proponent shall also submit six monthly reports on the status of compliance of the stipulated Environmental Clearance conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional Office of MoEF&CC, the respective Zonal Office of CPCB and SPCB. A copy of Environmental Clearance and six monthly compliance status report shall be posted on the website of the company.

(viii) The environmental statement for each financial year ending 31st March in Form-V as is mandated shall be submitted to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Regional Offices of MoEF&CC by e-mail.

(ix) The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB/Committee and may also be seen at Website of the Ministry and at https://parivesh.nic.in/. This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the concerned Regional Office of the Ministry.

(x) The project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of the project.

(xi) This Environmental clearance is granted subject to final outcome of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, if any, as may be applicable to this project.

15. The Ministry reserves the right to stipulate additional conditions, if found necessary at subsequent stages and the project proponent shall implement all the said conditions in a time bound manner. The Ministry may revoke or suspend the environmental clearance, if implementation of any of the above conditions is not found satisfactory.

16. Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.

17. Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

18. The above conditions will be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, the Hazardous Waste (Management, Handling and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 read with subsequent amendments therein.

19. This issues with the approval of the competent authority.

(Dr. R. B. Lal)
Scientist 'E'/Additional Director

(डॉ. आर. बी. लाल)
(Dr. R. B. LAL)
वैज्ञानिक 'ई'/Scientist 'E'
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय
Min.of Environment,Forest and Climate Change
भारत सरकार, नई दिल्ली
Govt. of India, New Delhi

Copy to: -

1. The Principal Secretary, Forests & Environment Department, Government of Gujarat, Sachivalaya, 8th Floor, **Gandhi Nagar** - 382 010 (Gujarat)
2. The Dy. Director General of Forest (Western Zone), MoEF&CC, Regional Office, E-5, Arera Colony, Link Road -3, Ravishankar Nagar, **Bhopal** - 462 016 (MP)
3. The Member Secretary, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, **Delhi** -32
4. The Member Secretary, Gujarat Pollution Control Board, Paryavaran Bhawan, Sector 10 A, **Gandhi Nagar**-382 043 (Gujarat)
5. Monitoring Cell, Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, **New Delhi** – 3
6. District Collector, **Porbandar, (Gujarat)**
7. Guard File/Record File/Monitoring File/Parivesh Portal/Website of MoEF&CC

(Dr. R. B. Lal)
Scientist 'E'/Additional Director
Tele-fax: 011-24695362
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SAURASHTRA CHEMICALS
(DIVISION OF NIRMA LTD.)

COMPLIANCE OF CC&A GRANTED TO M/S SAURASHTRA CHEMICALS DIVISION OF NIRMA LIMITED

<table>
<tr><th>Sr. No.</th><th>Condition</th><th>Compliance</th></tr>
<tr><td>1</td><td colspan="2">Consent Order No. AWH – 102464 Date of Issue 24/06/2019. And Amended on 15/02/2021.</td></tr>
<tr><td>2</td><td>The consents shall be valid up to 31/03/2024 for use of outlet for the discharge of treated effluent & air emission due to operation of industrial plant for manufacturing of the following items/products at Birlasagar, Vill.: Chhaya, Ta.: Porbandar, Dist.: Porbandar – 360576.
<table>
<tr><th>Sr. No.</th><th>Name of Products</th><th>Quantity</th></tr>
<tr><td>1</td><td>Soda Ash (Light)</td><td>28000 MT/M</td></tr>
<tr><td rowspan="3">2</td><td>Soda Ash (Dense)</td><td>5100 MT/M</td></tr>
<tr><td colspan="2">OR</td></tr>
<tr><td>Soda Ash (Light)</td><td>5100 MT/M</td></tr>
<tr><td rowspan="3">3</td><td>Caustic Lye (100%)</td><td>620 MT/M</td></tr>
<tr><td colspan="2">OR</td></tr>
<tr><td>Soda Ash (Light)</td><td>820 MT/M</td></tr>
<tr><td rowspan="3">4</td><td>Sodium Bi-Carbonate</td><td>1800 MT/M</td></tr>
<tr><td colspan="2">OR</td></tr>
<tr><td>Soda Ash (Light)</td><td>1800 MT/M</td></tr>
</table></td><td>The production of given products are as per the consented quantities and are being regularly uploaded on the website of Gujarat State Pollution Control Board.

Monthly Report Form D-2 for the month of July, 2021 enclosed as Annexure – 1. and Production quantity for the year 2020 – 21 are as under:
<table>
<tr><th>Sr. No.</th><th>Name of Products</th><th>Actual production (MT/ Month)</th></tr>
<tr><td>1</td><td>Soda Ash (Light)</td><td>13581.715</td></tr>
<tr><td rowspan="3">2</td><td>Soda Ash (Dense)</td><td>758.804</td></tr>
<tr><td colspan="2">OR</td></tr>
<tr><td>Soda Ash (Light)</td><td>0.00</td></tr>
<tr><td rowspan="3">3</td><td>Caustic Lye (100%)</td><td>0.00</td></tr>
<tr><td colspan="2">OR</td></tr>
<tr><td>Soda Ash (Light)</td><td>0.00</td></tr>
</table></td></tr>
</table>

5	Liquid Bromine	20 MT/M
6	Power (Co-generation Power Plant)	40 MW
7	Flash Condensate	20 m^3/Hr. (14400 m^3/M)
8	Distilled Water	70 m^3/Hr. (50400 m^3/M)

* The overall consented quantity of Soda Ash (Light) will be 35720 MT/M.

Note: This Consolidated Consent and Authorization is also granted for the operation of already existing RO Plant 2 Nos. (Capacity 12,400 M^3/Day), operation of Coal Breeze Briquette Plant (Capacity 300 MT/Day), Modification in effluent treatment (Acid Dosing for Neutralization of Waste Water) & operation of New Turbo Generator of 14.5 MWH capacity.

4	Sodium Bi-Carbonate	941.729
	OR	
	Soda Ash (Light)	0.00
5	Liquid Bromine	0.00
6	Power (Co-generation Power Plant)	11.576
7	Flash Condensate	8571.666 m^3/month
8	Distilled Water	16885.333 m^3/month

3 Condition under the Water Act – 1974

3.1 The quantity of trade effluent to be generated from factory shall not exceed 169960 KL/Day.

The quantity of trade effluent have been generated for the Month of January, 2021 to July, 2021 are as under:

Sr. No.	Month	Quantity KL / Month	Quantity KL / Day
1	January	3189824	102898
2	February	3004051	107288
3	March	3260436	105175
4	April	3675719	122524

		5 May 3914609 126277 6 June 4225344 140845 7 July 3828540 123501
3.2	The quantity of sewage waste water from the factory shall not exceed 1000 KL/Day.	The quantity of Sewage waste water have been generated for the Month of January, 2021 to July, 2021 are as under: **Sr. No.** / **Month** / **Quantity KL / Month** / **Quantity KL / Day** 1 January 18070 583 2 February 17305 618 3 March 19337 624 4 April 18036 601 5 May 22329 720 6 June 22102 737 7 July 20166 650 Treated Sewage is being utilizing for farming
	Trade Effluent	
3.3	The quality of the treated effluent as per GPCB norms mentioned below: Parameter: pH — GPCB Norms: 6.5 to 8.5 Parameter: Temperature — GPCB Norms: 40 ^{0}C Parameter: Suspended Solids — GPCB Norms: 1300 mg/l Parameter: Oil and Grease — GPCB Norms: 10 mg/l	The Quality report of treated effluent samples collected by GPCB Officials are as under and enclosed as **Annexure – 2** : Parameter / June, 2020 / Oct. 2020 / Nov. 2020 / Feb, 2021 / May, 2021 / July, 2121 pH 8.40 8.20 7.59 6.27 8.52 8.30 Tem. 35.7 36 28 32 34 29 SS 988 1048 1150 458 1232 1054 Oil and Grease 0.00 BDL BDL BDL BDL BDL Ammonic 6.44 2.8 4.48 1.12 2.8 1.12

	Ammonical Nitrogen | 50 mg/l Bio Assay Test | 90% survival of fish after 96 Hrs. in 100% effluent All efforts shall be made to remove color and unpleasant odour as far as practicable.	al Nitrogen | | | | | | | The Quality report of treated effluent samples collected by M/s Kadam Environmental Consultant are as under and enclosed as Annexure – 3 : **Parameter** | **Jan, 2021** | **Feb, 2021** | **March, 2021** | **April, 2021** | **May, 2021** | **June, 2021** **pH** | 8.45 | 8.77 | 8.69 | 8.56 | 8.48 | 8.48 **Tem.** | 26.3 | 27 | 29 | 27.3 | 27.8 | 25.7 **SS** | 1083 | 1038 | 1010 | 1086 | 1052 | 1089 **Oil and Grease** | <1 | <1 | <1 | <1 | <1 | <1 **Ammonical Nitrogen** | <0.05 | 8.68 | 9.33 | 4.67 | 4.39 | 5.39
3.4	The effluent confirm to the above standards shall be discharged into Arabian sea beyond lowest tide water level through closed pipeline and diffuser system.	After confirming the stipulated norms, treated effluent has been discharged 270 mtr into the Arabian sea beyond lowest tide water level through closed submerged pipeline and diffuser system.
3.5	Domestic effluent shall be disposed off through septic tank/soak pit system.	Domestic effluent / sewage is being disposed off through septic tank / soak pit system. Further, we are in process to connect our sewage line with Porbandar – Chhaya Nagarpalika Sewage line for proper sewage treatment as 19.10 MLD sewage treatment plant is being

<table>
<tr><td></td><td></td><td>setup by Porbandar – Chhaya Nagarpalika.</td></tr>
<tr><td>3.6</td><td>The disposal point mentioned in the condition no:3.3.2 shall studied time to time through NIO or any Other competent authority of central Government for safe disposal of effluent into the sea. The report should be submitted to this board.</td><td>Marine studies have been carried out by M/s NIO from time to time and same is being submitted to concerned authorities. Last studies have been carried out by M/s NIO in December, 2020 and report for the same is in under preparation.</td></tr>
<tr><td>3.7</td><td>The quantity of rejected effluent from the desalination plant shall not exceed 57,60,000 L/Day and rejected waste water shall be used as dilution and total quantity of trade effluent shall not exceed 169960 KL/Day.</td><td>The quantity of reject effluent from the desalination plant are as under:
<table>
<tr><th>Sr. No.</th><th>Month</th><th>Quantity
KL / Month</th><th>Quantity
KL / Day</th></tr>
<tr><td>1</td><td>January</td><td>32141</td><td>1036.80</td></tr>
<tr><td>2</td><td>February</td><td>54406</td><td>1943.07</td></tr>
<tr><td>3</td><td>March</td><td>94941</td><td>3062.61</td></tr>
<tr><td>4</td><td>April</td><td>129578</td><td>4319.26</td></tr>
<tr><td>5</td><td>May</td><td>55633</td><td>1794.61</td></tr>
<tr><td>6</td><td>June</td><td>88079</td><td>2935.96</td></tr>
<tr><td>7</td><td>July</td><td>0</td><td>0</td></tr>
</table>
Rejected water is being used in the dilution of main effluent. The quantity of effluent generated from the plant is well within the limit and mentioned in point no. 3.1.</td></tr>
<tr><td>3.8</td><td colspan="2">Additional Condition under Water Act – 1974 read with EPA – 1986</td></tr>
</table>

<table>
<tr>
<td>1</td>
<td>Unit shall receive Ammonium Carbonate Scrubbed solution (30 – 50 % Concentration) from below mentioned CPC Blue manufacturing industries for the recycling / reuse/ re-processing purpose in existing industrial facility, which is by product of following generating industries.
i. Narayan Organics Pvt. Ltd., 1107/1 & 2, GIDC Ankleshwar, Dist.: Bharuch.
ii. Narayan Industries, Plot No. 1303/1 & 2, Phase-IV, GIDC-Naroda, Ahmadabad.
iii. A-One Chemicals, A1/4701 - 2, GIDC Ankleshwar, Dist.: Bharuch.
iv. A-One Phthalo Colors Pvt. Ltd., Plot No. 808/A-1&3, Phase-III, GIDC Vapi, Dist.: Valsad.
v. Dhanlaxmi Pigments Pvt. Ltd., Plot No. 3020-3021, GIDC Estate, Panoli, Dist.: Bharuch.
vi. M/s Ushanti Colour chem Pvt Ltd. Plot No. 88/7 Phase - 1, GIDC, Vatva, Ahmadabad.
vii. M/s Asahi Songwon Colors Ltd. Plot No. 429-432, Vill Dudhwada, Ta Padra, Vadodara.
viii. M/S.Ishan Dyes & Chemicals Ltd., Plot No.18, GIDC Estate, Phase-1, Vatva, Ahmadabad- 382445.
• In case of any violation, the permission can be withdrawn at any point of time without prior intimation.
• Any type of violation under the provisions of water act 1974 all concern receptor / generator will be held responsible & suitable action may be initiated without intimation.</td>
<td>We are receiving the ammonium carbonate from stipulated party only with adopting proper safety measures.

Ammonium Carbonate supplied by Acid Chem (i.e Approved supplier for the collection of Ammonium carbonate from above said CPC Blue manufacturing industries to SAUKEM) are as Under:
<table>
<tr><th>Sr. No.</th><th>Month 2021</th><th>Quantity in MT</th></tr>
<tr><td>1</td><td>January</td><td>814.420</td></tr>
<tr><td>2</td><td>February</td><td>890.515</td></tr>
<tr><td>3</td><td>March</td><td>1135.120</td></tr>
<tr><td>4</td><td>April</td><td>1358.140</td></tr>
<tr><td>5</td><td>May</td><td>1306.960</td></tr>
<tr><td>6</td><td>June</td><td>1396.850</td></tr>
</table>
Copy of P.O. is enclosed as Annexure - 4</td>
</tr>
</table>

4 Condition under the Air Act – 1981

4.1

The following shall be used as fuel

Sr. No.	Name of Fuel	Existing Quantity
1	Coal &/OR Lignite &/OR Petcock	33.4 TPH &/OR 65.5 TPH &/OR 50 TPH
2	LSHS	52.8 TPD
3	LDO	2700 KL/Year

Petcoke (Cap-50 TPH) shall be used as fuel in CBFC boilers 2 Nos. and consumption of lime stone dosing shall be increased from 7.98 TPH to 12.53 TPH.

Fuel consumption details are as under:

Sr. No.	Month	Quantity of Fuel			
		Pet coke TPH	Coal TPH	LDO (KL)	Lignite (TPH)
1	January	0	28.706	0	0
2	February	0	27.202	0.0625	0
3	March	0	29.39	0	0
4	April	0	29.19	0	0
5	May	0	31.33	0	0
6	June	0	33.18	0	0
7	July	21.52	1.46	0.4375	0

Further, Lime stone Powder used at Boiler for SOx control are as under:

Sr. No.	Month	Quantity of Lime stone Powder TPH
1	January	1.113
2	February	0.189
3	March	0.795
4	April	0.186
5	May	0.288
6	June	0.376
7	July	0.690

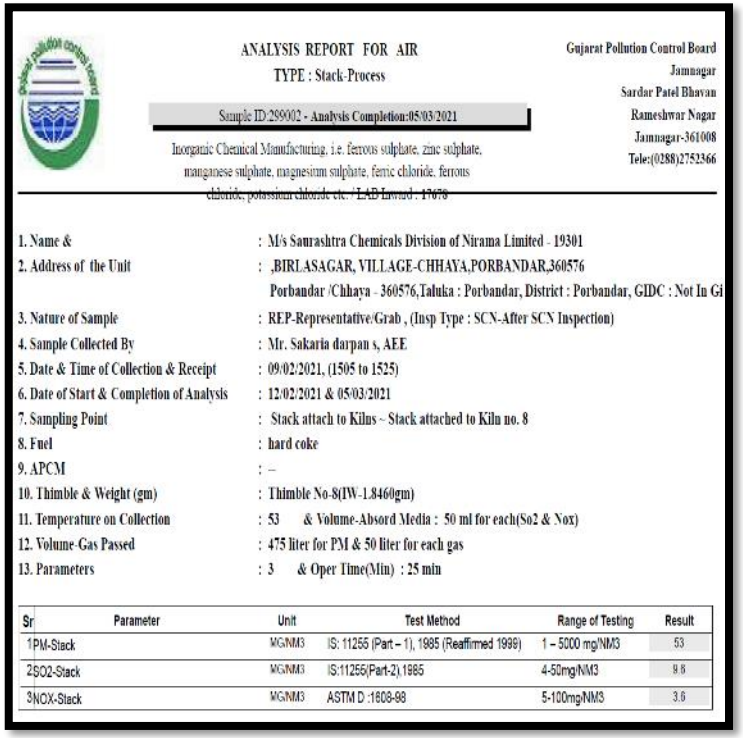
<table>
<tr><td>4.2</td><td>The applicant shall install & operate air pollution control system in order to achieve norms prescribed below.</td><td>ESPs have already been installed at each boiler for control the SPM. Further, Lime dosing systems are already in placed to control the SOx level. Moreover, CFBC boilers have maintaining the continuity in temperature so that NOx level can control within the norms.</td></tr>
<tr><td>4.2.1</td><td>The flue gas emission through stack shall confirm to the following standards:

<table><tr><th>Stack No.</th><th>Stack attached to</th><th>Stack Height (m)</th><th>APCM</th><th>Expected Pollutant</th></tr><tr><td>1</td><td>CFBC Boiler 8 & 9</td><td>100</td><td>ESP to each boiler</td><td>PM≤50 mg/Nm^3
SO_2≤600 mg/Nm^3
NO_X≤450 mg/Nm^3
Hg ≤ 0.03 mg/Nm^3</td></tr><tr><td>2</td><td>D.G. Set - 1500 KVA</td><td>20</td><td></td><td>PM≤150 mg/Nm^3
SO_2≤100 PPM
NO_X≤50 PPM</td></tr></table></td><td>Analysis reports of samples collected M/s Kadam Environmental Consultant are as under and enclosed as Annexure – 5.

<table><tr><th>Sr. No</th><th>Pollutant</th><th>April</th><th>May</th><th>June</th><th>July</th></tr><tr><td>1</td><td>SPM mg/Nm^3</td><td>46</td><td>42</td><td>36</td><td>46</td></tr><tr><td>2</td><td>SOx mg/Nm^3</td><td>180.99</td><td>413.42</td><td>410.07</td><td>53.61</td></tr><tr><td>3</td><td>NOx mg/Nm^3</td><td>19.95</td><td>154.63</td><td>150.48</td><td>26.12</td></tr><tr><td>4</td><td>Hg mg/Nm^3</td><td>N.D</td><td>N.D</td><td>N.D</td><td>N.D</td></tr></table>Note: in month of July, 2021 Boiler no. 8 was in operation & Boiler No. 9 is in maintenance.</td></tr>
<tr><td>4.2.2</td><td>The process emission through various stack/vent of reactors, process vessels shall confirm to the following standards

<table><tr><td>Sr. No.</td><td>Stack attached to</td><td>Stack height (m)</td><td>APCM</td><td>Pollutants</td></tr><tr><td>1</td><td>Rotary Kiln</td><td>23</td><td>Venturi Scrubber</td><td>PM≤150mg/Nm^3</td></tr><tr><td>2</td><td>Air Vent Scrubber (Kiln 1 to 4)</td><td>34</td><td>Sea Water</td><td>SO_2≤40mg/Nm^3
NO_X≤25mg/Nm</td></tr></table></td><td>Analysis reports of samples collected by GPCB are as under and enclosed as Annexure - 6:</td></tr>
</table>

	3	Kiln 1 & 2	45 each	Vent shall be closed during operation	3
	4	Kiln 3 & 4	45 each		
	5	Kiln 5	57		
	6	Kiln 6	57		
	7	Kiln 7 & 8	63 each		
	8	Slaker No. 5	20	Water Vapor free from pollutants	
	9	Slaker No. 6	20		
	10	Slaker No. 7	20		
	11	Dust extraction system connected to kiln 1 to 5	20	Bag House	PM≤150 mg/Nm^3
	12	Ammonia Scrubber	60	Brine Scrubber	NH_3 ≤175 mg/Nm^3



ANALYSIS REPORT FOR AIR
TYPE : Stack-Process

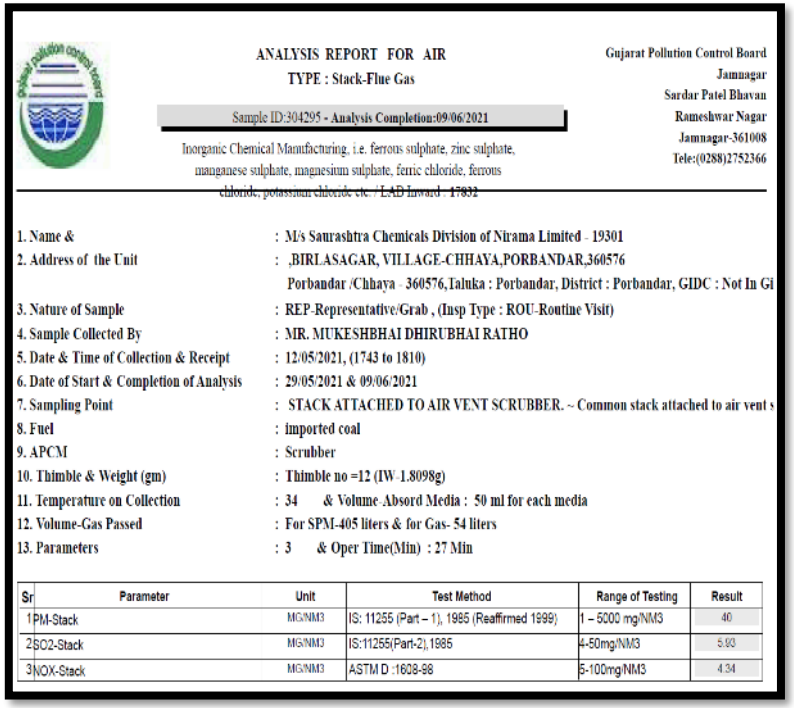
Gujarat Pollution Control Board
Jamnagar
Sardar Patel Bhavan
Rameshwar Nagar
Jamnagar-361008
Tele:(0288)2752366

Sample ID:299002 - Analysis Completion:05/03/2021

Inorganic Chemical Manufacturing, i.e. ferrous sulphate, zinc sulphate, manganese sulphate, magnesium sulphate, ferric chloride, ferrous chloride, potassium chloride etc. / LAB Invoice : 17678

1. Name & : M/s Saurashtra Chemicals Division of Nirama Limited - 19301
2. Address of the Unit : ,BIRLASAGAR, VILLAGE-CHHAYA,PORBANDAR,360576 Porbandar /Chhaya - 360576,Taluka : Porbandar, District : Porbandar, GIDC : Not In Gi
3. Nature of Sample : REP-Representative/Grab , (Insp Type : SCN-After SCN Inspection)
4. Sample Collected By : Mr. Sakaria darpan s, AEE
5. Date & Time of Collection & Receipt : 09/02/2021, (1505 to 1525)
6. Date of Start & Completion of Analysis : 12/02/2021 & 05/03/2021
7. Sampling Point : Stack attach to Kilns - Stack attached to Kiln no. 8
8. Fuel : hard coke
9. APCM : –
10. Thimble & Weight (gm) : Thimble No-8(IW-1.8460gm)
11. Temperature on Collection : 53 & Volume-Absord Media : 50 ml for each(So2 & Nox)
12. Volume-Gas Passed : 475 liter for PM & 50 liter for each gas
13. Parameters : 3 & Oper Time(Min) : 25 min

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	PM-Stack	MG/NM3	IS: 11255 (Part – 1), 1985 (Reaffirmed 1999)	1 – 5000 mg/NM3	53
2	SO2-Stack	MG/NM3	IS:11255(Part-2),1985	4-50mg/NM3	9.6
3	NOX-Stack	MG/NM3	ASTM D :1608-98	5-100mg/NM3	3.6



ANALYSIS REPORT FOR AIR
TYPE : Stack-Flue Gas

Gujarat Pollution Control Board
Jamnagar
Sardar Patel Bhavan
Rameshwar Nagar
Jamnagar-361008
Tele:(0288)2752366

Sample ID:304295 - Analysis Completion:09/06/2021

Inorganic Chemical Manufacturing, i.e. ferrous sulphate, zinc sulphate, manganese sulphate, magnesium sulphate, ferric chloride, ferrous chloride, potassium chloride etc. / LAD Inward - 17832

1. Name & : M/s Saurashtra Chemicals Division of Nirama Limited - 19301
2. Address of the Unit : ,BIRLASAGAR, VILLAGE-CHHAYA,PORBANDAR,360576
Porbandar /Chhaya - 360576,Taluka : Porbandar, District : Porbandar, GIDC : Not In GI
3. Nature of Sample : REP-Representative/Grab , (Insp Type : ROU-Routine Visit)
4. Sample Collected By : MR. MUKESHBHAI DHIRUBHAI RATHO
5. Date & Time of Collection & Receipt : 12/05/2021, (1743 to 1810)
6. Date of Start & Completion of Analysis : 29/05/2021 & 09/06/2021
7. Sampling Point : STACK ATTACHED TO AIR VENT SCRUBBER. ~ Common stack attached to air vent s
8. Fuel : imported coal
9. APCM : Scrubber
10. Thimble & Weight (gm) : Thimble no =12 (IW-1.8098g)
11. Temperature on Collection : 34 & Volume Absord Media : 50 ml for each media
12. Volume-Gas Passed : For SPM-405 liters & for Gas- 54 liters
13. Parameters : 3 & Oper Time(Min) : 27 Min

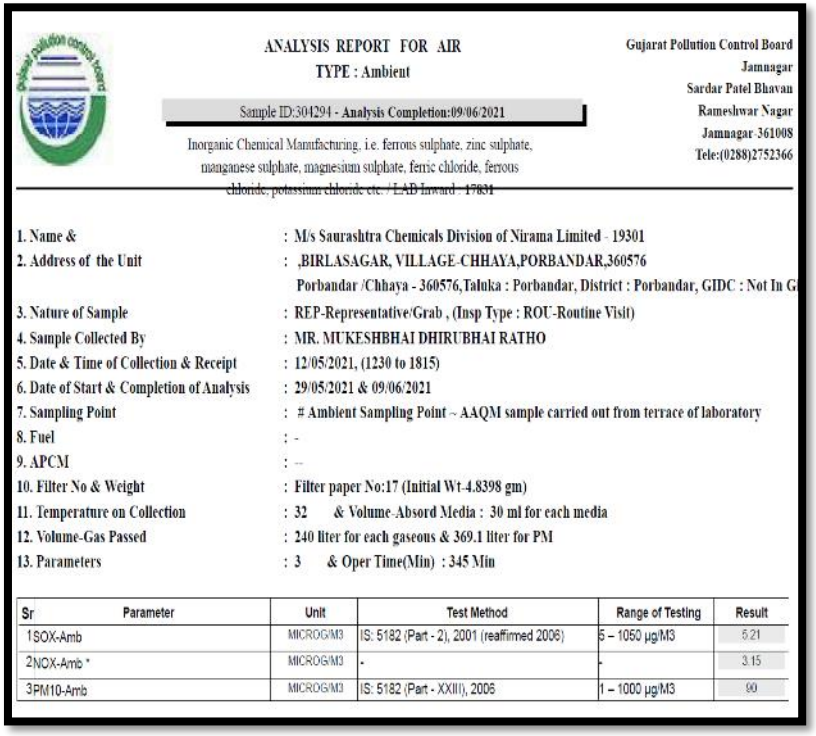
Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	PM-Stack	MG/NM3	IS: 11255 (Part – 1), 1985 (Reaffirmed 1999)	1 – 5000 mg/NM3	40
2	SO2-Stack	MG/NM3	IS:11255(Part-2),1985	4-50mg/NM3	5.93
3	NOX-Stack	MG/NM3	ASTM D :1608-98	5-100mg/NM3	4.34

4.2.3 The concentration of the following parameters in the ambient air within the premises of the industry shall not exceed the limits specified hereunder

Parameter	Permissible Limit Annual	Permissible Limit 24 Hr Average
Particulate matter – (PM_{10})	60 µg/m^3	100 µg/m^3
Particulate matter – ($PM_{2.5}$)	40 µg/m^3	60 µg/m^3

Analysis reports of samples collected by GPCB are as under:

	Sulphur Dioxide	50 µg/m^3	80 µg/m^3
	Nitrogen Dioxide	40 µg/m^3	80 µg/m^3



ANALYSIS REPORT FOR AIR
TYPE : Ambient

Gujarat Pollution Control Board
Jamnagar
Sardar Patel Bhavan
Rameshwar Nagar
Jamnagar-361008
Tele:(0288)2752366

Sample ID:304294 - Analysis Completion:09/06/2021

Inorganic Chemical Manufacturing, i.e. ferrous sulphate, zinc sulphate, manganese sulphate, magnesium sulphate, ferric chloride, ferrous chloride, potassium chloride etc. / LAB Inward - 17831

1. Name & : M/s Saurashtra Chemicals Division of Nirama Limited - 19301
2. Address of the Unit : ,BIRLASAGAR, VILLAGE-CHHAYA,PORBANDAR,360576
Porbandar /Chhaya - 360576,Taluka : Porbandar, District : Porbandar, GIDC : Not In G
3. Nature of Sample : REP-Representative/Grab , (Insp Type : ROU-Routine Visit)
4. Sample Collected By : MR. MUKESHBHAI DHIRUBHAI RATHO
5. Date & Time of Collection & Receipt : 12/05/2021, (1230 to 1815)
6. Date of Start & Completion of Analysis : 29/05/2021 & 09/06/2021
7. Sampling Point : # Ambient Sampling Point ~ AAQM sample carried out from terrace of laboratory
8. Fuel : -
9. APCM : --
10. Filter No & Weight : Filter paper No:17 (Initial Wt-4.8398 gm)
11. Temperature on Collection : 32 & Volume-Absord Media : 30 ml for each media
12. Volume-Gas Passed : 240 liter for each gaseous & 369.1 liter for PM
13. Parameters : 3 & Oper Time(Min) : 345 Min

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	SOX-Amb	MICROG/M3	IS: 5182 (Part - 2), 2001 (reaffirmed 2006)	5 – 1050 µg/M3	5.21
2	NOX-Amb *	MICROG/M3	-	-	3.15
3	PM10-Amb	MICROG/M3	IS: 5182 (Part - XXIII), 2006	1 – 1000 µg/M3	99

Analysis reports for AAQM carried our by M/s Kadam Environmental Cons. Baroda is enclosed here with as **Annexure – 7.**

4.3	The applicant shall provide portholes, ladder, platform etc. at chimney (s) for monitoring the air emissions and the same shall be open for inspection. The chimney (s) vent attached to various sources of emission shall be designed by numbers such as S-1, S-2, etc. and these shall be painted / displayed to facilitate identification.	Necessary Portholes, ladder, platform etc. have been provided at Chimneys for monitoring the air emission and each chimney have been nominated / painted with S-1, S-2 etc.

		
4.4	The unit shall take adequate measures for control of noise levels from its own sources within the premises so as to maintain ambient air quality standards in respect of noise within following levels: Between 6 AM to 10 PM – 75 dB (A) Between 10 PM to 6 AM – 70 dB (A)	Noise level monitoring carried out by M/s Kadam Environment Consultants, Vadodara (MoEF Approved third party) are as under and enclosed as **Annexure – 8**

Month (2021)	Day time dB(A)				Night time dB(A)			
	Near Coal Yard	Near Raw Material Area	Near Technical Block	TPS	Near Coal Yard	Near Raw Material Area	Near Technical Block	TPS
Jan	60.0	62.0	59.7	68.2	56.2	58.9	58.4	62.6
Feb	56.3	61.8	64.6	67.1	51.2	58.4	60.7	61.3
Mar	60.8	64.6	63.2	64.7	58.3	60.9	60.7	61.3
April	64.2	65.6	68.9	68.2	60.6	61.3	62.7	62.3
May	62.6	67.1	69.4	61.4	59.2	61.6	62.7	58.4
June	58.6	60.9	64.8	67.3	54.2	56.3	60.5	61.7

5 **Authorization under Hazardous and other Waste [Management & Transboundary Movement] Rules, 2016 Form-2 [See rule 6 (2)] Form for grant of authorization for occupier or operator handling hazardous waste.**

5.1

M/s. Saurashtra Chemicals Division of Nirma Limited is hereby granted an authorization to operate facility for the following hazardous waste on the premises situated at Birlasagar, Vill.: Chhaya, Ta.: Porbandar, Dist.: Porbandar - 360576.

Sr. no.	Category of hazardous waste as per the schedules I, II, III of these rules	Authorization mode of disposal or recycling or utilization or Co processing, etc.	Quantity (per Year)

Generation of Hazardous waste i.e used oil and discarded drum are as under:

Sr. No.	Month	Used Oil (KL)		
		Generation	Utilization	Stock
1	January	0.200	0.200	0.100 (carry forwarded)
2	February	0.200	0.250	0.050
3	March	0.200	0.250	0
4	April	0.200	0.200	0
5	May	0.200	0.200	0
6	June	0.100	0.100	0
7	July	0.200	0	0.200

<table>
<tr>
<td></td>
<td>
<table>
<tr><td>1</td><td>Schedule-1 Category-5.1 Used Oil</td><td>Collection, Storage, Transportation, Disposal by reuse or selling to registered recycler</td><td>2 KL</td></tr>
<tr><td>2</td><td>Schedule-1 Category-33.1 Discarded Containers</td><td>Collection, Storage, Transportation, Disposal by selling to registered recyclers unit only</td><td>350 Nos.</td></tr>
<tr><td>3</td><td>Insulating Material Waste (Glass Wool etc.) Non-Hazardous Waste</td><td>Collection, Storage, Transportation, Disposal and sent to TSDF site</td><td>5 MT</td></tr>
<tr><td>4</td><td>Plastic Waste (Non Hazardous Waste)</td><td>Collection, Storage, Transportation, Disposal by selling to registered recyclers unit only</td><td>100 MT</td></tr>
</table>
</td>
<td>
Discarded Drums
<table>
<tr><th rowspan="2">Sr. No.</th><th rowspan="2">Month</th><th colspan="3">Discarded Drums (No.)</th></tr>
<tr><th>Generation</th><th>Utilization</th><th>Stock</th></tr>
<tr><td>1</td><td>January</td><td>1</td><td>1</td><td>1 (Carry forwarded)</td></tr>
<tr><td>2</td><td>February</td><td>1</td><td>2</td><td>0</td></tr>
<tr><td>3</td><td>March</td><td>1</td><td>1</td><td>0</td></tr>
<tr><td>4</td><td>April</td><td>1</td><td>1</td><td>0</td></tr>
<tr><td>5</td><td>May</td><td>1</td><td>0</td><td>1</td></tr>
<tr><td>6</td><td>June</td><td>1</td><td>0</td><td>2</td></tr>
<tr><td>7</td><td>July</td><td>1</td><td>2</td><td>1</td></tr>
</table>

Insulating materials i.e glass wool is not generated since last 3 year.
Further, MoU has been done with M/s Avanti Enterprise, Kalol for Plastic waste and same is being sold to them. Copy of the Mou along with CC&A of M/s Avanti is enclosed as Annexure – 9.

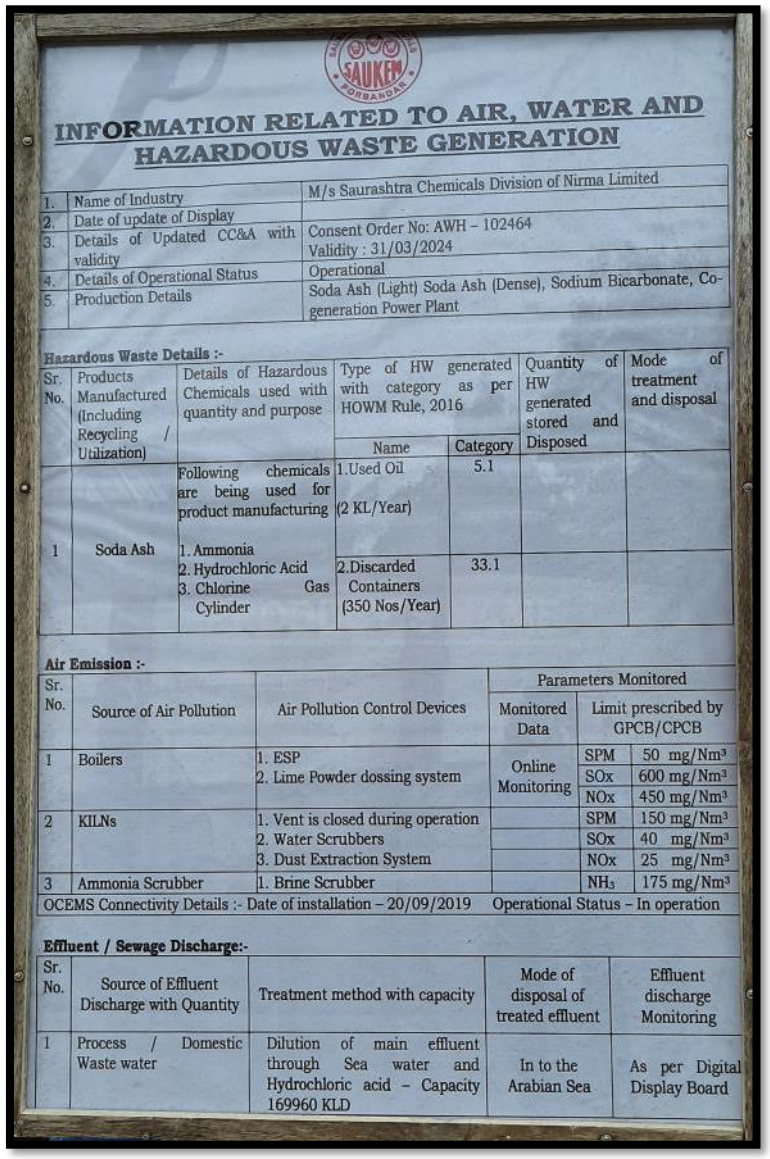
</td>
</tr>
<tr><td>5.2</td><td>The authorization shall be valid up to 31/03/2024.</td><td>Noted</td></tr>
<tr><td>5.3</td><td>The authorization is subject to the conditions stated below and such other conditions as may be specified in the rules from time to time under the Environment protection Act – 1986.</td><td>Noted</td></tr>
<tr><td>5.4</td><td colspan="2">Terms & Conditions of Authorization</td></tr>
<tr><td>A</td><td>The authorized person shall comply with the provisions of the Environment Protection Act – 1986 and the rules made there</td><td>Activities have been carried out with complying the provisions of the Environment Protection Act – 1986 and the rules made there</td></tr>
</table>

	under.	under.
B	The authorization shall be produced for inspection at the request of an officer authorized by the Gujarat Pollution Control Board.	Complied, and same will be produced for inspection at the request of an officer authorized by the Gujarat Pollution Control Board.
C	The persons authorized shall not rent, lend sell, and transfer of otherwise transport the hazardous waste without obtaining prior of the Gujarat Pollution Control Board.	There are no such activities carried out for hazardous waste.
D	Any authorized change in personnel, equipment or working conditions as mentioned in the authorization order by the person authorized shall constitute a breach of this authorization.	There are no any changes in personnel, equipment or working conditions as mentioned in the authorization order.
E	It is the duty of the authorized person to take prior permission of the Gujarat Pollution Control Board to close down the facility.	Prior permission will be taken if such type of activities carried out at plant.
F	An application for the renewal of an authorization shall be made as laid down in rule 5 (6) (ii).	Complied, application for renewal shall be done before expiry date.
G	Industry shall submit annual report within 15 days and sub sequent 30th June of every year.	Complied, environment annual reports have been submitted regularly before 30th of June every year. We vide our letter no. SAUKEM/ENV/Audit/588/2021 dated 19/06/2021 has already been submitted annual report to GPCB on 22/06/2021.
6	**General Conditions**	
6.1	Any change in personnel, equipment or working conditions as mentioned in the consents form/order should immediately be intimated to this Board.	If any changes in personnel, equipment or working conditions as mentioned in the consents form/order then same will be intimated to GPCB.
6.2	The waste generator shall be totally responsible for (i.e. Collection, Storage, Transportation and Ultimate Disposal) of the wastes generated.	We are collecting, storing, transporting (if any) and utilizing the waste generated inside plant premises.
6.3	Records of waste generation, its management and annual return shall be submitted to Gujarat Pollution Control Board in Form – 4 by 31st January every year.	We are regularly submitted Form – 4 to GPCB. We vide our letter no.R&D/Haz./ 92/2021 dated 14/04/2021 have already been submitted form – 4 to GPCB. Copy of the same is enclosed as **Annexure – 10.**

6.4	In case of any accident, details of the same shall be submitted in Form – 5 to Gujarat Pollution Control Board.	We vide our letter no. R&D/Form – V/ 93/2021 Dated 14/04/2021 have already been submitted Form – V to GPCB. Copy of the same is enclosed as **Annexure – 11.**
6.5	As per "Public liability Insurance Act – 91" company shall get Insurance policy, if applicable.	We do have valid insurance policy as per "Public Liability Insurance Act – 91" i.e Insurance Policy no. 0603002720P108302745 with validity up to 28/10/2021. Copy of the same is enclosed as **Annexure – 12.**
6.6	Empty drums and containers of toxic hazards material shall be treated as per guideline published for "management & handling of discarded containers". Records of the same shall be maintained and forwarded to Gujarat Pollution Control Board regularly.	Empty drums and containers of used oil is being reused inside plant. Record for the same is being submitted to GPCB on monthly basis as well as in form of Form – IV (annually). Last Report for the same is submitted to GPCB for the month of July, 2021 on 04/08/2021 through XGN Portal.
6.7	In no case any kind of hazardous waste shall be imported without prior approval of appropriate authority.	N/A as we are no importing any hazardous waste.
6.8	In case of transport of hazardous waste to a facility for (i.e. Treatment, Storage and Disposal) existing in a state other than the state where hazardous waste are generated, the occupier shall obtain "No objection certificate" from the State Pollution Control Board, the Committee of the concerned state or Union territory Administration where the facility exists.	N/A as we are not transporting any hazardous waste to other state.
6.9	Until shall take all concrete measures to show tangible results in waste generation reduction, voidance, reuse and recycle. Action taken in this regards shall be submitted within 03 months and also along with Form 4.	Necessary measures are in practice to reduce the waste generation reduction, voidance, reuse and recycle. Report for the same is being submitted to GPCB along with Form – 4 and Form – V copy of the same are enclosed. • Further, At present, we are accepting best available practices for waste minimization i.e unburned lime stone is reused / back to lime kiln, greet waste is being sold for construction activities, etc. • Most of finished products are being bagged through automated bagging machine. This minimized the spillages.

		• We are using closed conveyed system to convey the raw materials / fuels etc. appropriate APC system/Bag filters are provided at strategic location for dust suppression. • Further, Soda Ash process is continuous process and comprises in closed system. • All above practices will be continue for proposed modernization of project. • 7kg high pressure hose is being used for cleaning.
6.10	Industry shall have to display the relevant information with regard to hazardous waste as indicated in the Hon Supreme Court's order in W.P. No. 657 of 1995 dated 14th October 2003.	We already have displayed the relevant information with regard to hazardous waste as per GPCB / CPCB guideline.

SAURASHTRA CHEMICALS
(DIVISION OF NIRMA LTD.)



INFORMATION RELATED TO AIR, WATER AND HAZARDOUS WASTE GENERATION

1.	Name of Industry	M/s Saurashtra Chemicals Division of Nirma Limited
2.	Date of update of Display	
3.	Details of Updated CC&A with validity	Consent Order No: AWH – 102464 Validity : 31/03/2024
4.	Details of Operational Status	Operational
5.	Production Details	Soda Ash (Light) Soda Ash (Dense), Sodium Bicarbonate, Co-generation Power Plant

Hazardous Waste Details :-

Sr. No.	Products Manufactured (Including Recycling / Utilization)	Details of Hazardous Chemicals used with quantity and purpose	Type of HW generated with category as per HOWM Rule, 2016		Quantity of HW generated stored and Disposed	Mode of treatment and disposal
			Name	Category		
1	Soda Ash	Following chemicals are being used for product manufacturing 1. Ammonia 2. Hydrochloric Acid 3. Chlorine Gas Cylinder	1.Used Oil (2 KL/Year)	5.1		
			2.Discarded Containers (350 Nos/Year)	33.1		

Air Emission :-

Sr. No.	Source of Air Pollution	Air Pollution Control Devices	Parameters Monitored		
			Monitored Data	Limit prescribed by GPCB/CPCB	
1	Boilers	1. ESP 2. Lime Powder dossing system	Online Monitoring	SPM	50 mg/Nm³
				SOx	600 mg/Nm³
				NOx	450 mg/Nm³
2	KILNs	1. Vent is closed during operation 2. Water Scrubbers 3. Dust Extraction System		SPM	150 mg/Nm³
				SOx	40 mg/Nm³
				NOx	25 mg/Nm³
3	Ammonia Scrubber	1. Brine Scrubber		NH_3	175 mg/Nm³
OCEMS Connectivity Details :- Date of installation – 20/09/2019			Operational Status – In operation		

Effluent / Sewage Discharge:-

Sr. No.	Source of Effluent Discharge with Quantity	Treatment method with capacity	Mode of disposal of treated effluent	Effluent discharge Monitoring
1	Process / Domestic Waste water	Dilution of main effluent through Sea water and Hydrochloric acid – Capacity 169960 KLD	In to the Arabian Sea	As per Digital Display Board

6.11	Industry shall have to display on – line data outside the main factory gate with regard to quantity and nature of hazardous chemical being handled in the plant, including wastewater and air emission and solid hazardous waste generated within the factory premises.	We already have displayed online data at outside of main gate. 

SAURASHTRA CHEMICALS

(DIVISION OF NIRMA LTD.)

Plant: Birlasagar, Porbandar – 360576, Gujarat

Point Wise Compliance Report of the Environmental Clearance Granted by Ministry of Environment & Forest, Vide Letter No. J-11011/115/2017-IA-II (I), Dated 19.08.2020 to Saurashtra Chemicals, Division of Nirma Ltd.

Period: January-2021 to June-2021

<table>
<tr><th colspan="3">COMPLIANCE OF EC ISSUED VIDE
LETTER NO. J-11011/115/2017-IA-II(I) DATED: 19/08/2020</th></tr>
<tr><th>A.</th><th>Conditions:</th><th>Compliances</th></tr>
<tr><td>A1.</td><td colspan="2">Specific Conditions</td></tr>
<tr><td>1</td><td>EAC recommended that PP shall conduct a study on effect of pollution on fish harvesting by a reputed organization and submit the report within 6 months for further appraisal before the EAC. PP shall prepare a report on improvement done through modernization in existing process technology and reduction/alteration/reuse of existing raw material, fuel, CO2 emission etc. These reports shall be submitted to the EAC within 6 month for further appraisal.</td><td>➢ Work has been allotted to reputed organization, Gujarat University, Department of Zoology, School of Science, for study on effect of Soda Ash effluent on marine fish harvesting. Project is under progress and will expect report by end of year. Please find enclosed herewith WO copy along with scope of work given to Gujarat University as Annexure – I.
➢ Report on improvement through modernization in process technology is attached herewith as Annexure – II.</td></tr>
<tr><td>2</td><td>Treated water of 169960 m^3/day shall be discharged to Arabian Sea beyond lowest tide water level through closed pipeline and diffuser system.</td><td>➢ The treated water quantity of @ 169960 m^3/day is discharging to Arabian Sea beyond lowest tide water level through closed pipeline and diffuser system.</td></tr>
<tr><td></td><td colspan="2">Wastewater Generation (Permissible Limit – 1,69,960 KLD & 50,98,800 KL/Month)
<table>
<tr><th>Sr. No.</th><th>Month</th><th>Quantity of Wastewater (KL/Month)</th></tr>
<tr><td>1.</td><td>January, 2021</td><td>31,89,824</td></tr>
<tr><td>2.</td><td>February, 2021</td><td>30,04,051</td></tr>
<tr><td>3.</td><td>March, 2021</td><td>32,60,436</td></tr>
<tr><td>4.</td><td>Aparil,2021</td><td>36,75,719</td></tr>
<tr><td>5.</td><td>May, 2021</td><td>39,14,609</td></tr>
<tr><td>6.</td><td>June, 2021</td><td>42,25,344</td></tr>
</table></td></tr>
<tr><td></td><td colspan="2">Disposal of Treated Effluent facilities :</td></tr>
</table>

<table>
<tr><td></td><td>
<table>
<tr><td>1.</td><td>Total length of Effluent channel from inside Plant to Effluent Disposal point</td><td>:</td><td colspan="2">Length : 1.3 km</td></tr>
<tr><td>2.</td><td>Two (2) line from Disposal point to Deep sea</td><td>:</td><td colspan="2">Length : 270 meter</td></tr>
<tr><td>3.</td><td>Disposal Coordinates</td><td></td><td colspan="2"></td></tr>
<tr><td></td><td>Point No. 1</td><td>:</td><td colspan="2">21°37’30.91”N 69° 36’45.73”E</td></tr>
<tr><td></td><td>Point No. 2</td><td></td><td colspan="2">21° 37’30.30”N 69° 36’46.17”E</td></tr>
<tr><td>4.</td><td>Quantity of Treated effluent disposed off through diffuser system</td><td>:</td><td colspan="2">1,69,960 Kilo litter per Day</td></tr>
<tr><td>5.</td><td>Maximum permissible parameter for treated effluent</td><td>:</td><td>Parameters</td><td>Permissible Limits</td></tr>
<tr><td></td><td></td><td></td><td>pH</td><td>6.5 to 9</td></tr>
<tr><td></td><td></td><td></td><td>Temperature</td><td>40 °C</td></tr>
<tr><td></td><td></td><td></td><td>Suspended Solids</td><td>1300 mg/l</td></tr>
<tr><td></td><td></td><td></td><td>Oil and Grease</td><td>2.0 mg/l</td></tr>
<tr><td></td><td></td><td></td><td>Ammonical Nitrogen</td><td>50 mg/l</td></tr>
</table>
</td></tr>
<tr><td>3</td><td>No raw material/solvent prohibited by concerned regulatory authorities from time to time shall be used.</td><td>➢ Two prime raw material for Soda Ash production is salt and limestone these both raw materials are procured from captive salt works and mines. Also, no any other prohibited raw material being used for existing project.
➢ Current practice will be continuing for the proposed project as it is modernization of existing products/plant only.</td></tr>
<tr><td>4</td><td>To control source and fugitive emissions, suitable pollution control devices shall be installed to meet the prescribed norms and/or the NAAQS. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/GPCB guideline.</td><td>➢ Presently, we have initiated two activities.
1. Standby TG is now in regular use which is connected with exiting two boilers having capacity of 240 TPH (120 TPH each).
2. Relocation and Reconstruction of Distillation & Absorption Section. All new sections capacity will remain same as existing capacity.
<table>
<tr><th>Existing units</th><th>Proposed installation</th></tr>
<tr><td>Distillation section: 2250TPD
6 units with capacity of 375 TPD each.</td><td>Distillation section: 2250 TPD units with capacity of 750 TPD.</td></tr>
</table>
</td></tr>
</table>

Absorption section: 1 unit with capacity of 1325 TPD.	Absorption section: 1unit with capacity of 1325 TPD.

3. Other modernization activities are under planning stage.
4. Major source of fugitive emission in plant is from handling of raw material i.e. limestone and fuel. Considering the source of fugitive emission following mitigation measures are taken at plant site and will continue to be followed:
   - Fuel is store in close storage area. Capacity of storage area is more than 15000 MT. Fuel beyond this capacity is covered with tarpaulin. Water sprinkling system has been provided and loading and unloading of the material has been done though stacker/reclaimer system.
   - Almost all conveyer belts are covered and bag filters @ 8 nos. are installed at strategic location of material conveying and transfer.
   - Apart from these, other raw materials are conveyed in covered truck/dumpers and regular water sprinkling has been done on transportation route of material in plant for dust suppression.
   - Regular monitoring of AAQM is being done by Kadam Environ, Vadodara. Reports of the last 6 months are attached herewith as **Annexure-III.** Regular Environment Audit has been done by GPCB authorized Schedule – I auditor.
   - Adequate stack height has been provided as per CPCB/GPCB guideline.

Month (Jan'21-July'21)	Pollutants			
	PM10 (µg/m3)	PM2.5 (µg/m3)	SO2 (µg/m3)	NOx (µg/m3)
Sampling location: Raw Material Area				
January	40	24	11.05	16.34
February	76	24	9.12	11.14
March	72	24	8.75	12.15
April	65	23	7.18	11.73
May	49	15	6.80	14.64
June	73	24	10.20	13.05
Sampling Location: Technical Block				

January	46	19	10.64	15.21
February	79	27	10.14	12.11
March	77	29	9.87	13.86
April	54	26	8.03	12.12
May	52	19	5.67	10.79
June	76	26	9.86	12.97
Sampling Location: Coal Yard-North Gate				
January	53	16	9.75	13.07
February	73	23	10.26	11.14
March	74	27	9.29	10.97
April	51	29	6.49	10.79
May	88	28	6.03	13.62
June	71	23	8.25	10.26
Sampling Location: Nr. Thermal Power Plant Area				
January	55	25	10.23	13.37
February	66	25	8.90	10.52
March	67	22	7.13	11.18
April	68	19	7.42	11.03
May	55	17	5.15	14.14
June	68	21	9.95	11.85

Photographs of covered fuel storage area with sprinkling system

	Photographs of covered conveyer belt 	
5.	The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/GPCB guideline.	• Adequate stack height is provided to the flue gas stack as per CPCB/GPCB guidelines. • ESP has been provided to each boiler and lime dosing system to control particulate matter and SO2 level. Online monitoring system has been provided to flue gas stack and results are display on main gate. • Appropriate scrubbing system is provided to process stack along with adequate stack height. 8 nos. of ammonia sensors are installed at strategic location with alarm system.
	Photograph of Ammonia Storage area 	
6	Total water requirement shall not increase 176100 cum/day proposed to be met from Sea.	➢ There is no increase in sea water requirement due to modernization, water requirement will remain same as existing 176100 cum/day.

<table>
<tr><td></td><td></td><td>➢ Last six-month water consumption details are given below.</td></tr>
<tr><td></td><td colspan="2">
Sea Water Intake (Permissible Limit – 1,76,100 KLD & 52,83,000 KL/Month-30 days)
<table>
<tr><th>Sr. No.</th><th>Month</th><th>Quantity of Sea water (KL/Month)</th></tr>
<tr><td>1.</td><td>January, 2021</td><td>3211595</td></tr>
<tr><td>2.</td><td>February, 2021</td><td>3024900</td></tr>
<tr><td>3.</td><td>March, 2021</td><td>3283734</td></tr>
<tr><td>4.</td><td>Aparil,2021</td><td>3697089</td></tr>
<tr><td>5.</td><td>May, 2021</td><td>3941511</td></tr>
<tr><td>6.</td><td>June, 2021</td><td>4251973</td></tr>
</table>
<table>
<tr><td colspan="4">Sea Water Intake facilities :</td></tr>
<tr><td>1.</td><td>Two (2) Line from inside sea to Pump house (42 Inch)</td><td>:</td><td>Length - 137.16 meter</td></tr>
<tr><td>2.</td><td>Intake Point Coordinates (At Inside Sea Area)</td><td>:</td><td>21° 37’13.55” N
69° 37’04.93” E</td></tr>
<tr><td>3.</td><td>Quantity of Sea water Intake</td><td>:</td><td>1,76,100 Kilo litters per Day</td></tr>
<tr><td>4.</td><td>Four (4) lines from Pump house to Plant (30 Inch)</td><td>:</td><td>2line length: 778 meter
2 line length : 709 meter</td></tr>
</table>
</td></tr>
<tr><td>7</td><td>Rainwater harvesting system shall be set up in the premises by construction of storage tanks and water shall be used for various industrial purpose in the unit. No water shall be permitted to pumped into the ground.</td><td>➢ Plant is close to the sea coast, so it is difficult to harvest the rainwater by installing rain water harvesting structure/system. However, we will explore the possibility of roof top rain water collection and reuse.
➢ No ground water is use in plant; source of water is sea water only.</td></tr>
<tr><td>8</td><td>Process effluent/any wastewater shall not be allowed to mix with storm water. The storm water from the premises shall be collected and discharged through separate conveyance system.</td><td>➢ We have cemented channel in which effluent is passing through without any seepages. And so that storm water will not get contaminated.</td></tr>
<tr><td>9</td><td>Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame</td><td>➢ Only one Hazardous Chemicals I.e. Ammonia is used in the plant. Ammonia has been stored in 2 closed tank of carbon steel having capacity of 28 MT each</td></tr>
</table>

	arresters shall be provided in tank farm and solvent transfer through pumps.	with necessary permission of PESO. Please find attached herewith PESO license for ammonia storage as **Annexure – IV.** ➢ As per PESO guidelines 5 nos. of ammonia sensors with alarm system are provided.
10	Process organic residue and spent carbon if any shall be sent to cement industries. ETP sludge, process inorganic and evaporation salt shall be disposed off to TSDF.	➢ There is no process organic residue and spent carbon are generated from Soda Ash process. ➢ Also, after 10 to 15 times dilution, effluent is discharging in to the Arabian Sea through diffuser system. Same practice will be continuing for proposed modernisation project.
11	The company shall strictly comply with the rules and guideline under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules,1989 as amended time to time.	We are storing and handling Ammonia as per the norms and necessary license from PESO. Same practice will be continuing for proposed modernisation project. (Details covered in above point-8).
12	Fly ash should be stored separately as per CPCB guideline so that it should not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing water with storm water. Direct exposure of workers to fly ash & dust should be avoided.	➢ Fly Ash is store in Fly Ash silos (2 nos.), each having capacity of 300 MT. Further, we have Ash condensing system (through water) and telescopic pouch system to unload the Fly Ash in to the cement bulker / vehicles so that there is no any direct exposure of workers to fly ash & dust. ➢ Bottom ash is also store in silo – 2 nos. each having capacity of 100 MT. ➢ Fly Ash is sell to brick manufacturer/traders and Cement Plant (Ultratech Cement).
	Photographs of Fly Ash and Bottom Ash Silo with Capacity.  	

13	The company shall undertake waste minimization measures as below: • Metering and control of quantities of active ingredients to minimize waste. • Use of automated filling to minimize spillage. • Use of close feed system into batch reactors. • Venting equipment through vapor recovery system. • Use of high pressure hoses for equipment clearing to reduce wastewater generation.	➢ At present, we are accepting best available practices for waste minimization i.e. unburned lime stone is reused / back to lime kiln, grit waste @ 31,342.71 MT is being sold for construction activities, etc. ➢ Most of finished products are being packed through automated bagging machine. This minimized the spillages. ➢ We are using closed conveyed system to convey the raw materials / fuels etc. Appropriate APC system/Bag filters are provided at strategic location for dust suppression. ➢ Further, Soda Ash process is continuous process and comprises in closed system. ➢ 7 kg high pressure hose is being used for cleaning. All above practices will be made continued for proposed modernization of project.
14	The green belt of at least 5-10 m width shall be developed in nearly 33% of total project area, mainly along the plant periphery in downwind direction and along the road side etc. Selection of plant species shall be as per the CPCB guideline in consultation with forest department.	➢ Existing green belt have already been developed in an area of 8256 m^2 which is around 2% of total area. Due to proximity of sea and plant land having rocky soil formation, which is not suitable for plants growth and due to this survival of sapling is very poor. ➢ Considering the same we have made 10898m^2 @ 2.5 % plantation at surrounding villages and 2,47,660 m^2 @ 40% green belt have already been developed at Birlasagar colony area. ➢ Moreover, action plan for greenbelt is attached herewith as **Annexure-V.**

	Photographs of Greenbelt in Plant  	
15	All the commitments made during public hearing/consultation shall be satisfactorily implemented.	Implementation Action plan with budgetary provisions for commitments made during public hearing is attached herewith as **Annexure – VI.**
16	As per Ministry's O.M No.22-65/2017-IA III dated 1st May,2018 an amount equivalent to 0.75% of proposed capital cost for expansion (Rs.151.78 cr) I.e Rs.1.14 cr shall be allocated for Corporate Environmental Responsibility (CER).The CER funds shall be utilized for meeting the issues suggested during public hearing.	➢ As per O.M No.22-65/2017-IA III dated 1st May,2018 an amount equivalent to 0.75% of proposed capital cost for expansion (Rs.151.78 cr) I.e Rs.1.14 cr which is allocated for CER. ➢ However, as recommended by EAC, out of 1.14 Cr. CER amount @ 25 lacs will be allocated for fisherman welfare activity as per discussed during Public Hearing. ➢ Detail CER action plan with broad activates are attached herewith as **Annexure-VII.**
17	For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the CPCB guideline. Acoustic enclosures shall be provided to DG set for controlling the noise pollution.	➢ We have not proposed D.G.Set in modernization project. ➢ However, our existing DG Set having conformity with the extant regulations and the CPCB guideline. Further, Acoustic enclosures have already been provided to control noise pollution at DG Set area.
18	The unit shall make arrangements for protection of possible fire hazards	➢ Major raw materials required for manufacturing of Soda Ash are solid in nature, except ammonia. So, possibility of fire due to process are negligible.

	during manufacturing process in material handling. Fire-fighting system shall be as per the norms.	However, fire sensors, fire extinguisher, water pumps, sprinklers are placed to control any fire accident. ➢ Further, proper mitigation measures are taken to avoid fire in fuel handling and storage i.e. fuel stored in covered storage area with water sprinkling system, outside stored fuel is moist and covered with tarpaulin etc… ➢ Also, to avoid the fire while handling hazardous chemical like ammonia, proper care is taken as per PESO license. ➢ Company has also obtained Gujarat State Fire Prevention Services, Gov. of Gujarat vide it's letter no. RFO – SFPS/Fire NOC – Industries/83/2020 dated 28/12/2020 has granted NOC for our plant. Accordingly, adequate fire extinguishing lines having monitors, boxes, etc. have been layout at each location of plant area. Further, fire sensors, fire extinguisher, water pumps, sprinklers are also in placed to control any fire accident. ➢ Details on fire control arrangement is attached herewith as **Annexure-VIII.** Same practice will be continuing for modernization project.
19	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act. Workers shall be provided with adequate safety kits/mask for protection from carbon black/coal tar dust if any occur in the factory.	➢ We have our occupational health center located inside company premises as well as at residential area with fully equipped dispensary with full time doctors and supporting staff. ➢ All the workers have been medically check-up on regular basis. Further, Form – 32 and other records have been maintained as per Factory act. ➢ Moreover, it is our policy to provide PPEs to each company employee / workers. Without this we are not allowing to perform any work in company premises.
20	Continuous online (24 X 7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutant	➢ Continuous online monitoring system for flue gas stack has been installed and it is digitally displayed on main gate. Transmission work of this data to GPCB and CPCB server are under process. Also, for online continuous monitoring of effluent, we have installed

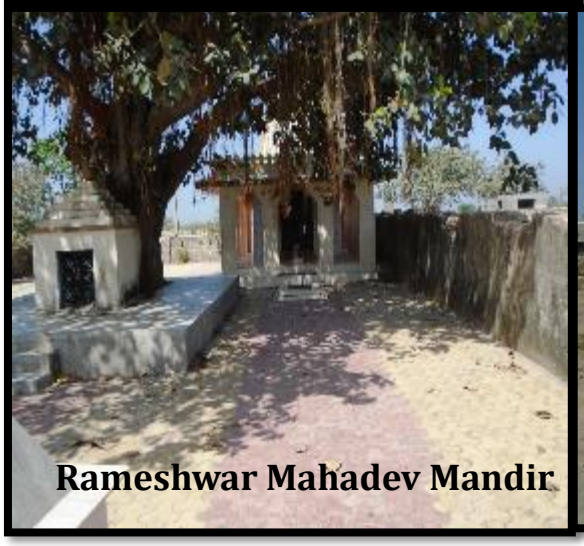
	concentration and the data to be transmitted to CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within premises.	web camera with night vision capability and flow meters.
21	Mitigating measures suggested during process safety and advanced risk assessment studies shall be carried out.	➢ All the mitigation has been carried out as per norms, regulations and suggested by competent approved organization for our existing plant activities. Same will be continuing for proposed modernization project.
B.	**GENERAL CONDITIONS**	
1	No further expansion or modifications in the plant, other than mentioned in EIA Notification,2006 and its amendments shall be carried without prior approval of the Ministry of Environment, Forest and Climate Change/SEIAA as applicable. In case of deviations or alterations in the project proposal form submitted to this Ministry of Clearance, a fresh clearance shall be made to Ministry/SEIAA,as applicable to assess the adequacy of conditions imposed and to add additional environmental protection measures required if any.	Currently, there is no proposal of projects other than this modernization of plant. However, if there any, same will be initiated after only necessary approval from competent authorities.
2	The energy source for lighting purpose shall be preferably LED based or advanced having preference	With consideration of energy conservation and environment betterment, we have already replaced most of old lighting system with LED based / advance lighting system in plant. We will also explore the

	in energy conservation and environment betterment.	possibilities of roof-top solar panel/solar tree for energy conservation & betterment of environment.
3	The overall noise level in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc. On all sources of noise generation. The ambient noise level shall conform to the standards prescribed under the Environment Protection Act,1986 viz.75 dBA (Day time) and 70 dBA(Night time).	We already have provided noise controlling measures i.e acoustic hoods, silencers, enclosures etc. for our existing facilities. Same practice will be continuing for modernization project. Further, details of Ambient Noise level carried out by M/s Kadam Environment Consultants, Vadodara (MoEF Approved third party) are as under:

Result of Ambient Noise Level for the month of Jan'21- June'21

Month (2021)	Day time dB(A)				Night time dB(A)			
	Near Coal Yard	Near Raw Material Area	Near Technical Block	TPS	Near Coal Yard	Near Raw Material Area	Near Technical Block	TPS
Jan	60.0	62.0	59.7	68.2	56.2	58.9	58.4	62.6
Feb	56.3	61.8	64.6	67.1	51.2	58.4	60.7	61.3
Mar	60.8	64.6	63.2	64.7	58.3	60.9	60.7	61.3
April	64.2	65.6	68.9	68.2	60.6	61.3	62.7	62.3
May	62.6	67.1	69.4	61.4	59.2	61.6	62.7	58.4
June	58.6	60.9	64.8	67.3	54.2	56.3	60.5	61.7

4	The company shall undertake all relevant measures for improving socio-economic conditions of the surrounding area.CER activities shall be undertaken by involving local villages and administration and shall be implemented. The company shall undertake eco-developmental measures including community welfare measures in the project area for	Company is already taking adequate measure to improve socio – economic conditions of surrounding area. Details of the same are given in above point 15 of specific condition. Photographs of the same is attached below.

	the overall improvement of environment.	
	   	
5	The company shall earmark sufficient funds towards capital cost and recurring cost per annum to implement the conditions stipulated by MoEF as well as state government along with the implementation schedule for all the conditions stipulated herein.	At present only one activity i.e. standby TG to regular use from the modernization activities has been implemented, no other projects are started yet. However, the fund earmarked will be utilized for environment management / pollution control measures only during operation of said project.

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	The funds so earmarked for environment management/pollution control measures shall not be diverted for any other purpose.	
6	A copy of clearance letter shall be sent by project proponent to concerned panchayat, zilla parishad/Municipal Corporation, Urban local body and the local NGO if any from whom suggestions/representation if any were received while processing the proposal.	Clearance letter has been submitted to concerned authorities and NGO. Acknowledged copy of the same has already been submitted to your office through vide our letter no. NL/SC/ENV-111(d)/ 564/2020 Dated 21/10/2020. Copy of the same is attached herewith as **Annexure-IX.**
7	The project proponent shall also submit six monthly reports on the status of compliance of stipulated Environmental Clearance conditions including results of monitored data (both in hard copies as well as by e-mail) to respective Regional office of MoEF&CC, the respective zonal office of CPCB and SPCB. A copy of clearance letter and its six monthly compliance report shall be posted on website of company.	We vide our letter no. NL/SC/ENV-111(d)/1884/2020 – 21 Dated 06/01/2021 had already been submitted six monthly compliance reports to concerned authorities. And same will be submitted on regular basis from time to time.
8	The environmental statement for each financial year ending 31st March is mandated shall be submitted to the concerned SPCB as prescribed under the Environment Protection Rules,1986 as amended subsequently shall also be put on website of the company along with the status of compliance of environmental clearance conditions and shall be sent to the	Environment statement for the existing unit has already been submitted to GPCB through vides our letter no. R&D/Form – V /93/2021 dated 14/04/2021 for the year of 2020 – 21. Copy of the same is attached herewith as **Annexure-X.** Further, same will be submitted to concerned authorities with incorporating details of proposed modernization project during execution of new project work.

	respective regional office of MoEF & CC by e-mail.	
9	The project proponent shall inform the public the public that project has been accorded environmental clearance by the Ministry and copies of the environmental clearance letter are available with the SPCB/Committee and may also seen at the website of the Ministry and at https://parivesh.nic.in//.This shall be advertised within seven days from the date of issue of clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in vernacular language of the locality concerned and the copy of the same shall be forwarded to the concerned regional office of the Ministry.	Copy of the advertisement has already been published informing that EC has been accorded in 'The Indian Express' and 'Sandesh' on 21st August, 2020. Cutting of the both newspapers showing the advertisement have already been submitted to regional office of ministry through vide our letter no. SAUKEM/ENV/554/2020 Dated 26/08/2020. Copy of the same is attached herewith as **Annexure-XI.**
10	The project authorities shall inform the Regional office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of the project.	We will inform to concerned authorities in reference of financial details along with date of start of the project during execution of modernization project.
11	The Environmental Clearance is granted subject to final outcome of the Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other court of law of any as may be applicable to this project.	Noted.

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ACTION PLAN FOR ECOLOGY PROTECTION

M/s.Saurashtra Chemicals Division of Nirma Ltd is aware about its responsibility towards ecology & environment protection. Company is also promoting the activities to create awareness of ecology & environment in society. Some awareness activities implemented by company for protection of ecology is as below:

- Awareness drive to clean Porbandar beach for not to litter plastic.
- Organized awareness programme ''Pink Celebration'' promoting conservation of migratory birds along with Mokarsagar Wetland Conservation committee (NGO), Porbandar.

To continue the awareness on ecology following action plan will be implemented in upcoming years.

- Organize awareness program in consultation with local NGO for bird survey at Gosabara wetland complex.
- Beach cleaning drive in association with Nagarpalika, local NGO, forest department & local people.
- Green belt drive in consultation with Forest Department along the periphery of the beach & city area.
- Spreading awareness to protect ecology & marine environment by organizing training programme & placing the signages of cleaning in both languages.

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Action Plan For implementation of Wildlife Conservation plan

Proposed financial layout for wildlife conservation plan was approved by Principal Chief Conservator of Forest, Gandhinagar on 12.02. 2021.However, due to 2nd wave of covid pandemic we were unable to start implementation in financial layout for Year 2020-21.

No	Activity	Rate/ unit (Lakh)	Physical	Year-20-21	Year-21-22	Year-22-23	Total for 3 yeas rs (Lakh)
A	**Bird Population survey of Gosabara Wetland Complex**						
1	Hiring services of NGO/experts for carrying out annual bird survey at Gosabara wetland complex	0.5	3 years	0.5	0.5	0.5	1.5
B	**Monitoring & Patrolling of Gosabara Wetland & seaturtle nest monitoring & protection**						
1	Hiring 2 persons on contract bases for patrolling of Gosabara & Seaturtle nest protection and monitoring	0.15	3 years	3.6	3.6	3.6	10.8
C	**Promoting eco-tourism at Gosabara wetland**						
	Nature guide & hospitality training 20 persons	5	1	5			5
D	**Seaturtle Nest Protection & Monitoring on Porbandar Coast**						
1	Quad Bikes 2 nos. **	2.5	2	5			5
2	Fuel cost for 2 Quadbikes lumpsum	LS		1	1	1	3
E	**Monitoring of mitigation plan**						
1	Six-monthly third-party monitoring report preparation	0.25	6	0.2	0.5	0.5	1.2
	Grand Total (in lakh Rs.)			**15.3**	**5.6**	**5.6**	**26.5**

Approved wildlife conservation plan with activities

Action plan for the F.Y 2021-22 is shown below

SAURASHTRA CHEMICALS
Division of Nirma Limited
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Action Plan for the implementation of wildlife conservation plan for the F.Y 2020-21

No	Activity	Rate/ unit (Lakh)	Physical	Year-20-21	Action Plan
A	**Bird Population survey of Gosabara Wetland Complex**				
1	Hiring services of NGO/experts for carrying out annual bird survey at Gosabara wetland complex	0.5	3 years	0.5	As suggested by DCF, survey of bird population in Gosabara wetland will be done during winter season (Dec'21-Feb'22).
B	**Monitoring & Patrolling of Gosabara Wetland & seaturtle nest monitoring & protection**				
1	Hiring 2 persons on contract bases for patrolling of Gosabara & Seaturtle nest protection and monitoring	0.15	3 years	3.6	In consultation with DCF, survey of bird population in Gosabara wetland will be hired for monitoring in the month of Sept'21.
C	**Promoting eco-tourism at Gosabara wetland**				
	Nature guide & hospitality training 20 persons	5	1	5	As suggested by DCF, this training will be organized in winter season.
D	**Seaturtle Nest Protection & Monitoring on Porbandar Coast**				
1	Quad Bikes 2 nos. **	2.5	2	5	Request for quotation of Quad bikes has been sent to 3 suppliers. Same will be finalized at earliest.
2	Fuel cost for 2 Quadbikes lumpsum	LS		1	
E	**Monitoring of mitigation plan**				
1	Six-monthly third-party monitoring report preparation	0.25	6	0.2	Third party monitoring report will be submitted in Oct'21.
Grand Total (in lakh Rs.)				**15.3**	