

Ref: MPL/ENV/MoEF&CC/2023 –Nov/03

Date: 24th November, 2023

To,

Shri Shrawan Kumar Verma, IFS
Deputy Director General of Forests (C)
Integrated Regional Office, Gandhinagar,
Ministry of Environment, Forest and Climate Change,
A-Wing-407 & 409, Aranya Bhawan, Near CH-3 Circle,
Sector-10A, Gandhinagar – 382010
E-mail : iro.gandhinagr-mefcc@gov.in

Subject: Six monthly compliance report (April, 2023 to September, 2023) of Environment Clearance (EC) for the project activities "Caustic Soda-1310 KTPA and Acetylene-860 KTPA plants near village Vandh & Tunda, Taluka Mundra, District Kachchh, Gujarat" by M/s Mundra Petrochem Limited.

Reference: 1). EC Identification No. - EC22A013GJ127411, File No. - IA-J-11011/149/2021-IA-II(I) dated 31/08/2022.
2). F.No.IA-J-11011/149/2021 – IA – II(I) Dated 28/11/2022.
3). MPL/ENV/MoEF&CC/2023 – May/03 Dated 29/05/2023.

Respected Sir,


With reference to above subject, MoEF&CC vide above refer letter dated 31/08/2022 has granted environment clearance for the project activities "Caustic Soda-1310 KTPA and Acetylene-860 KTPA near village Vandh & Tunda, Taluka Mundra, District Kachchh, Gujarat by M/s Adani Enterprises Limited". Followed by, MoEF&CC vide above refer letter dated 28/11/2022 has transferred the Environment Clearance on the name of M/s Mundra Petrochem Limited from M/s Adani Enterprises Limited.

Presently, the coal to PVC Project is still under process design & detailed engineering stage. However, we are hereby submitting a soft copy of the six-monthly EC compliance report for the period April, 2023 to September, 2023.

The six-monthly compliance report for the period October, 2022 to March, 2023 was submitted on 29th May, 2023 vide letter no. MPL/ENV/MoEF&CC/2023 – May/03.

We hope you will find the above in order.

Thanking you,
Yours faithfully,


Vinay Kumar Singh
Head – Environment & Sustainability

Copy to : 1. Reginal Directorates, CPCB, Vadodara : praseon.cpcb@nic.in
2. Member Secretary, GPCB : ms-gpcb@gujarat.gov.in
3. Regional Office, GPCB (Kutch East): ro-gpcb-kute@gujarat.gov.in

Mundra Petrochem Limited
"Adani Corporate House",
Shantigram, Near Vaishno Devi Circle,
S. G. Highway, Khodiyar
Ahmedabad 382 421
Gujarat, India
CIN: U23209GJ2021PLC122112

Tel. + 91 79 2656 5555
Fax + 91 79 2555 5500
info@adani.com
www.adani.com

Registered Office: "Adani Corporate House", Shantigram, Near Vaishno Devi Circle, S. G. Highway, Khodiyar, Ahmedabad - 382421

Mundra Petrochem Limited

Introduction:

Mundra Petrochem Limited, wholly owned stepdown subsidiary of Adani Enterprises Limited (AEL) intends to setup a Coal to PVC Project at Mundra, Kachchh, Gujarat. The PVC Production capacity of the proposed project is 2000 KTPA (Kilo Tons Per Annum). PVC grades such as Suspension PVC (Resin), Chlorinated PVC (C-PVC), Mass PVC (bulk) and Emulsion PVC (paste) would be produced at the proposed Coal to PVC Project.

For implementation of this project, various plants such as Semi-Coke Plant, Calcium Carbide Plant, Acetylene Plant, Caustic Soda (Chlor-Alkali process) Plant, VCM Plant, PVC Plant, Ethylene Glycol Plant and Cement Plant are proposed to be established.

PVC Produced from the facility will cater to the domestic market and replace imports in the domestic market. By- Products from the plant would be marketed in either in domestic market or export market depending upon market conditions.

Ministry of Environment Forest and Climate Change has granted Environment Clearance for proposed project "Coal to Poly-Vinyl Chloride (PVC) comprising of IND-I projects i.e. Semi Coke– 2030 KTPA, Cement–6 MTPA; Clinker–4 MTPA, IND-II projects i.e. VCM– 2002 KTPA, PVC– 2000 KTPA, Ethylene Glycol– 400 KTPA and IND-III projects i.e. Acetylene–860 KTPA & Caustic Soda–1310 KTPA) and Calcium Carbide–2900 KTPA (Not Specified in EIA Notification)) in land notified as Industrial area of APSEZ, Ta-Mundra, Dist-Kachchh, Gujarat." vide –

Industry – I activity: EC identification no. EC22A009GJ154137 and file no. IA-J-11011/423/2021-IA-II(IND-I) dated 26/09/2022

Industry – II activity: EC Identification No. - EC22A020GJ133762, File No. - IA-J-11011/149/2021-IA-II(I) dated 31/08/2022.

Industry – III activity: EC Identification No. - EC22A013GJ127411, File No. - IA-J-11011/149/2021-IA-II(I) dated 31/08/2022

Considering the company's long term business strategy, the proposed project is transferred from M/s Adani Enterprises Limited (AEL) to M/s Mundra Petrochem Limited (MPL). MPL is a wholly owned stepdown subsidiary company of M/s Adani Enterprises Limited (AEL), incorporated under the provision of Company Act, 2013 for carrying out various business activities for Semi-Coke, Calcium

Carbide, Cement & Clinker, VCM, PVC, Ethylene Glycol, Chlor-alkali and acetylene plants and associated products in phased manner. Further above granted Environment Clearances have been transferred in the name of M/s Mundra Petrochem Limited (MPL) by Ministry of Environment Forest and Climate Change (MOEFCC) vide their letter no.

- 1. Industry – I activity: - File no. IA-J-11011/423/2021-IA-II(IND-I) Dated 23/12/2022.**
- 2. Industry – II activity: - File no. J-11011/149/2021-IA-II(I) Dated 27/12/2022.**
- 3. Industry – III activity: - File no. IA-J-11011/149/2021-IA-II(I) Dated 28/11/2022.**

Further, the Consent to Establish (CTE) is granted by the Gujarat Pollution Control Board (GPCB)

Presently, the Coal to PVC project is under basic & detailed engineering and process design stage, however, initial site preparation activities have been started at the project site & financial closure of the project is yet to be achieved.

Point wise Compliance of Environmental Clearance for Industrial activity-III- **Proposed Caustic Soda – 1310 KTPA and Acetylene–860 KTPA** vide EC Identification No: EC22A013GJ127411 File No: IA-J-11011/149/2021-IA-II(I) Date: 31/08/2022 & subsequent EC Transfer vide File no. IA-J-11011/149/2021-IA-II(I) Dated 28/11/2022.

S. No	Conditions	Status
A	Specific Conditions	
(i)	The Environmental Clearance (EC) is subject to the outcome of the PIL No. 36 of 2022 pending before the Hon'ble High Court of Gujarat.	Agreed with requirements
(ii)	<p>The PP shall develop Greenbelt over an area at least 107.14 ha by planting 2,67,600 number of trees in 5 years from the grant of EC. The saplings selected for the plantation should be of sufficient height, preferably 6-ft. In addition to this as committed by the PP, Industry shall deploy a uniform greenbelt of equal width all- round the plant boundary, it will reduce the width of the green belt by 15 to 25 meters on seaward side of the project and will increase the width of the greenbelt on landward side of the project maintaining the total 33% of the greenbelt. The budget earmarked for the plantation shall be ₹ 75 crore and shall be kept in separate account and should be audited annually. The PP should annually submit the audited statement along with proof of activities viz. photographs (before & after with geo- location date & time), details of expert agency engaged, details of species planted number of species planted, survival rate, density of plantation etc. to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year</p>	<p>Noted and shall be complied with the requirements.</p> <p>Remark: Project is under detailed designing stage. However, Green belt having requisite width will be developed in phased manner, mainly along the plant periphery, in downward wind direction, and along roadsides etc. Selection of plant species will be done in consultation with the State Forest Department. Further, adequate width of greenbelt will be developed in the plant side adjacent to the Mangrove Forest. Further, budget earmarked for the same will be kept in separate account and shall be audited annually once activities started and report on the same shall be submitted.</p> <p>Moreover, community tree plantation activities with selection of plant species in consultation with forest department have been started at nearby villages. Report of the same is enclosed as Annexure - I</p>
(iii)	<p>A separate Environmental Management Cell (having qualified persons with Environmental Science/Environmental Engineering/specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions. As committed PP shall engage CSO, Head Environment, lead Environment at corporate level, EC/CTO wise site environment engineer and Laboratory analytical staff as per the qualification given in Factories Act 1948 shall be engaged within a month of grant of EC. PP should annually submit the audited statement of amount spent towards the engagement of qualified persons in EMC along with details of person engaged to the Regional Office of</p>	<p>A separate Environmental Management Cell (EMC) having qualified & experienced persons with specialization in Environmental Science / Engineering has been established for environment management, in which EMC head is directly reporting to Head of Organization / CEO as per company hierarchy.</p> <p>Further, a full-fledged environment laboratory will be developed at site to carryout environmental monitoring once the activities commence at site. Audited statement for the same will</p>

	MoEF&CC before 1st July of every year for the activities carried out during previous year.	be submitted to Regional office of MoEF&CC before 1st July of every year for the activities carried out during previous year once the activities started at site.
(iv)	The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented. The budget propose under EMP is ₹ 2874.59 Crore (Capital cost) and ₹ 1494.55 Crore (Recurring cost) shall be kept in separate account and should be audited annually. The PP should submit the annual audited statement along with proof of implementation of activities proposed under EMP duly supported by photographs (before & after with geo-location date & time) and other document as applicable to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.	Noted and shall be complied with. Remarks- Presently, various process units of Coal to PVC project under development of basic & detail design and engineering stage and environmental protection measures & safeguards in line with the applicable regulatory requirements and best available technologies are being considered in the detailed project engineering design. Audited statement for the same will be submitted to Regional office of MoEF&CC before 1st July of every year once the activities commence at the site.
(v)	The total water requirement (including the existing) will be 2,22,875 KLD that includes desalinated sea water 1,60,053 KLD which will be met from APSEZL Desalination plant and rest will be met form the internal recycling of the water. Project has obtained willingness letter for 220 MLD water supply from APSEZL. The PP should ensure that water utilization should not be above the permissible limit and only after obtaining valid agreement from the Concerned Authority. The PP should submit the details of water abstraction and utilization to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year. In addition to this the PP shall submit the target for reduction of GW utilization to Regional Office of MoEF&CC within a period of one year	There will be no groundwater extraction for this project. Remarks-The total water requirement will be fulfilled through APSEZL Seawater Desalination plant. Further, this project is based on "Zero Liquid (Effluent) Discharge" concept. So, there will be no untreated water discharge at outside the premises. Further, possibilities are being explored for optimizing and reducing the water consumption in detailed engineering based on technical feasibility. Also, water conservation initiative will further be explored during operational stage to reduce the OPEX for De-saline water. Details of water received from Desalination plant and utilization will be furnished to the Regional office of MoEF&CC before 1st July of every year for the activities carried out during the previous year once project activities commence at site.

(vi)	As committed by PP, the tertiary treatment for STP will be operated only when end use of the treated water is required to make-up the water system for toilet flushing and sanitation in the plant	Noted & shall be complied with. Project is under detailed engineering & designing stage. Modular STPs have been installed for construction phase and Environment Monitoring report of the same is enclosed as Annexure - II . Engineering design of the STPs is in progress for treatment of domestic effluent during operational phase.
(vii)	No banned chemicals shall be manufactured by the project proponent. No banned raw materials shall be used in the unit. The project proponent shall adhere to the notifications/guidelines of the Government in this regard.	Noted and shall be complied with. Remarks-Project is under detailed designing stage. However, Banned chemicals/raw materials will not be manufactured or used for manufacturing activities.
(viii)	The project proponent shall utilize modern technologies for capturing of carbon emitted and shall also develop carbon sink/carbon sequestration resources capable of capturing more than emitted. The implementation report shall be submitted to the IRO, MoEF&CC in this regard.	Noted and shall be complied with the requirements. Remarks: Presently, Coal to PVC project is under development of basic & detail design and engineering stage. A detailed decarbonation program shall be prepared after design & detailed engineering of the different processes. An action plan for the same will be prepared, implemented, monitored and a report in this regard shall be submitted to the IRO, MoEF&CC.
(ix)	The species-specific conservation plan of Schedule-I species shall be implemented within time limit and as per the approval of the Chief Wildlife Warden of the State Government	Noted and shall be complied with the requirements. The project is under detailed design & engineering stage. Consultation process with the Forest Department, Kachchh, Bhuj, is also initiated for implementation of wildlife conservation plan. Activities proposed in the wildlife conservation plan have been initiated. Detail of the activities performed as part of "Wildlife Conservation Plan" is attached as Annexure-III .

(x)	All necessary precautions shall be taken to avoid accidents and action plan shall be implemented for avoiding accidents. The project proponent shall implement the onsite/offsite emergency plan/mock drill etc. and mitigation measures as prescribed under the rules and guidelines issued in the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996.	Noted and shall be complied with the requirements. Remarks - The project is under detailed design & engineering stage. However, All necessary precautions will be taken to avoid the accidents. Further, onsite / offsite emergency plan / mock drill and mitigation measures as prescribed under the concerned rules and guidelines will be planned and implemented.
(xi)	The volatile organic compounds (VOCs)/Fugitive emissions shall be controlled at 99.97 % with effective chillers/modern technology. Regular monitoring of VOCs shall be carried out.	Noted and shall be complied with the requirements. Remarks: The project is under detailed design & engineering stage. However, Adequate measures will be adopted to control the volatile organic compounds (VOCs) / Fugitive emissions and regular monitoring will be done in this regard once the activities commence at site.
(xii)	The project proponent shall explore possibilities for recycling and reusing of treated water in the unit to reduce the fresh water demand and waste disposal.	Noted and shall be complied with the requirements. All possibilities will be explored for optimizing and reducing the water consumption during detailed engineering and operational stage by adopting water conservation measures. However, at present, modular Sewage treatment plant have been installed at admin / office area for treatment of domestic effluent during construction phase. Treated water being utilized for the development / growing of greenbelt. Further, Environment Monitoring report of the same is enclosed as Annexure - II.
(xiii)	As already committed by the project proponent, the Effluent (54,254 KLD) will be treated through ETPs, and Zero Liquid Discharge (ZLD) shall be ensured	Noted and shall be complied with the requirements. Remarks- The project is under detailed design & engineering stage. Further, this project is on "Zero Liquid Discharge" concept and industrial as well domestic wastewater will be treated in well designed ETP and STP.
(xiv)	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	Noted and shall be complied with the requirements. Remark: The project is under detailed design & engineering stage.

	<p>the CPCB and SPCB servers. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises</p>	<p>Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration as per CPCB Guideline and necessary arrangements will be made for transmission of data to the CPCB / SPCB server during operation phase. Further, as this project is on "Zero Liquide Discharge" Concept, real time monitoring system will be installed at the ETP outlet as per CPCB Guideline.</p>
(xv)	<p>The storage of toxic/hazardous raw material shall be bare minimum with respect to quantity and inventory. Quantity and days of storage shall be submitted to the Regional Office of Ministry and SPCB along with the compliance report.</p>	<p>Noted and shall be complied with the requirements. Remarks-the project is under detailed design & engineering stage. However, Storage of toxic and hazardous raw materials will be carried out as per the statutory norms. Quantity and days of storage will be submitted to the Regional Office of Ministry and SPCB along with the compliance report once activities started at site.</p>
(xvi)	<p>The occupational health center for surveillane of the worker's health shall be set up. The health data shall be used in deploying the duties of the workers. All workers & employees shall be provided with required safety kits/mask for personal protection.</p>	<p>Noted and shall be complied with the requirements. Remarks-the project is under detailed design & engineering stage. However, Occupational Health Center will be set up for surveillane of the worker's health within plant premises and deployment of workers shall be based on health status. Further, it will be ensured that all workers & employees are equipped with necessary Personal protection equipment's (PPEs) during construction as well as operational activities.</p>
(xvii)	<p>Training shall be imparted to all employees on safety and health aspects for handling chemicals. Safety and visual reality training shall be provided to employees. Action plan for mitigation measures shall be properly implemented based on the safety and risk assessment studies.</p>	<p>Noted and shall be complied with. Remarks- the project is under detailed design & engineering stage. Necessary trainings will be conducted for all employees & contractor manpower on safety and health aspects for handling chemicals & other hazard controls. Further, Action plan for mitigation measures will be properly implemented based on the safety and risk assessment</p>

		studies once the activities commence at site.
(xviii)	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.	Noted and shall be complied with. Remarks - The project is under detailed design & engineering stage. However, Adequate Firefighting system / control measures for possible fire hazards during manufacturing process in material handling will be done as per the norms.
(xix)	The solvent management shall be carried out as follows: (a) Reactor shall be connected to chilled brine condenser system. (b) Reactor and solvent handling pump shall have mechanical seals to prevent leakages. (c) Solvents shall be stored in a separate space specified with all safety measures. (d) Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done. (e) Entire plant shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses. (f) All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.	Noted and shall be complied with the requirements. Remarks - The project is under detailed design & engineering stage
(xx)	The storm water from the roof top shall be channelized through pipes to the storage tank constructed for harvesting of rainwater in the premises and harvested water shall be used for various industrial processes in the unit. No recharge shall be permitted within the premises. Process effluent/ any wastewater shall not be allowed to mix with storm water.	Noted and shall be complied with the requirements. Remarks- The project is under detailed design & engineering stage. However, rooftop rainwater harvesting system will be designed and the storm water from the roof top will be channelized through pipes to the storage tank constructed for harvesting of rainwater in the premises and harvested water will be used for horticulture / landscaping or various industrial processes in the unit during operation phase based on suitability. Further, storm water drainage system will be constructed in a way that no process effluent and/or any wastewater shall allow to mix with storm water.

(xxi)	<p>The PP shall undertake waste minimization measures as below:</p> <ul style="list-style-type: none"> (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 cleaning to reduce wastewater generation. 	<p>Noted and shall be complied with the requirements.</p> <p>Remarks- The project is under detailed design & engineering stage. However, best available practices including suggested measures will be adopted for waste minimization.</p>
(xxii)	<p>The activities and the action plan proposed by the project proponent to address the issues raised during the public hearing as well as the related socio-economic issues in the study area shall be completed as per the schedule presented before the Committee and as described in the EIA report in letter and spirit</p>	<p>Noted and being complied with the requirements.</p> <p>Remarks- Presently, Coal to PVC project is under development of basic & detail design and engineering stage. Action plan proposed to address the issues raised during public hearing and socio-economic issues in the study area shall be implemented as project progress at site.</p> <p>However, MPL has already initiated CER activities in all villages surrounding to project area and total CER expenditure incurred in various community welfare & eco-development activities during the period from April, 2023 to September, 2023 approx. INR 50.91 Lakhs in line with project CAPEX incurred till September, 2023.</p> <p>The detailed CER activities with expenditures are summarized in Annexure - IV.</p>
B	General Condition	
(i)	<p>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</p>	<p>Noted and shall be complied with.</p>

	Ministry/SEIAA, as applicable, to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.	
(ii)	The Project proponent shall strictly comply with the rules and guidelines issued under the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996, and Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016 and other rules notified under various Acts.	Noted and shall be complied with.
(iii)	The energy source for lighting purpose shall be preferably LED based, or advanced having preference in energy conservation and environment betterment	Noted and shall be complied with. Remarks- The project is under detailed design & engineering stage. However, the best available practices will be adopted for energy conservation and environment betterment.
(iv)	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).	Noted and shall be complied with the requirements. Remarks - Mandatory noise control measures including acoustic hoods, silencers, enclosures etc. as applicable will be provided where necessary for maintaining the ambient noise levels within the norms. Monitoring of ambient noise level (ANQM) at selected location in Project site and nearby villages are being carried out and Environment Monitoring reports of the same is enclosed as Annexure – II .
(v)	The company shall undertake all relevant measures for improving the socio- economic conditions of the surrounding area. The activities shall be undertaken by involving local villages and administration. The company shall undertake eco- developmental measures including community welfare measures in the project area for the overall improvement of the environment	Noted and shall being complied with the requirements. Remark: To improve the socio-economic conditions of the study area, various eco-developmental measures including community welfare activities are initiated in phased manner by involving local villages and administration under Corporate Environmental Responsibility.

		<p>In order to know the present social status and needs of the local community, a “Baseline & Need Assessment Study” is also carried out through third party professional agency involving various stakeholders- local villagers, administration etc. and the recommendation of the study is further included in the CER plan for implementation in phased manner.</p> <p>MPL has already initiated CER activities in all villages surrounding project area and total CER expenditure approx.. INR 50.91 Lakhs. incurred in various community welfare & eco-development activities for the period from April, 2023 to September, 2023 with cumulative CER expenditure of approx. 500 Lakhs in line with project CAPEX incurred till September, 2023. The detailed CER activities with expenditures are summarized as Annexure - IV.</p>
(vi)	<p>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</p>	<p>Noted and being complied with the requirements.</p> <p>Remarks- Presently, Coal to PVC project is under development of basic & detail design and engineering stage.</p> <p>Further, the capital cost & annual recurring cost towards the environmental protection measures is earmarked and expenditures related to environmental protection measures will be separately tracked and reported as part of EC compliance and same will be made available in company website.</p>

(vii)	<p>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.</p>	<p>Complied with. The copies of the Environmental Clearance letter vide our following letter nos. have been submitted to concerned panchayats (all 15 villages) & The Taluka Development Officer (Rural Local Body), The District Development Officer, District Industries Center and the local NGO / trust from whom suggestions / representations received during public hearing and reference Ack. copy of submission is enclosed as Annexure - V.</p> <ol style="list-style-type: none"> 1. AEL/MPL/ENV/EC/2022-September/02 Dated 02/09/2022. 2. AEL/MPL/ENV/EC/2022-September/04 Dated 02/09/2022. 3. AEL/MPL/ENV/EC/2022-September/06/01 to 15 Dated 02/09/2022.
(viii)	<p>The project proponent shall also upload/submit six monthly reports on Parivesh Portal on the status of compliance of the stipulated Environmental Clearance conditions including results of monitored data to the respective Integrated Regional Office of MoEF&CC, the respective Zonal Office of CPCB and SPCB. A copy of Environmental Clearance and six monthly compliance status report shall be posted on the website of the company.</p>	<p>As per MoEF&CC Office Memorandum dated 14th June, 2022, Six monthly compliance report of stipulated environment clearance conditions including results of monitored data being uploaded on PARIVESH Portal & company's website i.e https://www.adanienterprises.com. Further, Soft copy of the same being sent to Zonal offices of CPCB and SPCB.</p>
(ix)	<p>The environmental statement for each financial year ending 31st March in Form-V as is mandated shall be submitted to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Integrated Regional Office of MoEF&CC by e-mail.</p>	<p>The project is under detailed design & engineering stage. However, Environmental Statement for the year 2022-2023 have been submitted to Gujarat Pollution Control Board through vide our letter no. MPL/ENV/GPCB – Form – V/2023 – June/01 dated 29/06/2023 i.e within stipulated time period and same is also available on Company's Website i.e https://www.adanienterprises.com. Copy of the same is enclosed as Annexure-VI.</p>
(x)	<p>The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the</p>	<p>The advertisement "<i>stating the project has been accorded environmental clearance by</i></p>

	<p>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</p>	<p><i>MoEF&CC and also displayed on company website" - have been published on following newspapers on 5th September, 2022. (i.e within 7 days of grant of Environmental Clearance).</i></p> <ol style="list-style-type: none"> 1. Kutch Mitra (Gujarati Language) 2. Gujarat Samachar (Gujarati Language) 3. The Times of India (English Language). <p>copy of EC letter and News Papers are also submitted to Regional Office, MoEF&CC, Gandhinagar through vide our letter no. AEL/MPL/ENV/EC/2022 – September/07 dated 06/09/2022. Copy of the same is enclosed as Annexure – VII.</p>
(xi)	<p>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.</p>	<p>Noted and shall be complied with the requirements.</p> <p>Remarks: Presently, the Coal to PVC project is under detailed design & engineering stage and initial construction activities have been started at the project site. The Financial Closure and approval of the project by concerned authorities shall be done after project commissioning. Status of project and financial closure of the same once attained, will be submitted to the regional office as well as to the MoEF&CC along with Six monthly Compliance report.</p>
(xii)	<p>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.</p>	<p>Noted and agreed with the requirement.</p>

Annexures

No.	Name
I	Tree plantation report
II	Environment Monitoring Report
III	Activities as per Wildlife conservation Plan
IV	CER Activities
V	Letter for Submission of EC to Local Authorities.
VI	Environment Statement Form – V.
VII	Letter for submission of News paper and EC to concern authorities.

Annexure – I Tree Plantation Activities

Prakrutirath is an initiative for trees distributions among the peoples of nearby villages. It is about fostering a sense of responsibility toward the surrounding environment. Through sapling distribution to individuals, we have empowered communities to take ownership of their surroundings, leading to a heightened consciousness about the environment's significance.

Enhancing the landscape and improving environment, local species of trees with heights ranging from 6ft to 8ft along the 18km stretch of road from Zarpara to Nana Bhadiya village have been planted. This green initiative adds beauty and promotes environmental wellbeing.



Photo: Tree plantation alongside the road from Zarpara to Nana Bhadiya.

Further, as an environment responsible organization, Mundra Petrochem Limited has also planned to carry out plantation activities as part of Eco development drives in surrounding village (Deshalpar Village) of the Coal to PVC project at Mundra which will lead to achieve green belt development.





Photo: Tree plantation activities initiated at village Desalpar.

Annexure - II



SIX MONTHLY ENVIRONMENTAL MONITORING REPORT,
MUNDRA PETROCHEM LIMITED



M/S. MUNDRA PETROCHEMICAL LIMITED (MPL)

**Six Monthly Environmental Monitoring Report
Mundra Petrochemicals Limited (MPL) Located at near
Village Vandh & Tunda, Taluka Mundra, District Kachchh,
Gujarat**

Month: April to September - 2023

Submitted By



**UniStar Environment & Research Labs Pvt. Ltd.
White House, Near GIDC Office, Char Rasta, Vapi,
Gujarat, India – 396195**

M/S. MUNDRA PETROCHEM LIMITED (MPL)

Six Monthly Environment Monitoring Report for Coal to PVC Project near Village Vandh & Tunda, Taluka Mundra, District Kachchh, Gujarat

This report is released for the use of Mundra Petrochem Limited (MPL), Regulators and relevant stakeholders solely as part of the subject project's Environmental Compliance Process. Information provided, unless attributed to referenced third parties, is copyrighted, and shall not be used for any other purpose without the written consent from Mundra Petrochemical Limited (MPL).

QUALITY CONTROL							
Name of Publication	Six Environmental Monitoring Report for Coal to PVC Project near Village Vandh & Tunda, Taluka Mundra, District Kachchh, Gujarat						
SO No.	Service Order	Issue No.	1	Revision No.	01	Released	October, 2023
Prepared & Managed By	Mr. Deelip Brahmin		Approved by		Mr. Jaivik Tandel		
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ABBREVIATIONS AND ACRONYMS

MPL	:	Mundra Petrochemicals Limited
APL	:	Adani Power Limited.
APSEZL	:	Adani Ports & Special Economic Zone Limited
UERL	:	UniStar Environment and Research Labs Private Limited
CPCB	:	Central Pollution Control Board
EIA	:	Environment Impact Assessment
EMP	:	Environmental Management Plan
ETP	:	Effluent Treatment Plant
KLD	:	Kilo Liter Day
MOEFCC	:	Ministry of Environment, Forest & Climate Change
C ₂ H ₂	:	Acetylene
CaC ₂	:	Calcium Carbide
C ₂ H ₃ Cl	:	Vinyl chloride
GoI	:	Government of India
GPCB	:	Gujarat Pollution Control Board
PVC	:	Polyvinyl chloride
VCM	:	Vinyl Chloride Monomer

1 EXECUTIVE SUMMARY

1.1 Introduction

1.1.1 About ADANI Group

Adani Group is India's fastest growing corporate catering to a billion aspirations. Adani Group is a diversified organization comprising of 7 publicly traded companies in India. Adani Group has headquartered in Ahmedabad, in the state of Gujarat, India. Over the years, Adani Group has positioned itself to be the market leader in its transport logistics and energy utility portfolio businesses focusing on large scale infrastructure development in India with O & M practices benchmarked to global standards, with key businesses across Resources -Coal mining & trading, Logistics – shipping, rail and airport terminals, Energy – Gas (LNG, City Gas), Thermal power generation, Renewables (Solar & Wind) and transmission energy infrastructure, Agro commodities, Ancillary industries and Real estate etc. Adani Group is the largest private power producer in India.

Adani owes its success and leadership position to its core philosophy of 'Nation Building' driven by '*Growth with Goodness*' - a guiding principle for sustainable growth. Adani is committed to improve its ESG footprint by re-aligning its businesses with emphasis on climate protection and increasing community outreach through its CSR programme based on the principles of sustainability, diversity and shared values.

Adani group is now executing green PVC project (Coal to PVC) at near Village Vandh & Tunda, Taluka Mundra, District Kachchh, Gujarat

1.1.2 About UniStar Environment and Research Labs Private Limited (UERL)

UniStar Environment and Research Labs Private Limited is a company which provide efficient and economical services in the areas of environmental pollution control/monitoring and chemical analysis & research activities to various industries and institutions. UniStar provides technical consultancy backed by well-established sophisticated analytical laboratories, to comply with Statutory requirements and directives of the Pollution Control Board/ Committees under various Environment Pollution Control Acts. and Rules. We also carry out post Environmental Clearance monitoring and assist our valued customers in preparation of Half-yearly Environmental Clearance Compliance report.

- Ministry of Environment, Forest and Climate Change (MOEFCC), GOI recognized the Laboratory under the Environment Protection Act-1986 which is valid up to – 22/09/2024.
- ISO/IEC 17025 Accredited Laboratory by National Accreditation Board for Testing and Calibration Laboratories (NABL) which is valid up to – 22/09/2024.
- Recognized Environmental Auditor Laboratory by Gujarat Pollution Control Board, Gandhinagar, Gujarat, India which is valid up to 31/12/2023.

Copy of relevant certificates are attached as Annexure I.

1.2 Brief Description of Project

The proposed Green PVC Project is having various major units such as, Semi-coke Plant, Calcium Carbide Plant, Acetylene Plant, VCM Plant, PVC Plant, Caustic Soda Plant, Ethylene Glycol Plant & Cement Plant. The associated infrastructure facilities such as boiler, final/intermediate product storages etc, utilities, pipelines, ancillary facilities for interconnecting /transferring of materials between pockets, loading/unloading, roads, drainages, pipe racks, trenches, cable trays, non-plant buildings, laboratories, fabrication yards, batching Plant, dispatch section, general stores/warehouse, fire & safety department, maintenance workshop, occupational health centre etc. will also be established.

2 ENVIRONMENTAL MONITORING

2.1 General Philosophy & Scope of Work

The environmental monitoring encompassed various disciplines and environmental attributes, including air quality, water quality, noise levels, and soil conditions. As per the given scope of work for environmental monitoring by MPL, we have prepared Environmental Monitoring Plan as per below.

Sr. No	Discipline	Location	Parameter	Frequency
1.	Ambient Air Quality Monitoring	Five Locations	As per NAAQMS, 2009	Monthly
2.	Ambient Noise Monitoring	Five Locations	Day Time & Nighttime - Noise Levels in Leq dB(A)	Monthly
3.	Treated Sewage water	One Location	pH, Bio-Chemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD), Total Suspended Solids (TSS), Faecal Coliform (FC) (Most Probable Number per 100 millilitre, MPN/100ml, Nitrogen-Total, Phosphorus-Total	Monthly
4.	Ground water	Two Location	pH, Temperature, Turbidity, conductivity, Total Dissolved Solids, Bio-Chemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD), Salinity, Ammonical Nitrogen, Total Alkalinity, Total Hardness, Calcium, Magnesium, Chloride, Sulphate, Nitrate, Fluoride, Phenolic Compound, Sodium, Potassium, Calcium Hardness, Magnesium Hardness, Lead, Iron, Cadmium, Manganese, Copper, Arsenic, Chromium, Mercury, Nickel, Zinc, Total Nitrogen, Cyanide, Total Phosphorous, Sodium Absorption Ratio (SAR)	Half Yearly
5.	Surface Water	Two Location	pH, Colour, Conductivity, Total Dissolved Solids, Bio-Chemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD), Dissolved Oxygen, Total Hardness, Calcium Hardness, Magnesium Hardness, Chloride, Sulphate, Nitrate, Fluoride, Phenolic Compound, Ammonical Nitrogen, Lead, Iron, Cadmium, Manganese, Copper, Arsenic, Chromium, Boron, Mercury, Zinc, Cyanide, Sodium Absorption Ratio (SAR)	Half Yearly
6.	Surface Water (Marine)	Two Location	pH, Colour, Odour, turbidity, Total Suspended Solids, Total Dissolved Solids, Bio-Chemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD), Dissolved Oxygen, Oil & Grease, Lead, Iron, Cadmium, Manganese,	Half Yearly

2.2 Sampling & Analysis

The selection of methods for sampling, preservation, and analysis holds significant importance in environmental monitoring. To ensure the highest quality in environmental sampling and analysis, the Central Pollution Control Board (CPCB) has established guidelines for these processes. Adhering to these guidelines, specific methods for sampling and analysis of environmental samples have been chosen and implemented. Instrument used in sampling are calibrated from NABL accredited Laboratory. Details are as follows:

Sr. No	Name of Instrument Used	ID No./Sr. No	Make/Model	Calibration Date	Cal. Valid up to
1.	Respirable Dust Sampler PM 10	UERL/AIR/RDS/47/1816-DTJ-2013	Envirotech/ APM 460-BL	27/06/2023	26/06/2024
2.	Fine Particulate Sampler PM 2.5	UERL/AIR/FPS/22/ 44-DTC-2012	Envirotech/ APM 550-MINI	27/06/2023	26/06/2024
3.	Respirable Dust Sampler PM 10	UERL/AIR/RDS/34/1768-DTB-2013	Envirotech/ APM 460-BL	02/08/2023	01/08/2024
4.	Fine Particulate Sampler PM 2.5	UERL/AIR/FPS/21/ 20-DTC-2012	Envirotech/ APM 550-MINI	02/08/2023	01/08/2024
5.	Sound Level Meter	UERL/AIR/SLM/09C	Extech / SDL 600	26/06/2023	25/06/2024

***Calibration certificates are attached in Annexure II**

2.2.1 Ambient Air Quality Sampling and Analytical Techniques

The techniques used for ambient air quality monitoring and its permissible limit are given in following table.

Sr. No.	Parameter	Technique	Technical protocol	Permissible Limit (As per NAAQS)
1.	Particulate Matter as PM10	Respirable Dust Sampler (Gravimetric method)	IS - 5182, Part - 23	100
2.	Particulate Matter as PM2.5	fine particular Sampler (Gravimetric method)	IS - 5182, Part - 24	60
3.	Sulphur Dioxide as SO2	Modified West and Gaeke	IS - 5182, Part - 2	80
4.	Nitrogen Dioxide as NO2	Jacob &Hochheiser	IS - 5182, Part - 6	80
5.	Carbon Monoxide as CO	Gas Analyser (CO)	IS - 5182, Part - 10	4.0
6.	Ozone as O3	UV Spectrophotometer	IS - 5182, Part - 9	180
7.	Ammonia as NH3	Titrimetric Method	IS - 5182, Part - 25	400
8.	Lead as Pb	AAS Method	IS - 5182, Part - 22	1.0
9.	Nickel as Ni	AAS Method	IS - 5182, Part - 26	20
10.	Arsenic as As	AAS Method	IS - 5182, Part - 22	6.0
11.	Benzene as C6H6	GC Method	IS - 5182, Part - 11	5.0
12.	Benzo (a) Pyrene (BaP)	GC Method	IS - 5182, Part - 12	1.0

2.2.2 Ambient Noise Level Sampling Techniques

The techniques used for ambient air quality monitoring and its permissible limit are given in following table.

Sr. No.	Parameter	Technique	Technical protocol	Permissible Limit (As per CPCB)
1.	Ambient Noise Level Monitoring at Industrial Area	Noise Meter (Leq)	IS : 9989 : 1981	Day Time – 75 dB Night Time – 70 dB
2	Ambient Noise Level Monitoring at Residential Area	Noise Meter (Leq)	IS : 9989 : 1981	Day Time – 55 dB Night Time – 45 dB

2.2.3 Ground Water Sampling & Analysis Techniques

Sr. No.	Parameter	Technical protocol	IS 10500 Standard Limits for drinking water	
			Desirable limit	Per. Limit in the Abs. of Alt. Source
1	pH	IS 3025(Part 11):2022	6.5-8.5	NR
2	Temp	IS 3025(Part 9):1984	NS	NS
3	Turbidity	IS 3025(Part 10):1984	1	5
4	TDS	IS 3025(Part 14):1984	500	2000
5	Electrical Conductivity	IS 3025(Part 16):2023	NS	NS
6	COD	IS 3025(Part 58): 2006	NS	NS
7	BOD	IS 3025(Part 44): 1993	NS	NS
8	Phenol	IS 3025(Part 43): 2020	0.001	0.002
9	Chlorides	IS 3025(Part 32): 1988	250	1000
10	Sulphate	IS 3025(Part 24): 2022	200	400
11	Total Hardness	IS 3025(Part 21): 2009	200	600
12	Ca++ Hardness	APHA 23rd Ed,2017,3500 Ca. B	NS	NS
13	Mg++ Hardness	APHA 23rd Ed,2017,3500 Mg. B	NS	NS
14	Total Alkalinity	IS 3025(Part 23): 1986	200	600
15	Nitrate	APHA 23rd Ed,2017,4500 NO3-B	45	NR
16	Fluoride	IS 3025(Part 60): 2008	1	1.5
17	Sodium	APHA 23rd Ed,2017,3500 Na. B	NS	NS
18	Potassium	APHA 23rd Ed,2017,3500 Mg. B	NS	NS
19	Calcium	APHA 23rd Ed,2017,3500 Ca. B	75	200
20	Magnesium	APHA 23rd Ed,2017,3500 Mg. B	30	100
21	Salinity	APHA 23rd Ed,2017,2520-B, 2-60	NS	NS
22	Total Nitrogen	APHA 23rd Ed,2017,4500 NH3 - B	0.5	NR
23	Total Phosphorous	APHA 23rd Ed,2017,4500-P, D	NS	NS
24	Dissolved Oxygen	APHA 23rd Ed,2017,4500-O, B	NS	NS
25	Ammonical Nitrogen	IS 3025(Part 34) (ISE Method):1988	NS	NS
26	SAR	By Calculation	NS	NS
	Heavy Metals			
27	Arsenic (as As)	APHA 23rd Ed,2017,3114-C	0.01	0.05
28	Cadmium (as Cd)	IS 3025(Part 41): 1992	0.003	NR
29	Chromium (as Cr)	APHA 23rd Ed,2017,3111-B	0.05	NR
30	Copper (as Cu)	APHA 23rd Ed,2017,3111-B	0.05	1.5
31	Cyanide (as CN)	IS 3025(Part 27): 1986	0.05	NR
32	Iron (as Fe)	IS 3025(Part 53): 2003	0.3	NR
33	Lead (as Pb)	IS 3025(Part 47): 1994	0.01	NR
34	Mercury (as Hg)	APHA 23rd Ed,2017,3112-B	0.001	NR

Sr. No.	Parameter	Technical protocol	IS 10500 Standard Limits for drinking water	
			Desirable limit	Per. Limit in the Abs. of Alt. Source
35	Manganese (as Mn)	APHA 23rd Ed,2017,3500 Mn. B	0.1	0.3
36	Nickel (as Ni)	IS 3025(Part 54): 1994	0.02	NR
37	Zinc (as Zn)	IS 3025(Part 49): 1994	5	15
38	Total Coliform	IS 1622:1981	Shall not be detectable	
39	Faecal Coliforms	IS 1622:1981	Shall not be detectable	

2.2.4 Surface Water Sampling & Analysis Techniques

Sr. No.	Parameter	Technical protocol	Classification for Inland Surface Water (CPCB)
			Class E
1	pH	IS 3025(Part 11):2022	6.5 to 8.5
2	Dissolved Oxygen	APHA 23rd Ed,2017,4500-O, B	NA
3	TDS	IS 3025(Part 14):1984	2100
4	Electrical Conductivity	IS 3025(Part 16):2023	2250
5	BOD	IS 3025(Part 44): 1993	NA
6	Colour	IS 3025(Part 4):2021	-
7	Total Hardness	IS 3025(Part 21): 2009	NA
8	Ca++ Hardness	APHA 23rd Ed,2017,3500 Ca. B	NA
9	Mg++ Hardness	APHA 23rd Ed,2017,3500 Mg. B	NA
10	Chlorides	IS 3025(Part 32): 1988	600
11	Sulphate	IS 3025(Part 24): 2022	1000
12	Nitrate	APHA 23rd Ed,2017,4500 NO3-B	NA
13	Fluoride	IS 3025(Part 60): 2008	-
14	Phenol	IS 3025(Part 43): 2020	NA
15	Ammonical Nitrogen	IS 3025(Part 34) (ISE Method):1988	NA
16	SAR	By Calculation	26
17	Copper (as Cu)	APHA 23rd Ed,2017,3111-B	NA
18	Iron (as Fe)	IS 3025(Part 53): 2003	NA
19	Manganese (as Mn)	APHA 23rd Ed,2017,3500 Mn. B	NA
20	Mercury	APHA 23rd Ed,2017,3112-B	NA
21	Cadmium (as Cd)	IS 3025(Part 41): 1992	NA
22	Arsenic (as As)	APHA 23rd Ed,2017,3114-C	NA
23	Cyanide	IS 3025(Part 27): 1986	NA
24	Lead (as Pb)	IS 3025(Part 47): 1994	NA
25	Zinc	IS 3025(Part 49): 1994	NA
26	Chromium (as Cr)	APHA 23rd Ed,2017,3111-B	NA
27	Boron	IS 3025(Part 49): 1994	NA
28	Total Coliform	IS 1622:1981	2
29	COD	IS 3025(Part 57): RA 2021	-

2.2.5 Surface Water (Marine) Sampling & Analysis Techniques

Sr. No.	Parameter	Technical protocol	Classification for Coastal marine water (CPCB)
			SW-I
1	pH	IS 3025(Part 11):2022	6.5 to 8.5
2	Dissolved Oxygen	APHA 23rd Ed,2017,4500-O, B	5

Sr. No.	Parameter	Technical protocol	Classification for Coastal marine water (CPCB)
			SW-I
3	Colour & Odour	IS 3025(Part 4):2021 & IS 3025(Part 5):1983	No Colour No Odour
4	Floating Matters	-	None
5	Total Suspended Solid	APHA 23rd Ed,2017,2540-D	None from Sewage or Industrial waste Origin
6	Turbidity	IS 3025(Part 10):1984	-
7	BOD	IS 3025(Part 44): 1993	-
8	Oil & Grease	IS 3025(Part 39): 1991	0.1
9	Mercury as Hg	APHA 23rd Ed,2017,3112-B	0.001
10	Lead (as Pb)	IS 3025(Part 47): 1994	0.001
11	Cadmium (as Cd)	IS 3025(Part 41): 1992	0.01
12	Iron (as Fe)	IS 3025(Part 53): 2003	-
13	Manganese (as Mn)	APHA 23rd Ed,2017,3500 Mn. B	-
14	Total Coliform	IS 1622:1981	-
15	Sludge Deposits, Solid refuse floating Solids, Oil Grease and Scum	-	-
16	COD	IS 3025(Part 57): RA 2021	-

2.2.6 Treated Water Sampling & Analysis Techniques

The techniques used for waste water Sampling and analysis its permissible limit is given in following table.

Sr. No.	Parameter	Technical protocol	Permissible Limit (As per CPCB)
1.	Treated Effluent from STP		
	pH	IS 3025(Part 11):2022	6.5 to 9.0
	BOD	APHA 23 rd Ed,2017,5210-B	<30
	COD	IS 3025(Part 58): 2006	-
	TSS	APHA 23rd Ed.,2017, 2540 – D	<50
	Nitrogen Total	APHA 23rd Ed,2017,4500-B, C	--
	Phosphorous Total	APHA 23rd Ed,2017,4500-P, D	--
	Faecal Coliform	IS 1622:1981	<1000

2.3 Location (map showing general location, Monitoring location and project boundary) with coordinates & Monitoring details.

The general location of the project is shown in **Map 2-1** shows the study area of 10 Km radius around the project site on Google Earth downloaded image.

The sampling location used for monitoring purpose is taken after due consideration with baseline monitoring location, availability of power & weather condition etc. Also In order to evaluate the quality of sewage water, samples were acquired from the sewage water treatment plant for comprehensive analysis. These analyses encompassed physico-chemical, general-chemical, and microbiological parameters.

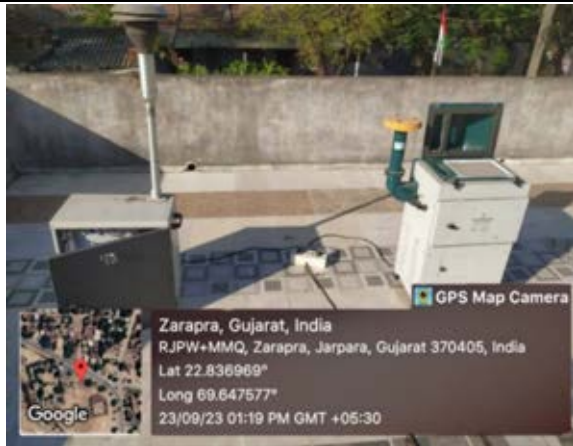
Sr. No.	Sampling Type	Sampling Location	Type of Area	Coordinates
1.	Ambient Air & Noise	Village - Zarpara	Rural Area	22.837942° N, 69.646225° E
2.	Ambient Air & Noise	Village - Navinal	Rural Area	22.829246° N, 69.598332° E

3.	Ambient Air & Noise	Village - Vandh	Rural Area	22.809106° N, 69.53562° E
4.	Ambient Air & Noise	Outside Fabrication & Batching Plant	Industrial Area	22.807563° N, 69.704170° E
5.	Ambient Air & Noise	Project Site (Pocket – 1)	Industrial Area	22.785943° N, 69.566645° E
6.	Ground Water (GW-5)	Navinal	Rural Area	22.829246° N, 69.598332° E
7.	Ground Water (GW-7)	Nana Bhadiya	Rural Area	22.833943° N, 69.486339° E
8.	Surface Water (SW-4)	Nagavanti Nadi	Rural Area	22.836757° N, 69.486339° E
9.	Surface Water (SW-7)	Siracha	Rural Area	22.835496° N, 69.621600° E
10.	Surface Water (Marine) (SW-2)	Kotdi Creek	Industrial Area	22.806976° N, 69.559314° E
11.	Surface Water (Marine) (SW-3)	Bardi Mata Creek	Industrial Area	22.812261° N, 69.561134° E
12.	Trade Effluent - STP	Project Site (Pocket – 1)	Industrial Area	22.784881° N, 69.566798° E

Photograph 2-1: Proposed Project Site (Current Status of Land)



Photograph 2-2: Photographs of monitoring



Zarapra Village



Navinal Village



Vandh Village



Project Site (Pocket - 1)



Outside Fabrication & Batching Plant



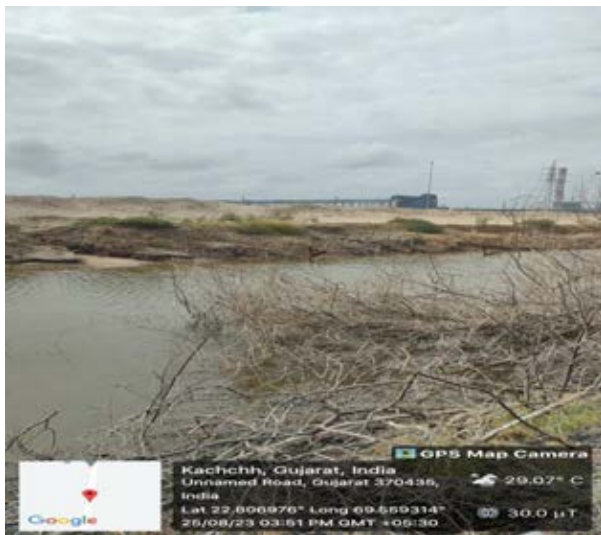
Ground Water (GW-7) Nana Bhadiya



Surface Water (Marine) (SW-3) - Baradi mata creek



Surface Water (SW-4) - Nagavanti Nadi



Surface Water (Marine) (SW-2) - Kotadi Creek water



STP Treated Water Sample Collection

Map 2-1: Project site and Study Area of 10 Km radius on Google Earth Downloaded Images



3 CLIMATIC CONDITON

3.1 Climatic data from secondary sources

For the coal to PVC project secondary data for weather conditions in the region is available for the period of April 2023 to September 2023. This table gives useful information about a region's weather condition. Meteorological data was analysed/reviewed for important parameters like Temperature, Humidity, BP, Wind speed, Wind direction, Solar radiation and Rainfall.

Average meteorological condition recorded at is as given in below table.

Table 3-1: Average meteorological condition

Weather Monitoring Data							
Month	Scale	Temp. (°C)	RH (%)	BP (mmHg)	Wind Direction	Wind speed (Km/ Hr.)	Total Rainfall (mm)
April - September 2023	Max.	44.1	100.3	760.2	360.0	82.0	690.5
	Min	21.2	10.6	737.0	0.0	0.1	
	Average/ Total	31.3	75.6	751.6	238.8	10.3	

4 ANALYSIS & INTERPRETATION

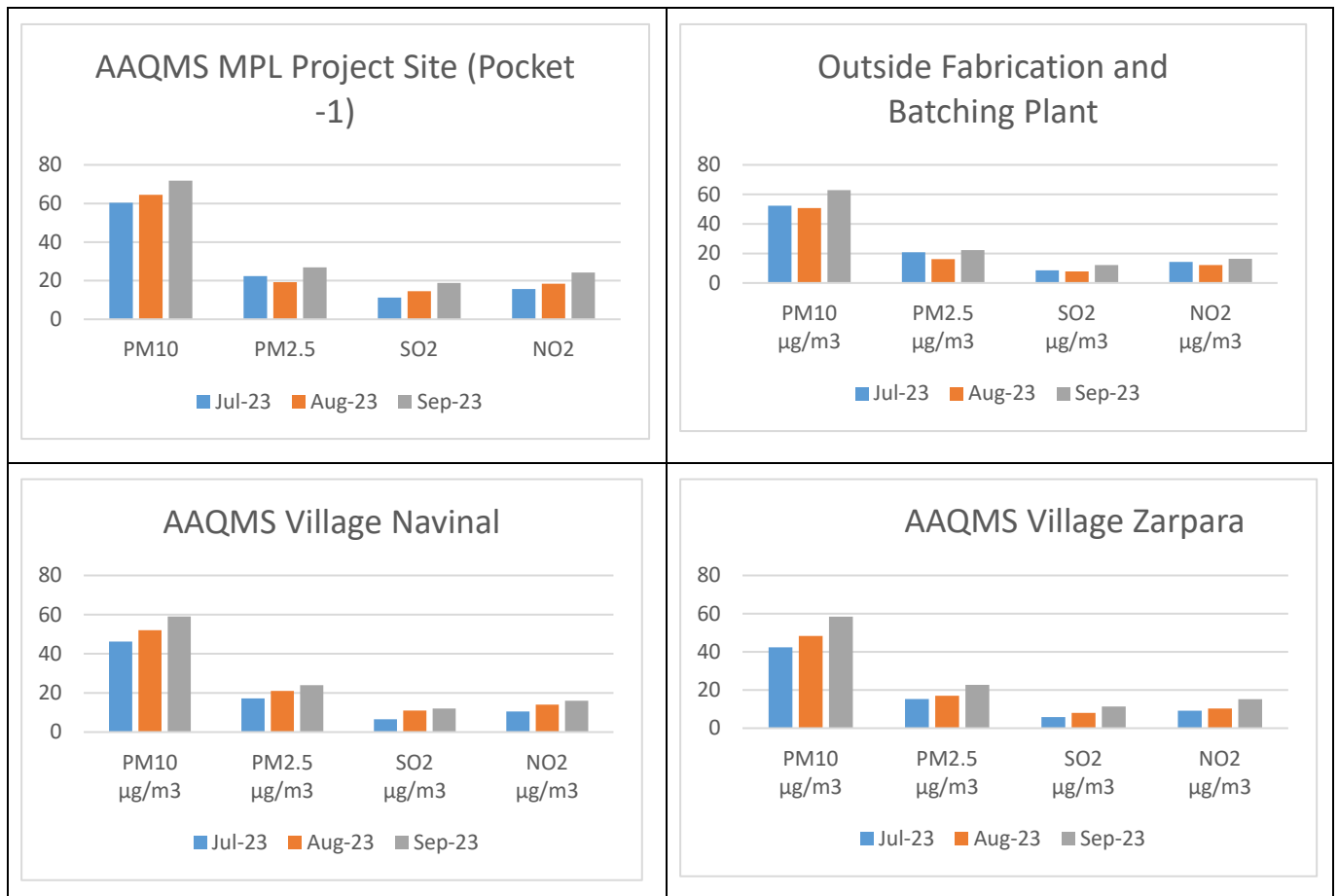
4.1 Ambient Air

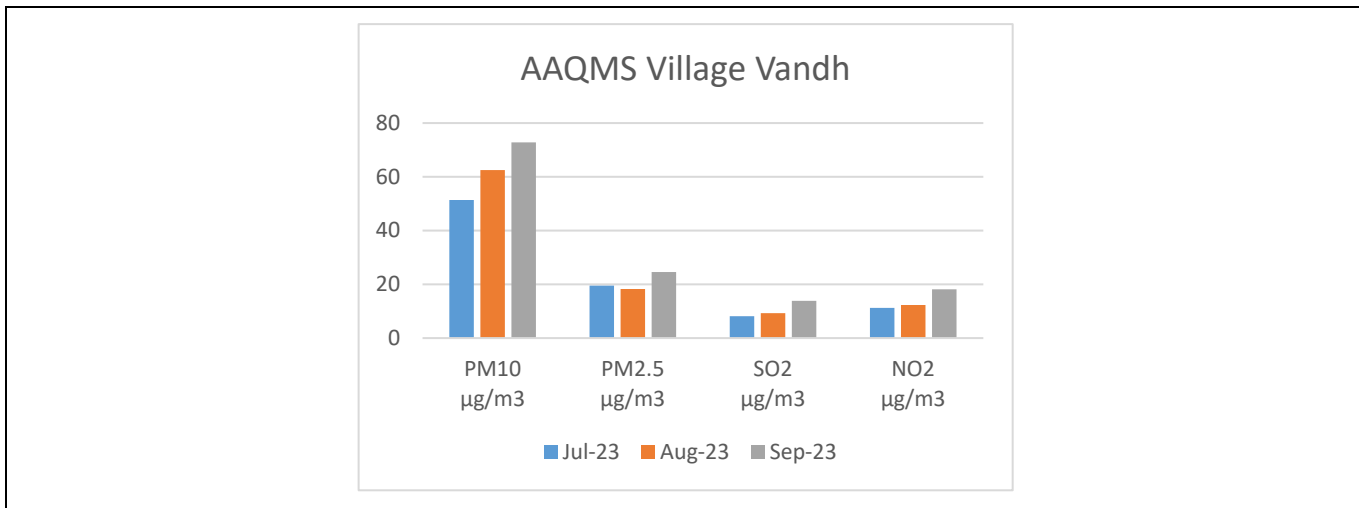
Sr. No.	Month	Parameter with Results											
		PM10	PM2.5	SO2	NO2	CO	O3	NH3	Pb	Ni	As	Benzene	Benzo (a) Pyrene
		µg/m3	µg/m3	µg/m3	µg/m3	mg/m3	µg/m3	µg/m3	µg/m3	ng/m3	ng/m3	µg/m3	ng/m3
		Permissible Limit As per NAAQS – 2009 Notification.											
		100	60	80	80	2	400	100	1	6	20	5	1
Location : Project Site (Near to Pocket -1)													
1	Jul-23	60	22	11	16	<0.01	<5.0	<5.0	<0.5	<1.0	<1.0	<1.0	<0.1
2	Aug-23	65	19	15	18	<0.01	<5.0	<5.0	<0.5	<1.0	<1.0	<1.0	<0.1
3	Sep-23	72	27	19	24	<0.01	<5.0	<5.0	<0.5	<1.0	<1.0	<1.0	<0.1
Report Reference No. - URA/23/08/A-054 dt. 25/07/2023, URA/23/08/A-066 dt. 31/08/2023, URA/23/09/A-MPL075 dt. 03/10/2023													
Location : Outside Fabrication and Batching Plant													
1	Jul-23	52	21	9	14	<0.01	<5.0	<5.0	<0.5	<1.0	<1.0	<1.0	<0.1
2	Aug-23	51	16	8	12	<0.01	<5.0	<5.0	<0.5	<1.0	<1.0	<1.0	<0.1
3	Sep-23	63	22	12	16	<0.01	<5.0	<5.0	<0.5	<1.0	<1.0	<1.0	<0.1
Report Reference No. - URA/23/08/A-053 dt. 25/07/2023, URA/23/08/A-067 dt. 31/08/2023, URA/23/09/A-MPL070 dt. 03/10/2023													
Location : Village Navinal													
1	Jul-23	46	17	7	11	<0.01	<5.0	<5.0	<0.5	<1.0	<1.0	<1.0	<0.1
2	Aug-23	52	21	11	14	<0.01	<5.0	<5.0	<0.5	<1.0	<1.0	<1.0	<0.1
3	Sep-23	59	24	12	16	<0.01	<5.0	<5.0	<0.5	<1.0	<1.0	<1.0	<0.1
Report Reference No. - URA/23/08/A-056 dt. 25/07/2023, URA/23/08/A-073 dt. 31/08/2023, URA/23/09/A-069 dt. 03/10/2023													
Location : Village Zarpara													
1	Jul-23	42	15	6	9	<0.01	<5.0	<5.0	<0.5	<1.0	<1.0	<1.0	<0.1
2	Aug-23	48	17	8	10	<0.01	<5.0	<5.0	<0.5	<1.0	<1.0	<1.0	<0.1
3	Sep-23	58	23	11	15	<0.01	<5.0	<5.0	<0.5	<1.0	<1.0	<1.0	<0.1
Report Reference No. - URA/23/08/A-058 dt. 25/07/2023, URA/23/08/A-062 dt. 31/08/2023, URA/23/09/A-MPL060 dt. 03/10/2023													
Location : Village Vandh													
1	Jul-23	51	20	8	11	<0.01	<5.0	<5.0	<0.5	<1.0	<1.0	<1.0	<0.1
2	Aug-23	63	18	9	12	<0.01	<5.0	<5.0	<0.5	<1.0	<1.0	<1.0	<0.1
3	Sep-23	51	20	8	11	<0.01	<5.0	<5.0	<0.5	<1.0	<1.0	<1.0	<0.1
Report Reference No. - URA/23/08/A-057 dt. 25/07/2023, URA/23/08/A-009 dt. 31/08/2023, URA/23/09/A-MPL082 dt. 03/10/2023													

Observations

- The concentration of PM10 ranged from 73 $\mu\text{g}/\text{m}^3$ at the Project Site (Pocket -1) to 42 $\mu\text{g}/\text{m}^3$ in the Village of Zarpara, with an average concentration of 57 $\mu\text{g}/\text{m}^3$.
- The concentration of PM2.5 ranged from 27 $\mu\text{g}/\text{m}^3$ at the Project Site - Pocket 1 to 15 $\mu\text{g}/\text{m}^3$ in the Village of Zarpara, with an average concentration of 20.5 $\mu\text{g}/\text{m}^3$.
- The concentration of SO2 ranged from 19 $\mu\text{g}/\text{m}^3$ at the Project Site - Pocket 1 to 6.0 $\mu\text{g}/\text{m}^3$ in the Village of Zarpara, with an average concentration of 10.6 $\mu\text{g}/\text{m}^3$.
- The concentration of NO2 ranged from 24 $\mu\text{g}/\text{m}^3$ at the Project Site - Pocket 1 to 9.1 $\mu\text{g}/\text{m}^3$ in the Village of Zarpara, with an average concentration of 14.5 $\mu\text{g}/\text{m}^3$.
- The concentrations of CO were below $<0.01 \text{ mg}/\text{m}^3$, & NH3 were below $<5.0 \text{ }\mu\text{g}/\text{m}^3$, O3 were below $<5.0 \text{ }\mu\text{g}/\text{m}^3$ at all the locations.
- The concentrations of Lead (Pb) were below $<0.5 \text{ }\mu\text{g}/\text{m}^3$, Arsenic (As) were below $<1.0 \text{ ng}/\text{m}^3$ & Nickel (Ni) were all below $<1.0 \text{ ng}/\text{m}^3$ at all the locations.
- The concentrations of Benzene were below $<1.0 \text{ }\mu\text{g}/\text{m}^3$ & BaP were all below $<0.1 \text{ ng}/\text{m}^3$ at all the locations.

The concentrations of all monitored air quality parameters were found to be within the permissible limits as defined by the National Ambient Air Quality (NAAQ) Standards set by the Ministry of Environment, Forest and Climate Change (MoEF&CC).



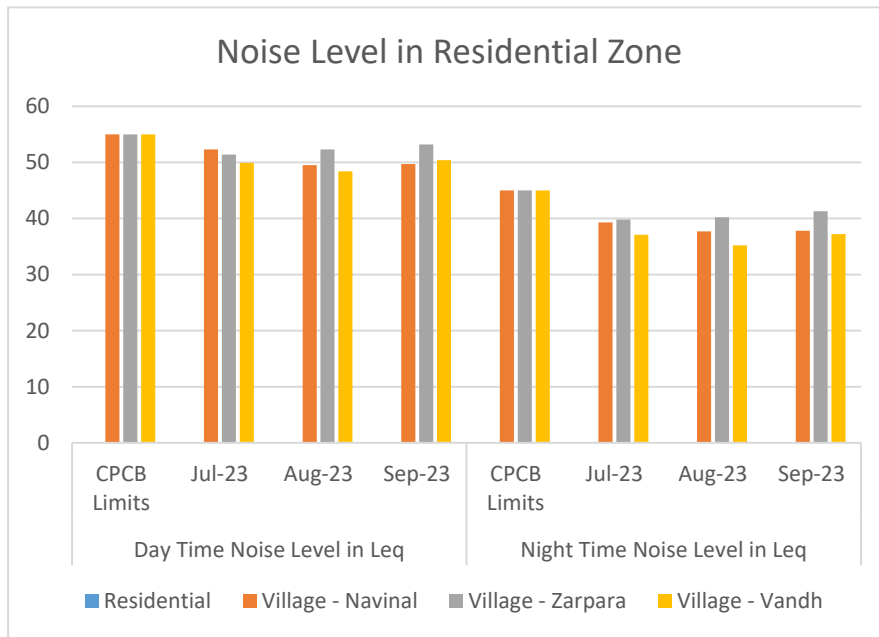
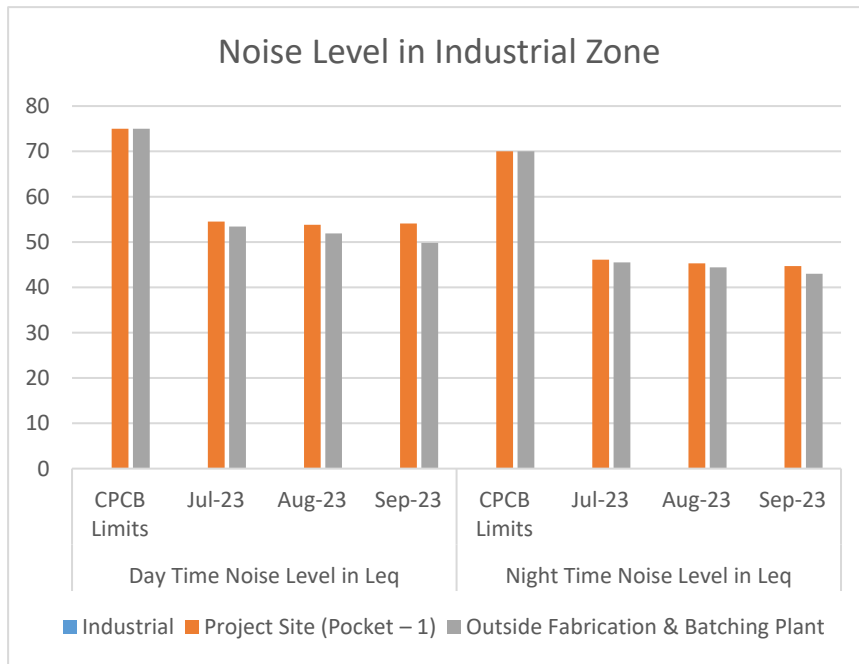


4.2 Ambient Noise

The ambient noise levels measured and analysed for equivalent noise levels viz. Leq (24hrly), Leq day, Leq night at all the noise monitoring locations.

Ambient Noise Level in Leq

Sr. No.	Location	Day Time Noise Level in Leq				Night Time Noise Level in Leq			
		CPCB Limits	Jul-23	Aug-23	Sep-23	CPCB Limits	Jul-23	Aug-23	Sep-23
Industrial									
1	Project Site (Pocket – 1)	75	54.5	53.8	54.1	70	46.1	45.3	44.7
2	Outside Fabrication & Batching Plant		53.4	51.9	49.8		45.5	44.4	43
Residential									
3	Village - Navinal	55	52.3	49.5	49.7	45	39.3	37.7	37.8
4	Village - Zarpara		51.4	52.3	53.2		39.8	40.2	41.3
5	Village - Vandh		49.9	48.4	50.4		37.1	35.2	37.2
Report Reference No. –									
<ul style="list-style-type: none"> Project Site (Pocket – 1) – Report 2 dt. 17/07/2023, URA/23/08/AN-003 dt. 31/08/2023, URA/23/09/AN-043 dt. 03/10/2023 Outside Fabrication & Batching Plant - Report 1 dt. 15/07/2023, URA/23/08/AN-004 dt. 31/08/2023, URA/23/09/AN-040 dt. 03/10/2023 Navinal - Report 3 dt. 19/07/2023, URA/23/08/AN-005 dt. 31/08/2023, URA/23/09/AN-039 dt. 03/10/2023 Zarpara - Report 5 dt. 21/07/2023, URA/23/08/AN-002 dt. 31/08/2023, URA/23/09/AN-036 dt. 03/10/2023 Vandh - Report 4 dt. 20/07/2023, URA/23/08/AN-001 dt. 31/08/2023, URA/23/09/AN-047 dt. 03/10/2023 									



Observations

Industrial Zone

The Average Leq (equivalent continuous sound level) during the day for the industrial zone ranged from 54.5 dB(A) at Project Site - Pocket 1 to 49.8 dB(A) at Outside Fabrication & Batching Plant. Similarly, the Leq during the night ranged from 46.1 dB(A) at Project Site - Pocket 1 to 43 dB(A) at Outside Fabrication & Batching Plant. Importantly, all these values remained within the CPCB (Central Pollution Control Board) limits specified for the industrial zone, both during daytime and night time.

Residential Zone

The Average Leq (equivalent continuous sound level) during the day in the residential zone varied from 53.2 dB(A) in Village Zarpara to 48.4 dB(A) in the village Vandh. Meanwhile, the Leq during the night ranged from 41.3 dB(A) in Village Zarpara to 35.2 dB(A) in Village Vandh. It's worth noting that the ambient noise levels in these villages are affected by the local environment, and all the Leq values are compliant with permissible limits across all the villages.

4.3 Water Quality

4.3.1 Ground Water Quality

Ground water was collected as grab samples from two location Navinal & Nana Bhadiya & sent to laboratory for analysis for various parameters.

The water quality findings from the ground water samples are outlined in the following table:

Sr. No.	Parameter	Unit	IS 10500 Standard Limits for drinking water		GW 05 Navinal	GW 07- Nana Bhadiya
			Desirable limit	Permissible Limit in the Absence of Alternate Source	Aug-23	Aug-23
1	pH	pH scale	6.5-8.5	NR	7.96	8.4
2	Temp	o C	NS	NS	29.5	29.5
3	Turbidity	NTU	1	5	BDL (MDL: 0.1)	BDL (MDL: 0.1)
4	TDS	mg/l	500	2000	1820	604
5	Electrical Conductivity	µmhos/cm	NS	NS	2750	990
6	COD	mg/l	NS	NS	20.4	<2
7	BOD	mg/l	NS	NS	2.5	<1
8	Phenol	mg/l	0.001	0.002	BDL (MDL: 0.001)	BDL (MDL: 0.001)
9	Chlorides	mg/l	250	1000	667.8	96.3
10	Sulphate	mg/l	200	400	38	73.3
11	Total Hardness	mg/l	200	600	236.1	118.9
12	Ca++ Hardness	mg/l	NS	NS	138.6	75.3
13	Mg++ Hardness	mg/l	NS	NS	97.5	43.6
14	Total Alkalinity	mg/l	200	600	289	242.2
15	Nitrate	mg/l	45	NR	1.1	0.6
16	Fluoride	mg/l	1	1.5	0.98	1.39
17	Sodium	mg/l	NS	NS	410	45.5
18	Potassium	mg/l	NS	NS	34	2.1
19	Calcium	mg/l	75	200	55.6	30.2
20	Magnesium	mg/l	30	100	23.7	10.6
21	Salinity	mg/l	NS	NS	1.206	0.174
22	Total Nitrogen	mg/l	0.5	NR	BDL (MDL: 2.0)	BDL (MDL: 2.0)
23	Total Phosphorous	mg/l	NS	NS	0.38	0.29
24	Dissolved Oxygen	mg/l	NS	NS	4.1	2.9
25	Ammonical Nitrogen	mg/l	NS	NS	BDL (MDL: 0.2)	BDL (MDL: 0.2)
26	SAR	-	NS	NS	11.6	1.4
	Heavy Metals					
27	Arsenic (as As)	mg/l	0.01	0.05	BDL (MDL: 0.01)	BDL (MDL: 0.01)
28	Cadmium (as Cd)	mg/l	0.003	NR	BDL (MDL: 0.003)	BDL (MDL: 0.003)
29	Chromium (as Cr)	mg/l	0.05	NR	BDL (MDL: 0.05)	BDL (MDL: 0.05)
30	Copper (as Cu)	mg/l	0.05	1.5	BDL (MDL: 0.05)	BDL (MDL: 0.05)
31	Cyanide (as CN)	mg/l	0.05	NR	BDL (MDL: 0.05)	BDL (MDL: 0.05)

32	Iron (as Fe)	mg/l	0.3	NR	BDL (MDL: 0.1)	BDL (MDL: 0.1)
33	Lead (as Pb)	mg/l	0.01	NR	BDL (MDL: 0.01)	BDL (MDL: 0.01)
34	Mercury (as Hg)	mg/l	0.001	NR	BDL (MDL: 0.001)	BDL (MDL: 0.001)
35	Manganese (as Mn)	mg/l	0.1	0.3	BDL (MDL: 0.1)	BDL (MDL: 0.1)
36	Nickel (as Ni)	mg/l	0.02	NR	BDL (MDL: 0.02)	BDL (MDL: 0.02)
37	Zinc (as Zn)	mg/l	5	15	BDL (MDL: 0.05)	BDL (MDL: 0.05)
38	Total Coliform	MPN	Shall not be detectable		Absent	Absent
39	Faecal Coliforms	MPN	Shall not be detectable		Absent	Absent
Report Reference No.					URC/23/08/0551 URB/23/08/0531	URC/23/08/0552 URB/23/08/0529

Observations :

These analysed results were subsequently compared against the IS:10500 Standard Limits for drinking water & are found well within Limits.

4.3.2 Surface Water Quality

Surface water was collected as grab samples from two location Nagavanti Nadi & Siracha village pond. Same has been sent to laboratory for analysis for various parameters.

The water quality findings from the surface water samples are outlined in the following table:

Sr. No.	Parameter	Unit	Classification for Inland Surface Water (CPCB)	SW 04 Nagavanti Nadi	SW 07 Siracha village pond
			Class E	Aug-23	Aug-23
1	pH	pH Scale	6.5 to 8.5	7.62	7.7
2	Dissolved Oxygen	mg/l	NA	6.1	5.9
3	TDS	mg/l	2100	410	198
4	Electrical Conductivity	µmohs/cm	2250	661	305.3
5	BOD	mg/l	NA	2.3	2
6	Colour	Pt.co	-	BDL (MDL: 5.0)	BDL (MDL: 5.0)
7	Total Hardness	mg/l	NA	73.3	59.4
8	Ca++ Hardness	mg/l	NA	39.6	33.7
9	Mg++ Hardness	mg/l	NA	33.7	25.7
10	Chlorides	mg/l	600	19	15.4
11	Sulphate	mg/l	1000	10.4	8.9
12	Nitrate	mg/l	NA	0.5	BDL (MDL: 0.1)
13	Fluoride	mg/l	-	BDL (MDL: 0.2)	BDL (MDL: 0.2)
14	Phenol	mg/l	NA	BDL (MDL: 0.001)	BDL (MDL: 0.001)
15	Ammonical Nitrogen	mg/l	NA	BDL (MDL: 0.2)	BDL (MDL: 0.2)
16	SAR		26	1.52	1.89
17	Copper (as Cu)	mg/l	NA	BDL (MDL: 0.05)	BDL (MDL: 0.05)
18	Iron (as Fe)	mg/l	NA	BDL (MDL: 0.1)	BDL (MDL: 0.1)
19	Manganese (as Mn)	mg/l	NA	BDL (MDL: 0.1)	BDL (MDL: 0.1)
20	Mercury	mg/l	NA	BDL (MDL: 0.001)	BDL (MDL: 0.001)
21	Cadmium (as Cd)	mg/l	NA	BDL (MDL: 0.003)	BDL (MDL: 0.003)
22	Arsenic (as As)	mg/l	NA	BDL (MDL: 0.01)	BDL (MDL: 0.01)

23	Cyanide	mg/l	NA	BDL (MDL: 0.05)	BDL (MDL: 0.05)
24	Lead (as Pb)	mg/l	NA	BDL (MDL: 0.01)	BDL (MDL: 0.01)
25	Zinc	mg/l	NA	BDL (MDL: 0.05)	BDL (MDL: 0.05)
26	Chromium (as Cr)	mg/l	NA	BDL (MDL: 0.05)	BDL (MDL: 0.05)
27	Boron	mg/l	NA	BDL (MDL: 0.5)	BDL (MDL: 0.5)
28	Total Coliform	MPN/100ml	2	Absent	Absent
29	COD	mg/l	-	16.4	12.1
Report Reference No.				URC/23/08/0553 URB/23/08/0533	URC/23/08/0554 URB/23/08/0535

Observations :

These analysed results were subsequently compared against the **Classification for Inland Surface Water (CPCB)** Class E & are found well within Limits.

4.3.3 Surface Water (Marine) Quality

Surface water (Marine) was collected as grab samples from two location Kotadi Creek & Baradi mata creek. Same has been sent to laboratory for analysis for various parameters.

The water quality findings from the surface water (marine) samples are outlined in the following table:

Sr. No.	Parameter	Unit	Classification for Coastal Marine Water (CPCB)	SW 2- Kotadi Creek water	SW 3- Baradi Mata Creek
			SW-I	Aug-23	Aug-23
1	pH	pH scale	6.5 to 8.5	7.2	8.07
2	Dissolved Oxygen	mg/l	5	6.22	6.02
3	Colour & Odour	-	No Colour No Odour	10	10
4	Floating Matters	-	None	None	None
5	Total Suspended Solid	mg/l	None from Sewage or Industrial waste Origin	14	18
6	Turbidity	mg/l	-	0.1(3.9)	0.1(5.4)
7	BOD	NTU	-	3.1	3.2
8	Oil & Grease	mg/l	0.1	BDL (MDL : 5.0)	BDL (MDL : 5.0)
9	Mercury as Hg	mg/l	0.001	BDL (MDL : 0.001)	BDL (MDL : 0.001)
10	Lead (as Pb)	mg/l	0.001	BDL (MDL : 0.01)	BDL (MDL : 0.01)
11	Cadmium (as Cd)	mg/l	0.01	0.08	0.089
12	Iron (as Fe)	mg/l	-	0.14	0.15
13	Manganese (as Mn)	mg/l	-	BDL (MDL : 0.1)	BDL (MDL : 0.1)
14	Total Coliform	ml (MPN)	-	<2 Absent	<2 Absent
15	Sludge Deposits, Solid refuse floating Solids, Oil Grease and Scum	-	-	None	None
16	COD	mg/l	-	24.2	36.2
Report Reference No.				URC/23/08/0577 URB/23/08/0580	URC/23/08/0578 URB/23/08/0581

Observations :

These analysed results were subsequently compared against the **Classification for Coastal marine water (CPCB)** Class SW I & are found well within Limits.

4.3.4 Sewage Water Quality

Sewage water samples were collected as grab samples from STP outlet situated in Pocket 1. This STP has a capacity of 5 KLD and samples were sent to laboratory for analysis for various parameters.

The water quality findings from the sewage water sampling locations are outlined in the following table:

Sr. No.	Location	CPCB/GPCB Limits	STP Pocket I		
			Jul-23	Aug-23	Sep-23
1	pH @25°C	6.5 – 9.0	7.33	7.05	7.18
2	Total Suspended Solid	<50	14	6	22
3	Chemical Oxygen Demand (COD)	-	42.3	44.5	36.1
4	Biochemical Oxygen Demand (BOD) (5 days at 20 °C)	<30	12	13	17
5	Total Nitrogen	-	4.8	4.1	3.8
6	Total Phosphorus	-	0.8	2.2	1.8
7	Faecal Coliform	<1000	50	27	21
Report Reference No.			URC/23/07/MPL-0340 URB/23/07/MPL-0120	URC/23/08/579 URB/23/08/575	URC/23/09/537 URC/23/09/538

Observations :

These analysed results were subsequently compared against the standards set by the Central Pollution Control Board (CPCB) and are found well within limits.

ANNEXURE

Annexure 1: Laboratory Recognition by MOEFCC, NABL, GPCB Sch.II Auditor & NABET Certification

<p>File No. G/101/180228/PCW/PF</p> <p>No. G/101/180228/PCW/PF</p> <p>Ministry of Environment, Forest and Climate Change C.T. Division</p> <p>April 27, 2019</p> <p>To: M/s Unistar Environment and Research Labs Pvt. Ltd., Plot No. C/5-24, White House, 1st & 2nd Floor, Near GIDC Office, Char Rasta, Vapi (S.T. Char, Vapi), Dist. Vapi, Gujarat</p> <p>Subject: Recognition of M/s Unistar Environment and Research Labs Pvt. Ltd., Vapi as Environmental Laboratory under the Environment (Protection) Act, 1986 - (reg.)</p> <p>With reference to the above and in view of the records on file of ISO 9001:2015 certification awarded by ISO 9001:2015 Environmental and Research Labs Pvt. Ltd., Vapi, the Ministry hereby grants the validity of recognition of M/s Unistar Environment and Research Labs Pvt. Ltd., Vapi under the Environment (Protection) Act, 1986 to 17.03.2023 as also the notified in the Gazette of India.</p> <p>This recognition is subject to all the terms and conditions detailed in the Ministry's letter under reference and those stipulated to be complied with by the laboratory.</p> <p>Yours faithfully, (Dr. Suresh George S.) Secretary to Government of India Ministry of Environment, Forest and Climate Change New Delhi-110003</p> <p>Copy to: 1. Member Secretary, Central Pollution Control Board, Petrol, Petrol, New Delhi 2. Member Secretary, Gujarat Pollution Control Board, Paryavaran Bhawan, Sector-10A, Gandhinagar - 382 015, Gandhinagar-382015, Gujarat 3. Additional Principal Controller of Factories, Ministry of Environment, Forest and Climate Change, Regional Office, GIDC, Vapi, Gujarat 4. Additional Secretary, Ministry of Environment, Forest and Climate Change, New Delhi-110003 for updating on MoEFCC Data Base.</p> <p>Digitally signed by Dr. Suresh George S. DN: cn=Dr. Suresh George S., o=Ministry of Environment, Forest and Climate Change, ou=Government of India, email=suresh.g@nic.gov.in, c=IN</p>	<p>National Accreditation Board for Testing and Calibration Laboratories</p> <p>CERTIFICATE OF ACCREDITATION</p> <p>UNISTAR ENVIRONMENT AND RESEARCH LABS PVT. LTD. (LABORATORY DIVISION)</p> <p>has been assessed and accredited in accordance with the standard</p> <p>ISO/IEC 17025:2017</p> <p>"General Requirements for the Competence of Testing & Calibration Laboratories"</p> <p>for its facilities at</p> <p>WHITE HOUSE, 1ST & 2ND FLOOR, PLOT NO. C-5/24, CHAR RASTA, VAPI, VALSAD, GUJARAT, INDIA</p> <p>in the field of</p> <p>TESTING</p> <p>Certificate Number: FC-7793 Issue Date: 23/09/2022 Valid Until: 23/09/2024</p> <p>This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the relevant requirements of NABL. (To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl.org)</p> <p>Name of Legal Entity: UNISTAR ENVIRONMENT AND RESEARCH LABS PVT. LTD.</p> <p>Signed for and on behalf of NABL.</p> <p>N. Venkateswarar Chief Executive Officer</p>																																																																						
<p>Laboratory Recognition by MOEFCC</p>	<p>Laboratory Recognition by NABL</p>																																																																						
<p>GUJARAT POLLUTION CONTROL BOARD Paryavaran Bhawan Sector - 10 A, Gandhinagar - 382 015, Environmental Audit Cell</p> <p>R.P.A.D</p> <p>No. GPCB/EA-219/21/4447</p> <p>To: Unistar Environment and Research Labs Pvt. Ltd., White House, Plot No. C/5-24, Sr. Near GIDC Office, Char Rasta, Vapi-396195</p> <p>Subj: Renewal of Recognition as Schedule-II Environmental Auditor with team member change.</p> <p>This refers to your application for renewal of the recognition as Schedule-II Environmental Auditor along with team member change and subsequent interview by Environment Audit Committee members. It is recommended by the Environment Audit Committee members, to renew the recognition of your firm as Schedule-II Environmental Auditor along with team member change for carrying out the Environment Audit under Environment Audit Scheme with following conditions:</p> <ol style="list-style-type: none"> 1) Recognition is valid upto 31.12.2023. 2) You shall have maximum Three teams for the Environment Audit. 3) You shall carry out maximum 30 nos. of Environment Audit in a year. 4) Team members shall be as under: <table border="1"> <thead> <tr> <th>Team-1</th> <th>Sr. No.</th> <th>Name</th> <th>Designation</th> </tr> </thead> <tbody> <tr> <td rowspan="4">Team-1</td> <td>1</td> <td>Mr. G. G. Thumar</td> <td>Environment Engineer</td> </tr> <tr> <td>2</td> <td>Mr. Devang B. Patel</td> <td>Chemical Engineer</td> </tr> <tr> <td>3</td> <td>Mr. Jayesh S. Tandil</td> <td>Chemist</td> </tr> <tr> <td>4</td> <td>Mr. Ranjan Maharaj</td> <td>Microbiologist</td> </tr> <tr> <td rowspan="4">Team-2</td> <td>1</td> <td>Ms. Divya K. Patel</td> <td>Environment Engineer</td> </tr> <tr> <td>2</td> <td>Mr. Mayur R. Patel</td> <td>Chemical Engineer</td> </tr> <tr> <td>3</td> <td>Mr. Nitesh H. Tandil</td> <td>Chemist</td> </tr> <tr> <td>4</td> <td>Ms. Shweta A. Ram</td> <td>Microbiologist</td> </tr> </tbody> </table> <p>Clean Gujarat Green Gujarat An ISO 9001: 2008 & ISO 14001: 2004 Certified Organization</p>	Team-1	Sr. No.	Name	Designation	Team-1	1	Mr. G. G. Thumar	Environment Engineer	2	Mr. Devang B. Patel	Chemical Engineer	3	Mr. Jayesh S. Tandil	Chemist	4	Mr. Ranjan Maharaj	Microbiologist	Team-2	1	Ms. Divya K. Patel	Environment Engineer	2	Mr. Mayur R. Patel	Chemical Engineer	3	Mr. Nitesh H. Tandil	Chemist	4	Ms. Shweta A. Ram	Microbiologist	<p>National Accreditation Board for Education and Training</p> <p>Certificate of Accreditation</p> <p>Unistar Environment and Research Labs Pvt. Ltd.</p> <p>C-5/24, White House, Near GIDC Office, Char Rasta, Vapi Gujarat</p> <p>The organization is accredited as Category-A under the QC-NABET Scheme for Accreditation of EA Consultant Organization, Version 2 for preparing EIA-EMP reports in the following Sectors -</p> <table border="1"> <thead> <tr> <th>Sr. No.</th> <th>Sector Description</th> <th>NABET</th> <th>MoEFCC</th> <th>Cat.</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Mining of minerals including oil/minerals</td> <td>1</td> <td>1 (A) (E)</td> <td>B</td> </tr> <tr> <td>2</td> <td>Metallurgical industries (ferrous & non-ferrous)</td> <td>0</td> <td>3 (A)</td> <td>A</td> </tr> <tr> <td>3</td> <td>Manmade fibers manufacturing</td> <td>19</td> <td>3 (A)</td> <td>A</td> </tr> <tr> <td>4</td> <td>Petrochemical based processing (processes other than cracking & reforming) and oil (crude) under the composite</td> <td>20</td> <td>5 (A)</td> <td>A</td> </tr> <tr> <td>5</td> <td>Synthetic organic chemicals industry</td> <td>31</td> <td>5 (A)</td> <td>A</td> </tr> <tr> <td>6</td> <td>Integrated pulp industry</td> <td>35</td> <td>5 (A)</td> <td>B</td> </tr> <tr> <td>7</td> <td>Building and construction projects</td> <td>38</td> <td>8 (A)</td> <td>B</td> </tr> </tbody> </table> <p>Note: Names of approved EA Coordinators and Functional Area Experts are mentioned in RAAC minutes dated April 28, 2023 posted on QC-NABET website.</p> <p>The Accreditation shall remain in force subject to continued compliance to the terms and conditions mentioned in QC-NABET's letter of accreditation bearing no. QC/NABET/ENV/AG/25/2780 dated June 14, 2022. The accreditation needs to be renewed before the expiry date by Unistar Environment and Research Labs Pvt. Ltd., Vapi following due process of assessment.</p> <p>Sr. Director, NABET Dated: June 14, 2025</p> <p>Certificate No. NABET/EIA/2326/NA 0288</p> <p>Valid up to Feb 15, 2026</p> <p>For the updated List of Accredited EA Consultant Organizations with approved sectors please refer to QC-NABET website.</p>	Sr. No.	Sector Description	NABET	MoEFCC	Cat.	1	Mining of minerals including oil/minerals	1	1 (A) (E)	B	2	Metallurgical industries (ferrous & non-ferrous)	0	3 (A)	A	3	Manmade fibers manufacturing	19	3 (A)	A	4	Petrochemical based processing (processes other than cracking & reforming) and oil (crude) under the composite	20	5 (A)	A	5	Synthetic organic chemicals industry	31	5 (A)	A	6	Integrated pulp industry	35	5 (A)	B	7	Building and construction projects	38	8 (A)	B
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Annexure 2: Calibration Certificates

ENPRO Enviro Tech and Engineers Pvt. Ltd.
 Calibration and Validation Laboratory
 Service Provider | Dimension, Electrical, Flame, Mass, Pressure, Thermal, Volume
 Plot No. D/29/16-17, Road No. 17, Highdals Industrial Estate, Gate No. 3,
 Sachin-Palana Road, Sachin, Surat - 394 230, Gujarat, INDIA.
 Calibration Lab Ph. : +91-93275 09920 E-mail : cal@enpro.co.in

CALIBRATION CERTIFICATE

Calibration Certificate No.: ENP2302019684-B I/LR No.: CC2302019684B-01
 Date of Receipt: 27-08-2023 Name of Customer and Address
 Date of Calibration: 27-08-2023 Unistar Environment & Research Labs Pvt. Ltd
 Date of Calibration (Prescribed by Customer): 26-08-2024 White House, Plot No. G/04, No. 0400 Office,
 Chir Park, Vapi-395105
 Date of Issue: 29-08-2023
 Format No.: ENP/01/001

Details of SUC to be Calibrated:

Manufacturer of SUC	I.D. No. / S. No.	Make / Model	Least Count	Range	Accuracy	Type
Respirable Dust Sampler PM 10	UR/LA/R/04/047 / 1818-074-0113	Envirotech / AFM 400 SL	See Calibration Result	As per Calibration Result	See in Calibration Result	NA

Description of Standard Instrument Used:

Manufacturer	I.D. No. / S. No.	Certificate No.	Certified By	Valid Up To
Top Loading Office Calibrator	ENP/FCR/01-0119	PCAL/1222P/130	PI Calibration Laboratory	14-12-2023
Flow Calibration Standard	ENP/FCR/01-0119	PCAL/1222P/130	PI Calibration Laboratory	14-12-2023
Air Flow Calibrator	ENP/FCR/01-0119	PCAL/1222P/117	PI Calibration Laboratory	04-12-2023

Environmental Condition:

Parameter	Value	Condition of Test	Condition of Test
Temperature (°C)	24.5	On Site	On Site
Relative Humidity (% RH)	55.3	On Site	On Site
Pressure (mbar)	1011.3	On Site	On Site

Company Location: ---

Refer Page No - 2,3,4

Notes:

- The reported uncertainty associated with a coverage probability of approximately 95% of normal distribution.
- The Certificate is issued subject to conditions stated elsewhere.
- Readings are Traceable to International Standard.
- Recommended due date is suggested in column 4.
- The calibration results reported in this certificate are valid at the time and under stated condition of measurement.
- This Certificate is Digitally Signed and does not require Signature.

Approved and Received By: 
 Technical Manager
 Unistar Kapadia

Page 1 of 4

ENPRO Enviro Tech and Engineers Pvt. Ltd.
 Calibration and Validation Laboratory
 Service Provider | Dimension, Electrical, Flame, Mass, Pressure, Thermal, Volume
 Plot No. D/29/16-17, Road No. 17, Highdals Industrial Estate, Gate No. 3,
 Sachin-Palana Road, Sachin, Surat - 394 230, Gujarat, INDIA.
 Calibration Lab Ph. : +91-93275 09920 E-mail : cal@enpro.co.in

CALIBRATION CERTIFICATE

Calibration Certificate No.: ENP2302019684-B I/LR No.: CC2302019684B-01
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 Chir Park, Vapi-395105
 Date of Issue: 29-08-2023
 Format No.: ENP/01/001

Details of SUC to be Calibrated:

Manufacturer of SUC	I.D. No. / S. No.	Make / Model	Least Count	Range	Accuracy	Type
Flow Particle Sampler PM2.5	UR/LA/R/04/047 / 1818-074-0113	Envirotech / AFM 400 SL	See Calibration Result	As per Calibration Result	See in Calibration Result	NA

Description of Standard Instrument Used:

Manufacturer	I.D. No. / S. No.	Certificate No.	Certified By	Valid Up To
Air Flow Meter (PFE)	ENP/FCR/01-0119	PCAL/1222P/129	PI Calibration Laboratory	14-12-2023
Flow Calibration Standard	ENP/FCR/01-0119	PCAL/1222P/129	PI Calibration Laboratory	14-12-2023

Environmental Condition:

Parameter	Value	Condition of Test	Condition of Test
Temperature (°C)	24.5	On Site	On Site
Relative Humidity (% RH)	55.3	On Site	On Site
Pressure (mbar)	1011.3	On Site	On Site

Company Location: ---

Approved and Received By: 
 Technical Manager
 Unistar Kapadia

Page 1 of 2

Calibration Certificate for RDS

Calibration Certificate for PM 2.5

UniStar
 Environment and Research Labs Pvt. Ltd.

Calibration Certificate

Instrument Name: Respirable Dust Sampler
 Instrument ID No.: UR/LA/R/04/047
 Instrument Fr. No. Supplier: I/ASB DIB 2013, 114/ 111/ 2013
 Calibration Certificate No.: UR/LA/R/04/047-34/5802/23-24
 Date of Calibration: 02/06/2023
 Next Calibration due Date: 01/06/2024

Sr. No.	Name of Unit Calibrated	Calibrator Traceable to	Calibration Certificate No. / Date of Calibration
1.	Flow Meter ID No. UR/LA/R/04/047/24	Pressure Indicator Envirotech Calibration Laboratory	PCAL/1222P/130 / 14-12-2023
2.	Flow Sampler ID No. UR/LA/R/04/047/24	Envirotech Calibration Laboratory	ECLA/R/04/047-34/5802/23-24
3.	Rotameter ID No. UR/LA/R/04/047/24	Envirotech Calibration Laboratory	ECLA/R/04/047-34/5802/23-24

UNCERTAINTY MEASUREMENT:

- Flow Meter: ± 0.061 m³/min
- Flow Sampler: ± 0.031 flow
- Rotameter: ± 4.0 LPM

The reported uncertainty is the expanded uncertainty in measurement at 95% Confidence level with coverage factor k = 2 which corresponds to coverage probability of approximately 95% of normal distribution.

Prepared By: 
 Senior Chemist

Approved By: 
 Manager - Operations

Page 1 of 1

UniStar
 Environment and Research Labs Pvt. Ltd.

Calibration Certificate

Instrument Name: Flow Particle Sampler
 Instrument ID No.: UR/LA/R/04/047
 Instrument Fr. No. Supplier: AFM - 350/75H/IC/010
 Calibration Certificate No.: UR/LA/R/04/047-34/5802/23-24
 Date of Calibration: 02/06/2023
 Next Calibration due Date: 01/06/2024

Sr. No.	Name of Unit Calibrated	Calibrator Traceable to	Calibration Certificate No. / Date of Calibration
1.	Rotameter ID No. UR/LA/R/04/047/24	Envirotech Calibration Laboratory (New Dots)	ECLA/R/04/047-34/5802/23-24
2.	Flow Sampler ID No. UR/LA/R/04/047/24	Envirotech Calibration Laboratory	ECLA/R/04/047-34/5802/23-24

UNCERTAINTY MEASUREMENT:

- Rotameter: ± 0.045 flow
- Flow Sampler: ± 0.031 flow

The reported uncertainty is the expanded uncertainty in measurement at 95% Confidence level with coverage factor k = 2 which corresponds to coverage probability of approximately 95% of normal distribution.

Prepared By: 
 Senior Chemist

Approved By: 
 Manager - Operations

Page 1 of 1

Calibration Certificate for RDS

Calibration Certificate for PM 2.5

CALIBRATION CERTIFICATE

SUBJECT: CALIBRATION OF SOUND LEVEL METER

CERTIFICATE NO. ML/NCR/RESEARCH/002/23	CERTIFICATE Issue Date: 26/10/2023
Page 1 of 1	

1. Scope

1.1 Service Request Details: Calibration
 1.1.1 Service Request No.: ML/008/23/24
 1.1.2 Service Request Description: SLM/02/23
 1.1.3 Unique Lab Request Number (ULR No.): CC206423000036627
 1.1.4 Measurement / Group: Mechanical / Acoustics
 1.1.5 Name & Address of Organization: UNSTAR ENVIRONMENT RESEARCH LABS PVT. LTD., White House, 3rd Floor, Near S.I.D.C. Office, Char Rasta, Vapi, District, India, 396 105.

1.2 Item Details

1.2.1 Condition of the Item: Working

1.2.2 Name/Make/Model of the Item: Working

Manufacturer: Emet	Model No.: 103-633
Q.No.: ML/NCR/RESEARCH/002/23	S.No.: ---
Range: 30 to 130 dB (A) Hz	Type: Digital
Lower Limit: 0.1 dB @ 1 Hz	Accuracy: ±2 dB
Department: ---	Location: ---

1.4 Item Received On: 26/10/2023

1.4 Details of Test Equipment Used

Instrument Name	Lot No.	Certificate No.	Make	Exp. Date
Sound level Calibrator	ML/MG/002	FCN/02/22/21283	Seton	11/06/2024

1.4.1 Operating Procedures Used: ML/NCR/RESEARCH/002/23
 1.4.2 Reference Standard: IS: 3709:2002
 1.4.3 Date of Calibration: 26 June 2023
 1.4.4 Recommended Due Date of Calibration: 25 June 2024
 1.4.5 Calibration Cycle: ---
 1.4.6 Laboratory Ambient: Temperature: 29.3 °C (284) Humidity: 58.0 %RH (24.02)
 1.4.7 Parameter: 65 dB (A) Hz

1.5.2 Calibration Results

No.	Calibration Point	Set Value on Master (A)	Measured Value on SUT (B)	Error (B - A)	SD Expanded Uncertainty
1	30	30	34.6	4.6	±1.1 dB @ 95 %
2	114	114	114.9	0.9	±1.1 dB @ 95 %

1.5.3 Note: The value mentioned above is the mean of 3 readings.

1.6 General Remarks:

- The reported uncertainty is the expanded uncertainty as measurement obtained by multiplying the standard uncertainty by the coverage factor (k=2), which corresponds to a coverage probability of approximately 95.45% for a normal distribution.
- Uncertainty is not calculated at Max Error - Full Range of CC.
- Any amendments/changes in the certificate should be brought to our notice within 30 days from the date of issue Certificate.
- ISO/IEC 17025:2017 (Calibration)
- The Measurements are metrologically traceable to applicable national/International Standards.
- Any hard written corrections (except g) or photographs of the report invalidates this certificate.
- The results reported to the item calibration.

AUTHORIZED SIGNATORY
 Technical Director, Quality Manager

3rd End of Certificate 308
 B-208 & B-210 2nd Floor, "B" Wing, 39 C/2, The Business Hub, Opp. Taluka Office Building, Vapi, Dist. Vapi, Gujarat-396105, India. Tel: +91 79 22122222, 22122223
 Web: www.matrixlab.in, E-mail: info@matrixlab.in, matrixlab@matrixlab.com

CALIBRATION CERTIFICATE

SUBJECT: CALIBRATION OF SOUND LEVEL METER

CERTIFICATE NO. ML/NCR/RESEARCH/002/23	CERTIFICATE Issue Date: 26/10/2023
Page 2 of 1	

1. Scope

1.1 Service Request Details: Calibration
 1.1.1 Service Request No.: ML/008/23/24
 1.1.2 Service Request Description: SLM/02/23
 1.1.3 Unique Lab Request Number (ULR No.): CC206423000036627
 1.1.4 Measurement / Group: Mechanical / Acoustics
 1.1.5 Name & Address of Organization: UNSTAR ENVIRONMENT RESEARCH LABS PVT. LTD., White House, 3rd Floor, Near S.I.D.C. Office, Char Rasta, Vapi, District, India, 396 105.

1.2 Item Details

1.2.1 Condition of the Item: Working

1.2.2 Name/Make/Model of the Item: Working

Manufacturer: Fluke	Model No.: 8235
Q.No.: ML/NCR/RESEARCH/002/23	S.No.: ---
Range: 30 to 130 dB (A) Hz	Type: Digital
Lower Limit: 0.1 dB @ 1 Hz	Accuracy: ±2 dB
Department: ---	Location: ---

1.4 Item Received On: 26/10/2023

1.4 Details of Test Equipment Used

Instrument Name	Lot No.	Certificate No.	Make	Exp. Date
Sound level Calibrator	ML/MG/002	FCN/02/22/21283	Seton	11/06/2024

1.4.1 Operating Procedures Used: ML/NCR/RESEARCH/002/23
 1.4.2 Reference Standard: IS: 3709:2002
 1.4.3 Date of Calibration: 26 June 2023
 1.4.4 Recommended Due Date of Calibration: 25 June 2024
 1.4.5 Calibration Cycle: ---
 1.4.6 Laboratory Ambient: Temperature: 29.3 °C (284) Humidity: 58.0 %RH (24.02)
 1.4.7 Parameter: 65 dB (A) Hz

1.5.2 Calibration Results

No.	Calibration Point	Set Value on Master (A)	Measured Value on SUT (B)	Error (B - A)	SD Expanded Uncertainty
1	30	30	30.1	0.1	±1.1 dB @ 95 %
2	114	114	114.5	0.5	±1.1 dB @ 95 %

1.5.3 Note: The value mentioned above is the mean of 3 readings.

1.6 General Remarks:

- The reported uncertainty is the expanded uncertainty as measurement obtained by multiplying the standard uncertainty by the coverage factor (k=2), which corresponds to a coverage probability of approximately 95.45% for a normal distribution.
- Uncertainty is not calculated at Max Error - Full Range of CC.
- Any amendments/changes in the certificate should be brought to our notice within 30 days from the date of issue Certificate.
- ISO/IEC 17025:2017 (Calibration)
- The Measurements are metrologically traceable to applicable national/International Standards.
- Any hard written corrections (except g) or photographs of the report invalidates this certificate.
- The results reported to the item calibration.

AUTHORIZED SIGNATORY
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 Web: www.matrixlab.in, E-mail: info@matrixlab.in, matrixlab@matrixlab.com

Calibration Certificate for Sound Level Meter



UniStar Environment & Research Labs Pvt. Ltd.

White House, Near GIDC Office, Char Rasta, Vapi,
Gujarat, India – 396195



Annexure – III Activities for Wildlife Conservation Plan

Awareness program for "Wildlife conservation" for surrounding area has been conducted at near by village. These awareness program comprises the need of wild life conservation, definition, importance, methods of wildlife conservations and actions taken by Adani foundations for at near by villages.

On July 26th, Mundra Petrochemical Limited has celebrated Mangrove Day with spreading awareness over 9th & 10th Grade students and fisherfolk. The session ended with Mangrove plantation. Approximately more than 150 participants were participated.



Photo: Mangrove species awareness and plantation program.

Annexure – IV

Activities of Corporate Environmental Responsibility

In line with the proposed Corporate Environment Responsibility (CER) plan as per EIA study and Environment Clearance (EC), Mundra Petrochem Limited has planned phase wise implementation of the various community & eco-development activities in all 15 villages surroundings to the project activity as part of extended Environment Management Plan (EMP). A total amount of INR 123 Cr has been proposed as CER expenditure in 5 years for community developmental activities focused in all 15 nearby villages in coordination with district administration for the entire Coal to PVC project of CAPEX INR 34900 Cr. Since the project is being developed in phased manner, it is proposed to expend INR 67.53 Cr in 5 years from the initiation of project construction/execution activity at site-proportionate to total CAPEX of the project in phase-I. Thus, the amount of INR **67.53 Cr** will spend for community initiative as CAPEX of Phase I (as part of extended EMP) within the project period before commissioning and CER expenditure of remaining INR **55.47 Cr** shall be planned when the Phase II activities initiated.

Accordingly, MPL has already initiated CER activities in all villages surrounding project area and total CER expenditure incurred in various community welfare & eco-development activities during the period from April, 2023 to September, 2023 approx. INR 50.91 Lakhs with cumulative CER expenditure of approx. 500 Lakhs in line with project CAPEX incurred till September 2023 as project is still in detail engineering & design stage.

Also, in order to know the present socio-economic status and needs of the local community, a "Baseline & Need Assessment Study" was also carried out through third party professional agency i.e. M/s Saline Area Vitalisation Enterprise Pvt. Ltd., involving various stakeholders – local villagers, administration etc. and the recommendation of the study is further being included in the CER plan for implementation in phased manner.

Further, following activities have been completed for the period from April, 2023 to September, 2023.

Sr. No.	Details / Descriptions	Budget Utilized (INR)
A	Education Initiatives	3,25,952
B	Monitoring and Reporting.	8,16,427
C	Sustainable Livelihood and women Empowerment	2,47,675
D	Community Rural Infrastructure Development	37,01,557
Total (INR)		50,91,611

A. Education Initiatives:

Adani Foundation set out an innovative intervention through project “**Utthan**” to improve students' learning capabilities, provide facilities to schools to improve environment and achieve better learning outcomes at the grassroots level with the help of “**Utthan sahayak**”. The main objectives of “Utthan” are adopting government primary schools, Main streaming progressive learners, Enhancing Learning outcomes, arresting dropout rates, introducing English as a third language, enabling joyful leaning spaces and collaborating for teachers capability building.

Teachers support under “Utthan Sahayak” Program

As part of education initiative, Mundra Petrochem Limited has provided “Shikshan Sahayak” (support of qualified & trained teachers) to Siracha Govt Primary School to continue education in school in absence of permanent teachers.

Fisherfolk Livelihood & Skill Development

Vehicle Transportation Facilities:

Mundra Petrochem Limited, extended vehicle transportation services to School – going children from Luni and Randh Fisherman Settlements to the AVMB School, Bhadreshwar.

Education Kits Support:

Education kits including notebooks, guides and bags have been provided to fisherfolk students studying in 9th to 12th standard for enhancing their learning experience.

The above initiatives helped in increasing turn-out of students in the schools through parental engagement including enhancement in learning & cultural shift.

Education awareness sessions :

Education awareness sessions were conducted in four fisherfolk Vasahat of nearby villages to highlight the importance of education, particularly girl-child education. Approximate 500 students were benefited from this awareness sessions.



Photo: Vehicle support, education Kits serving and Education awareness program at fisherfolk community.

Youth employment:

The main objective of this initiative is to offer sustainable employment opportunities to the local fishing community in Mundra. We bridge the gap between industries and Fisherfolk youth by facilitating job placements. Total of 12 fisherfolk youths have been successfully engaged in this endeavor during the reporting period.

Scholarship support:

The scholarship support (covering actual school fees etc.) has been provided to 30 Nos. deserving students under the committed corporate key initiative to empower the future of fisherfolk communities through education.

. This unwavering commitment not only provide support in education but also promoting gender equality and advancing girl child education though extending 100% fee support to female candidates and 80% to male candidates.

Natural Farming

Natural farming is an urgent need of the hour, Mundra Petrochem limited and Adani Foundation team have comprehensive approach to promote natural farming practices through a variety of activities aiming to minimize and /or eliminate pesticides and chemicals usage, lead to producenutritious, chemicals free produce which is benefitting both farmers and consumers by providing healthier and more sustainable food options as well as plays significant role to flourishing environment and balanced ecosystem.

Regular awareness sessions related to “Natural Farming” are being organized for the farming communities aiming to increase agricultural productivity, use of real world class techniques.

Further, support to obtain natural farming certification through the Gujarat Organic Product Certification Agency (GOPCA) so that farmers could achieve higher earning by selling certified organic agriculture produce.

The usage of Jivamrut, Vormi compost bed, Nimastra Agnistra Dasparni ark, Gaukrupa Amrutam becteria and Biogas etc under natural faming not only improve the soil fertility (quality) but also great reduction in soil, water & air pollution by eliminating chemicals fertilizers & pesticides. This initiative also helping in improvement of health conditions of the farmers communities.

Total 60 farmers participated in a comprehensive natural farming training program- organised through collaboration with the Center for Agricultural Sciences.



પ્રાકૃતિક ખેતી જ પ્રગતિનો સાચો માર્ગ છે, ખેડૂતો પૂર્ણ વિશ્વાસથી પ્રાકૃતિક ખેતી કરે : રાજ્યપાલ

કચ્છના મુન્દરા-મોંઢલી વિસ્તારમાં પ્રાકૃતિક ખેતી કરતા ખેડૂતો રાજ્યપાલ આશ્ચર્ય દેવકાંત સાથે મોંઢિ કરવા રાજ્યભવન પધાર્યા હતા. રાજ્યપાલ પ્રાકૃતિક ખેતી સહકારી મંડળીના રૂરૂ જીટલા સભ્યો પેડીના આ ખેડૂતોએ પ્રાકૃતિક ખેતીના પોતાના અનુભવો કહ્યા હતા. રાજ્યપાલે દરેક ખેડૂતને યાજ્ઞિત માનદંશન આપ્યું હતું. તેમણે કહ્યું કે, પ્રાકૃતિક ખેતી જ પ્રગતિનો સાચો માર્ગ છે. ખેડૂતો પૂર્ણ વિશ્વાસથી પ્રાકૃતિક ખેતી કરે. મુન્દરા-મોંઢલીના પાસાસભ્ય અનિરુદ્ધભાઈ દેવેના નેતૃત્વમાં રાજ્યભવન પધારેલા ખેડૂતોએ ઈન્સાઇપુરંક પોતાના અનુભવો કહ્યા. એટલું જ નહીં તેઓ પોતાની સાથે પોતાના પ્રાકૃતિક ખેત ઈન્સાઇપુરંક પણ લોસામેર લાવ્યા હતા. કમ, સાકભાજ અને અનાજની ગુણવત્તા રાજ્યપાલ સમક્ષ રજૂ કરતા ખેડૂતોનો આનંદ ઇષ્ટકાનો



હતા. આ લેવનમાં પ્રાકૃતિક ખેતીનો વ્યાપ વધારવા પ્રયત્નશીલ અદાણી કાઉન્સિલના પંડિતબેન સાલ પણ ખેડૂતો સાથે રહ્યા હતા. કમજ જિલ્લાના મુન્દરા વિસ્તારમાં પ્રાકૃતિક ખેતી કરતા ખેડૂત જીવરાજ ગઢવીએ ગુજરાતના ખેડૂતો પ્રાકૃતિક ખેતી જ કરે એવો સંકલ્પ સિદ્ધ કરવા પોને જીલ્લા નહીં પહેરવાનો સંકલ્પ લીધો

છે. રાજ્યપાલ આશ્ચર્ય દેવકાંતે જીવરાજ ગઢવીના આ સંકલ્પની સરભલા કરતાં તે જલ્દીમાં જલ્દી સાકાર થાય એ માટે સહિયારા પ્રયત્નો કરવાની જરૂર પર ભાર મૂક્યો હતો. જીવરાજભાઈ ગઢવી એ કહ્યું કે, તેઓ છેલ્લા સાત વર્ષથી પ્રાકૃતિક ખેતી કરે છે. તેમની જમીનનો ઓર્ગેનિક કાર્બન 0.32

થવા છે કે, પોતાના ખેતરમાં એકો ટુરીઝમ વિકસાવવાનું આયોજન કરી રહ્યા છે. તેઓ કમજમાં અન્ય ખેડૂતોને પણ પ્રાકૃતિક ખેતીની તાલીમ આપી રહ્યા છે. પ્રાકૃતિક ખેતીથી કમલમ કુટનો પાક લેવા અભિલા ખેડૂત ગીતાબેન જીટલાએ કહ્યું કે, તેઓ વર્ષે રૂપિયા અડીધી ગણ લાખના કમલમ કુટનું ઈન્સાઇન કરીને ભુજ અને રાજકોટના બજારમાં વેચે છે. રાજ્યપાલ આશ્ચર્ય દેવકાંતે તેમને ધનજીવામુન અનાવવાની યોગ્ય પદ્ધતિ સમજાવી હતી અને વેલ્ફેરિય કમ્પે પ્રાકૃતિક ખેતી કરવા માનદંશન આપ્યું હતું. તેમણે બિયારણને શીજમુતથી સંસ્કારીત કરીને યાવેતર કરવાની, ધનજીવામુન અનાવવાની, આચ્છાદન કરવાની, એક સાથે અનેક પાક લેવાની પદ્ધતિઓ વિનયવાર સમજાવી હતી. અભિલા ખેડૂત જયોતિબેન ટાંક પોતાના ખેતરનાં કરેલા લાભો કહ્યા હતા.

રાજ્યપાલ કારેલાનું કહા અને ગુણવત્તા જોઈને પ્રખ્યાતિ થયા હતા. રાજ્યપાલે કહ્યું કે, પ્રાકૃતિક ખેતી કરતા ખેડૂતો પોતાના ઈન્સાઇપુરંકોને જ મૂલ્યવર્ધન કરીને યોગ્ય માર્કેટિંગ કરે. આમ કરવાથી અલગમાં વધારો થશે. રામભાઈ ગઢવી પોતાની વાડીના જંગલથી નામિયેર લાવ્યા હતા. વિશાળ કદના નામિયેર જોઈને રાજ્યપાલ આશ્ચર્ય દેવકાંતે આશ્ચર્ય વ્યક્ત કર્યું હતું. તેમણે કહ્યું હતું કે, પ્રાકૃતિક ખેતી પ્રત્યે વિશ્વાસ ઊભો કરો, વધારા માટે તો આયોજાય ઊભું થઈ જશે. ભુજપુરાના સરપંચ માણેકભાઈ ગઢવી, માવજીભાઈ વલેરે ખેડૂતોએ પણ પોતાના અનુભવો વર્ણવ્યા હતા અને પ્રાકૃતિક ખેતીથી સમૃદ્ધિ માટે પ્રસાદા વ્યક્ત કરી હતી. રાજ્યપાલે અન્ય ખેડૂતો પણ પ્રાકૃતિક ખેતી અપનાવે એ માટે પ્રેરણા અને માનદંશન આપવા સૌ ખેડૂતોને ખેતરનાં કરેલા લાભો કહ્યા હતા.

Photo: Awareness program on Natural farming and activities acknowledged by Governors of Gujarat.

In addition to above, a proactive step has been taken by organizing awakening and awareness sessions to promote natural farming practices in villages of Mundra taluka. These efforts led to the formation of the "Raj Shakti Prakrutik Kheti Sahkari Mandali", comprising of 35 dedicated farmers who are deeply committed to natural farming. Company has started green carnival to provide a platform for those farmers to sell their agricultural products in company's both colonies in Mundra. Encouraged by positive feedback, the farmers have set-up a organic Agri produce shop in Mundra, it serves as an inspiration for other to embrace eco – friendly agricultural practices. Now 302+ farmers are collaborating with Mandli.

Previously, these farmers used to sell their produce in bulk to vendors. Now, they are selling product directly to consumers, leading to a 35% increase in their income. Furthermore, they have applied for the certificate from the Gujarat Organic Product Certification Agency, highlighting their commitment to organic farming practices. Now, they have started collective organic farming in the 200 acre of Agri land with proper fencing and technique.



Photo: Natural Farming Practices to cell natural farming product.

World Environment Day Celebration:



Photo: Awareness cum kitchen garden kits distribution programs for farming communities of nearby villages.

Mundra Petrochem Limited & Adani foundation in collaboration with Govt Agri. Dept organized celebration of "World Environment Day on 5th June, 2023. This program was organized to spread awareness cum distribution of kitchen garden kits for farmer resident at nearby villages. More than 500 farmers with the aim to enable them to grow fresh and nutritious, chemical free vegetables. This initiative will enhance food security and promote self – reliance.

Plastic Free Village Awareness

The central aim of the plastic – free drive is to empower and enlighten students as key agents of change, enabling them to disseminate awareness and instill the practice of reducing single use plastic within their community.

1. Educate: Spread awareness about the harmful effects of plastic on the environment, marine life, soil health and human wellbeing.
2. Engage: Mobilize community members, especially the youth and family members to actively participate in plastic waste reduction activities.
3. Implement: Introduce sustainable alternatives to ensure proper disposal and recycling.

About 10,000 students of primary school and 990 students of secondary schools of nearby villages have been enlightened through plastic free awareness programs.



Photo: Awareness Program on "Plastic free Drive"

B. Community Health Initiative

Regular health camps being organized by Adani Group to bridge healthcare gaps in underserved regions, offering a holistic approach for community wellbeing with combining preventive and precautionary measure through awareness session, Health Check camp, screening and treatment.



Mobile health care units and rural clinic services by Adani Group have made significant strides in delivering essential healthcare to remote rural area and underserved populations since the inception.

C. Sustainable Livelihood and Women empowerment:

Date restoration:

In the aftermath of the devastating Biporjoy cyclone, farming community faced a severe setback as numerous Date, Mango and other fruits trees which served as a vital source of income for farmer were left in shambles.

To address this crisis and provide a ray of hope, MPL embarked on the Dates Restoration Project in collaboration with Krishi Vigyan Kendra (KVK) and other agricultural experts. This project aimed to rejuvenate and review the fallen Date plants. Approximately 615 Date plants have been successfully restored. These plants are now on the path to recovery and are expected to bear fruit in the upcoming season which will providing significant financial relief to the farmers community.



Photo: Date restoration activities.

Home Biogas Plants:

Mundra Petrochem Limited (MPL) in association with the Adani Foundation actively involving local farming communities around the Coal to PVC project for usage of sustainable energy & organic manure. Objective of this initiative is to educate farmer community on utilizing biogas from the cattle dung (i.e usage of clean sustainable energy for cooking). In addition to this, organic compost generated from the biogas plants supports natural farming.

As part of "Corporate Environment Responsibility (CER)", Mundra Petrochem Limited planned to support 240 farmers by providing the technical know-how, guidance & financial support in purchase & installation of Bio-gas plant in the surrounding villages of the Coal to PVC project which will helps farmers to access the self sustained & clean source of energy for cooking and will also get the organic manure for natural farming. The initiative will further helps in enhancing the farmer's economy.



Photo: Home Bio-gas system to farming communities.

Women empowerment:

Mundra Petrochem Limited has initiated various initiatives through Adani Foundation for empowerment of women through Self Help Group (SHG) for self-employment and also engaging women farmers in various trainings programs i.e. operations of farming equipment's, supporting for understanding Government Schemes/various Subsidies on agriculture/horticulture/cattle's etc., awareness on home biogas, cattle feed or NB21 promotion etc.

Water Conservation:

As part of "Corporate Environment Responsibility (CER)", Mundra Petrochem Limited has constructed through Adani Foundation Rainwater harvesting system to collect, convey and store rain for later use from the surfaces during rainy season. Rainwater Harvesting is a simple method of collecting rainwater and deploying the same for further usage, a step towards water conservation aiming towards fulfillment of Corporate Environment Responsibility.

These efforts have led to enhancement in water storage, water quality consistency water access for drinking and agricultural use.

Sr. No.	Project	Unit	Out Come	effectiveness
1	Check dam strengthening at Nana Kapaya	1	Water storage capacity increased by 48,000 Cum	60+ Farmer's, 120+ acres area of Agri land can be irrigated.
2	Recharge Borewell	21	Reduce salinity ingress and preventing water run	150+ farmer's 260+ Acres area of Agri land can be irrigated.
3	Pipe culvert at Checkdam located at Bhujpur	1	Prevent water runoff into sea side.	35 farmer's 120+ acres of Agri land can be irrigated.





Photo: Pond deepening, rainwater recharging borewell and pipe culvert activities at nearby villages.

Tree plantation:

Launching Prakrutirath-is an initiative for trees distributions among the peoples of nearby villages. It is about fostering a sense of responsibility toward the surrounding environment. Through sapling distribution to individuals, we have empowered communities to take ownership of their surroundings, leading to a heightened consciousness about the environment's significance.

Enhancing the landscape and improving environment, local species of trees with heights ranging from 6ft to 8ft along the 18km stretch of road from Zarpara to Nana Bhadiya village have been planted. This green initiative adds beauty and promotes environmental wellbeing.





Photo: Tree plantation alongside the road from Zarpara to Nana Bhadiya.

Further, large scale tree plantation activities have been initiated at village Desalpar community area.





Photo: Tree plantation activities initiated at village Desalpar.

Imparting Skill development trainings through "Skill Development Centre (SDC)":

Mundra Petrochem Limited (MPL) has initiated skill development activities for youth of the nearby villages through Adani Skill Development Centre (ASDC). In this regard, MPL has identified the interested youths for various skill development programs namely- Solar Technician (Solar Panel Manufacturing Technician), Domestic Data Entry Operator, Assistant Electrician. These courses are designed as per National Skills Qualifications Framework (NSQF). These skill development training will help youths in getting employment in

industries nearby. Training on Mudwork is also planned for the people having interest in activities related to craft of mud work. The course will provide the desired skill set to the trained personal leading to self-employment etc.

D. Community Rural Infrastructure Development:

Cyclone Biparjoy left a trail of substantial losses in Mundra and surrounding villages. Adani Foundation collaborated with panchayats and Government bodies, playing a pivotal role in relief and recovery efforts. More than 17,000 people benefited from various efforts. Adani foundation consider this as ethical responsibility and source of satisfaction.

Fisherfolk home were significantly damaged by the Biporjoy Cyclone. In response to that company have provided 2696 cement sheets to 336 fisherfolk households of Juna Bandar, Luni and Randh Bandar to support their recovery.

The work have been performed as under:

Pre – cyclone	During Cyclone	Post – cyclone
✓ Team distribution	✓ Food and Shelter provision	✓ Temporary housing
✓ Workforce migration	✓ Fodder support	✓ Food Packets
✓ Basic amenities	✓ Awareness messages	✓ Excavator support
✓ Awareness efforts	✓ Vehicle / Ambulance support	✓ Transfer of affected individuals.
✓ Meeting with Government	✓ Coordination with Panchayat	✓ Provision of fodder





Photo: Support during Biparjoy Cyclone.

E. Bio-Diversity:



Coastal Biodiversity :

Mundra Petrochem Limited is in a process of multi species Mangrove Biodiversity Park with collaboration of Gujarat Institute of Desert Ecology (Bhuj, Kachchh Total 20 hector area have been developed with multi species Mangrove plantation at Luni coast, Mundra. Avicenna Marina, Rhizophora Mucronata Ceriops Tagal, Ceripos decandra are the spices of Biodiversity Park Due to this massive costal plantation, different birds, crabs, fishes and other insects will be attracted towards the coast.

Terrestrial Biodiversity:

In 16 villages with coordination of Village Development Committee, in 2 acre land biodiversity park will be developed which will be divided in 4 compartments i.e fruit bearing trees, medicinal trees, oxygen trees and native spices which will be connected by paver pathways Terrestrial habitats are ones that are found on land, like forests, grasslands, deserts, shorelines, and wetlands Terrestrial habitats also include man made habitats, like farms, towns, and cities, and habitats that are under the earth, like caves and mines Discussion with village development committee regrading provision of land This initiative will attract various flora and fauna.

On July 26th, Mundra Petrochemical Limited has celebrated Mangrove Day with spreading awareness over 9th & 10th Grade students and fisherfolk. The session ended with Mangrove plantation. Approximately more than 150 participants were participated.



Photo: Mangrove species awareness and plantation program.

Other community and eco-developmental activities in villages by Adani Group

In addition to above, Adani Foundation has carried out various socio-economic & eco developmental activities at villages of Taluka: Mundra and Mandavi. Adani Foundation helping community by facilitating quality education, enabling the youth with income-generating skills, promoting a healthy society and supporting infrastructure development. With an aim to contribute to the holistic development of communities, the Adani Foundation is contributing to the global agenda of meeting Sustainable Development Goals (SDGs).

Few activities are listed as:

1. Native species plantation in the 2 acres area at Nana Kapaya village creating a flourishing mini forest with 5,508 trees.
2. Barren spaces were transformed into lush green havens through our massive public plantation drives. One notable example is the Bhupur Visri Mata temple where 25,000 trees have been planted.
3. About 57,065 numbers of trees have been distributed among the villagers of nearby villages under Prakruti Rath during the monsoon season.
4. Activities under "Utthan – Flagship Education Program of Adani Foundation".
 - a) 2541 numbers of progressive learner and Assessment of 6314 students (3rd to 7th Standard)
 - b) More than 400 mothers were personally engaged and more than 10,000 mothers actively participated in the mother meet program.
 - c) 877 students are preparing for competitive exams i.e 354 JNV, 273 PSE & 250 NMMS.
 - d) More than 5000 students of class 1st to 4th were facilitated for making English as third language.
 - e) More than 72000 books were issued under Library activities.
 - f) 4170 students empowered with digital skills & knowledge.
 - g) More than 4300 students of primary & high schools participated under Summer camp.
5. Diverse health care initiatives are making society healthier. We facilitated the participation of numerous attendees for the health care activities
 - a. 1007 numbers of medical support.
 - b. 58 numbers of Dialysis.
 - c. 4690 numbers of Mobile Van users.
 - d. 5939 numbers of users at Rural clinic centers.
 - e. 1448 numbers of users at health camp.
 - f. 1489 numbers of users at specialty health camp.
 - g. 5584 numbers of Ayushman card.
 - h. 1598 numbers of donators at blood donation camp.
6. Dialysis Support: In Mundra, where water quality challenges contribute to a higher prevalence of urinary infection lead to kidney failure cases. Our Dialysis Support Program is designed to assist those in extreme need and Financial weaker. The program is not only alleviating their financial burden but also enabling them to lead healthier lives.
7. The initiative is a dedicated effort to eradicate cataract – related vision impairments specially focused on senior citizen through Meticulous planning as 473 patient of 9 villages benefited with comprehensive Eye Screenings, Cataract Surgeries and post operative care and follow – up.

8. Arranged gynecological and ophthalmic and general health camp at village level.
9. Adani Foundation has started 100% Ayushman Card coverage in all villages of Mundra in coordination with the District Health Department. 5584 Ayushman cards have been issued among the 25 villages. Further, more than 2230 women among 18 villages were check up under Gynec Health check up program.
10. We have introduced the "Sagar Mitra Card" to simplify access for Fisherfolk to specific fishing routes within APSEZ. This Digital card is connected to a digital punching machine located at designated entry points.
11. 15,000 kilo liter of drinking water have been distributed at Luni bandar having 401 numbers of population in the village.
12. 20,000 kilo liter of drinking water have been distributed at Bavdi bandar having 535 numbers of population in the village.
13. Under the "*Project Sahel*", comprehensive training programs are being conducted in which 850 numbers of women across more than 82 Self Help Group have been trained.
14. Empowering communities through Menstrual Hygiene Awareness, Adani Foundation have conducted sessions in 18 villages. A total of 1587 women and 494 girls from schools actively participated in these enlightening sessions at the grassroot level.
15. In the Millet Program, 545 numbers of women were participated and they have prepared 236 numbers of delectable millet dishes.
16. 195 stalls have been constructed for vegetable market for promoting local entrepreneurship under community development program .
17. Skill development program serve the skills on Digital literacy, RTG Crane operator, Beauty therapist, mud work, Advance Excell training, real time exposure, hydrography training, entrepreneurship development program, placement opportunity etc.
18. Utthan Sahayak played a pivotal role in supporting taluka level science fair and sports activities, resulting in the selection of 6 students for the district level sports competitions.

Grassland Development Program:

Mundra Petrochem Limited have started Grass land development with a primary objective to create a self sustaining village by converting common pastureland (Gauchar) into fertile and productive grasslands to ensure a reliable source of fodder for the community, especially during challenging times. Total 213 acres of Gauchar (Pastureland) has been cleaned and allotted for grass land development with strong community contribution and mobilization at villages like Zarpara, Siracha, Gundala, Kukadsar.

Cattle Health Camp:

Cattle health camp had been arranged in coordination with Government Veterinary doctors and the Animal Husbandry Department, dedicated to ensuring the crucial veterinary care to a significant number of cattle, effectively addressing their immediate health needs. Approximately more than 500 cattle were treated successfully with ensuring their health and vitality.



Photo: Cattle health camp and Fodder support at nearby villages.



Photo: Community Tree Plantation at nearby villages



Photo: Community health center and education center for villages



Photo: Aayushman Card distribution program



Photo: Drinking water distribution and women empowerment programme at near by villages.



Photo: Vegetable market – stalls under community infrastructure development.

Photo: News highlights on the Corporate Environment Responsibility (CER) activities by Mundra Petrochem Limited in nearby villages through Adani Foundation (a CSR Arm of Adani Group)

adani

Ref: MPL/ENV/CER/2023 - July/02

Date: 29/07/2023

To,
The District Development Officer,
Jilla Panchayat, Opp - Surmandir Multiplex
Bhuj-Kutch, Gujarat - 370 001

Subject Community developmental activities in all 16 villages surrounding the Coal to PVC project as part of Corporate Environment Responsibility (CER) activities by Mundra Petrochem Limited. - Reg.

Reference 1. Environment Clearance (EC) vide ref. no. F.No.IA-J-11011/423/2021 - IA - II (Ind - I) Dated 23/12/2022.
2. EC vide ref. no. F.No.-J-11011/149/2021 - IA - II(i), 27/12/2022.
3. EC vide ref. no. F.No.IA-J-11011/149/2021 - IA - II(i), 28/11/2022.

Respected Sir,

We would like to draw your kind attention that being an environmentally & socially responsible corporate, Adani Group always give priority to community development along with any project establishment.

As you are aware that M/s Mundra Petrochem Limited (A subsidiary of Adani Enterprises) has planned to set-up Coal to PVC project at Mundra site and MoEF/BCC vide above refer letter dated 23/12/2022, 27/12/2022 and 28/11/2022 has already granted Environmental Clearances for Industrial activities under Industrial project - 1, 2 & 3 respectively for Coal to PVC project.

As per our commitments, we have already initiated community developmental activities as part of our Corporate Environment Responsibility (CER) in all 16 villages surrounding the Coal to PVC project.

You will kindly appreciate that to apply a systematic approach for community development initiative, a detailed baseline and need assessment study was carried out through a reputed third-party agency by involving community (i.e identification of needs by involvement of community) for further implementation identified needs as part of CER initiatives. In the same line, the activities being planned and initiated in present FY 2023 - 2024 have been enclosed as Annexure-I for your perusal.

This is for your information and record, please.

Thanking you,

For M/s Mundra Petrochem limited

Vinay Kumar Singh
General Manager - Environment & Sustainability.

Encl: Annexure-I
Copy to: The Taluka Development Officer, Taluka Panchayat, Mundra

Mundra Petrochem Limited
"Adani Corporate House",
Shantigram, Near Valuhra Devi Circle,
S. G. Highway, Khotiyar,
Ahmedabad 382 421
Guzrat, India
CIN: U23209GJ0201PLC32112

Tel. + 91 79 2656 5555
Fax + 91 79 2655 5500
info@adani.com
www.adani.com

Registered Office: "Adani Corporate House", Shantigram, Near Valuhra Devi Circle, S. G. Highway, Khotiyar, Ahmedabad - 382421

Handwritten notes in Gujarati: સરકારી કાર્યાલય, તાલુકા પંચાયત, મુન્દરા

adani

Annexure-I: Activities under Corporate Environment Responsibility (CER) being carried out in FY 23-24

Sr. No.	Activities
1	Land, Vegetation, Water & Air
A	Soil & Water Conservation
A.1	Rooftop Rainwater Harvesting System
A.2	Pond Deepening & Beautification, River Cleaning
A.3	Check dam Strengthening
A.4	Percolation Well
B	Participatory Ground Water Management
B.1	Water Management Project
C	Natural Farming
C.1	Farmer Awareness Meeting & Seed Support, Training
C.2	Agriculture Equipment Support I.e Weed Cutter
D	Biodiversity
D.1	Tree plantation at Roadside with Tree Guard
D.2	Community Place / Green Belt Development
D.3	Horticulture Saplings distribution
2	Segar Sathi
2.1	Motivation Support
2.2	Women Awareness Program (De-addiction, Menstrual hygiene, parenting, Noncommunicable diseases)
3	Basic Infra
3.1	Approach Roads of Vasahat and Vadi vistar
4	Skill Development
4.1	Technical Training

List of 16 Villages Surrounding to the Coal to PVC Project -

1	Nani Bhujpar	5	Desaipar	9	Nana Bhadiya	13	Siracha
2	Pratappar	6	Moti Bhujpar	10	Mota Bhadiya	14	Nani Khakhar
3	Vandh	7	Targadi	11	Zarpara	15	Kandagara Mota
4	Navihal	8	Moti Khakhar	12	Modhava	16	Tunda

Mundra Petrochem Limited
"Adani Corporate House",
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S. G. Highway, Khotiyar,
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Guzrat, India
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Photo: Communication letter with Government authorities to execute the CER activities at nearby villages.

adani

dc

Ref: AEL/MPL/ENV/EC/2022 - September/02

Date: 02/09/2022

To,
Ms. Praveena D.K. (IAS),
Collector & DM,
Collector Office, Jilla Seva Sadan,
Bhuj - Kachchh, 370 001

Subject: Environment Clearance (EC) for proposed Project "**Caustic Soda-1310 KTPA and Acetylene-860 KTPA plants near village Vandh & Tunda, Taluka Mundra, District Kachchh, Gujarat** by M/s Adani Enterprises Ltd.

Reference: EC Identification No. - EC22A013GJ127411, File No. - IA-J-11011/149/2021-IA-II(I) dated 31/08/2022

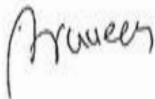
Respected Ma'am,

With reference to above subject, this is to inform that Ministry of Environment Forest and Climate Change has granted Environment Clearance for proposed project "**Industry-III activity i.e. Caustic Soda-1310 KTPA and Acetylene-860 KTPA**" (as a part of Proposed Coal to Poly-Vinyl Chloride (PVC) Project of M/s Adani Enterprises Ltd. (AEL) in land notified as Industrial area of APSEZ, Ta-Mundra, Dist-Kachchh, Gujarat, comprising of IND-I projects i.e. Semi Coke-2030 KTPA, Cement-6 MTPA; Clinker-4 MTPA, IND-II projects i.e. VCM- 2002 KTPA, PVC-2000 KTPA, Ethylene Glycol-400 KTPA and IND-III projects i.e. Acetylene-860 KTPA & Caustic Soda-1310 KTPA) and Calcium Carbide-2900 KTPA (Not Specified in EIA Notification)) by M/s Adani Enterprises Ltd." vide EC Identification No. - EC22A013GJ127411, File No. - IA-J-11011/149/2021-IA-II(I) dated 31/08/2022.

As required under general condition No. **B - (vii)** of EC, we are submitting herewith copy of Environment Clearance for the said project for your reference, please.

Thanking You,
Yours Faithfully,

Authorized Signatory for Adani Enterprises Ltd,



Praveen Anant (Environment - Head)

Encl: As Above

Adani Enterprises Ltd
"Adani Corporate House",
Shantigram, Near Vaishno Devi Circle,
S. G. Highway, Khodiyar
Ahmedabad 382 421
Gujarat, India
CIN: L51100GJ1993PLC019067

Tel. + 91 79 2656 5555
Fax + 91 79 2555 5500
info@adani.com
www.adani.com

Registered Office: "Adani Corporate House", Shantigram, Near Vaishno Devi Circle, S. G. Highway, Khodiyar, Ahmedabad - 382421

MS
21/6/22
Shantigram
382-421

adani

Copy to:

1). **The District Development Officer,**
Jilla Pachayat, Opposite Surmandir
Multiplex,
Bhuj – Kachchh, 370 001

2). **The Taluka Development Officer,**
Taluka Panchayat, Mundra
Ta: Mundra Dist: Kachchh, 370 421

3). **The General Manager,**
District Industries Center, Near New
Green Hospital, Bhuj – Kachchh, 370 001

4). **The Regional Officer,**
Gujarat Pollution Control Board (Kachchh East),
Room no.215,216 & 217, 2nd Floor, Administration
Office Building, Deendayal Port Trust,
Sector – 08, Gandhidham – Kachchh, 370 201

Adani Enterprises Ltd
"Adani Corporate House",
Shantigram, Near Vaishno Devi Circle,
S. G. Highway, Khodiyar
Ahmedabad 382 421
Gujarat, India
CIN: L51100GJ1993PLC019067

Tel. + 91 79 2656 5555
Fax + 91 79 2555 5500
info@adani.com
www.adani.com

Registered Office: "Adani Corporate House", Shantigram, Near Vaishno Devi Circle, S. G. Highway, Khodiyar, Ahmedabad - 382421



Ref: AEL/MPL/ENV/EC/2022 – September/04

Date: 02/09/2022

To,
The Sarpanch, Shri / Talati Cum Mantri, Shri
Gram Panchayat,
Village: _____
Ta: _____, Dist: Kachchh (List Attached)

Subject: Environment Clearance (EC) for proposed Project "**Caustic Soda-1310 KTPA and Acetylene-860 KTPA plants near village Vandh & Tunda, Taluka Mundra, District Kachchh, Gujarat** by M/s Adani Enterprises Ltd.

Reference: EC Identification No. - EC22A013GJ127411, File No. - IA-J-11011/149/2021-IA-II(I) dated 31/08/2022

Respected Ma'am,

With reference to above subject, this is to inform that Ministry of Environment Forest and Climate Change has granted Environment Clearance for proposed project "**Industry-III activity i.e. Caustic Soda-1310 KTPA and Acetylene-860 KTPA**" (as a part of Proposed Coal to Poly-Vinyl Chloride (PVC) Project of M/s Adani Enterprises Ltd. (AEL) in land notified as Industrial area of APSEZ, Ta-Mundra, Dist-Kachchh, Gujarat, comprising of IND-I projects i.e. Semi Coke-2030 KTPA, Cement-6 MTPA; Clinker-4 MTPA, IND-II projects i.e. VCM- 2002 KTPA, PVC-2000 KTPA, Ethylene Glycol- 400 KTPA and IND-III projects i.e. Acetylene-860 KTPA & Caustic Soda-1310 KTPA) and Calcium Carbide-2900 KTPA (Not Specified in Any EIA Notification)) by M/s Adani Enterprises Ltd." vide EC Identification No. - EC22A013GJ127411, File No. - IA-J-11011/149/2021-IA-II(I) dated 31/08/2022.

As required under general condition No. **B - (vii)** of EC, we are submitting herewith copy of Environment Clearance for the said project for your reference, please.

Thanking You.
Yours Faithfully,

Authorized Signatory for Adani Enterprises Ltd,

Praveen

Praveen Anant (Environment - Head)

Encl: As Above

Copy to:

- 1). **The Taluka Development Officer,**
Taluka Panchayat, Mundra
Ta: Mundra Dist: Kachchh, 370 421

2).

Gujarat Environment Conservation Dept.
Room no.215,216 & 217, 2nd Floor, Administration
Office Building, Deendayal Port Trust,
Sector - 08, Gandhidham - Kachchh, 370 201

<Dial 18002666868> <Wear Mask, Stay Safe>

RG204034787IN IVR:827120403478

RL MANEKBAG SO <380015>

Counter No:1,20/10/2022,13:27

To:THE TALUKA DEVELOPMENT OFFI

PIN:370421, Mundra SO

From:ADANI ENTER,LTD ADAN HOUSE

Wt:190gms

Am:70.00(Cash)

<Track on www.indiapost.gov.in>

<Dial 18002666868> <Wear Mask, Stay Safe>

Adani Enterprises Ltd
"Adani Corporate House",
Shantigram, Near Valshno Devi Circle,
S. G. Highway, Khodiyar
Ahmedabad 382 421
Gujarat, India
CIN: L51100GJ1993PLC019067

Tel. + 91 79 2656 5555
Fax + 91 79 2555 5500
info@adani.com
www.adani.com

Registered Office: "Adani Corporate House", Shantigram, Near Valshno Devi Circle, S. G. Highway, Khodiyar, Ahmedabad - 382421



Ref: AEL/MPL/ENV/EC/2022 –September/06/01

Date: 02/09/2022

To,
Shri Naran Gadhavi,
President - Kheti Vikas Seva Trust,
Village: Zarpara, Taluka: Mundra,
Dist-Kutch- 370 405

Subject: Environment Clearance (EC) (for Industrial activities pertain to Industry – 2 & 3) of proposed Project "**Coal to Poly-Vinyl Chloride (PVC) Project in land notified as Industrial area of APSEZ near village Vandh & Tunda, Taluka Mundra, District Kachchh, Gujarat by M/s Adani Enterprises Ltd**". – reg.

Reference: 1. EC Identification No. - EC22A020GJ133762, File No. - IA-J-11011/149/2021-IA-II(I) dated 31/08/2022
2. EC Identification No. - EC22A013GJ127411, File No. - IA-J-11011/149/2021-IA-II(I) dated 31/08/2022

Respected Sir,

With reference to above subject, this is to inform that Ministry of Environment, Forest and Climate Change has granted Environmental Clearance for following Industrial activities pertain to Industry – 2 & 3 of proposed Project "**Coal to Poly-Vinyl Chloride (PVC) Project in land notified as Industrial area of APSEZ near village Vandh & Tunda, Taluka Mundra, District Kachchh, Gujarat by M/s Adani Enterprises Ltd**".

Sr. no.	Type of Activities	Name of Activities	Details of Environmental Clearance	Enclosed as
1	Industry – 2	VCM– 2002 KTPA, PVC–2000 KTPA, Ethylene Glycol– 400 KTPA	EC Identification No. - EC22A020GJ133762, File No. - IA-J-11011/149/2021-IA-II(I) dated 31/08/2022	Annexure – I
2	Industry – 3	Acetylene–860 KTPA & Caustic Soda–1310 KTPA)	EC Identification No. - EC22A013GJ127411, File No. - IA-J-11011/149/2021-IA-II(I) dated 31/08/2022	Annexure – II

Accordingly, in compliance of general condition no. B(VI) & B(VII) of above refer letter sr. no. 1 & 2 respectively, we are enclosing herewith copies of Environmental Clearances for your reference, please.

Thanking You,
Yours Faithfully,

Authorized Signatory for Adani Enterprises Ltd.

Praveen Anant (Environment - Head)

Encl: As Above

Adani Enterprises Ltd
"Adani Corporate House",
Shantigram, Near Vaishno Devi Circle,
S. G. Highway, Khodiyar
Ahmedabad 382 421
Gujarat, India
CIN: L51100GJ1993PLC019067

Tel. + 91 79 2656 5555
Fax + 91 79 2555 5500
info@adani.com
www.adani.com

Ref: MPL/ENV/GPCB – Form – V/2023 –June/01

Date: 29/06/2023

To,**PCB ID:86184**

The Unit Head, (Kutch District)
Gujarat Pollution Control Board,
Paryavaran Bhavan, Sector-10A,
Gandhinagar – 382010

E-mail : kut-uh-gpcb@gujarat.gov.in

Subject: Environment Statement (Form – V) for the year 2022-2023 for the Project
"Coal to Poly-vinyl Chloride (PVC)" near Village Vandh & Tunda, Taluka
Mundra, District Kachchh, Gujarat by M/s Mundra Petrochem Limited –
Reg.

Reference : 1) CTE no. 59301 granted by GPCB vide letter no. GPCB/(PCB ID:
86184)/ 16246 dated 13/12/2022.

2) Amended CTE letter no. PC/CCA-KUTCH-2104/GPCB ID
86184/738939 Dated 12/04/2023.

Respected Sir,

With reference to the Consent to Establish issued by GPCB vide above refer
letter dated 13/12/2022, amended vide letter dated 12/04/2023 for the project
"Coal to Poly-vinyl Chloride (PVC)" near Village Vandh & Tunda, Taluka Mundra,
District Kachchh, Gujarat by M/s Mundra Petrochem Limited.

Presently, the coal to PVC Project is under basic/detail engineering and
process design stage i.e construction activities yet to be initiated. The soft copy of
the Environment Statement (Form – V) for the year 2022 -2023 is attached for your
ready reference & record please.

Thanking you,



Vinay Kumar Singh
General Manager – Environment & Sustainability

Encl: As Above

Copy to : 1. Member Secretary, GPCB : ms-gpcb@gujarat.gov.in
3. Regional Office, GPCB (Kutch East): ro-gpcb-kute@gujarat.gov.in

Mundra Petrochem Limited
"Adani Corporate House",
Shantigram, Near Vaishno Devi Circle,
S. G. Highway, Khodiyar
Ahmedabad 382 421
Gujarat, India
CIN: U23209GJ2021PLC122112

Tel. + 91 79 2656 5555
Fax + 91 79 2555 5500
info@adani.com
www.adani.com

Registered Office: "Adani Corporate House", Shantigram, Near Vaishno Devi Circle, S. G. Highway, Khodiyar, Ahmedabad - 382421

FORM – V
(See Rule 14)

From :
M/s Mundra Petrochem Limited,
Survey no.180/Part (Unsurveyed Land),
Mundra Forest (Diverted for SEZ),
Vill: Tunda, Ta:Mundra, Dist: Kutch 370421

To,
Gujarat Pollution Control Board,
Sector 10 – A,
Gandhinagar 382 043
Environmental Statement for the financial year ending the 31st March 2023.

PART – A

i	Name and address of the owner / occupier of the industry operation or process	Mr. K. S. Lakshminarayana (Site – Head) M/s Mundra Petrochem Limited, Survey no.180/Part (Unsurveyed Land), Mundra Forest (Diverted for SEZ), Vill: Tunda, Ta:Mundra, Dist: Kutch 370421
ii	Industry Category – Primary – STC Code Secondary – STC Code	Red (Large Scale)
iii	Production Capacity Units	As per Annexure - I
iv	Year of establishment	Under Construction Stage - The Coal to PVC project is under basic & detail engineering and process design stage,
v	Date of the last Environmental Statement Submitted	N/A

PART – B

Water and Raw material Consumption

i	Water Consumption M ³ /day	80*	
	Process	0	
	Cooling	0	
	Domestic	80	
	Name of Product	Process water consumption per unit of product output	
	During the previous financial year	During the current financial year	
	As per Annexure - I	NIL	NIL

ii	Raw Material Consumption		
	Name of raw materials	Name of products	Consumption of raw material per unit of output
			During the previous Financial year
			During the current financial year
	NIL	NIL	NIL

* Presently, the Coal to PVC project is under basic & detail engineering and process design stage, water consumption is mainly for domestic & greenery development.

PART - C

Pollution Discharged to environment / unit of output
(Parameter as specified in the consent issued)

Pollutant	Quantity of Pollutants discharged (Mass / day)	Concentration of pollutants in discharges (Mass/Volume)	Percentage of variation from prescribed standards with reasons
(a) Water	NIL*	NIL*	NIL*
(b) Air	NIL*	NIL*	NIL*

* : The Coal to PVC project is under basic & detail engineering and process design stage,

Part - D

Hazardous Wastes

[As specified under Hazardous Waste (Management and Handling) Rules, 1989]

Hazardous Wastes	Total Quantity (KG)	
	During the Previous Financial Year	During the Current Financial Year
(a) From Process	NIL*	NIL*
(b) From pollution control facilities.	NIL*	NIL*

* : The Coal to PVC project is under basic & detail engineering and process design stage,

Part - E

Solid waste

	Total Quantity (KG)	
	During the Previous Financial Year	During the Current Financial Year
(a) From Process	NIL*	NIL*
(b) From pollution control facilities.	NIL*	NIL*
(c) 1 - Quantity recycled OR re-utilized within the unit.	NIL*	NIL*
2 - Sold	NIL*	NIL*
3 - Disposed	NIL*	NIL*

* : The Coal to PVC project is under basic & detail engineering and process design stage,

Part – F

Please specify the characterizations (in terms of composition and quantum) of hazardous as well as solid waste and indicate disposal practice adopted for both these categories of wastes.

Hazardous Waste:

Presently, the Coal to PVC project is under basic & detail engineering and process design stage. However, M/s Mundra Petrochem Limited has taken membership of Common TSDF site operated by M/s Saurashtra Enviro Projects Private Limited, Kutch for safe disposal of following hazardous waste during construction and operation phase.

Name of Hazardous Waste	Category as per HWMR,2016 and amended	Schedule as per HWMR,2016 and amended	Authorized total generation Quantity (MT / year)	Mode of Disposal
Spent Catalyst and Molecular Sieves	1.6	I	1565	To be sent to an approved / authorized vendor for recovery / Disposal to authorized TSDF/ Recycler / Co-processing
Used OR Spent Oil	5.1	I	300	To be sent to registered Oil re-processor.
Empty barrels/containers/liners contaminated with hazardous chemicals /wastes	33.1	I	50	Disposed to authorized TSDF / recycler / Co-processing.
Spent ion exchange resin containing toxic metals	35.2	I	50	Disposed to authorized TSDF / recycler / Co-processing.
Chemical Sludge from Wastewater treatment	35.3	I	138601	Disposed to authorized TSDF / recycler / Co-Processing.

Solid Waste:

Presently, the Coal to PVC project is under basic & detail engineering and process design stage. However, following practices will be adopted during construction as well as operational phase of the project.

Type of Solid waste	Composition of Waste	Quantity (MT/Annum)	Mode of Transportation	Mode of Treatment / Disposal
Brine Sludge	Brine Sludge	17030	Truck	Disposal to authorized TSDF / Sanitary Landfill site / Sale to authorized brick manufacturers.
Carbon from coke drying tail gas dust removal system	Coke / Carbon fine particles	120000	Truck	To be Used in in-house cement plant as fuel along with coal OR Sent to TSDF if found hazardous after characterization.
Residues from Lime kiln cinder and shaker gravel	Lime stone, Lime and dust	108000	Truck	To be Used in in-house Cement plant / offsite cement plant as fuel along with coal OR sent to TSDF if found hazardous after characterization.
Residues from furnace gas purifies dust of dust collector	Carbon Fines	215000	Truck	To be Use in in-house Cement plant / offsite cement plant as fuel along with coal OR Sent to TSDF if found hazardous after characterization.
Calcium Carbide furnace slag	SiO ₂ , MgO etc.	400	Truck	To be Used in in-house cement plant / offsite cement plant as fuel along with coal OR sent to TSDF if found Hazardous after characterization.
Coke fine from sieve and dust collector	Coke	100000	Truck	To be Used in in-house cement plant / offsite cement plant as fuel along with Coal OR sent to TSDF if found hazardous after characterization.
Lime fines from sieve and dust collector	Lime	120000	Truck	To be Used in in-house cement plant / offsite cement plant as fuel along with coal OR sent to TSDF if found hazardous after characterization.
Boiler Ash	Boiler Ash	43200	Fly Ash Bulk trailer	To be Used in in-house cement plant
	Bottom Ash	21600	Fly Ash Bulk trailer	To be used in in-house cement plant.

Sewage Treatment Plant Sludge	Biological Sludges	602	Within site premises	Will be used as manure for gardening.
Municipal Solid waste	Canteen waste, scraped office stuff	~1270	Bags / Bins/ Dedicated area in scrap yard	Disposal to authorized sanitary landfill site / sale to recyclers of segregated wastes.
Biomedical Waste	Waste generated from Hospital activities.	As & when generated	Authorized collection vehicle	Bio medical waste to be sent to authorized common TSDF site.
Used lead acid batteries	Acid and other chemicals	As & when generated	Authorized collection vehicle	100 % buy - back policy implemented at site for collection and disposal of such type of waste.
Electronic waste	Damaged / obsolescence Electronic items	As & when generated	Vehicle of authorized recycler	To be sent to authorized recycler.
Construction and Demolition waste	Sand, cement, etc.	As & when generated	Truck	To be used for leveling of low laying area within the plant premises.

Part – G

Impact of the pollution abatement measures taken on conservation of natural resources and on the cost of production.

Presently, the Coal to PVC project is under basic & detail engineering and process design stage. However, following pollution control measures will be taken on conservation of natural resources and on the cost of production.

Aspect	Mitigation Measures
Air	<p>Construction phase:</p> <ul style="list-style-type: none"> • Periodic checking of vehicles and construction machinery to ensure compliance to emission standards • Water sprinkling on haul roads <p>Operation Phase:</p> <ul style="list-style-type: none"> • Adequate stack height will be provided to all flue gas stack. • Highly efficient Air Pollution Control Equipment will be installed to proposed process stacks & flue gas stack. • Installation of Online CEMS as applicable

	<ul style="list-style-type: none"> • Closed loop system will be proposed for transfer of liquid / solid raw material from storage / tank farm area to processing areas. • Greenbelt area will be developed at the facility. • Attenuation of pollution/protection of receptor through greenbelt/green cover. • Regular monitoring of air pollutant concentrations will be done. • All trucks shall be PUC Certified from time to time. • Vehicles with applicable Bharat Stage exhaust emission norms will be used.
Noise	<p>Construction Phase:</p> <ul style="list-style-type: none"> ▪ Regular preventive maintenance of vehicles and construction equipment will be done. <p>Operation Phase:</p> <ul style="list-style-type: none"> ▪ The high noise generating equipment's like ID Fans, Compressors, DG Sets shall be provided with noise insulation, Acoustic laggings and silencers to ensure that the noise level at 1 meter from the machine is <85dB(A) or minimum 25dB(A) noise attenuation. ▪ Proper PPEs will be provided to the workers working in the high noise area within the plant and compliance will be done with applicable regulations. ▪ Job Rotation of workers working in the high noise area. ▪ Implement good working practices (equipment selection) to minimize noise and reduce its impacts on human health (earmuffs, safe distances, and enclosures). ▪ Development of thick Green belt within the plant premises and along project boundary to screen noise.
Water	<ul style="list-style-type: none"> ▪ No impact on Ground Water as there is no Ground water use. ▪ Only desalinated sea water supplied by APSEZL, will be used for Industrial and domestic purposes. ▪ No adverse impacts on surface water, ground water or soil. There will be no disposal of effluent outside project premises. ▪ All effluent will be reduced at source by recycling and reuse after proper treatment to achieve the Zero Liquid Discharge. <p>Mitigation measures and ZLD Scheme</p> <ul style="list-style-type: none"> ▪ ETP and STPs will be installed for treatment of effluents. ▪ The ETPs will consists of primary, biological & tertiary treatment process. After tertiary treatment, treated water is made to pass through UF, RO System and MEE. RO permeate and MEE condensate are recycled back for utilization in utility areas. Hence, ETPs works on Zero Liquid Discharge (ZLD) concept. ▪ Similarly, treated sewage will be reused in gardening, reducing the overall freshwater demand. ▪ The Solids waste generated from ETP will be disposed through TSDF and Bio sludge from STP will be disposed by using it as manure in green belt

Soil	<ul style="list-style-type: none"> ▪ Measures for site development will be minimum as project site is already identified as industrial area of APSEZ. ▪ Free area will be paved. ▪ Tree plantation will be carried out. ▪ Shrubs and grass to be planted wherever open land available. ▪ Top soil to be kept aside and reused in Greenbelt development wherever possible.
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Part – H

Additional measures /investment proposal for environmental protection including abatement of pollution / prevention of pollution.

Presently, the Coal to PVC project is under basic & detail engineering and process design stage. However, following measures / activities have been initiated / completed for the betterment of environment.

- Mundra Petrochem Limited has completed mangrove plantation in an area of 1 Ha. Due to this, coastal plantation, different birds, crabs, fishes and other insects will be attracted towards coast.
- Conducted Awareness program at nearby villages for "Ban on Single Use plastic" and "Wildlife conservation and it's benefit".

Part – I

Any other particulars for improving the quality of the environment.

Presently, the Coal to PVC project is under basic & detail engineering and process design stage. However, following measures / activities have been initiated for betterment of environment.

- Mundra Petrochem Limited & Adani foundation in collaboration with Govt Agriculture dept organized at district level workshop at Mundra as a part of the "Bharat Ka Amrut Mahotsav". The workshop was aimed to bringing all together to promote, implement and ensure convergence of natural farming to village level by involving "Gram Sevak" of kutch region.
- MPL has also organized training program on "Jivamrut preparation". More than 150 Gram Sevak across Kutch had participated and made aware about systematic and scientific way for effective Natural farming practices and ensure to incorporate it to Farm.
- Various awareness program on wetland restoration and coastal biodiversity was organized involving students. On this occasion, representative from Gujarat Pollution Control Board and Gujarat Institute of Desert Ecology (GUIDE) were present and addressed.

- Mundra Petrochem Limited (MPL) in association with the Adani Foundation engaged various farming communities in villages surrounding to Coal to PVC project activity to spread awareness about the use of biogas generated from the cattle dung from Bio-gas plant which provide farmer's a sustainable solution for energy security for cooking and compost generated form the biogas plan will be used as organic fertilizer for natural farming.



Signature of a person carrying out
an industry – operation or Process
Name: Mr. Vinay Kumar Singh

Designation: General Manager – Environment &
Sustainability

Address: M/s Mundra Petrochem Limited,
"Adani Corporate House",
Shantigram, Near Vaishno Devi Circle,
S. G. Highway, Khodiyar
Ahmedabad 382 421
Gujarat, India

Annexure – I

List of Product

Plant	Product Details	Capacity
Industry Project – 1		
Semi-Coke Plant	Coke	2030 KTPA
	Tar	370 KTPA
	Crude Benzene	26 KTPA
	Ammonium Sulphate	18 KTPA
	Sulphur	5 KTPA
	Coking Gas	1360 MNm ³ /A
Cement Plant	Ordinary Portland Cement, Portland Pozzolona Cement, Portland Slag Cement, Portland Composite Cement	6000 KTPA
	Clinker	4000 KTPA
Calcium Carbide	Calcium Carbide	2900 KTPA
	Lime fines and lime residues	2870 KTPA
Industry Project – 2		
PVC Plant	Polyvinyl Chloride (PVC Grades: Suspension, Mass Emulsions, Chlorinated PVC etc.)	2000 KTPA
VCM Plant	Vinyl Chloride Monomer	2002 KTPA
Ethylene Glycol Plant	Ethylene Glycol (EG) (Superior Grade EG, Qualified Grade EG, MEG, DEG, TEG)	400 KTPA
	Dimethyl Carbonate	13 KTPA
	Crude Ethanol	10 KTPA
	Alkanol	7 KTPA
Industry Project – 3		
Caustic Soda Plant (Chlor-Alkali Process)	Caustic Soda	1310 KTPA
	Caustic Soda (50% wt)	810 KTPA
	Hydrochloric Acid	1232 KTPA
	Sodium Hypochlorite	16 KTPA
	Caustic Potash	130 KTPA
	Potassium Carbonate	33 KTPA
	Sodium bi-carbonate	66 KTPA
	Caustic Soda flakes	600 KTPA
	Liquid Chlorine	60 KTPA
	Sodium Sulphate	75 KTPA
Acetylene Plant	Acetylene	860 KTPA
	Carbide Lime Sludge	5700 KTPA



Ref: AEL/MPL/ENV/EC/2022 – September/07

Date: 06/09/2022

To,

Shri Shrawan Kumar Verma, IFS (Addl. Charge)
Deputy Director General of Forests (C)
Integrated Regional Office, Gandhi Nagar,
Ministry of Environment, Forest and Climate Change,
A-Wing-407 & 409, Aranya Bhawan, Near CH-3 Circle,
Sector-10A, Gandhinagar – 382010

एकीकृत क्षेत्रीय कार्यालय, गांधीनगर
Integrated Regional Office, Gandhinagar
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय,
Ministry of Environment, Forest & Climate Change,
Govt. of India / भारत सरकार
कक्ष क्र. 407 व 409 ए विंग अरण्या भवन
Room No.407 & 409, A wing Aranya Bhavan
गांधीनगर (गुजरात) / Gandhinagar(Gujarat)

Subject: Environment Clearance for Project "Caustic Soda-1310 KTPA and Acetylene-860 KTPA plants near village Vandh & Tunda, Taluka Mundra, District Kachchh, Gujarat by M/s Adani Enterprises Ltd.

Reference: EC Identification No. - EC22A013GJ127411, File No. - IA-J-11011/149/2021-IA-II(I) dated 31/08/2022

Dear Sir,

With reference to above subject, this is to inform that the Ministry of Environment Forest and Climate Change has granted Environment Clearance for "Industry-III activity i.e. Caustic Soda-1310 KTPA and Acetylene-860 KTPA" (as a part of Proposed Coal to Poly-Vinyl Chloride (PVC) Project of M/s Adani Enterprises Ltd. (AEL) in land notified as Industrial area of APSEZ, Ta Mundra, Dist-Kachchh, Gujarat, comprising of IND-I projects i.e. Semi Coke-2030 KTPA, Cement-6 MTPA; Clinker-4 MTPA, IND-II projects i.e. VCM- 2002 KTPA, PVC-2000 KTPA, Ethylene Glycol- 400 KTPA and IND-III projects i.e. Acetylene-860 KTPA & Caustic Soda-1310 KTPA) and Calcium Carbide-2900 KTPA (Not Specified in EIA Notification)) by M/s Adani Enterprises Ltd." vide EC Identification No. - EC22A013GJ127411, File No. - IA-J-11011/149/2021-IA-II(I) dated 31/08/2022. Copy enclosed as **Annexure - A**.

Accordingly, in compliance of EC condition No. B(x), we are submitting herewith copies of following News papers (**Annexure - B**) stating "the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB (GPCB) and may also be seen at Website of the Ministry at <https://parivesh.nic.in/> as well as on Company website at <https://adanienterprises.com/-/media/e1d3761e5b154108947fff67fe6d940c.ashx> " for your reference, please.

Adani Enterprises Ltd
"Adani Corporate House",
Shantigram, Near Vaishno Devi Circle,
S. G. Highway, Khodiyar
Ahmedabad 382 421
Gujarat, India
CIN: L51100GJ1993PLC019067

Tel. + 91 79 2656 5555
Fax + 91 79 2555 5500
info@adani.com
www.adani.com

Registered Office: "Adani Corporate House", Shantigram, Near Vaishno Devi Circle, S. G. Highway, Khodiyar, Ahmedabad - 382421



Sr. no.	Name of News Paper	Language	Date of Publication
1	Kutch Mitra	Gujarati	05/09/2022
2	Gujarat Samachar	Gujarati	05/09/2022
3	The Times of India	English	05/09/2022

Thanking You.
Yours Faithfully,

Authorized Signatory for Adani Enterprises Ltd,

Praveen Anant (Environment - Head)

Encl: As Above

Copy to:

1). **The Member Secretary,**
Gujarat Pollution Control Board,
Paryavaran Bhavan,
Sector – 10 A,
Gandhinagar 382 010

2). **The Regional Officer,**
Gujarat Pollution Control Board
(Kuchchh East),
Room no.215,216 & 217, Second floor,
Administration Office Building,
Deendayal Port Trust, Sector - 08,
Gandhidham – Kuchchh, 370 201

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અદાણી એન્ટરપ્રાઇઝીસ લિમિટેડ

શાંતિગ્રામ, એસ. જી. હાઇવે, અમદાવાદ - ૩૮૨૪૨૧. (ગુજરાત)

જાહેર નોટિસ

મેં. અદાણી એન્ટરપ્રાઇઝીસ લિમિટેડ, APSEZ ઔદ્યોગિક જમીન, વાંદ ઇ ટૂંડા ગામ નજીક, તા: મુન્દ્રા, જી: કચ્છ, ગુજરાત ખાતે પ્રસ્તાવિત "ઇન્ડસ્ટ્રી - ૩ એક્સિડેન્ટિયલ - કોસ્ટિક સોડા - ૧૩૧૦ કે.ટી.પી.એ. અને એસિડિલિન - ૮૬૦ કે.ટી.પી.એ." (જે સૂચિત કોલ ટુ પોલી - વિનાચલ (પી.વી.સી.) પ્રોજેક્ટ ના ભાગ રૂપે મેં. અદાણી એન્ટરપ્રાઇઝીસ લિમિટેડ દ્વારા પ્રસ્તાવિત, APSEZ ઔદ્યોગિક જમીન, વાંદ ઇ ટૂંડા ગામ નજીક, તા: મુન્દ્રા, જી: કચ્છ, ગુજરાત, જેમાં ઇન્ડસ્ટ્રી - ૧ પ્રોજેક્ટ - સેમી કોક - ૨૦૩૦ કે.ટી.પી.એ.; સિમેન્ટ - ૬ એમ.ટી.પી.એમ; ક્લિનકર - ૪ એમ.ટી.પી.એમ; ઇન્ડસ્ટ્રી - ૨ પ્રોજેક્ટ - વી.સી.એમ - ૨૦૦૨ કે.ટી.પી.એ., પી.વી.સી. - ૨૦૦૦ કે.ટી.પી.એ., ઇથીલીન ગ્લાયકોલ - ૪૦૦ કે.ટી.પી.એ, અને ઇન્ડસ્ટ્રી-૩ પ્રોજેક્ટ - એસિડિલિન - ૮૬૦ કે.ટી.પી.એ. અને કોસ્ટિક સોડા - ૧૩૧૦ કે.ટી.પી.એ અને કેલ્સિયમ કાબાઇડ - ૨૮૦૦ કે.ટી.પી.એ. (EIA નોટિફિકેશન માં દર્શાવેલ નથી) ના ભાગ રૂપે સમાવેશ થાય છે.)" માટે ની પર્યાવરણીય મૂલ્યો મિનિસ્ટ્રી ઓફ એન્વિરોમેન્ટ, ફોરેસ્ટ અને ક્લાઇમેટ ચેન્જ, નવી દિલ્લી ના પત્ર ક્રમાંક : EC Identification No. - EC22A013GJ127411, File No. - IA-J-11011/149/2021-IA-II(I) dated 31/08/2022 ના રોજ પ્રાપ્ત થયેલ છે. સદરહુ માન્યતા અંગેનો પત્ર ગુજરાત પ્રદુષણ નિયંત્રણ બોર્ડ ની ઓફિસ માં તેમજ મિનિસ્ટ્રી ઓફ એન્વિરોમેન્ટ, ફોરેસ્ટ અને ક્લાઇમેટ ચેન્જ ની વેબ સાઇટ <https://parivesh.nic.in> પરથી પણ જોઈ શકાશે. તદ્ ઉપરાંત એન્વિરોમેન્ટ કલેયરન્સ ની કોપી કંપનનીની વેબસાઇટ <https://www.adanienterprises.com/-/media/e1d3761e5b154108947fff67fe6d940c.ashx> પર પણ જોઈ શકાશે.

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પ્રોદ્યુત માણુ (પ્રોજેક્ટ ડેડ)

મેં. અદાણી એન્ટરપ્રાઇઝીસ લિમિટેડ



પત્ર નહીં મિત્ર

કચ્છમિત્ર

ભુજ - સોમવાર, તા.૦૫-૦૯-૨૦૨૨

કચ્છ

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અદાણી એન્ટરપ્રાઇસ લિમિટેડ

શાંતિગ્રામ, એસ. જી. હાઈવે, અમદાવાદ - ૩૮૨૪૨૧. (ગુજરાત)

જાહેર નોટિસ

મેં. અદાણી એન્ટરપ્રાઇસ લિમિટેડ, APSEZ ઔદ્યોગિક જમીન, વાંદ ઇ ટૂંડા ગામ નજીક, તા: મુન્દ્રા, જી: કચ્છ, ગુજરાત ખાતે પ્રસ્તાવિત "ઇન્ડસ્ટ્રી - ૩ એક્ટિવિટી - કોસ્ટિક સોડા - ૧૩૧૦ કે.ટી.પી.એ. અને એસિટિલિન - ૮૬૦ કે.ટી.પી.એ." (જે સૂચિત કોલ ટુ પોલી - વિનાયલ (પી.વી.સી.) પ્રોજેક્ટ ના ભાગ રૂપે મેં. અદાણી એન્ટરપ્રાઇસ લિમિટેડ દ્વારા પ્રસ્તાવિત, APSEZ ઔદ્યોગિક જમીન, વાંદ ઇ ટૂંડા ગામ નજીક, તા: મુન્દ્રા, જી: કચ્છ, ગુજરાત, જેમાં ઇન્ડસ્ટ્રી - ૧ પ્રોજેક્ટ - સેમી કોક - ૨૦૩૦ કે.ટી.પી.એ.; સિમેન્ટ - ૬ એમ.ટી.પી.એમ; ક્લિલકર - ૪ એમ.ટી.પી.એમ; ઇન્ડસ્ટ્રી - ૨ પ્રોજેક્ટ - વી.સી.એમ - ૨૦૦૨ કે.ટી.પી.એ., પી.વી.સી. - ૨૦૦૦ કે.ટી.પી.એ., ઈથીલીન ગ્લાયકોલ - ૪૦૦ કે.ટી.પી.એ, અને ઇન્ડસ્ટ્રી-૩ પ્રોજેક્ટ - એસિટિલિન - ૮૬૦ કે.ટી.પી.એ. અને કોસ્ટિક સોડા - ૧૩૧૦ કે.ટી.પી.એ અને કેલ્સિયમ કાર્બાઇડ - ૨૮૦૦ કે.ટી.પી.એ. (EIA નોટિફિકેશન માં દર્શાવેલ નથી) ના ભાગ રૂપે સમાવેશ થાય છે.)" માટે ની પર્યાવરણીય મંજૂરી મિનિસ્ટ્રી ઓફ એન્વિરોમેન્ટ, ફોરેસ્ટ અને ક્લાઇમેટ ચેન્જ, નવી દિલ્લી ના પત્ર ક્રમાંક : EC Identification No. - EC22A013GJ127411, File No. - IA-J-11011/149/2021-IA-II(I) dated 31/08/2022 ના રોજ પ્રાપ્ત થયેલ છે. સદરહુ માન્યતા અંગેનો પત્ર ગુજરાત પ્રદુષણ નિયંત્રણ બોર્ડ ની ઓફિસ માં તેમજ મિનિસ્ટ્રી ઓફ એન્વિરોમેન્ટ, ફોરેસ્ટ અને ક્લાઇમેટ ચેન્જ ની વેબ સાઇટ <https://parivesh.nic.in> પરથી પણ જોઈ શકાશે. તદ્ ઉપરાંત એન્વિરોમેન્ટ કલીયરન્સ ની કોપી કંપનનીની વેબસાઇટ <https://www.adanienterprises.com/-/media/e1d3761e5b154108947fff67fe6d940c.ashx> પર પણ જોઈ શકાશે.

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પ્રોદ્યુટ માન્ય (પ્રોજેક્ટ હેડ)

મેં. અદાણી એન્ટરપ્રાઇસ લિમિટેડ

Adani Enterprises Limited

Shantigram, S.G. Highway, Ahmedabad-382421. (Gujarat)

PUBLIC NOTICE

M/s Adani Enterprises Limited, APSEZ Industrial Land, Near Villages Vandh & Tunda, Taluka Mundra, District - Kachchh, Gujarat has been accorded Environmental Clearance (EC) for project "Industry-III activity i.e. Caustic Soda-1310 KTPA and Acetylene-860 KTPA (as a part of Proposed Coal to Poly - Vinyl Chloride (PVC) Project of AEL in land notified as industrial area of APSEZ, Ta - Mundra, Dist - Kachchh, Gujarat, comprising of IND - I projects i.e. Semi Coke - 2030 KTPA, Cement - 6 MTPA; Clinker - 4 MTPA, IND-II projects i.e. VCM - 2002 KTPA, PVC-2000 KTPA, Ethylene Glycol - 400 KTPA and IND - III projects i.e. Acetylene - 860 KTPA & Caustic Soda - 1310 KTPA) and Calcium Carbide - 2900 KTPA (Not Specified in EIA Notification)) by M/s Adani Enterprises Ltd." by Ministry of Environment, Forest and Climate Change, Government of India vide **EC Identification No. - EC22A013GJ127411, File No. - IA-J-11011/149/2021-IA-II(i) dated 31/08/2022**. The said clearance letter is available at website of the Ministry of Environment, Forest and Climate Change at <https://parivesh.nic.in> and also available at office of the Gujarat Pollution Control Board (GPCB). Copy of EC is also kept at website of the company at <https://www.adanienterprises.com/-/media/e1d3761e5b154108947fff67fe6d940c.ashx>

sd-

Pradyut Maji (Project Head)
M/s Adani Enterprises Limited