Ref: MPL/ENV/MoEF&CC/2024 – Nov/02 **Date:18th Nov, 2024**

To,

Shri Subrat Mohapatra, IFS (I/C)
Deputy Director General of Forests (C)
Ministry of Environment, Forest and Climate Change,
Integrated Regional Office, Gandhinagar,
A-Wing–407 & 409, Aranya Bhawan, Near CH-3 Circle,
Sector-10A, Gandhinagar – 382010
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Subject: Six monthly compliance report (April, 2024 to September, 2024) of Environment Clearance (EC) for the project activities "Semi Coke–2030 KTPA, Calcium Carbide–2900 KTPA, Cement–6 MTPA; Clinker–4 MTPA near village Vandh & Tunda, Taluka Mundra, District Kachchh, Gujarat by M/s Mundra Petrochem Limited.

Reference : 1). EC Identification no EC22A009GJ154137, File no. IA-J-11011/423/2021-IA-II(IND-I) Dated- 26/09/2022.
2). F.No.IA-J-11011/423/2021 – IA – II(Ind-I) Dated- 23/12/2022.
3). MPL/ENV/MoEF&CC/2024-May/05 Dated- 24th May, 2024.

Respected Sir,

With reference to above subject, MoEF&CC vide above refer letter dated 26/09/2022 has granted environment clearance for the project activities "Semi Coke–2030 KTPA, Calcium Carbide–2900 KTPA, Cement–6 MTPA; Clinker–4 MTPA near village Vandh & Tunda, Taluka Mundra, District Kachchh, Gujarat by M/s Adani Enterprises Limited". Followed by, MoEF&CC vide above refer letter dated 23/12/2022 has transferred the Environment Clearance on the name of M/s Mundra Petrochem Limited from M/s Adani Enterprises Limited.

Presently, the PVC project is under final design, detailed engineering & procurement stage including simultaneous site construction activities are in progress at site. We are hereby submitting a soft copy of the six-monthly EC compliance report for the period April, 2024 to September, 2024.

We hope you will find the above in order.

Thanking you,
Yours faithfully,

Mundra Petrochem Limited

Vinay Kumar Singh
Head – Environment & Sustainability

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

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MUNDRA PETROCHEM LIMITED

Six Monthly EC Compliance Report

April, 2024 – September, 2024

ENVIRONMENTAL CLEARANCE

FOR

The project activities "Semi Coke–2030 KTPA, Calcium Carbide–2900 KTPA, Cement–6 MTPA; Clinker–4 MTPA at Mundra, Kutch Gujarat

EC IDENTIFICATION NO. EC22A009GJ154137 DATED 26/09/2022

Mundra Petrochem Limited
Adani Corporate House, Shantigram, Near Vaishnodevi Circle, S G Highway, Ahmedabad-382421, Gujarat

Mundra Petrochem Limited

Introduction:

Mundra Petrochem Limited (MPL), wholly owned stepdown subsidiary of Adani Enterprises Limited (AEL) intends to setup a 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), Emulsion PVC (paste) etc. would be produced at the proposed 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 Clinker & 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. Products & bi-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 " 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) & 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 activities have been 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) vide order CTE-59301 dated 13/12/2022 and same was transferred in the name of Mundra Petrochem Limited on dated 12/04/2023.

Presently, the PVC project is under final design, detailed engineering & procurement stage including simultaneous construction activities are in progress at site.

Point wise compliance status of Environmental Clearance for Industrial activity-I- Proposed Semi Coke–2030 KTPA, Calcium Carbide–2900 KTPA, Cement–6 MTPA; Clinker–4 MTPA vide EC Identification No: EC22A009GJ154137, File No: IA-J-11011/423/2021-IA-II(IND-I) Date: 26/09/2022 & subsequent EC Transfer vide File no. IA-J-11011/423/2021-IA-II(IND-I) Dated 23/12/2022.

S. No	Conditions	Status
A	**Specific Conditions**	
(i)	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. Project proponent shall abide by all the orders and judicial pronouncements, made from time to time, passed by Hon'ble High Court of Gujarat in PIL No. 36 of 2022.	Noted & agreed with requirement. The matter of PIL No. 36 of 2022 was last posted/listed for hearing on 7th February 2023. Presently the matter is still pending for listing/hearing. The copy of latest status as per Hon'ble High Court of Gujarat is attached as **Annexure – I**. However, In the first hearing on the matter was held on 26th April 2022. The Hon'ble court waives notice against AEL due to compliance of all the provisions of EIA Notification and applicable office memorandums of MoEF&CC.
(ii)	The Environment Clearance (EC) granted to the project/ activity is strictly under the provisions of the EIA Notification, 2006 and its amendments issued from time to time. It does not tantamount/ construe to approvals/ consent/ permissions etc., required to be obtained or standards/conditions to be followed under any other Acts/Rules/Subordinate legislations, etc., as may be applicable to the project.	Noted & agreed with requirement. Consent to Establish (CTE) is granted by the Gujarat Pollution Control Board (GPCB) vide order CTE-59301 dated 13/12/2022 and same was transferred in the name of Mundra Petrochem Limited on dated 12/04/2023.
(iii)	The project proponent 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.	Noted and shall be complied with. Remarks – Presently, the PVC project is under final design, detailed engineering & procurement stage including simultaneous construction activities are in progress at site with incorporating the environmental protection measures and safeguards in line with the applicable regulatory requirements and best available technologies i.e. water sprinkling on roads for dust control, speed limits considering no air born fugitive dust generation, material movement within bulker or covered with tarpaulin sheets etc.

S. No	Conditions	Status
		Report with Photographs of the same is enclosed as **Annexure – II.**
(iv)	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. Remarks- Presently, the PVC project is under final design, detailed engineering & procurement stage including simultaneous construction activities are in progress at site. The best available technology being explored/considered/in detailed engineering to develop the carbon sink/carbon sequestration resources for capturing of carbon emitted. Also, community plantation activities are being carried out at surrounding villages aiming for carbon sequestration resources development. Refer details of plantation activities at **Annexure-IV**. Further, the implementation report on various carbon abatement initiatives being considered in project design & engineering shall be submitted to the IRO, MoEF&CC after successful commissioning of the project.
(v)	The activities and the action plan proposed by the project proponent to address the issues raised during public hearing and 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.	Noted and being complied with the requirements. Remarks – Presently, the PVC project is under final design, detailed engineering & procurement stage including simultaneous construction activities are in progress at site. Action plan proposed to address the issues raised during public hearing and socio-economic issues in the study area are in progress as MPL has already initiated CER activities in all villages surrounding to the project area and total CER expenditure incurred in various community welfare & eco-development activities during reporting period is INR. 170 lakhs and cumulative CER expenditure till the end of reporting period is approx. INR 1000 Lakhs.

S. No	Conditions	Status
		The details of CER activities with expenditures are summarized in CER report enclosed as **Annexure – III**.
(vi)	There are many water bodies including Jarpara Lake, Khari River, Nagavanti River, Dhanesri River, Phot River, Gulf of Kuchchh, Baradi Mata Creek, Kotdi Creek, Modhva Coast exists within the project site. A robust Drainage Conservation scheme to protect the natural drainage and its flow parameters; along with Soil conservation scheme and multiple Erosion control measures shall be implemented.	Noted and shall be complied with. Remarks – Water bodies like Jarpara Lake, Khari River, Nagavanti River, Dhanesri River, Phot River, Gulf of Kuchchh, Baradi Mata Creek, Kotdi Creek, Modhva Coast are outside of the project site. The PVC project is being established on land already notified as industrial land of APSEZ and there is no river or creek passing through inside the allotted industrial land to PVC project. Moreover, APSEZ has already developed the industrial land (SEZ) in such a way that no river course modification is required to be carried out. All the rivers passing through SEZ area are maintained through proper path for area drainage. Hence, no impact on natural drainage & its flow parameters and no soil erosion due to project activity are envisaged.
(vii)	As all the natural drainage including the micro drainage flows into the Gulf of Kutch, a drainage conservation plan shall be implemented. An adequate robust Erosion control and Soil Conservation Program (like Storm water diversion; Storm water drains with catch pits to trap run off material; Garland drains; Retention walls; Settling Ponds; Wheel washing arrangement; Silt removal from settling ponds and utilization; Greening & Paving; Excavated soil preservation for landscaping) shall be implemented.	Noted and shall be complied with. Remarks – The PVC project is being established on the land already notified as industrial land of APSEZ and there are no natural drains i.e., no river or creek are passing through inside the allotted industrial land to PVC project. A robust storm water drainage system with necessary catchments & settling arrangements are being designed for soil and water conservations.
(viii)	The Efforts shall be made to achieve power consumption of 70 units/tone of Portland Pozzolona cement (PPC) and 95 units/tone of cement for Ordinary Portland Cement and thermal energy consumption of 670 kcal/Kg of Clinker.	Noted and shall be complied with. Same will be complied with during operational phase. Presently, the PVC project is under final design, detailed engineering & procurement stage including simultaneous construction activities are in progress at site.

S. No	Conditions	Status
(ix)	Most of the transportation of raw material is by road, the distance of which is within 10 km. Project Proponent shall use overhead belt conveyor wherever possible. Action plan shall be prepared and implemented in a time bound manner from the date of issue of Environment Clearance after obtaining requisite statutory permissions from the concerned competent authority.	Noted and shall be complied with. Presently, the PVC project is under final design, detailed engineering & procurement stage including simultaneous construction activities are in progress at site with consideration of adequate conveying system (overhead belt conveyor, pipeline conveying system etc.) to the extent possible. The implementation of conveying system (overhead belt conveyor, pipeline conveying system etc.) wherever possible and/or applicable, shall be done as part of the establishment of the project.
(x)	The project proponent 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 a 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 geolocation 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.	Noted and shall be complied with the requirements. Remark: Presently, the PVC project is under final design, detailed engineering & procurement stage including simultaneous construction activities are in progress at site. However, Greenbelt 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. A total of 33% greenbelt shall be developed & maintained. However, tree plantation at nearby community villages including roadside plantations are in progress in consultation with local forest department. Copy of the implementation report is enclosed as **Annexure – IV** with photographs of the plantation activity.
(xi)	The total water requirement for Coal to PVC project will be 222.875 MLD. This will be met by internal recycling of 62 MLD and makeup water of 160.053 MLD from	Noted and shall be complied with the requirements.

S. No	Conditions	Status
	APSEZL Seawater Desalination plant. No groundwater extraction is permitted	Remarks: Water requirement for the construction and/or operation activities is being and/or shall be met through Seawater Desalination plant.
(xii)	All stockyards shall be having impervious flooring and shall be equipped with water spray system for dust suppression. Stock yards shall also have garland drains to trap the runoff material.	Noted and shall be complied with the requirements. Remarks: Presently, the PVC project is under final design, detailed engineering & procurement stage including simultaneous construction activities are in progress at site. Adequate facilities for dust control will be installed to suppress the dust and/or to prevent the generation of air born dust particles at stockyards area. Also, garland drains will also be provided to trap the runoff materials at stockyards.
(xiii)	Slip roads shall be provided at the gates and along crossings on main roads. All internal and connecting road to the Highway shall be black topped/ concreted with suitable load in term of Million Standard Axle (MSA) as per IRC guidelines.	Noted and shall be complied with the requirements. Remarks: internal and connecting road to highway for proposed project will be black topped and/or cement concrete (CC) with suitable load in term of Million Standard Axle (MSA) as per IRC guidelines.
(xiv)	Performance monitoring of pollution control equipment shall be taken up yearly and compliance status in this regard shall be reported to the concerned Regional Office of the MoEF&CC.	Noted and shall be complied with the requirements. During operation phase, performance monitoring of pollution control equipment will be conducted at prescribed interval and compliance status shall be reported to the concerned Regional Office of the MoEF&CC.
(xv)	Project Proponent shall implement the recommendations of CSIR-CIMFR on the Report which was conducted on validation of technology proposed for Semi-Coke Unit to evaluate all the environmental concerns arising out of the project activities and their conformity to the Indian Standards issued vide G.S.R. 277 (E) dated 31 March 2012 pertaining to Coke -Oven Plant.	Noted and shall be complied with the requirements. Remarks: Presently, the PVC project is under final design, detailed engineering & procurement stage including simultaneous construction activities are in progress at site. Recommendation by CSIR-CIMFR for Semi coke plant shall be implemented during execution / commissioning of semi coke unit for meeting the requirements of G.S.R. 277 (E)

S. No	Conditions	Status
		dated 31st March 2012 pertaining to Coke - Oven Plant.
(xvi)	Coke Oven Gas shall be desulfurized.	Noted and shall be complied with the requirements during execution/ commissioning of the unit.
(xvii)	Coke oven plant shall be equipped with modified wet quenching system.	Noted and shall be complied with the requirements during execution/ commissioning of the unit.
(xviii)	Dioxin and furans shall be monitored twice a year during co-processing of hazardous waste and report shall be submitted to the Regional Office of the MoEF&CC.	Noted and shall be complied with the requirements after commencement of the operations. Remarks: Presently, PVC project is under final design & detail engineering stage. However, dioxin and furans will be monitored twice a year during coprocessing of hazardous waste (if any) and report will be submitted to the Regional Office of the MoEF&CC.
(xix)	Project proponent shall develop separate drainage system for storm water and industrial wastewater and effectively prevent the pollution of natural waterbody.	Noted and shall be complied with the requirements. Remarks: Presently, the PVC project is under final design, detailed engineering & procurement stage including simultaneous construction activities are in progress at site. Adequate drainage system is being designed by considering "Zero Liquid Discharge" concept so that there will be no impact on natural waterbody through industrial wastewater. A separate drainage system for storm water and industrial wastewater is also being developed & maintained.
(xx)	Particulate matter emissions from cement mill stacks shall be less than 20 mg/Nm3.	Noted and shall be complied with the requirements. Remarks: Presently, the PVC project is under final design, detailed engineering & procurement stage including simultaneous construction activities are in progress at site. Adequate APC equipment will be installed to comply the prescribed emission norms.
(xxi)	Entire wastewater shall be treated and reused for plantation and dust suppression within the premises. Also,	Noted and shall be complied with the requirements.

S. No	Conditions	Status
	STP water shall be reused in plantation with a view to conserve fresh water.	Remarks: Presently, the PVC project is under final design, detailed engineering & procurement stage including simultaneous construction activities are in progress at site. The proposed project is on "Zero Liquid Discharge" concept and treated water will be re-used for gardening/planation, dust suppression, cooling water make-up and/or other industrial activities to conserve the fresh water. Also, treated water from STP will be utilized for horticulture & greenbelt development.
(xxii)	As committed by the project proponent to adopt the 15 villages, where habitation exists within the study area of the project site, namely Vandh, Tunda, Kandagara, Shiracha, Navinal, Jarpara, Mota Bhadiya, Tragadi, Nana Bhadiya, Nani Khakar, Moti Khakhar, Deshalpar, Moti Bhujpur, Nani Bhujpur and Modhva, Project Proponent shall adopt these villages and prepare and implement a robust plan to develop them into model villages in next 10 years.	Noted and being complied with the requirements. Remarks: In order to know the present social status and needs of the local community, a "Detailed Baseline & Need Assessment Study" was carried out through third party professional agency involving various stakeholders- local villagers, administration etc. and the recommendations of the study are further included in the CER plan for implementation in phased manner. MPL has already initiated CER activities in all the villages surrounding to the project area and total CER expenditure incurred in various community welfare & eco-development activities during reporting period is INR 170 Lakhs and cumulative CER expenditure till the end of reporting period is approx. INR 1000 Lakhs in line with project progress. The details of CER activities with expenditures are summarized in CER report enclosed as **Annexure – III**.
(xxiii)	Hot air dryer shall not be installed. Flue gases of preheater shall be used to dry the slag/bottom ash.	Noted and shall be complied with the requirements. Remarks: Presently, the PVC project is under final design, detailed engineering & procurement stage including simultaneous construction activities are in progress at site

S. No	Conditions	Status
		Utilization of off-gases and/or flue-gases for heating/drying purpose wherever possible is considered in design & engineering of the plant.
(xxiv)	DeSOx system shall be provided dry type. NOx level shall be maintained below 600 mg/Nm3 by using best available technology.	Noted and shall be complied with the requirements. Remarks Presently, the PVC project is under final design, detailed engineering & procurement stage including simultaneous construction activities are in progress at site with consideration of adequate APCM to control the pollutants withing the stipulated emission norms.
(xxv)	Petcoke dosing shall be controlled automatically to control SO2 emission from chimney within the prescribed limits.	Noted and shall be complied with the requirements. Remarks : Presently, the PVC project is under final design, detailed engineering & procurement stage including simultaneous construction activities are in progress at site with consideration of adequate APCM to control the pollutants withing the stipulated emission norms.
(xxvi)	The PP shall develop a control strategy and mitigation plan that incorporates pollution control measures. The Clean Air practices shall be adopted like mechanical collectors, wet scrubbers, fabric filters (baghouses), electrostatic precipitators, combustion systems (thermal oxidizers), condensers, absorbers, adsorbers, and biological degradation.	Noted and shall be complied with the requirements. Remarks : Presently, the PVC project is under final design, detailed engineering & procurement stage including simultaneous construction activities are in progress at site with consideration of adequate APCM to control the pollutants withing the stipulated emission norms.
(xxvii)	Sufficient numbers of additional truck mounted Fog/Mist water cannons shall be operated regularly inside the project premises and also in the surrounding villages to arrest suspended dust in the atmosphere. The PP to this effect shall implement a time bound Action Plan, and the compliance shall be submitted to IRO, MoEFCC.	Noted and shall be complied with the requirements. Remarks: Presently, the PVC project is under final design, detailed engineering & procurement stage including simultaneous construction activities are in progress at site with consideration of water sprinkling on roads for dust control, speed limits to avoid air born dust particle generation, material movement in bulker or covered with tarpaulin sheets etc are in place.

S. No	Conditions	Status
		Report with Photographs of the same is enclosed as **Annexure – II.** Simultaneously AAQM being carried out in project and nearby community area.
(xxviii)	A proper action plan must be implemented to dispose of the electronic waste generated in the industry	Noted and shall be complied with the requirements.
(xxix)	The total quantity of particulate matter generated (kg/month) and the percentage of this captured by pollution control units, must be reported every six months.	Noted and shall be complied with the requirements. Remarks: Presently, the PVC project is under final design, detailed engineering & procurement stage including simultaneous construction activities are in progress at site. During operation stage, half yearly report incorporating details of total generation of particulate matter and captured quantity will be submitted to concerned authority.
(xxx)	The project proponent shall take utmost importance in protecting, conserving, and enhancing the wildlife fauna in areas falling under their operational activities, especially the aquatic/ marine/ estuarine ecosystems. The recommendations of the approved Site-Specific Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report to the concerned Regional Office of the MoEF&CC.	Noted and shall be complied with the requirements. Remark: Presently, the PVC project is under final design, detailed engineering & procurement stage including simultaneous construction activities are in progress at site. Further, wildlife conservation plan is being implemented in consultation with the Forest Department, Kachchh, Bhuj, Details of activities performed as per approved site-specific wildlife conservation / management plan is attached as **Annexure – V.** Copy of the same report is being furnished to the Regional Office of the MoEF&CC along with six monthly compliance report.
(xxxi)	The project proponent shall not disturb the nearby Mangrove Forest and shall take necessary steps to protect, conserve and enhance them.	Noted and shall be complied with the requirements. Remarks: Presently, the PVC project is under final design, detailed engineering & procurement stage including simultaneous construction activities are in progress at site. Utmost priority is being given to conserve and protect the nearby mangroves forest. Further,

S. No	Conditions	Status
		same priority will be given during operation phase as well.
(xxxii)	The project proponent shall implement the Disaster/ Risk Management SOPs and protocols, as the Kutch area is prone to periodic cyclone storms. All the recommendations made in the risk assessment report shall be implemented and compliance status in this regard shall be furnished to the Regional Office of the MoEF&CC along with the six-monthly compliance report.	Noted and shall be complied with the requirements. Remarks: Presently, the PVC project is under final design, detailed engineering & procurement stage including simultaneous construction activities are in progress at site. At present, HAZOP review for the process plants is being carried out for all process units under PVC complex for identifying all potential hazard and operability problems and access the associated risks & safeguards along with risk reduction measures with help of guide words by structured review. Moreover, a detailed Risk Assessment study for the entire complex through reputed agency has also been carried out and subsequently Emergency Preparedness Plan and Disaster Management Plan will be prepared for further implementation. Further compliance status of the same will be submitted to the Regional Office of the MoEF&CC along with the six-monthly compliance report."
(xxxiii)	The project proponent shall comply with all the mitigation measures suggested by other divisions of MoEF&CC including Industry-II, Industry-III, Infra-I and also state departments like SPCB in the instant inter-linked PVC to Coal project.	Noted and shall be complied with the requirements. Remark: Presently, the PVC project is under final design, detailed engineering & procurement stage including simultaneous construction activities are in progress at site with incorporation of mitigation measures suggested by the other division of MoEF&CC including Industry -II, Industry – III, infra -1 and GPCB for this project,

S. No	Conditions	Status
(xxxiv)	The Plastic Waste Management Rules 2016, inter-alia, mandated banning of identified Single Use Plastic (SUP) items with effect from 01/07/2022. In this regard, CPCB has issued a direction to all the State Pollution Control Boards (SPCBs)/Pollution Control Committees (PCCs) on 30/06/2022 to ensure the compliance of Notification published by Ministry on 12/08/2021. The technical guidelines issued by the CPCB in this regard is available at https://cpcb.nic.in/technical-guidelines-3/. All the project proponents are hereby requested to sensitize and create awareness among people working within the Project area as well as its surrounding area on the ban of SUP in order to ensure the compliance of Notification published by this Ministry on 12/08/2021. A report, along with photographs, on the measures taken shall also be included in the six-monthly compliance report being submitted by the project proponents.	Noted and shall be complied with the requirements. Remarks: Regular awareness program are being conducted at nearby community area for ban on single use plastic including other sensitive issues to conserve the environment. Copy of the same is enclosed as **Annexure - VI**.
B	**General Conditions**	
I.	**Statutory compliance:**	
(i)	The Environment Clearance (EC) granted to the project/ activity is strictly under the provisions of the EIA Notification, 2006 and its amendments issued from time to time. It does not tantamount/ construe to approvals/ consent/ permissions etc., required to be obtained or standards/conditions to be followed under any other Acts/Rules/Subordinate legislations, etc., as may be applicable to the project.	Noted & agreed with requirements
II.	**Air quality monitoring and preservation**	
(i)	The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986	Noted and shall be complied with the requirements. Remarks: Presently, the PVC project is under final design, detailed engineering &

S. No	Conditions	Status
	vide G.S.R. No. 612 (E) dated 25th August, 2014 (Cement) and subsequent amendment dated 9th May, 2016 (Cement) and 10th May, 2016 (in case of Co-processing Cement) as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants), as amended from time to time), G.S.R 277 (E) dated 31st March 2012 (Coke Oven Plants) and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories	procurement stage including simultaneous construction activities are in progress at site Necessary OCEMS / CEMS will be installed for applicable parameters prescribed in CPCB guideline and same will be connected to SPCB and CPCB servers for 24 x7 for real time data transfer during operation phase.
(ii)	The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through labs recognized under Environment (Protection) Act, 1986.	Noted and shall be complied with the requirements during operation phase. Remarks: Presently, the PVC project is under final design, detailed engineering & procurement stage including simultaneous construction activities are in progress at site. Moreover, ambient air quality monitoring (AAQM) is being conducted at selected locations of project site and surrounding villages through third party NABL accredited laboratory and result of AAQM is found well within NAAQM standard. Environment Monitoring Report is enclosed as **Annexure – VII**.
(iii)	The project proponent shall install system to carryout Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM10 and PM2.5 in reference to PM emission, and SO2 and NOx in reference to SO2 and NOx emissions) within and outside the plant area at least at four locations (one within and three outside the plant area at an	Noted and shall be complied with the requirements. Remarks: Presently, the PVC project is under final design, detailed engineering & procurement stage including simultaneous construction activities are in progress at site. Ambient Air quality monitoring is being carried out through NABL accredited laboratory at suitable locations and result of AAQM is found well within NAAQM standards.

S. No	Conditions	Status
	angle of 120°each), covering upwind and downwind directions.	The Environment Monitoring report of the same is enclosed as Annexure - VII.
(iv)	The project proponent shall submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring and manual monitoring of air quality / fugitive emissions to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.	Noted and shall be complied with the requirements during operational phase. Remarks: Presently, the PVC project is under final design, detailed engineering & procurement stage including simultaneous construction activities are in progress at site. Continuous stack emission and air quality monitoring and results of manual stack monitoring and manual monitoring of air quality / fugitive emissions shall be submitted during operational phase. Moreover, Ambient air quality monitoring (AAQM) is being conducted at selected location of project site and surrounding villages through third party NABL accredited laboratory and result of AAQM is found well with in NAAQM standard. The Environment Monitoring report of the same is enclosed as **Annexure - VII.**
(v)	Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.	Noted and shall be complied with the requirements during operational phase. Remarks: Presently, the PVC project is under final design, detailed engineering & procurement stage including simultaneous construction activities are in progress at site. APC system for Stack / fugitive emissions are already incorporated in the design/engineering. Further, water sprinkling on roads for dust control, speed limits to avoid air born dust particle generation, material movement in bulker or covered with tarpaulin sheets etc are in place. Report with Photographs of the same is enclosed as **Annexure – II.**

S. No	Conditions	Status
(vi)	The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.	Noted and shall be complied with the requirements during operational phase. Remarks: Presently, the PVC project is under final design, detailed engineering & procurement stage including simultaneous construction activities are in progress at site. Necessary control measures are being considered in the detailed engineering for leakage detection and mechanized bag cleaning facilities for better maintenance of bags at the time of operations.
(vii)	Pollution control system in the cement plant shall be provided as per the CREP Guidelines of CPCB.	Noted and shall be complied with the requirements during operational phase. Remarks: Presently, the PVC project is under final design, detailed engineering & procurement stage including simultaneous construction activities are in progress at site. Adequate pollution control system as per CREP guidelines of CPCB for cement plant are incorporated in the design/engineering.
(viii)	Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.	Noted and shall be complied with the requirements during operational phase. Remarks: Presently, the PVC project is under final design, detailed engineering & procurement stage including simultaneous construction activities are in progress at site.
(ix)	Ensure covered transportation and conveying of raw material to prevent spillage and dust generation; Use closed bulkers for carrying fly ash	Noted and shall be complied with the requirements during operational phase. Remarks: Presently, the PVC project is under final design, detailed engineering & procurement stage including simultaneous construction activities are in progress at site with due care for controlling the dust generation and ensuring the transportation and conveying of raw material to prevent spillages.
(x)	Provide wind shelter fence and chemical spraying on the raw material stock piles	Noted and shall be complied with the requirements during operational phase. Remarks: Presently, the PVC project is under final design, detailed engineering &

S. No	Conditions	Status
		procurement stage including simultaneous construction activities are in progress at site. All necessary control measures are being considered during the detailed engineering for further implementation at site at the time of commencement of operations.
(xi)	Provide Low NOX burners as primary measures and SCR / NSCR technologies as secondary measure to control NOX emissions.	Noted and shall be complied with the requirements during operational phase.
(xii)	Have separate truck parking area and monitor vehicular emissions at regular interval.	Noted and shall be complied with the requirements. Remark: Presently, the PVC project is under final design, detailed engineering & procurement stage including simultaneous construction activities are in progress at site. Separate truck parking area is considered and only vehicles having valid PUC certificate are being allowed to enter the premises. Further, AAQM are being carried out on regular interval to verify the air quality level at identified area.
(xiii)	Efforts shall be made to reduce impact of the transport of the raw materials and end products on the surrounding environment including agricultural land by the use of covered conveyor belts / railways as a mode of transport	Noted and shall be complied with the requirements during operational phase. Remarks: Presently, the PVC project is under final design, detailed engineering & procurement stage including simultaneous construction activities are in progress at site. Adequate control measures to reduce adverse impact on the surrounding environment due to transportation of construction materials is provided Necessary conveyor systems are being considered/designed for further implementation at site to reduce the road transportation during operational phase.

S. No	Conditions	Status
(xiv)	Ventilation system shall be designed for adequate air changes as per ACGIH document for all tunnels, motor houses, cement bagging plants.	Noted and shall be complied with the requirements during operational phase.
(xv)	Facilities for spillage collection shall be provided for coal and coke on wharf of coke oven batteries (Chain conveyors, land based industrial vacuum cleaning facility).	Noted and shall be complied with the requirements during operational phase. Remarks: Presently, the PVC project is under final design, detailed engineering & procurement stage including simultaneous construction activities are in progress at site. All necessary spill control & collection measures are being considered during the detailed engineering for further implementation at site at the time of commencement of operations.
(xvi)	Land-based APC system shall be installed to control coke pushing emissions.	Noted and shall be complied with the requirements during operational phase. Remarks: Presently, the PVC project is under detailed engineering & procurement stage. All necessary control measures are being considered during the detailed engineering for further implementation at site at the time of commencement of operations.
(xvii)	Monitor CO, HC and O2 in flue gases of the coke oven battery to detect combustion efficiency and cross leakages in the combustion chamber.	Noted and shall be complied with the requirements during operational phase.
(xviii)	Vapor absorption system shall be provided in place of vapour compression system for cooling of coke oven gas in case of recovery type coke ovens.	Noted and shall be complied with the requirements during operational phase.
III.	**Water quality monitoring and preservation**	
(i)	The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R. No. 612 (E) dated 25th August, 2014 (Cement) and subsequent amendment dated 9thMay, 2016 (Cement) and 10th May, 2016 (in case of	Noted and shall be complied with the requirements. Remarks: Presently, the PVC project is under final design, detailed engineering & procurement stage including simultaneous construction activities are in progress at site.

S. No	Conditions	Status
	Co-processing Cement) as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants), as amended from time to time), G.S.R 277 (E) dated 31st March 2012 (Coke Oven Plants) and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.	Necessary OCEMS / CEMS will be installed for applicable parameters prescribed in CPCB guideline and same will be connected to SPCB and CPCB servers for 24 x7 for real time data transfer during operational phase.
(ii)	The project proponent shall regularly monitor ground water quality at least twice a year (pre and post-monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognized under Environment (Protection) Act, 1986 and NABL accredited laboratories	Noted and shall be complied with the requirements during operational phase. Remark: Presently, the PVC project is under final design, detailed engineering & procurement stage including simultaneous construction activities are in progress at site. Ground water qualities of the surrounding area have been monitored at identified locations during pre-monsoon seasons through NABL accredited laboratories. Report for the same is enclosed as **Annexure – VII.** Further, at the time of plant operations, ground water quality of the plant area will be monitored at least twice a year (pre and post-monsoon) at sufficient numbers of piezometers/sampling wells with in the plant and adjacent areas as well through labs recognized under Environment (Protection) Act, 1986 and NABL accredited laboratories.
(iii)	Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.	Noted & being complied with. At present, Modular STP has been installed for construction phase and the latest Environment Monitoring report of the same is enclosed as **Annexure – VII**. Sewage Treatment Plant (STPs) for treatment of domestic effluent during operational phase will be designed & commissioned at site prior to full-fledged operations of the project.

S. No	Conditions	Status
(iv)	Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off	Noted and shall be complied with the requirements during operational phase. Remark: Presently, the PVC project is under final design, detailed engineering & procurement stage including simultaneous construction activities are in progress at site. Adequate storm water drainage system is being designed to arrest the run-off in the event of heavy rains and to avoid the contamination of surface run-off.
(v)	Water meters shall be provided at the inlet to all unit processes in the cement plant.	Noted and shall be complied with the requirements during operational phase.
(vi)	The project proponent shall make efforts to minimize water consumption in the cement plant complex by segregation of used water, practicing cascade use and by recycling treated water.	Noted and shall be complied with the requirements during operational phase.
(vii)	The project proponent shall provide the ETP for coke oven and by-product to meet the standards prescribed in G.S.R 277 (E) dated 31st March 2012 (Integrated iron & Steel); G.S.R 414 (E) dated 30th May 2008 (Sponge Iron) as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time.	Noted and shall be complied with the requirements during operational phase.
IV.	**Noise monitoring and prevention**	
(i)	Noise quality shall be monitored as per the prescribed Noise Pollution (Regulation and Control) Rules, 2000 and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.	Noted and shall be complied with. Presently, the PVC project is under final design, detailed engineering & procurement stage including simultaneous construction activities are in progress at site. Moreover, ambient noise quality monitoring (ANQM) is being carried out at selected locations of project site and surrounding villages through third party NABL accredited laboratory and result of ANQM conforms to

S. No	Conditions	Status
		the standards prescribed under E(P)A Rules, 1986. The Environment Monitoring report is enclosed as **Annexure – VII.**
(ii)	The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.	Noted and shall be complied with. Presently, the PVC project is under final design, detailed engineering & procurement stage including simultaneous construction activities are in progress at site. Moreover, ambient noise quality monitoring (ANQM) is being carried out at selected locations of project site and surrounding villages through third party NABL accredited laboratory and result of ANQM conforms to the standards prescribed under E(P)A Rules, 1986. The Environment Monitoring report is enclosed as **Annexure – VII**.
V.	**Energy Conservation measures**	
(i)	Waste heat recovery system shall be provided for kiln and cooler.	Noted and shall be complied with the requirements during operational phase. Remarks: Presently, the PVC project is under final design, detailed engineering & procurement stage including simultaneous construction activities are in progress at site.
(ii)	The project proponent makes efforts to achieve power consumption less than 65 units/ton for Portland Pozzolona Cement (PPC) and 85 units/ton for Ordinary Portland Cement (OPC) production and thermal energy consumption of 670 Kcal/Kg of clinker.	Noted and shall be complied with the requirements during operational phase. Remarks: Presently, the PVC project is under final design, detailed engineering & procurement stage including simultaneous construction activities are in progress at site.
(iii)	Provide solar power generation on roof tops of buildings, for solar light system for all common areas, streetlights, parking around project area and maintain the same regularly	Noted and shall be complied with the requirements. Remarks: Presently, the PVC project is under final design, detailed engineering & procurement stage including simultaneous construction activities are in progress at site. Further, possibilities are being explored/considered to use more renewable energy including provision of solar power

S. No	Conditions	Status
		generation on roof tops of buildings, for solar light system for all common areas, streetlights, parking around project area, wherever possible during project execution phase.
(iv)	Provide the project proponent for LED lights in their offices and residential areas.	Noted and shall be complied with the requirements. Remarks: Energy efficiency measures are being considered in the project design & engineering. The best available lighting equipment / LED will be provided at offices and residential areas.
VI.	**Waste management**	
(i)	Used refractories shall be recycled as far as possible.	Noted and shall be complied with the requirements during operational phase. Remarks: Presently, the PVC project is under final design, detailed engineering & procurement stage including simultaneous construction activities are in progress at site. Moreover, used refractories will be recycled as far as possible during operational phase.
VII.	**Green Belt**	
(i)	The project proponent shall prepare GHG emissions inventory for the plant and shall submit the program for reduction of the same including carbon sequestration by trees in the plant premises.	Noted and shall be complied with the requirements. Remarks: Presently, the PVC project is under final design, detailed engineering & procurement stage including simultaneous construction activities are in progress at site. A detailed Life cycle assessment study is being carried out through third party professional agency. On finalization of project design and LCA study, GHG emissions inventory for the plant will be prepared along with reduction strategy by incorporating carbon sequestration scheme through plantation program after commissioning of the project.

S. No	Conditions	Status
(ii)	Project proponent shall submit a study report within six months on De-carbonization program, which would essentially consist of company's carbon emissions, carbon budgeting/ balancing, carbon sequestration activities and carbon offsetting strategies. Further, the report shall also contain time bound action plan to reduce its carbon intensity of its operations and supply chains, energy transition pathway from fossil fuels to Renewable energy etc. All these activities/ assessments should be measurable and monitorable with defined time frames.	Noted and shall be complied with the requirements. Remarks: Presently, the PVC project is under final design, detailed engineering & procurement stage including simultaneous construction activities are in progress at site. A detailed decarbonization program shall be prepared after completion of final engineering of the different processes including GHG emission inventory and LCA study. An action plan for the same will be prepared, implemented, monitored and same shall be submitted.
VIII.	**Public hearing and Human health issues**	
(i)	Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.	Noted and shall be complied with the requirements. Remarks: Presently, the PVC project is under final design, detailed engineering & procurement stage including simultaneous construction activities are in progress at site. At present, HAZOP review for the process plants is being carried out for all the process units under PVC complex for identifying all potential hazard and operability problems and access the associated risks & safeguards along with risk reduction measures with help of guide words by structured review. Moreover, by considering the final design & engineering, a detailed Risk Assessment study for the entire complex through reputed agency is being conducted and subsequently Emergency Preparedness Plan and Disaster Management Plan will be prepared for further implementation.

S. No	Conditions	Status
(ii)	The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms.	Noted and shall be complied with the requirements. Remarks: Presently, the PVC project is under final design, detailed engineering & procurement stage including simultaneous construction activities are in progress at site. Further, heat stress analysis for the workmen who work in high temperature work zone will be carried out in operational phase & necessary PPEs will be provided as per the norms.
(iii)	Occupational health surveillance of the workers shall be done on a regular basis and records maintained.	Noted and shall be complied with the requirements. Remarks: Presently, the PVC project is under final design, detailed engineering & procurement stage including simultaneous construction activities are in progress at site. Regular health check-up is being done and fitness reports of workers / employees during construction phase is maintained. Further, on commencement of operations, occupational health surveillance of the workers will be done on a regular basis and records of the same shall be maintained.
IX.	**Environment Management**	
(i)	The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 30/09/2020. As part of Corporate Environment Responsibility (CER) activity, company shall adopt villages based on the socio-economic survey and undertake community developmental activities in consultation with the village Panchayat and the District Administration as committed	Noted and is 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 being carried out in phased manner under Corporate Environmental Responsibility (CER) by involving local villages and administration. In order to know the present social status and needs of the local community, a "Baseline & Need Assessment Study" was also carried out through third party professional agency involving various stakeholders- local villagers, administration etc. and the recommendation

S. No	Conditions	Status
		of the study is further included in the CER plan for implementation in phased manner. 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 reporting period is INR 170 Lakhs and cumulative CER expenditure till the end of reporting period is approx. INR 1000 Lakhs in line with project progress. The details of CER activities implemented during the reporting period along with expenditures are summarized in CER report enclosed as **Annexure – III**.
(ii)	The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/ violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.	A group level "Environmental policy" of the organization is framed and Mundra Petrochem Limited (MPL) is committed to follow the group level environment policy requirement. The group level "Environmental policy" of the organization is enclosed as "**Annexure – VIII**".
(iii)	A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.	Presently, the PVC project is under final design, detailed engineering & procurement stage including simultaneous construction activities are in progress at site. Further, a separate Environmental Management Cell having qualified persons with specialization in Environmental Science / Engineering has been developed in which EMC head is directly reporting to Head of

S. No	Conditions	Status
		Organization i.e. CEO as per company hierarchy. Furthermore, full-fledged environment management cell cum laboratory will also be developed at site for day-to-day environment management including carrying out the environmental monitoring activities as per the operational phase environment management plan.
X.	**Miscellaneous**	
(i)	The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently	The advertisement stating the project has been accorded environmental clearance by MoEF&CC and also displayed on company website was published on following news papers on 30th September, 2022. (i.e within 7 days of grant of Environmental Clearance). 1. Kutch Mitra (Gujarati Language) 2. Gujarat Samachar (Gujarati Language) 3. The Times of India (English Language). Copies of the same have already been submitted to concerned authorities through vide our letter no. AEL/MPL/ENV/MoEF&CC/2022 – September/11 dated 30/09/2022. Copy enclosed as **Annexure – IX**."
(ii)	The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.	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. 1. AEL/MPL/ENV/MoEF&CC/2022-September/08 Dated 28/09/2022. 2. AEL/MPL/ENV/MoEF&CC/2022-September/09 Dated 28/09/2022. 3. AEL/MPL/ENV/MoEF&CC/2022-September/11 Dated 30/09/2022." Copies of the same is enclosed as **Annexure – X.**
(iii)	The project proponent shall upload the status of compliance of the stipulated	Six monthly compliance reports of stipulated environment clearance conditions including

S. No	Conditions	Status
	environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.	results of monitored data being uploaded on company's website i.e https://www.adanienterprises.com. A soft copy of the same is also being submitted to concerned authorities. Last six-monthly compliance was submitted to concerned authorities on 24th May, 2024.
(iv)	The project proponent shall monitor the criteria pollutants level namely, PM_{10}, SO_2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company	Noted and shall be complied with the requirements after commissioning of the project.
(v)	The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.	Six monthly compliance report on stipulated environmental conditions being uploaded on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal. A soft copy of the same is also being submitted to concerned authorities. Last six-monthly compliance was submitted to concerned authorities on 24th May, 2024.
(vi)	The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.	Presently, the PVC project is under final design, detailed engineering & procurement stage including simultaneous construction activities are in progress at site. However, Environmental Statement for the year 2023 – 2024 have been submitted to Gujarat Pollution Control Board through vide our letter no. MPL/ENV/GPCB – Form – V/ 2024 – May/02 dated 18/05/2024 i.e within stipulated time period and same is also available on Company Website i.e https://www.adanienterprises.com. Copy of the submission is enclosed as **Annexure – XI**.
(vii)	The project proponent 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, commencing the land	Noted and complied. The requisit informations are being submitted to authority as part of six monthly EC compliance report. Remarks: Presently, the PVC project is under final design, detailed engineering &

S. No	Conditions	Status
	development work and start of production operation by the project.	procurement stage including simultaneous construction activities are in progress at site. The date of financial closure is 25th April 2024 when MPL signed the financing documents with the lead bank. The commencement of land development including earth work preparation, piling for foundation/construction activities have been initiated after award of consent of establishment (CTE) from the state pollution control board i.e. 13th Dec. 2022 after obtaining necessary environmental clearance from the MoEF&CC. As per schedule, the production/commercial operation of all the proposed units is expected by 1st October 2027.
(viii)	The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.	Noted and being complied with the requirements. Remarks: Presently, the PVC project is under final design, detailed engineering & procurement stage including simultaneous construction activities are in progress at site. However, MPL has already initiated CER activities in all villages surrounding project area in line with project progress to address the commitments and recommendations made in the EIA/EMP report, commitments made during Public Hearing and also that during presentation. Total CER expenditure incurred in various community welfare & eco-development activities during reporting period is INR 170 Lakhs and cumulative CER expenditure till the end of reporting period is approx. INR 1000 Lakhs. The details of CER activities with expenditures are summarized in CER report enclosed as **Annexure – III**.
(ix)	The PP shall put all the environment related expenditure, expenditure related to Action Plan on the PH issues, and other commitments made in the EIA/EMP Report etc. in the company web site for	Noted and being complied with the requirements. Remarks - Presently, the PVC project is under final design, detailed engineering & procurement stage including simultaneous

S. No	Conditions	Status
	the information to public/public domain. The PP shall also put the information on the leftover funds allocated to EMP and PH as committed in the earlier ECs and shall be carried out and spent in next three years, in the company web site for the information to public/public domain.	construction activities are in progress at site. Action plan proposed to address the issues raised during public hearing and socio-economic issues in the study area are being implemented as project progress at site. MPL has already initiated CER activities in all villages surrounding project area Total CER expenditure incurred in various community welfare & eco-development activities during reporting period is INR 170 Lakhs and cumulative CER expenditure till the end of reporting period is approx. INR 1000 Lakhs. 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 as part of EC Compliance. The details of CER activities with expenditures are summarized in CER report enclosed as **Annexure – III**.
(x)	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).	Agreed with requirement.
(xi)	The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.	Agreed with requirement.

Annexures

Annexure No.	Name
I	Status of PIL no 36/2022
II	Photographs of Water Sprinkling and APC measures.
III	CER Activities.
IV	Tree Plantation Activities.
V	Activities as per approved "Wildlife Conservation Plan".
VI	Awareness Program on "Ban on Single use Plastic".
VII	Environment Monitoring Report.
VIII	Environment Policy.
IX	Letter for submission of News paper and EC copy to concern authorities.
X	Letter for Submission of EC copy to Concern Local Authorities.
XI	e-mail copy of submission of Environment Statement – Form – V.

Annexure – I

Status of PIL No. 36/2022

This PIL NO. 36/2022 was filed by the petitioner (the Kheti Vikas Seva Trust) against Union of India (along with 6 respondents where AEL is one of the party) in Hon'ble Gujarat High Court with a prayer to stay the public hearing for the interlinked project of M/s Adani Enterprises Ltd. (Now transferred to Mundra Petrochem Limited) scheduled for 30th April 2022. In the first hearing on the matter was held on 26th April 2022. The Hon'ble court waives notice against AEL and did not order any stay to conduct the public hearing on the scheduled date.

The public hearing was successfully completed by the Gujarat Pollution Control Board (GPCB) on 30th April 2022 with respect to all the provisions of EIA Notification and applicable office memorandums of MoEF&CC. Subsequently, the project was appraised by MoEF&CC and accorded Environmental Clearance (EC) for the above referred PVC project (interlinked project).

The PIL matter was last posted for hearing on 7th February 2023. Presently the matter is still pending for hearing. A copy of the latest update (as on 18th November 2024) is attached herewith as Annexure-I.A.

Moreover, all processes related to EIA studies & public hearing for grant of Environment clearance complied with all the provisions of EIA Notification and applicable office memorandums of MoEF&CC.

Annexure - IA

WRIT PETITION (PIL) WRIT PETITION (PIL) No. 36 of 2022

Status : PENDING | **(Filing(Stamp) Number : WPPIL/12417/2022)** | **CNR No : GJHC240244952022**

Last Listing Date: 07/02/2023

Coram
- HONOURABLE THE CHIEF JUSTICE MRS. JUSTICE SUNITA AGARWAL and HONOURABLE MR. JUSTICE PRANAV TRIVEDI

S.NO.	Petitioner Name	Advocate On Record
1	KHETI VIKAS SEVA TRUST THROUGH PRESIDENT NARAN BHARU SEDA GADHVI	MR SIRAJ R GORI(2298) for: Applicant(s) 1

S.NO.	Respondent Name	Advocate On Record
1	UNION OF INDIA	MR ANKIT SHAH(6371) for :Opponent(s) 1
2	STATE OF GUJARAT	GOVERNMENT PLEADER(1) for :Opponent(s) 2,5
3	CENTRAL POLLUTION CONTROL BOARD	NOTICE NOT RECD BACK(3) for :Opponent(s) 3,6
4	GUJARAT POLLUTION CONTROL BOARD	CHINTAN H DAVE(7193) for :Opponent(s) 4
5	DISTRICT COLLECTOR	SINGHI & CO(2725) for :Opponent(s) 7
6	REGIONAL OFFICER (GUJARAT)	
7	ADANI ENTERPRISES LTD.	

Presented On : 18/04/2022
Registered On : 21/04/2022
Bench Category : DIVISION
District : KACHCHH
Case Originated From : -
Purpose of Listing : 192-NOTICE & ADJOURNED MATTERS
Classification
- 876-DB - PIL - PIL - ANY OTHER / MISCELLANEOUS MATTERS

Act
- CONSTITUTION OF INDIA

Office Objections

NO DATA FOR OFFICE OBJECTIONS

Court Proceedings

S. No.	Notified Date	CourtCode	Board Sr. No.	Stage	Action	Coram
1	26/04/2022	1	24	192-NOTICE & ADJOURNED MATTERS	1-NEXT DATE	HONOURABLE THE CHIEF JUSTICE MR. JUSTICE ARAVIND KUMAR HONOURABLE MR. JUSTICE ASHUTOSH SHASTRI
2	20/06/2022	1	59	192-NOTICE & ADJOURNED MATTERS	1-NEXT DATE	HONOURABLE THE CHIEF JUSTICE MR. JUSTICE ARAVIND KUMAR HONOURABLE MR. JUSTICE ASHUTOSH SHASTRI
3	05/07/2022	1	45	192-NOTICE & ADJOURNED MATTERS	1-NEXT DATE	HONOURABLE THE CHIEF JUSTICE MR. JUSTICE ARAVIND KUMAR HONOURABLE MR. JUSTICE ASHUTOSH SHASTRI
4	25/07/2022	1	47	192-NOTICE & ADJOURNED MATTERS	1-NEXT DATE	HONOURABLE THE CHIEF JUSTICE MR. JUSTICE ARAVIND KUMAR HONOURABLE MR. JUSTICE ASHUTOSH SHASTRI
5	25/08/2022	1	84	192-NOTICE & ADJOURNED MATTERS	1-NEXT DATE	HONOURABLE THE CHIEF JUSTICE MR. JUSTICE ARAVIND KUMAR HONOURABLE MR. JUSTICE ASHUTOSH SHASTRI
6	15/09/2022	1	65	192-NOTICE & ADJOURNED MATTERS	1-NEXT DATE	HONOURABLE THE CHIEF JUSTICE MR. JUSTICE ARAVIND KUMAR HONOURABLE MR. JUSTICE ASHUTOSH SHASTRI
7	13/10/2022	1	59	192-NOTICE & ADJOURNED MATTERS	1-NEXT DATE	HONOURABLE THE CHIEF JUSTICE MR. JUSTICE ARAVIND KUMAR HONOURABLE MR. JUSTICE ASHUTOSH SHASTRI
8	24/11/2022	1	52	192-NOTICE & ADJOURNED MATTERS	1-NEXT DATE	HONOURABLE THE CHIEF JUSTICE MR. JUSTICE ARAVIND KUMAR HONOURABLE MR. JUSTICE ASHUTOSH SHASTRI
9	22/12/2022	1	20	192-NOTICE & ADJOURNED MATTERS	1-NEXT DATE	HONOURABLE THE CHIEF JUSTICE MR. JUSTICE ARAVIND KUMAR HONOURABLE MR. JUSTICE ASHUTOSH SHASTRI

Available Orders

S. No.	Case Details	Judge Name	Order Date	CAV	Judgement	Questions	Transferred	Download
1	WPPIL/36/2022	◦ HONOURABLE THE CHIEF JUSTICE MR. JUSTICE ARAVIND KUMAR ◦ HONOURABLE MR. JUSTICE ASHUTOSH SHASTRI	26/04/2022	N	ORDER	-	Y	Download
2	WPPIL/36/2022	◦ HONOURABLE THE CHIEF JUSTICE MR. JUSTICE ARAVIND KUMAR ◦ HONOURABLE MR. JUSTICE ASHUTOSH SHASTRI	22/12/2022	N	ORDER	-	Y	Download

Connected Matters

NO DATA FOR CONNECTED MATTERS

Application / Appeal Matters

NO DATA FOR APPLICATION / APPEAL MATTERS

IA Details

Office Details

S. No.	Filing Date	Document Name	Advocate Name	Court Fee on Document	Document Details
1	21/04/2022	MEMO OF PETITION/APPEAL/SUIT	MR SIRAJ R GORI(2298) for PETITIONER(s)	100	-KHETI VIKAS SEVA TRUST THROUGH PRESIDENT NARAN BHARU SEDA GADHVI
2	21/04/2022	VAKALATNAMA	MR SIRAJ R GORI(2298) for PETITIONER(s)	5	-KHETI VIKAS SEVA TRUST THROUGH PRESIDENT NARAN BHARU SEDA GADHVI
3	09/06/2022	VAKALATNAMA	SINGHI & CO(2725) for RESPONDENT(s)	5	-ADANI ENTERPRISES LTD.
4	20/06/2022	APPEARANCE NOTE	MR. PARTH H BHATT(6381) for RESPONDENT(s)	0	-UNION OF INDIA
5	04/07/2022	VAKALATNAMA	CHINTAN H DAVE(7193) for RESPONDENT(s)	0	-GUJARAT POLLUTION CONTROL BOARD
6	31/07/2023	APPEARANCE NOTE	MR ANKIT SHAH(6371) for RESPONDENT(s)	0	-UNION OF INDIA

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Lower Court Detail

NO DATA FOR LOWERCOURT DETAIL

FIR Details

NO DATA FOR FIR DETAILS

Translated Orders/Judgments

NO DATA

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Annexure – II

Air Pollution Controlling Measures during construction phase at GPVC site.

Mundra Petrochem Limited has prepared and implemented Environmental Management Plan for construction phase vide internal documentation no. MG000-HSE-000-BD-7002 Dated 21.03.2024 with incorporating the Air Pollution Controlling Measures during construction activities. Presently, the PVC project is under final design, detailed engineering & procurement stage including simultaneous construction activities are in progress at site . The following APC measures have been taken for the activities during construction phase.

Sr. No.	Affected Environmental component	Likely Impacts in absence of mitigation measures	Mitigation measures have been taken	Remark
1	Air Quality	• Traffic congestion • Increase in ambient air pollution (Increase in levels of NOx, SPM, Dust Hazards) • Risk Accidents	• On site use of concreate batching plant. • Only PUC certified vehicles are allowed to enter the premises. • Water sprinkling have been carried out to stabilize the dust prone areas. • Preventive maintenance of transport, heavy equipment and construction equipment have been carried out at on regular interval. • Low Sulphur fuel i.e Diesel are being used. • PPEs / masks have been used at high dust generating area. • AAQM have been carried out at construction site as well as at surrounding villages. • DG sets having complied with GPCB/CPCB norms are in used.	• Impacts are temporary and short distances, as coarse particles are settling within the short distance from the activities during the construction phase. • Water sprinkling details have been recorded. • Monthly Monitoring has been carried out through recognized laboratory. • Record for the DG sets with complying GPCB/CPCB norms have been maintained with respective units / user.
2	Road Traffic due to vehicle movement for transportation	• Vehicular exhausts and dust emissions on the road. • Noise generation	• Only PUC certified vehicles are allowed to enter the premises.	• Entry and exit of vehicles' registration / records have

	of manpower, materials and equipment.	• Risk involved in transportation activity such as accidents damage to properties etc.	• Speed of vehicle have been restricted to certain speed limit to control the spillage, emissions OR air born generation. • Idling of the trucks and dumper on the roads are not allowed. • Construction materials are brought in batches with having covered with tarpaulin sheets. • Defensive driving / awareness training have been provided to drivers on regular interval.	been maintained. • Vehicle movement security system have been in service so that Photographs / video of each vehicle have been recorded during entry of vehicles.

Photographs:

Water Sprinkling on Internal Roads

Checking Vehicle's documents like PUC, etc. at Entry Gate

Batching Units / Facilities have been set up inside the premises

D.G. Sets having adequate stake height and Acoustic system covered on it.

Annexure - III

MUNDRA PETROCHEM LIMITED

Corporate Environmental Responsibility

April, 2024 – September, 2024

-: GROWTH WITH GOODNESS :-

Contents

1. EXECUTIVE SUMMERY

This report highlights the impactful achievements of Mundra Petrochem Limited (MPL)'s Corporate Environmental Responsibility (CER) initiatives for the period April 2024 to September 2024. MPL is steadfast in it's commitment to driving positive change in the communities surrounding to the project activities, with a focus on environmental sustainability, community empowerment and fostering a healthier society.

Educational Initiatives.

Addressing the SDG of providing quality education, MPL's education initiative in the form of developing infrastructure, providing necessary resources to students and encouraging girl child education through awareness. There are several gaps in the educational system in the region which need to be addressed and through systematic planning and execution, MPL's team is enhancing the quality of education in the region.

Under this, 750+ students attended Career Counseling Seminar. More than 68 students were facilitated through transportation for pick up & drop to attend the school. More than 70 students benefited with educational kits. School furniture provided to schools at Modhava village. 8 teachers have been appointed under the "Utthan" Sahayak for boosting the education skill of students. Educational awareness programs have been conducted by field expert with considering importance of environment and sustainability in routine life.

Skill development programs for young youth have been conducted. School infrastructure have been improved by providing Sea Water Reverse Osmosis (SWRO) unit, Pink Toilet for Girls Students, furniture and paver blocks for the school premises to provide safe drinking water including strengthening of sanitation & hygiene.

Community Health Initiatives.

MPL's primary assessment revealed that the local fisherman community is one of the most vulnerable communities. The aim of this initiatives is to empower fisherman community including by providing vital medical assistant and health education. Through preventive disease awareness drives, family planning workshops, menstrual hygiene and nutrition workshops, and general health sessions, the project aim to reached over 60,000 peoples in 16 villages.

Under this initiative, 99 Nos. of patients examined by Eye specialist while 34 Nos. of patients examined by Gynecologist and 641 Nos. of patients examined by General Doctor & 11 Nos. of patients examined by pediatrician.

Further, more than 184 Senior citizens participated in the general health camp. Menstrual Health awareness session was organized for Girls and women. Hospital infrastructure has been provided at GK & GAIMS Hospital at Bhuj with modern equipment for Burn & Intensive care units (ICU) to cater the medical support to burn cases in 200 km radius. Provision of clean & safe drinking water to the villagers and students by installing SWRO units at village Tunda.

Sustainable Livelihood and women Empowerment.

MPL has organized programs to empowers women, fostering sustainable livelihoods and cultivates environmental awareness within the community.

In coastal communities, women play a vital role in the fishing industry. They have been given awareness on hygiene and education for fishing business. Further, menstrual health awareness among community women have been given and more than 100 women were actively participated. Financial empowering over 300 marginalized fisherfolk community women. More than 450 sanitary pads distributed to improve woman health hygiene. Sustainable infrastructure like Check dam restoration, percolation well construction, River / stream cleaning, culvert construction and Roof top rainwater harvesting systems were provided. More than 160 farmers have benefited from renovation of check dam as they will store more than 1,75,000 cubic meter water.

More than 122 Nos. percolation well have been constructed. In addition to this, river/stream cleaning and pond deepening work have also been carried out.

Construction of culverts supported irrigation of 38 hectors of land and facilitating livelihood of more than 105 farmers.

Further, more than 165 Nos. Rainwater Harvesting (RWH) systems were constructed in the nearby community area. This initiative not only helped to increase clean & safe drinking water capacity to the tune of 16,50,000 liters but also achieved water positive status in more than 3 villages.

Community tree plantations were carried out in an area covering 7 acres of land. About 17610 Nos. trees were planted. In addition to this, more than 200 farmers were financially assisted in cultivating fruits bearing trees.

An Eco club has been established for the community, under this initiative, 70 schools and more than 11000 students were getting awareness about environmental and sustainability. A mangrove conservation awareness session was organized for the young generation, about 100 students were participated.

A massive awareness drive on Alternative of Single Use Plastic (SUP) was organized. More than 680 students participated.

Community Rural Infrastructure Development.

Community Rural Infrastructure Development program by MPL encompasses a wide array of initiatives aimed at enhancing living standard in rural areas. It focuses on water conservation through measures like check dam restoration, de-siltation and bore well recharge structures.

Road repairing work at nearby villages and fisherfolk community area were attended. Pavers blocks were installed at the common gathering area. Clear water facilities are provided for house animal with the capacity of 20000 liters. Rooftop rainwater harvesting system provided at nearby villages. SWRO units were provided for clean water for villagers and students with capacity of 3000 ltr/hr and 50 ltr/hr respectively. School furniture and other infrastructure constructed at nearby villages.

An overview of CER Expenditure by MPL for reporting period i.e April, 2024 to September, 2024:-

Sr. No.	**Sector**	**CER Expenditure April – Sept, 2024 (INR)**
1	Educational Initiatives.	841838
2	Community Health Initiatives.	7319340
3	Sustainable Livelihood and women Empowerment.	433900
4	Community Rural Infrastructure Development.	7227613
5	Monitoring & Reporting	1164682
	Total	**16987373**

i.e. Approximate INR 170 Lakhs

Total CER expenditure incurred in various community welfare & eco – development activities was approximate INR 1000 Lakhs cumulative till September, 2024 including expenditure occurred INR 170 Lakhs for the reporting period i.e April, 2024 to September, 2024.

2. ABOUT MUNDRA PETROCHEM LTD

Mundra Petrochem Limited (MPL), a stepdown subsidiary of the Adani Enterprises Limited, is a young company with a big vision. MPL is poised to become a key player in India's petrochemical sector. Its focus lies on the development of a greenfield PVC complex located strategically within the Adani Ports and Special Economic Zone (APSEZ) at Mundra, Gujarat.

MPL's mission extends beyond mere production. MPL is committed to pioneering sustainable practices in the industry sector in line with Adani Group level commitment to shape the country development. Its state-of-the-art facility is under engineering design with cutting-edge technologies to minimize environmental impact. This commitment is further reflected in their focus on community development through various Corporate Environmental Responsibility (CER) initiatives.

With operations expected to commence in 2026, MPL is poised to create significant economic opportunities within the region. By fostering sustainable practices and empowering local communities, MPL aims to become a model for responsible industrial development in India.

MPL's Corporate Environmental Responsibility (CER) program transcends mere carbon reduction efforts. It embodies a holistic approach grounded in robust scientific methodologies. This multifaceted initiative extends beyond environmental concerns, encompassing actions that enhance ecological resilience and empower local communities. The subsequent sections of this report will delve into the impactful outcomes achieved through MPL's comprehensive CER program.

3. SECTOR IDENTIFICATION BASED ON THE "CER" MANDATE

Mundra Petrochem Limited (MPL)'s CER action plan has been approved by the MoEF&CC as part of Environmental Clearance (EC) for the PVC project activities. As per the action plan, the activities were divided into four major impact sectors: -

- **Educational Support.**
- **Community Health Initiatives.**
- **Sustainable Livelihood & Women Empowerment.**
- **Community Rural Infrastructure Support.**

This report includes the interventions by MPL as a part of CER initiative. This report briefly brings the project details - input, output, outcome, and impact (where applicable). The programs or activities undertaken by MPL were in adherence with the provisions of action plan as approved by the MoEF&CC to address the issues raised during the public hearing process of the project activity.

4. CER INITIATIVES & INTERLINKAGE WITH SDGs.

Mundra Petrochem Limited have benchmark business around regulatory requirements beyond the warranted with the objective of making the world a better place. The result is that we have invested in generating the largest positive outcome in the shortest time with the longest impact. The Mundra Petrochem Limited have been woven around sustainable Development Goals – Social, economic and environment – with a supporting governance framework.

- End hunger and ensure access to safe, nutritious and sufficiant food.
- End all form of malnutrition.
- Ensure sustainable food production system and implement resilient agricultural practice.
- Investment in rural infrastructure.

- Promoting natural farming for a healthy lifestyle and conducting health camps to address the health issues.

- Ensure that all girls and boys complete free equitable and quality primary and secondary education.
- Bulding and upgrading education facilities.
- Providing transportation and school stuffs to students to attend the hasslefree education system.

- End all form of discrimination agaist all women and girls.
- Ensure women's full and effective participation
- Creating an inclusive environment for women in the community through participation in the decision-making process and other activities.

- Restoring water bodies and encouraging water harvesting through participatory actions
- Protect and restore waterrelated ecosystems
- Support and strengthen the participation of local communities in improving water and sanitation management.

- Promoting use of biogas for clean and affordable energy solution

- Full and productive employment and decent work for all women and men Creating livelihood opportunities for women and youth through skilling programs

- Empower and promote the social, economic and Ensure equal opportunity & reduce inequalities of outcome.
- Adopted policies, especially fiscal, wage and social protection policies, and progressively achieve greater equality.

- Providing holistic solutions through water management, sustainable agriculture, green energy, and resilience building through health and disaster management.

- Promoting green areas through plantation, preserving, and restoring mangrove ecosystems, and commencing IEC based awareness activities for building environmental stewardship.

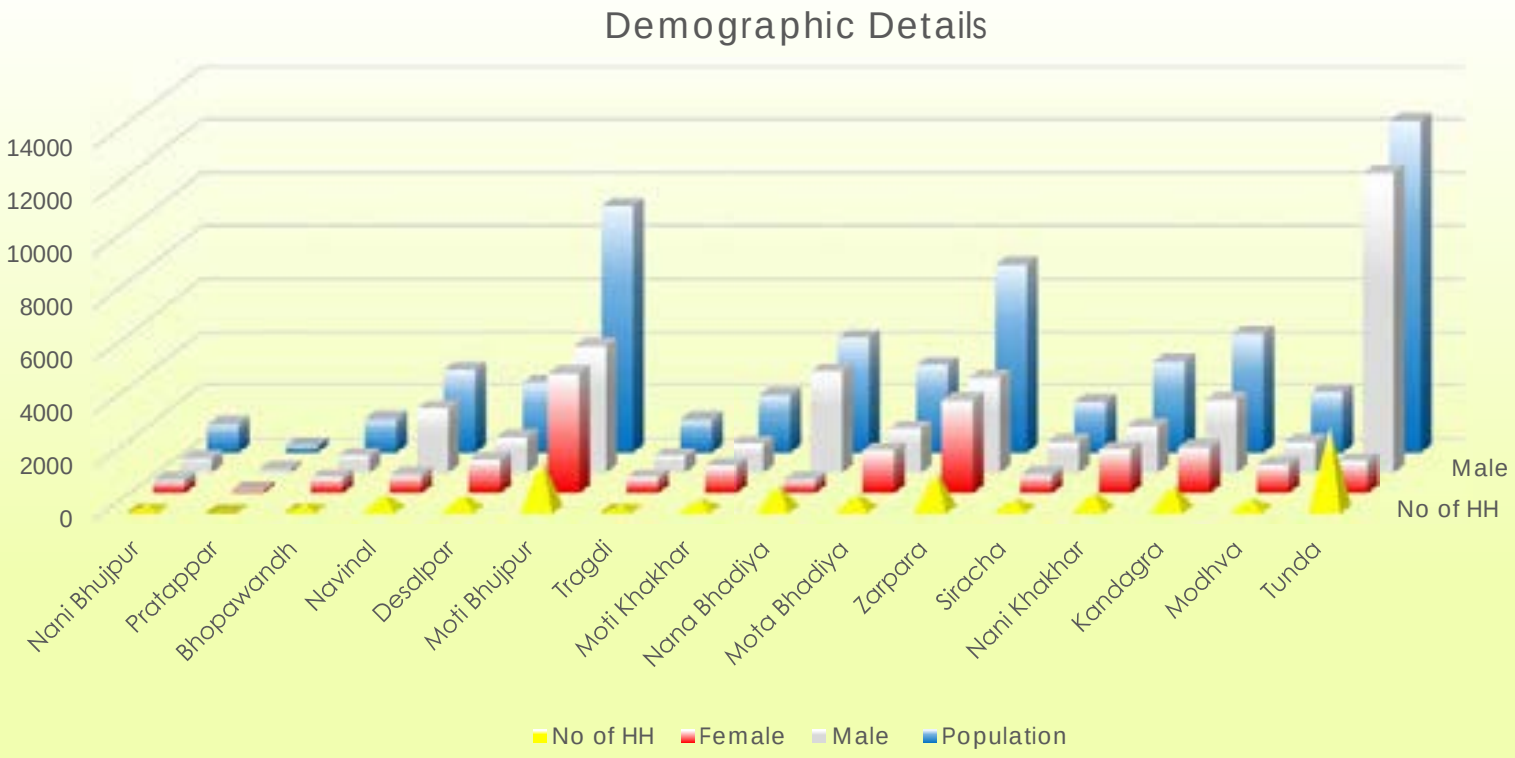
- Dedicated efforts are made to restore the mangrove ecosystem which supports many marine life forms.
- Sustainably manage and protect marine and coastal ecosystem.

- Increased afforestation and reforestation.
- Reduce the degradation of natural habitats, halt the loss of biodiversity.
- Integrate ecosystem and biodiversity values.
- Conservation of the local ecosystem through restoration action and mobilizing communities to minimize plastic consumption.

5. ABOUT REGION

Mundra, historic port town in Gujarat's Kutch district, boasts a hot, arid climate with rich biodiversity despite limited rainfall. Located on the Gulf of Kutch at around 46 feet elevation, this census town reflects the cultural diversity of the district. The ecology is surprisingly vibrant with mangroves and birdlife, but water scarcity necessitates conservation efforts. Mundra's industrial growth, including the Adani Port & SEZ, requires sustainable development practices.

Demographic details the 16 study villages of Mundra are as under[1]:

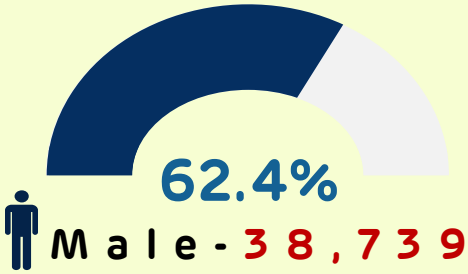


Sr. No.	Village Name	Population	Male	Female	No of HH
1	Nani Bhujpur	1056	551	505	210
2	Pratappar	268	136	132	48
3	Bhopawandh	1250	650	600	250
4	Navinal	3100	2406	694	602
5	Desalpar	2611	1350	1261	581
6	Moti Bhujpur	9278	4777	4501	1979
7	Tragdi	1238	636	602	216
8	Moti Khakhar	2139	1101	1038	436

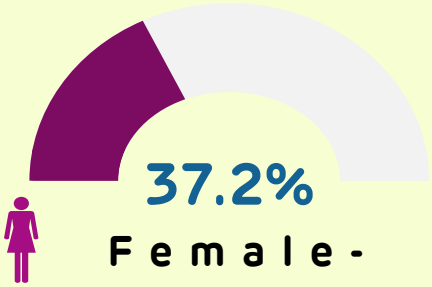
Sr. No.	Village Name	Population	Male	Female	No of HH
9	Nana Bhadiya	4318	3805	513	1011
10	Mota Bhadiya	3284	1669	1615	624
11	Zarpara	7052	3572	3480	1506
12	Siracha	1879	1171	708	429
13	Nani Khakhar	3412	1758	1654	691
14	Kandagra	4461	2729	1732	1015
15	Modhva	2250	1167	1083	450
16	Tunda	12471	11261	1210	3134

[1] The data is source from the Census, 2011

Total- 60,067



Male- 38,739



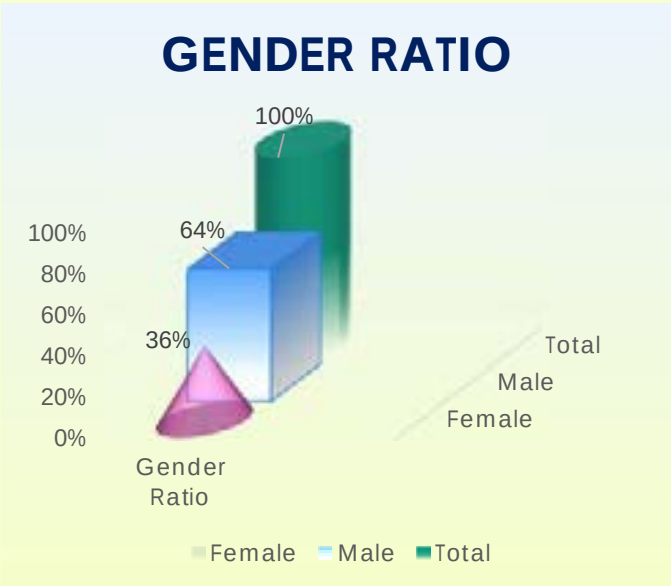
Female- 21,328

Household- 13,182

The chart presents the population data across different villages. Tunda, Moti Bhujpar has the highest population at 12,471 and 9278 respectively, significantly larger than most other villages. Zarpara and Kandagra also have relatively high populations. Several villages like Nani Khakhar and Desalpar have populations of around 3,000 to 4,000.

The chart highlights the variation in population size across rural areas, with some villages being quite populous while others have very small populations like Pratappar with just 268 residents. This data provides insights into the demographic distribution and density patterns in the region.

5.1 GENDER RATIO



In the collective populace of 16 villages, males significantly surpass females at a ratio of 9 to 1. Tunda village exhibits the most pronounced gender disparity, with males constituting 90% of its inhabitants. Across these villages, there are a total of 13,182 households, with Tunda boasting the highest count and Pratappar the lowest.

This disparity highlights a notable trend in gender distribution within rural communities, underscoring the need for further examination of socio – cultural dynamics and their implications on population demographics and societal structure.

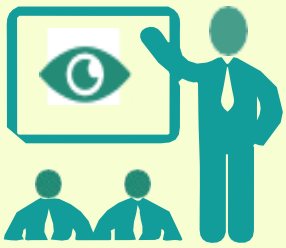
6. EDUCATION PROMOTIONAL INITIATIVE.

In this era of shaping future, the role of corporate responsibility in fostering sustainable development and empowering communities cannot be overstated. One such commendable endeavor is the "**Project Utthan**", Education Initiative undertaken by Adani Foundation (Under CSR), which stands as a testament to the organization's commitment towards creating a positive impact in society. The Utthan Initiative encompasses a multifaceted approach to enhance educational infrastructure, empower local institutions and foster community development. Through strategic interventions spanning infrastructure support, capacity building and community engagement, Adani Foundation (under CSR) has endeavored to address the educational needs of underserved communities and contribute to their holistic development. Mundra Petrochem Limited has supported various education promotion initiatives undertaken by Adani Foundation (under CSR / CER).

6.1 KEY INTERVENTIONS

Infrastructure Support to Local Institutions

MPL's commitment to improving educational infrastructure is exemplified by various initiatives, including the provision of essential resources such as office stationery, clean and Hygiene water availability, Additionally, constructing a pink toilet and renovating the primary school in underscore MPL's dedication to creating conducive learning environments for students.



Training & Capacity Building

Recognizing the pivotal role of educators in shaping young minds, MPL has invested in capacity building measures by hiring Utthan Sahayak and Shikshan Sahayak for government primary schools. Moreover, the distribution of education kits further empowers teachers and students with the necessary tools for effective learning and skill development.

Community Support

MPL's Education Initiative extends beyond the confines of school premises, reaching out to the broader community. By arranging transportation for underprivileged students, MPL ensures access to education for all, irrespective of socio-economic barriers. Furthermore, initiatives such as women awareness programs contribute towards fostering a more inclusive and empowered society.

6.2 RESULT AND OUTCOMES OF THE "UTTHAN" INITIATIVE.

This chapter details the significant achievements of the Education support initiative, highlighting improved educational access, enhanced learning outcomes and empowering students within the community.

Addressing the SDG of providing quality education, MPL's education institution in the form of developing infrastructure, providing necessary resources to students and encouraging girl child education through awareness. There are several gaps in the educational system in the region which need to be addressed and through systematic planning and execution, MPL's team is enhancing the quality of education in the region.

SOCIAL IMPACT

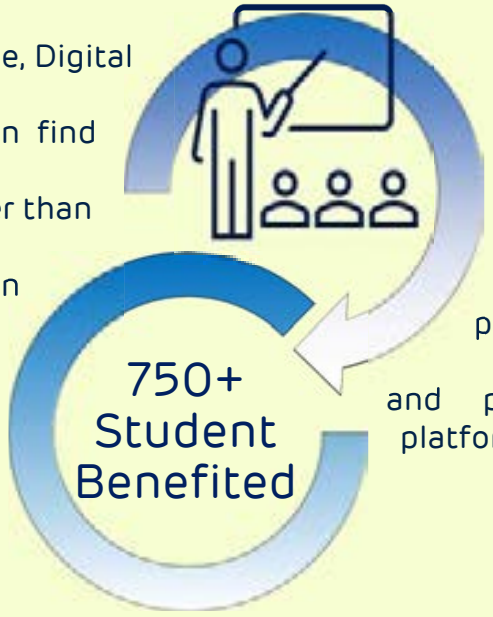
6.2.1 Career Counseling Seminar.

Mundra Petrochem Ltd., Adani Foundation and Kachchmitra have organized a mega career counseling seminar, at GKGH, Bhuj.

This seminar deeply focused on the different careers paths that students can chose after the 10th & 12th Standard. Students can understand his / her own ability to grow their career in skilled been developed within. So that, they can pick right path in so many career options.

This seminar has encompassed:

- Discussion on job profiles related to AI, Data science, Digital Marketing, and Technical trades.
- Shared government websites where students can find detailed information about job profiles in technical trades.
- Parents are advised to become pillars of trust rather than asserting ownership over their children.
- Unveiled a QR code, through this, students can virtually explore the "Yearly Career Guidance Book" published by the Education Department, Gujarat government.
- This seminar is not only benefited the students and parents of Kutch but also broadcasted live on digital platforms to reach students and parents across India.



6.2.2 HIGHER EDUCATIONAL OPPORTUNITIES FOR MARGINALIZED COMMUNITIES.

Reason for providing facilities:

- Not enough economical ground to support the expenses of high school.
- High Schools are very limited in fisherfolk villages, making it hard for families to afford transportation costs.
- The foundation of students is very poor due to negligence in primary education.
- Parents are uneducated and busy with daily labor, leaving no time to support their children education.

Impact of Providing facilities:

- To provide safe and reliable transportation for the children of the fisherfolk community.
- Vehicle transportation (two way) facilities are provided to more than 68 students - pick up & drop to attend the school.
- This initiative has significantly reduced transportation challenges and improved school attendance which contributes better educational outcomes. Drop out ratio have been reduced by 87%.
- Students from villages like Modhava, Tragadi Bandar & Zarpara Bandar are facilited.

6.2.3 EDUCATIONAL KIT & FURNITURE SUPPORT

- More than 70 students were benefited with educational kits like, School bags, books, stationary items, Guidebooks, notebooks, etc.

- Through these initiatives, students are able to interact daily school work and better at home as well.

- School furniture for students have been provided at Government School village Modhava.

6.2.4 "UTTHAN" SAHAYAK - TEACHERS

- Total 8 numbers of "Utthan" sahayak – teachers have been provided to fill the gape and enhance students' learning capacities, provided essential facilities to school and achieve better learning outcomes at the grassroots level.

- The Project focuses on transforming government primary schools into model institutions by implementing the following key initiatives.

Strengthening Government Primary Schools	Appointing an Utthan Sahayak	Providing Resources and Facilities	Introducing Vedic Math's & Abacus	Capacity Building for Government School Teachers	Special Focus on 'Priya' Vidyarthi's (Progressive Learners)	Training Students for Competitive Exams
Adopting and upgrading government primary schools to model schools.	Assigning a dedicated facilitator in each school to act as a catalyst for change.	Ensuring schools are equipped with necessary resources and infrastructure	Increasing students' logical and mathematical skills through Vedic Math's and Abacus training.	Conducting training programs to improve teachers' skills and teaching methods.	Providing additional support and tutoring for progressive learners.	Preparing students for various competitive examinations.

6.2.5 EDUCATIONAL AWARENESS PROGRAM

Environmental awareness program were conducted at more than 18 schools and about 2000 students were participated.

The sessions focused on sustainable practices and the importance of environmental conservation, particularly highlighting the need to reduce plastic usage and promote eco – friendly alternatives.

Education awareness sessions were conducted in fisherfolk Vasahat, Vadi vistar – Village Farm Residence areas of nearby villages to highlight the importance of education, particularly girl–child education.

To educate childrens on plastic free ecosystem, Eco-clubes were established for raise the climate change awarness. So, far 72 Utthan Sahayak have been trained who reaching over 780 studets through awarness seminar.

6.2.6 SKILL DEVELOPMENT PROGRAM

19 Girls

11 Boys

Total 30 numbers of young youth have attended Domestic Data Entry Operator (DDEO) - Skill development program.

6.2.7 SCHOOL INFRASTRUCTURE

MPL is deeply intended to create structure that has meaning fool OR positive out come for the long lasting period. Further, this can improve the beauty of the educational institutions, so that students have positive impress to love the school environment. Considering this, MPL has constructed area with "Paver Blocks" at primary schools.

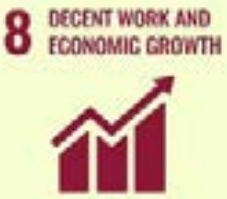
Considering initiatives for clean water and sanitation for all, MPL has installed Saline Water Reverse Osmosis (SWRO) unit having capacity of 50LPH at Primary school of Tunda Village. More than 200 students are benefiting with this service.

The Pink toilet Initiative is essential to address the lack of proper sanitation and hygiene facilities in school. This will encourages girls to stay in school, promote better menstrual hygiene and aims to change regressive norms and practices related to menstruation.

500 + Girls students benefited

About 8 schools from near by villages have been benefited.

6.2.8 LINKAGE WITH SUSTAINABLE DEVELOPMENT GOALS

	The education support initiative enhances quality education and equal access, directly contributing overall goal of inclusive, equitable education for all. Ensure that all girls and boys complete free equitable and quality primary and secondary education. Building and upgrading education facilities. Providing transportation and school stuffs to students to attend the hassle-free education system.
	The education support initiative promotes gender equality by ensuring equal educational opportunities and empowering girls. End all form of discrimination against all girls through education.
	The education support initiative fosters economic growth by providing skills and knowledge. Full and productive employment and decent work for all women and men Creating livelihood opportunities for all and youth through skilling programs.
	The education support initiative reduces inequalities by providing equitable access to education.

7. COMMUNITY HEALTH INITIATIVES

MPL's primary assessment of the project revealed that the local fisherman community is one of the most vulnerable communities. The project aimed to empower fisherman community including villages like Navinal, Tragadi, Modhva, and Zarpara by providing vital medical assistant and health education. Through preventive disease awareness drives, family planning workshops, menstrual hygiene and nutrition workshops, and general health sessions, the project aim to reached over 60,000 peoples in 16 villages. This holistic approach led to a lasting impact: women gained knowledge to plan their families and stay healthy, while adolescents and women received support for menstrual hygiene and proper nutrition. Most importantly, the project fostered a sense of community by forming a Self-Help Group, ensuring this newfound knowledge continues to empower future generations.

7.1 KEY INTERVENTIONS

Medical Support

Medical support in the form of medicine, vaccine, testing and blood testing facilities are provided by Mundra Petrochem under CER to the local community members.

Menstrual Hygiene Workshops

The workshop aimed to address the gap in knowledge and access to proper menstrual hygiene management (MHM) resources faced by women and girls in the area. During the workshop Adolescent and women are supported for Menstrual hygiene awareness and capacity building trainings.

Health Awareness Workshop

Awareness sessions were organized by the MPL team with a special focus on the importance of vaccination, clean water, sanitation, and mental health.

Nutrition Workshop

Workshops focused on promoting healthy eating habits and tackling malnutrition in the project villages. Local residents participated in interactive sessions led by nutrition experts. Participants learned practical tips on food preparation, storage, and techniques to maximize nutrient intake.

SOCIAL IMPACT

7.2 RESULT AND OUTCOMES OF THE "COMMUNITY HEALTH" INITIATIVE.

This chapter outlines the significant achievements of the Community Health Initiatives being implemented by Munda Petrochem Limited under CER, detailing improvements in Health, outcomes, increased awareness and enhanced well – being within the community.

7.2.1 MEDICAL CAMP FOR COMMUNITY

A medical health checkup camp is an initiative designed to provide comprehensive medical examinations and screenings to a community. These camps are instrumental in promoting health awareness, early detection of diseases and facilitating timely medical intervention.

The objectives of a medical health checkup camp are:

Early Detection	Health Awarness	Accessibility	Community Health
•Identifying health issues at an early stage allows for more effective treatment and management	•Educating the community about common health problems, preventive measures and healthy lifestyle choices.	•Providing healthcare services to underserved or remote areas where medical facilities may be limited.	•Improving the overall health status of the community by addresing prevalent health concerns.

A comprehensive medical camp have been organized at nearby villages by Mundra Petrochem Limited. This camp have been organized with a dedicated teams of doctors, the camp catered to diverse health needs of the community. Each patient received personalized attention with through check -ups and tailored prescriptions.

The team of doctors have Eye specialist, Gynecologist, General Doctors and Pediatricians.

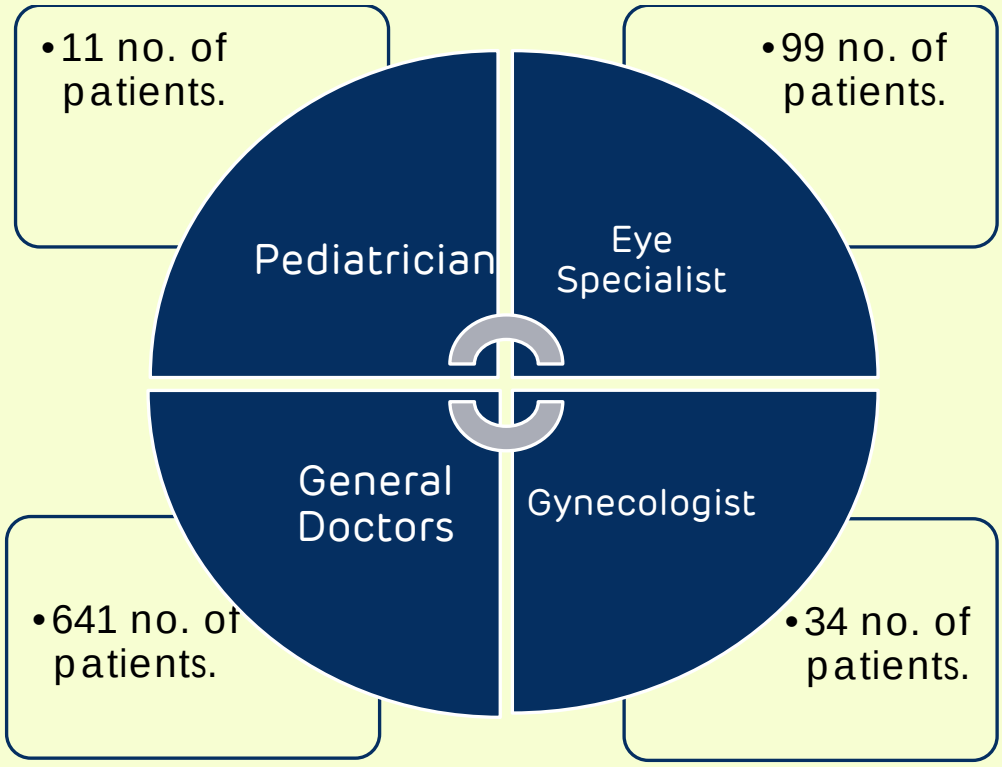
This initiative underscored the critical importance of early detection and treatment of eye – related issues, ensuring the people specially children have a better chance at maintaining healthy vision as they grow.

100+ Patients for Eye Checkup.

The students have been send to G.K.G.H Hospital, Bhuj from the villages for further treatment and the following actions have been taken.

Sr. No.	Student Name	Age	Observation / Treatment
1	Amina Amad Bhusan	14 years	She already has spectacles, and other necessary treatment given.
2	Afrin Salim Chaba	5 years	**Diagnosed with cataracts.** Advised to visit Civil Hospital in Ahmedabad.
3	Saima Abdul Chaba	12 years	**Diagnosed with an eye infection**. Prescribed eye drops.
4	Imtiyaz Umar Chaba	12 years	**Noted an increase in eye dot**. Suggested to visit Civil Hospital in Ahmedabad.
5	Amad Ashraf Chaba	11 years	Eye number assessment at GKGH.
6	Sakir Amad Chaba	10 years	Eye number assessment at GKGH.
7	Gulam Husain Lakhan	12 years	He already has spectacles, and other necessary treatment given.

Health camp participants:



Photographs of Health Camp at Nearby villages

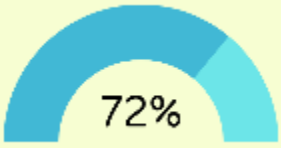
184 + Senior Citizens have attended General Health Camp which makes vital health services accessible and convenient.

Facilitated for multiple tests at one location such as:

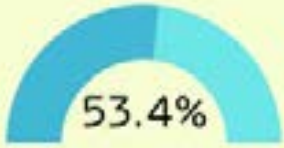
- ESR (Erythrocyte Sedimentation Rate)
- Serum Creatine.
- SGPT (Serum Glutamic Pyruvic Transaminase)
- Total Cholesterol.
- Random Blood Sugar.
- Complete Blood Test.

Further, this monsoon seasons, rainfall for region of the Mundra and Mandavi Taluka is higher then regular rainy season. Considering this scenario special health camp for rainy impacted area have been organized.

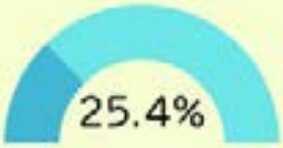
After heavy rain fall, 352+ villagers have been undergone for General Medical health check up. Following values observed:



Infected from Eye Flu



Suffering from Skin disease



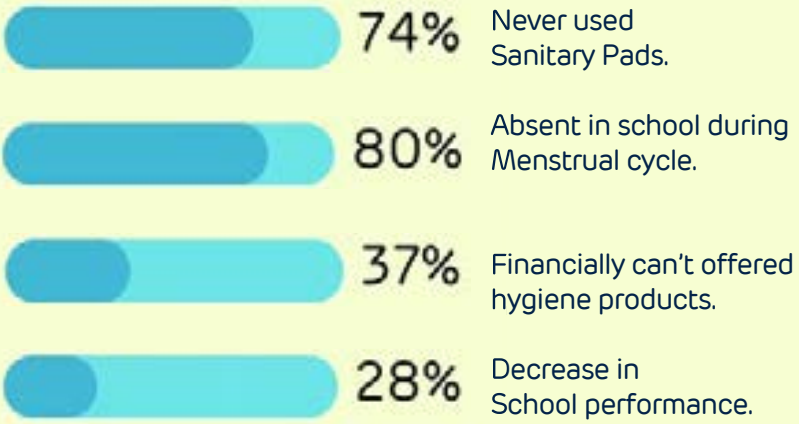
Distress with Gynec. diseases

7.2.2 MENSTRUAL HEALTH AWARNESS.

A comprehensive program on sanitary napkin distribution and menstruation hygiene was conducted at nearby villages with aiming to educate and empower them on menstrual health management. This initiative specifically targeted over 50 teenage girls and women from the villages.

Outcome of these awareness program:

Survey done in the event:



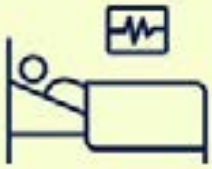
Outcome of the event

- Successfully educated all attendees on the importance of menstrual hygiene.
- Provided sanitary napkins.
- Assured them of reduced costs for future purchases.
- Encouraged them to prioritize health and hygiene over consuming additive items, fostering a positive shift in their habits.

7.2.3 HOSPITAL INFRASTRUCTURE

Kutch region has more than 22 lakhs of population. To facilitate them, Burn & Intensive Care Unit at GK & GAIMS General Hospital in Bhuj is establishing with an advanced facility, equipped with modern technology and specialized burn care. It will provide financial relief to patients and provide comprehensive care that addresses the physical, emotional and psychological needs of burn patients.

The Burn & Intensive Care Units at GK & GAIMS, Bhuj has:

			
26 General Bed + 4 ICU Bed	Minor & Major Operational Theater Room	Dressing Room	Emergency Service 24 X 7

Impact of the Burn Care & Intensive Care Unit:

7.2.4 COMMUNITY HEALTH – CLEAN WATER FACILITIES

Kutch Region is water scarcity region and having saline coastal area for Mundra & Mandavi taluka, the availability for clean water is less for the live. The main objective of providing the saline water reverse osmoses units at village Tunda is serving clean water for the villagers as more than 10000 peoples are benefiting from the services. This purified water will enhance the quality of life and promoting health in rural areas. This service is ensuring that students and peoples have continues access to clean drinking water.

The installation of the RO plants has directly improved access to clean water, positively impacting the health and daily lives of the village community and school children.

7.3 LINKAGE WITH SUSTAINABLE DEVELOPMENT GOALS

3 GOOD HEALTH AND WELL-BEING	The healthcare initiative improved community well-being, aligning with the goal by enhancing access to essential health services and promoting healthy lives.
10 REDUCED INEQUALITIES	The healthcare initiative reduced inequalities by providing equitable access to medical services, aligning with overall goal of reducing disparities.

8. SUSTAINABILITY LIVELIHOOD AND WOMEN EMPOWERMENT

This chapter dives into the impact of MPL's comprehensive program on women empowerment and skilling. Further, how this program empowers women, fosters sustainable livelihoods and cultivates environmental awareness within the community. This chapter highlighted MPL's focus on building a better future and emphasizing the program's multifaceted approach.

8.1 KEY INTERVENTIONS

Women Empowerment

Women empowerment is a multifaceted concept that encompasses a range of activities at improving the economic, social and cultural status of women.

Skill Development

Skill development initiatives were caried out with the aim of building capacity for the local community members and help them become more employable through skill enhancement.

Sustainable Infrastructure

In an era marked by rapid urbanization and climate change, the pursuit of sustainable infrastructure has become imperative. Sustainable infrastructure refers to designing, constructing and maintaining systems that meet the needs of the present without compromising the ability of future generations to meet their own needs.

Climate Action

Community tree plantation and rural tree plantation activities have been carried out with aim to improve the green surface and carbon sequestration. Tree plantation is a vital activity that contributes significantly to the preservation of our environment. It involves planting trees in a planned to restore, conserve and enhance the natural landscape.

SOCIAL & ENVIRONMENTAL IMPACT

8.2 WOMEN EMPOWERMENT

In coastal communities, women play a vital role in the fishing industry, yet they often face challenges in maintaining hygiene standards while handling fish and lack access to knowledge about fishing business opportunities. To address these issues and empower women from the fishermen community, MPL has conducted an awareness campaign for the fisherman community. The aim for this awareness program is hygiene practices and fishing business education.

Hygiene Awareness

- ✓ Wash hand before & after handling fish.
- ✓ Use gloves to minimize direct contact.
- ✓ Store fish properly to maintain freshness.
- ✓ Regularly sanitize equipment.

Fishing Business Education

- ✓ Market insights: Understand local demand and pricing.
- ✓ Financial management: Budgeting and pricing strategies.
- ✓ Networking: Connect with industrial peers and experts.

25+ fisher women

participated under awareness session.

Further, with vision to empower women through comprehensive education, health initiatives and financial independence, fostering community support and sustainable development, MPL has provided training on menstrual health and hygiene and proper nutrition to 5000+ women.

2 Self Help Groups over 50 women

In each group to foster skill development and collective growth.

Financial empowering over 300

marginalized fisherfolk community women.

MPL aim to improve menstrual health among women by promoting the use of sanitary pads, thereby enhancing hygiene, comfort and overall well – being during menstruation.

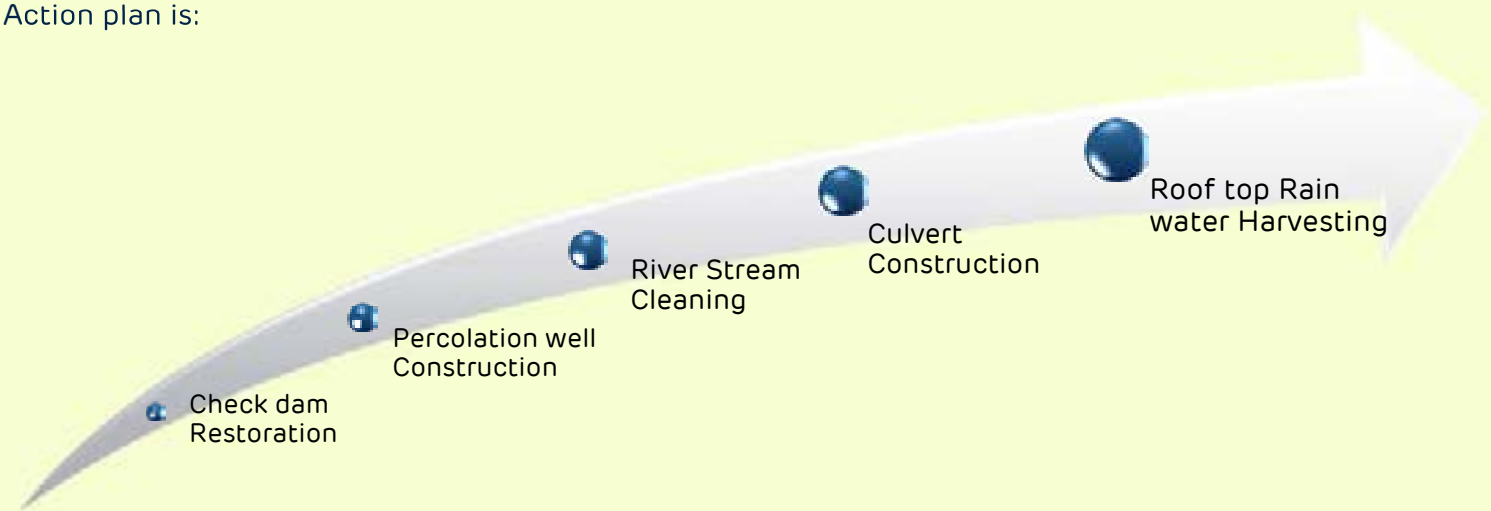
- To address specific challenges and needs related to menstrual hygiene in the local fisher community.
- Many women in the community currently use cloth due to traditional practices and lack of awareness.
- It is an informative sessions with over 50 women, on the benefits of sanitary pads. They offer better hygiene, reduce the risk of infections and provide greater comfort and protection during menstruation. Sanitary pads also provided to encourage the transition from the cloth.

450 + Sanitary pad distributed

8.3 SUSTAINABLE INFRASTRUCTURE

MPL's vision is to make 16 villages water positive under MPL-CER activities through better percolation of water into the ground increasing water table and water quality.

Action plan is:



Check Dam Restorations:

160+ farmers benefited for agricultural purposes.

1,75,000+ cubic meter water stored.

Enough water resources for nearby villagers.

Percolation well construction:

122+ percolation well been constructed.

Water table level increases.

Salinity of ground water Decreases

Rever / Stream Cleaning & Pond Deepening:

363+ Hr of work been done for cleaning of River / stream and pond deepening.

Free flow of water up to the dam or Pond have been ensured.

21+ percolation well have been cleaned.

Water Storage Capacity increased.

Culvert Constructions:

Construction of Box Culvert for water diversion and desilting of pond.

Benefited 38 hectors of land

105 + farmers benefited.

6800+ Cubic Meter water storage capacity increases.

Roof Top Rainwater Harvesting:

165 + RRWH constructed.

Increase clear drinking water capacity by 16,50,000 Liter.

3+ villages are water positive and till date cumulative there are 6+ villages are water positive.

8.4 CLIMATE ACTION

The climate crisis is one of the most pressing challenges of this period. To preserve biodiversity, sustainably utilize ecosystems, maintain essential ecological process and local communities through innovative climate action.

8.4.1 TREE PLANTATION

MPL has carried out tree plantation, as the process of planting trees in a targeted area, and considering same is a critical environmental activity that supports biodiversity, combats climate change and promotes the overall health of the ecosystem. This practice has gained significant global attention, as the world grapples with the adverse effects of deforestation, urbanization and environmental degradation.

17610+ trees have been planted at nearby villages to combat climate change and enhance biodiversity.

Further, 70,000+ numbers of cumulative trees have been planted for the period up to March, 2024. Therefore till date total 87610+ numbers of trees have been planted at nearby villages.

Miyawaki tree plantation & Drip irrigation methods were used.

Survival rate of trees are 95% +

7+ acre land were used for tree plantation

CO_2 Sequestration

2078.640+ tCO_{2e} will Seq. through planted trees.

200+ farmers were assisted in cultivating fruit – bearing trees.

Increasing their income and promoting sustainable agriculture.

Biodiversity Boost – Birds are **resting & roosting** at tree plantation area.

Icrease the **organic fertility** for the soil.

Increase the **CO2 Sequestration**, so as, clean air.

8.4.2 ECO – CLUB: AN INITIATIVE TOWARDS GREEN FUTURE

MPL is dedicated to promoting a sustainable and eco-friendly future. Thus, MPL is creating Eco-clubs in schools that educate students about environmental conservation, promote plastic – free living and inspire sustainable practices for climate action.

70 Schools

11,000+ Students

Impact of the work:

- Establish Eco-Clubs in 70 schools, engaging more than 11,000 students in environmental activities.
- Conducting awareness session at schools by expert lecturers, focusing on plastic pollution and its impact on the environment.
- Introduced plastic recycling initiative, turning waste into useful products like recycled plastic pots and benches.
- Educate students about Reduce, Reuse and Recycle principles.
- Educate students about Mangrove conservation and its important to the coastal area.
- Eco days like Environment Day, Earth Day, Mangrove Day, etc. have been celebrated at the different schools.

8.4.3 MANGROVE CONSERVATION AND AWARNESS

Mangrove are salt tolerant trees and shrubs that thrive in coastal intertidal zones. These remarkable ecosystems are found in Mundra and Mandavi taluka' coastal area at the vicinity of the MPL premises. Mangrove forests are vital not only to the health of coastal environments but also to the communities that depend on them. This part is report represents into the importance of mangrove conservation.

Mangrove nursery have been developed for 10,000 numbers of mangrove species.

100+ students from school & colleges have been participated in Mangrove Day Celebration.

The theme – "Mangroves: Vital Guardian of Coastal Ecosystems" highlighted their role in protecting coastlines, supporting fisheries and sustaining local communities. Bio Diversity expert from the company, Professors from the collages elaborated the importance of mangroves and how they provide myriad of ecological, economical and social benefits. This awareness session also focus on how mangrove serve as critical habitats for a wide array of marine and terrestrial species, including fish, birds and invertebrates. The dense root systems of mangroves stabilize shorelines, preventing erosion and protecting coastal area from the impacts of storms and rising sea levels.

8.4.4 AWARNESS ON "ALTERNATIVE OF SINGLE USE PLASTIC"

Rejecting single use plastics means embracing sustainable alternatives that are kinder to our planet. To create awareness about the harmful effects of single use plastic, MPL has conducted awareness sessions at schools of nearby villages.

680+ students participated.

- Students learn the alternative of single use plastic.
- Students enhance their innovated knowledge for reusable items as they are excellent substitutes such as cloths bags, metal straws, Glass bottles and bamboo cutlery.

Further, to promote Reuse, Recover & Recycling, MPL has initiated use of plastic to make plastic pots and benches.

100 numbers of each Pots and Bench made from recycled plastic waste.

Manufacturing Bench from the recycled plastic have following Eco-benefits:

 192 Carbon emissions reduced (KgCO2e)	 Circular Eco system complete	 18144 KL Fresh water Conserved
 2400 Natural resources conserved (kg)	 960 Waste plastic recycled (kg)	 1440 waste silica recycled (kg)
 12 number of people gaining direct livelihood	 480 hr of Job created.	 25 number of people gainnig indirect livelihood

8.5 LINKAGE WITH SUSTAINABLE DEVELOPMENT GOALS

	MPLs initiative focused on livelihood generation and providing additional support to farmers works towards eliminating poverty.
	Enhance income generation opportunities provided to the local community and sustainable job creation will enable the local to fulfill basic needs like food and nutrition.

	Dedicated efforts through Workshop and promoting women farmers have created more equitable society.
	Major interventions were focused on building employability in the local community and creating a sustainable source of income.
	A non – discriminatory approach in beneficiary identification has reduced inequality.
	By integrating IEC based interventions and Eco club drive on awareness and community building will work towards building sustainable society.
	A significant effort has been put in promoting natural farming and conservation of local ecosystem through plantation and mangrove conservation.

9. COMMUNITY RURAL INFRASTRUCTURE DEVELOPMENT

The community Rural infrastructure Development program by MPL encompasses a wide array of initiatives aimed at enhancing rural areas. It focuses on water conservation through measures like check dam restoration, de-siltation and bore well recharge structures. Infrastructure support includes sports facilities, renovation of educational and trailing centers and repair works in schools and infrastructure for fishing community across various villages. Additionally, the program addresses essential amenities like water tank (Awada) for domestic animal.

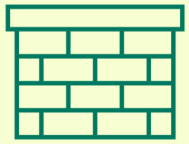
9.1 KEY INTERVENTION

Road Repairing / construction work

Road construction work is a cornerstone of modern civilization. It drives economic growth, enhances connectivity, promotes social integration and supports environmental sustainability.

Common Gathering Infrastructure

In the heart of any thriving community, common gathering infrastructure serves as the backbone that fosters interaction, collaboration and a sense of belonging. These infrastructures are essential for the social fabric, ensuring that people have spaces to meet, share and grow together.



Sustainable Infrastructure

By adopting the development of sustainable infrastructure in rural areas, we can address the challenges of climate change, resources depletion and urbanization while promoting a more equitable and resilient future.

Educational Infrastructure

Developing educational infrastructure in villages is essential for fostering individual and community development. Despite the challenges, a combination of government support, community involvement, public – private partnership and innovative solutions can create sustainable educational opportunities for rural populations.

9.2 ROAD REPAIRING / CONSTRUCTION ACTIVITIES.

As roads are the key factor for development through transporting, shifting, movement of materials and other activities, MPL is giving the priority to provide good road for circulating economy as well as smooth functioning of rural development, specially in fisherfolk community.

- Renovation work for approach road at kutdi Bandar for fisherman Vasahat Village Tragadi & Modhava.
- Pipe culvert repairing work for fisherman vasahat at Juna Bandar, Mundra.
- Renovation of Damage Bund and area filling with sand for fisherman vasahat at Juna Bandar, Mundra.
- Renovation of approach road for Vadi vistar area at Nana Bhadiya.
- Renovation of approach road for vadi vistar area i.e Lalyara and chach vadi vistar at Zarapara.
- Renovation of approach road for vadi vistar area i.e vagadiya at Zarpara.
- Road cleaning work at Mota Kandagra, Bidada, Tragadi,



9.3 COMMON GATHERING INFRASTRUCTURE

Common gathering infrastructure is key point to vibrant the societies and moving towards the consecutive fruitful activities. MPL has constructed paver blocks at common gathering places like Jyoteshwar in Pratappar village, Vachhada dada in Zarpara village, Hanuman Temple in Bhujpar. etc.



9.4 CLEAR WATER FACILITIES FOR HOUSE ANIMAL

Clean Water facilities provided at Modhava villages having capacity of 10,000 Litr each (2 Tanks) so that house animal can have easy access of clean water.

9.5 SUSTAINABLE INFRASTRUCTURE

As water is an essential part of live and to fulfill this requirement, MPL has constructed Roof top rainwater harvesting systems, repairing of check dams, cleaning of river / streams and percolation wells at nearby 16 villages from the plant premises.

165+ Rooftop Rainwater Harvesting system constructed.

16,50,000+ Liter clean water available at house step.

160+ farmers benefited for agricultural purposes through check dam repairing / construction.

1,75,000+ cubic meter water stored.

122+ percolation well been constructed.

Water table level increases.

Salinity of ground water Decreases

Saline water Reverse Osmosis Plant installed at village Tunda with capacity of 3000 Ltr/hr. for villagers to have clean drinking water.

10000+ villagers are beneficiated.

Saline water Reverse Osmosis Plant installed at primary school, Tunda with capacity of 50 Ltr/hr. for students to have clean drinking water.

200+ villagers are beneficiated.

9.6 EDUCATIONAL INFRASTRUCTURE

As educational infrastructure is a fundamental component of a thriving education system, MPL has constructed school amenities and facilitated with furniture at school. Further, considering a robust educational infrastructure is crucial for providing quality education, promoting equality and fostering the holistic development of student, MPL has installed the Paver block and constructed pink toilet facilities for the girls at school premises.

Furniture provided at Modhava School.

60 no. benches

12no. Chairs

6 no. table

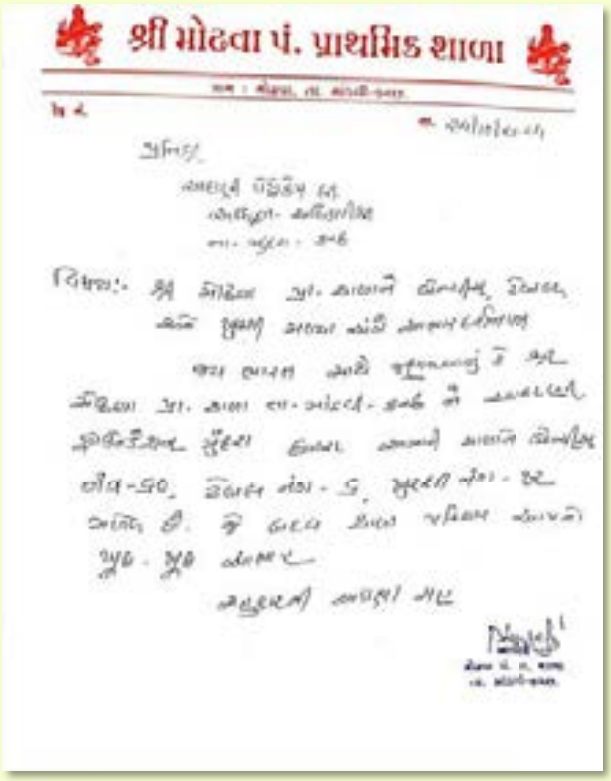
- Enhancing privacy and safety.
- Promoting gender neutrality.
- Preventing UTI
- Improved school Attendance.
- Empower Adolescent Girls.

500+ Girls students benefited.

9.7 LINKAGE WITH SUSTAINABLE DEVELOPMENT GOALS

	Increased water availability and quality will boost agricultural production.
	Dedicated efforts for enhancing rainwater storage will improve clean and safe drinking water option for household.
	Improved recharge and harvesting options will make local communities reliant against water stress.
	The water conservation initiative significantly increased storage capacity, enhancing climate resilience and promoting sustainable water management.

10. STAKEHOLDERS' APPRECIATION / FEEDBACK



11. NEWS HIGHLIGHTS

અદાણી જૂથ દ્વારા 'પ્લેનેટ જોઈએ કે પ્લાસ્ટિક' થીમ હેઠળ વિશ્વ પૃથ્વી દિવસની ઉજવણી

જળસંચય, વૃક્ષારોપણ અને ગાય આધારિત ખેતી પૃથ્વીનું જતન કરશે

આગામી સમયને અનુલક્ષીને નર્મદાના નીર પણ સાવચેતી પૂર્વક વાપરવા હાકલ

અદાણી ફાઉન્ડેશન દ્વારા ૯ તાલુકામાં જળસંગ્રહ અભિયાનનો આરંભ

અદાણી ફાઉન્ડેશનની કચ્છના ૨૧ ગામોમાં વરસાદી પાણીના સંગ્રહ માટેની કામગીરી પુરજોશમાં

કચ્છમાં ચેકડેમ તળાવ નવસર્જન કુદરતી જળસ્ત્રોતને પુનઃજીવીત કરી વરસાદના પાણીના એક ટીપાને એળે નહીં જવા દેવાય

પ્લાસ્ટિક છોડો ; પ્રાકૃતિક ખેતી અપનાવો

અદાણી ફાઉન્ડેશન અને મુંદ્રા પેટ્રોકેમિકલ લી - મુન્દ્રા દ્વારા વિશ્વ મેનગ્રૂવ્સ દિવસની ઉજવણી કરવામાં આવી

અદાણી ફાઉન્ડેશન અને મુંદ્રા પેટ્રોકેમિકલ લી - મુન્દ્રા દ્વારા વિશ્વ મેનગ્રૂવ્સ દિવસની ઊજવણી

અદાણી ફાઉ.મુંદ્રાની ભૂમિને લીલીછમ બનાવવા કૃતસંકલ્પ

નવા ૧૨,૦૦૦ વૃક્ષોનું વાવેતર, વૃક્ષમિત્રોને રૂા.૧૦,૦૦૦ નો ચેક અર્પણ

મુંદરા,તા.૧૬

અદાણી ફાઉન્ડેશનપર્યાવરણ જતનના સહિતના સમાજોપયોગી કાર્યોમાં સતત અગ્રેસર છે. મુંદરા નજીકના પીપરી અને નાની ખાખર ગામે 'અદાણી વન'નું ખાતમુહર્ત કરવામાં આવ્યું હતું.જેમાં વૃક્ષારોપણ થકી પર્યાવરણ સંરક્ષણ ક્ષેત્રે અભુતપૂર્વ યોગદાન આપતા ૧૨૦૦૦ વૃક્ષોનું વાવેતર કરી 'અદાણીવન' ઉભુ કરવામાં આવશે. પારાસભ્ય

અનિરુદ્ધભાઈ દવેનાવરદહસ્તે ખાતમુહર્ત બાદવૃક્ષમિત્રોને ?.૧૦,૦૦૦ના ચેક અર્પણ કરવામાં આવ્યા હતા.

મુંદરા ની આસપાસના વિસ્તારમાં હરિયાળી ફેલાવી લીલોછમ બનાવવા અદાણી ફાઉન્ડેશને બીડું ઝડપ્યું છે.'અદાણી વન'ના ખાતમુહર્ત સાથેતેમાંડ્રીપ ઈરીગેશનની વ્યવસ્થા પણ કરવામાં આવી છે. ત્રણ વર્ષમાં શુષ્ક વિસ્તારમાં વૃક્ષોની માવજત કરીહરિયાળી પાથરવા એડીચોટીનું જોર લગાવવામાં આવશે. આ ભગીરથ કાર્યમાંસહભાગી બની તેને સફળ બનાવવા સરપંચ સહિત સર્વ ગામ લોકોએ ભારે ઉત્સાહ દાખવ્યો હતો.

કાર્યક્રમના મુખ્ય અતિથી અને પારાસભ્ય અનિરુદ્ધભાઈ દવેએ અદાણી ફાઉન્ડેશનની સફળ કામગીરીને બિરદાવી સૌને શુભેચ્છાઓ પાઠવી હતી.ઉલ્લેખનીય છે કે, મુંદ્રા પેટ્રોકેમ લીમીટેડના સહયોગથી નાની ખાખર ખાતે ૧૦,૦૦૦ વૃક્ષો રોપવામાં આવ્યા હતા. આ પ્રવૃતિ "એક વૃક્ષ માઁ કે નામ" અંતર્ગત કરવામાં આવી હતી.

મુંદરામાં ચેર વાવેતર જાગૃતિ માટે કાર્યક્રમો

અદાણી ફાઉન્ડેશન અને મુંદરા પેટ્રોકેમિકલ્સ લિ. દ્વારા વિશ્વ મેન્ગ્રુવ દિવસની ઉજવણી

અદાણી ફાઉન્ડેશનના પ્રયાસોથી જળાશયો છલોછલ, જનતા ખુશખુશાલ

અદાણી પરિવાર સાથે ભળી ગામલોકોએ જળાશયોમાં નવા નીરને વધાવ્યા

મારું પહેલું અને અંતિમ દા

અદાણી ફાઉન્ડેશનના પ્રયાસોથી જળાશયો છલોછલ, લોકોમાં ખુશી

તળાવો ઉંડા કરવાથી ૧૪૦ એકર જમીનને પિયતનો લાભ તેમજ રોહડિયા પાડો લેતા ખેડૂતોની ૩૦૦ એકર જમીન અને ત્રણ હજારથી વધુ પશુઓને પીવા માટે પાણી મળશે

અબતક

મુન્દ્રાની ભૂમિને લીલીછમ બનાવવાનો અદાણી ફાઉન્ડેશનનો નિર્ધાર

પીપરી–નાની ખાખર ગામે 'અદાણીવનનું' ખાતમુહુર્ત કરાયું નવા ૧૨,૦૦૦ વૃક્ષોનું વાવેતરઃ વૃક્ષમિત્રોને ચેક અર્પણ

Annexure – IV

Tree Plantation Activities

Tree plantation is about fostering a sense of responsibility toward the surrounding environment. MPL has carried out tree plantation, as the process of planting trees in a targeted area and considering the same is a critical environmental activity that supports biodiversity, combats climate change and promotes the overall health of the ecosystem. This practice has gained significant consideration, as some grapples with the adverse effects of deforestation, urbanization and environmental degradation.

Tree plantation have been done with more than 7310+ trees (Native Species) at Nani Khakhar. The same plantation is being maintained by the expert.

Tree Plantation done at Borana with 10000+ native species. Further, tree plantation having 300 numbers of native species have been done at Road side from Tunda to Bhadia which are being maintain by M/s Sadbhavna Manavseva Trust and experts

Total 17610+ trees have been planted at nearby villages to combat climate change and enhance biodiversity. Further, 70,000+ numbers of cumulative trees have been planted for the period up to March, 2024. Therefore, till date total 87610+ numbers of trees have been planted at nearby villages.

Miyawaki tree plantation & Drip irrigation methods were used.

M/s Manvseva Charitable Trust, M/s Yash Green are the Expert to maintain the trees to get survival rate more than 95%.

Survival rate of trees are 95% +

7+ acre land were used for tree plantation

CO_2 Sequestration

2078.640+ tCO_2e will Seq.

200+ farmers were assisted in cultivating fruit – bearing trees.

Increasing their income and promoting sustainable agriculture.

Biodiversity Boost – Birds are resting & roosting at tree plantation area.

Icrease the organic fertility for the soil.

Increase the CO2 Sequestration, so as, clean air.

Tree Plantation Details

Sr. No.	Details of Expert Agency	Name of Species	Number of Species	Survival rate
1	M/s Manavseva Charitable Trust (Planting + 2 year maintenance)	Ficus Virens	08	100%
2		Millettia Pinnata	20	
3		Arborvitae	15	
4		Azadirachta indica	49	
5		Ficus religiosa	41	
6		Ficus benghalensis	34	
7		Arachis pintoi	20	
8		Samanea saman	11	
9		Tamarindus indica (Khati Ambali)	27	
10		Tamarindus Indica. (Mithi Ambali)	22	
11		Terminalia arjuna	23	
12		Syzygium Cumini	20	
13		Syzygium cumini (Jamun – Big Fruite)	10	
14	M/s Yash Green (Planting + 2 year maintenance)	Syzygiium samarangense	1715	100%
15		Prunas amygdalus	183	
16		pithecellobium dulce	1418	
17		Senna Siamea	800	
18		Cascabela thevetia	200	
19		Cassia fistula	1635	
20		Cusuarina Equisetifolia	435	
21		Moringa olieifera	655	
22		Azadirachta indica	1555	
23		Delonix regia	250	
24		Tamarinda	1455	
25		Date palm	550	
26		Croton (plants)	50	
27		Carissa carandas	30	
28		Ceiba pentandra	1304	
29		Albizia labbeck	250	
30		Morus (plant)	400	
31		Cedrus deodara	152	
32		Ficus religiosa	792	
33		Pentaclethra macroloba	125	
34		vechellia nilotica	115	
35		Gurva	535	
36		Samanea saman	95	
37		Seilver (disambiguation)	80	
38		Coconut tree(cocos nucifera)	4	
39		Banyan	6	
40		Ficus racemosa	57	
41		Woshingtonia robusta	2	
42		Betula Pendula	1170	

Sr. No.	Details of Expert Agency	Name of Species	Number of Species	Survival rate
43	M/s Yash Green (Planting + 2 year maintenance)	Bauhinia	500	100%
44		Tecoma stans	100	
45		Prosopis cinararia	330	
46		banmboo	55	
47		Exora Coccinea	70	
48		Hibiscus	10	
49		Jasminum sambac	10	
50		Euphorbia ingens	20	
51		Bodhi Tree	100	
52		Aegle marmelos	5	
53		Mimusops elengi	5	
54		Manilkara zapota	5	
55		Lemon	9	
56		Cymbopogon	5	
57		Curry tree	5	
58		Thespesia populnea	13	
59		Bougainvillea	50	
		Total	**17610**	

Annexure – V

Activities for Wildlife Conservation Plan

Awareness program for "Wildlife conservation" for surrounding area has been conducted at nearby village. These awareness program comprises the need of wild life conservation, definition, importance, methods of wildlife conservations and actions taken by Mundra Petrochem Limited in consultation with Adani foundations for nearby villages and coastal area.

Status of Wild Life conservation plan.

Sr. No.	Activity	Villages / Area	Status	Remark
1	Plantation program for coservation of habitat	Nearby Villages	Fulfilled	70000+ trees have been planted at nearby villages.
2	Awareness programme for "Wild life" Conservation – Educational Program.	Tunda (1st Year)	Fulfilled *	Awareness programme have been conducted under Eco Club Programne.
		Vandh (2nd Year)	Fulfilled *	
		Navinal (3rd Year)	Will done* on time	Awareness programme will be done under Eco Club Programne.
		Siracha (4th Year)	Will done* on time	
		Kandagra (5th Year)	Fulfilled	Awareness programme have been conducted under Eco Club Programne.
3	Artificial Concreate water pond of 1000 lit capacity to provide drinking water facility for wild animals.	2 villages in study area.	Fulfilled	"Guzzler" – Drinking water facilities have been provided for wild life animals.
4	Mangrove Plantation (1000 no. of plant per Ha.)	Near by project area.	Fulfilled	10000 numbers of mangrove plantation have been done in vicinity of plant premises.

* : 70 number of schools from neaby 16 villages and includes mundra and Mandavi towns have been covered under "ECO CLUB" which are formed for generating awareness on environmental best practices, wildlife conservation, Mangrove conservation, sustainability and Earth eco system.

Wild life awarness program have been conducted at schools of nearby village under Eco Club as 70 numbers of schools from nearby villages along with Mundra and Mandavi town area are dived for environmental awareness like wild life conservation, alternative of single use plastic, mangrove conservations, etc.

About 100 students were participated and realised the important of nearby area, life depends on baran land as well as coastal area.

Students were also enlighten for the sanctury and reserve forest area located in the district and how they protect the wild life.

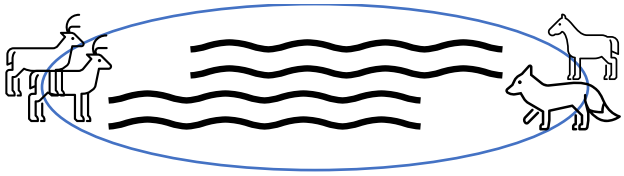
Mangrove are salt tolerant trees and shrubs that thrive in coastal intertidal zones. These remarkable ecosystems are found in Mundra and Mandavi taluka' coastal area at the vicinity of the MPL premises. Mangrove forests are vital not only to the health of coastal environments but also to the communities that depend on them. This part is report represents into the importance of mangrove conservation.

Mangrove nursery for 10,000 numbers of mangrove species have been developed.

100+ students from school & colleges have been participated in Mangrove Day Celebration.

The theme – "Mangroves: Vital Guardian of Coastal Ecosystems" highlighted their role in protecting coastlines, supporting fisheries and sustaining local communities. Bio Diversity expert from the company, Professors from the collages were elaborated the importance of mangroves with how mangroves provide myriad of ecological, economical and social benefits. This awareness session also focus on how mangrove serve as critical habitats for a wide array of marine and terrestrial species, including fish, birds and invertebrates. The dense root systems of mangroves stabilize shorelines, preventing erosion and protecting coastal area from the impacts of storms and rising sea levels.

Further, as per approved wild life activities, 2 numbers of "Guzzler" – Drinking water facilities for wild animals have been constructed in consultation and supervisions of District Forest Department, Kutch at following locations.



2 numbers of Guzzler have been constructed at Navinal Dhuvo and Near Brahmani Mata Mandir, Navinal


Latitude: 22.786644
Longitude: 69.627563
Elevation: -10.39±4 m
Accuracy: 3.9 m
Azimuth: 60° (NE)
Pitch: -25.8° (5.0°)
Time: 06-06-2024 17:17

Annexure – VI

Awareness Program on "Ban on Single Use Plastic"

Awareness program on "Ban on Single use plastic" has been conducted at Government Schools and Self Help Groups of nearby villages as per The Plastic Waste Management Rules 2016, inter-alia, mandated banning of identified Single Use Plastic (SUP) items with effect from 01/07/2022.

Awareness Program has covers CPCB Notifications, prohibited plastic items, complications created by plastic waste, awareness on plastic waste, plastic recycling numbers and its meaning.

The central aim of the plastic – free drive is to empower and enlighten students as key representatives 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 well – being.

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.

Green School: Eco club for enlarging awareness on environment, sustainability, wild life conservations, mangrove conservation, alternative of single use of plastics etc. have been established and under these 70 numbers of school from nearby villages, Mandavi and Mundra town area have been covered and more than 11,000 students are participated in above said various awareness activities.

In line with this, "No Plastic Drive" – alternative of Single use plastic, in Utthan Schools has encouragingly motivated students behavior. Under this, Eco Clubs were established to further raise climate change awareness and promote a plastic free environment.

72 Utthan Sahayak teachers have been trained by Expert on Reduced, Reuse and Recycle – "No to single use plastic".

780+ students attended Awareness sessions.

Cloth Bag distributions done for participant.

Further, Beach cleaning work have been organized at Kashivishvnath Beach, Mandvi. Over there,

	Participant	
200+ Students		80 Utthan Sahayak

1000 mtr Beach cleaning work done, specially single used plastic cleared

	Coastal Clean and Awarness
Reduced, Reuse of single use plastic bottle.	

Further, to promote Reuse, Recover & Recycling, MPL has initiated use of plastic to make plastic pots and benches.

100 numbers of each Pots and Bench made from recycled plastic waste.

Manufacturing Bench from the recycled plastic have following Eco-benefits:

 192 Carbon emissions reduced (KgCO2e)	 Circular Eco system complete	 18144 KL Fresh water Conserved
 2400 Natural resources conserved (kg)	 960 Waste plastic recycled (kg)	 1440 waste silica recycled (kg)
 12 number of people gaining direct livelihood	 480 hr of Job created.	 25 number of people gainnig indirect livelihood

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 - 2024

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 Green PVC Project near Village Vandh & Tunda, Taluka Mundra, District Kachchh, Gujarat

QUALITY CONTROL							
Name of Publication	Six Monthly Environmental Monitoring Report for Green PVC Project near Village Vandh & Tunda, Taluka Mundra, District Kachchh, Gujarat						
SO No.	Service Order	**Issue No.**	1	**Revision No.**	01	**Released**	October 2024
Prepared & Managed By	Mr. Nikunj Patel		**Approved by**		Mr. Jaivik Tandel		
Released By	Unistar Environment and Research Labs Pvt. Ltd.						

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LIST OF ANNEXURES

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_2H_2	:	Acetylene
CaC_2	:	Calcium Carbide
C_2H_3Cl	:	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 - 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.

Mundra Petrochem Limited of Adani group is now executing green PVC project (Green 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 – 18/10/2027.
- ISO/IEC 17025 Accredited Laboratory by National Accreditation Board for Testing and Calibration Laboratories (NABL) which is valid up to – 22/09/2026 .
- Recognized Environmental Auditor Laboratory by Gujarat Pollution Control Board, Gandhinagar, Gujarat, India which is valid up to 31/12/2025.

  Copy of relevant certificates are attached as Annexure I.

1.2 Brief Description of Project

The proposed Green PVC Project will be 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	Seven Locations	As per NAAQMS, 2009	Monthly
2.	Ambient Noise Monitoring	Seven 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	Eight 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)	Pre & Post Monsoon
5.	Surface Water	One 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)	Pre & Post Monsoon
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,	Pre & Post Monsoon

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	Validity of previous calibration	Calibration Date	Cal. Valid up to
1.	Respirable Dust Sampler PM 10	UERL/AIR/RDS/47/ 1816-DTJ-2013	Envirotech/ APM 460-BL	26/06/2024	27/06/2024	26/06/2025
2.	Fine Particulate Sampler PM 2.5	UERL/AIR/FPS/22/ 44-DTC-2012	Envirotech/ APM 550-MINI	26/06/2024	27/06/2024	26/06/2025
3.	Respirable Dust Sampler PM 10	UERL/AIR/RDS/34/ 1768-DTB-2013	Envirotech/ APM 460-BL	01/08/2024	02/08/2024	01/08/2025
4.	Fine Particulate Sampler PM 2.5	UERL/AIR/FPS/21/ 20-DTC-2012	Envirotech/ APM 550-MINI	01/08/2024	02/08/2024	01/08/2025
5.	Respirable Dust Sampler PM 10	UERL/AIR/RDS/027/ 1751-DTA-2013	Envirotech/ APM 460-BL	01/08/2024	02/08/2024	01/08/2025
6.	Fine Particulate Sampler PM 2.5	UERL/AIR/FPS/050/ 129-DTL-2012	Envirotech/ APM 550-MINI	02/08/2024	03/08/2024	02/08/2025
7.	Sound Level Meter	UERL/AIR/SLM/09A	Envirotech - SLM 100 /24 DTE 2008	14/07/2024	06/07/2024	05/07/2025
8.	Sound Level Meter	UERL/AIR/SLM/09B	Envirotech - SLM 100 /310 DTK 2015	14/07/2024	06/07/2024	05/07/2025
9.	Sound Level Meter	UERL/AIR/SLM/09C	Extech / SDL 600	25/06/2024	27/06/2024	26/06/2025

***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

Sr. No.	Parameter	Technique	Technical protocol	Permissible Limit (As per NAAQS)
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	Permissible Limit in the Absence 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):2024	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

Sr. No.	Parameter	Technical protocol	IS 10500 Standard Limits for drinking water	
			Desirable limit	Permissible Limit in the Absence of Alt. Source
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
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	

*** NS:** Not Specified **, NR:** No relaxation

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):2024	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	2
28	Total Coliform	IS 1622:1981	-

NA: Not applicable

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
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	0.01
10	Lead (as Pb)	IS 3025(Part 47): 1994	0.01
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	-	-

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 MOEFCC notification no. GSR 1265(E) dt. 13 Oct. 2017)
1.	Treated Effluent from STP		
	pH	IS 3025(Part 11):2022	6.5 to 9.0
	BOD	APHA 23rd 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	Project Site (Pocket – 1)	Industrial Area	22.785943° N, 69.566645° E
2.	Ambient Air & Noise	Project Site (Pocket – 2)	Industrial Area	22.78221° N, 69.559541° E
3.	Ambient Air & Noise	Project Site (Pocket – 3)	Industrial Area	22.802171° N, 69.552084° E
4.	Ambient Air & Noise	Near Fabrication & Batching Plant	Industrial Area	22.807563° N, 69.704170° E
5	Ambient Air & Noise	Village – Navinal	Rural Area	22.829246° N, 69.598332° E
6.	Ambient Air & Noise	Village – Zarpara	Rural Area	22.837942° N, 69.646225° E
7.	Ambient Air & Noise	Village – Vandh	Rural Area	22.809106° N, 69.53562° E
8.	Trade Effluent – STP Outlet	Project Site (Pocket – 1)	Industrial Area	22.784881° N, 69.566798°E

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

Pocket – 1

Pocket – 2

Pocket 3

Photograph 2-2: Photographs of monitoring

	
Pocket – 1	**Pocket – 2**
	
Pocket – 4 Fabrication & Batching Plant	**Pocket – 1**

	
Pocket – 2	**Pocket 3**
	
Pocket – 4 Fabrication & Batching Plant	**Pocket – 1 STP Sample Collection**

Navinal Village

Zarpara Village

Village - Vandh

Map 2-1: Images Project General Location Map

Project General Location Map.

Source: Google Earth

Client: M/s. Mundra Petrochem Limited

Prepared by:

M/s. Unistar Environment and Research labs Pvt. Ltd., Vapi.

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

3 CLIMATIC CONDITON

3.1 Climatic data from secondary sources

For the Green PVC project secondary data for weather conditions in the region is available for the period of April 2024 to September 2024. 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, and Rainfall.

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

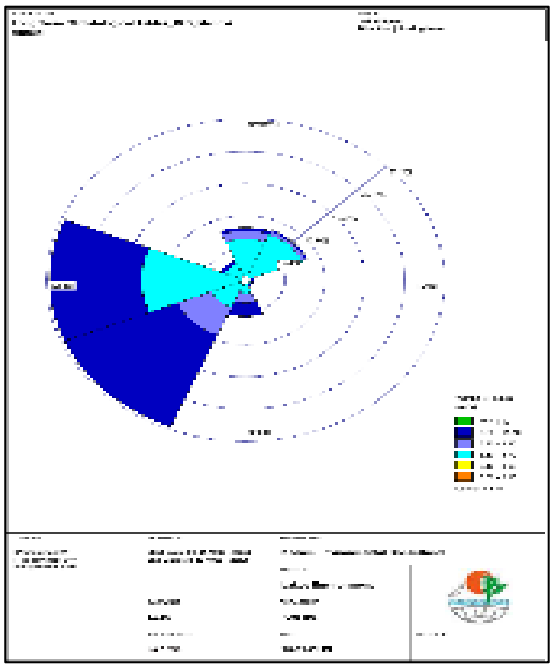
Table 3-1: Average meteorological condition

Weather Monitoring Data							
Month	**Scale**	**Temp. (°C)**	**RH (%)**	**BP (mmHg)**	**Wind Direction**	**Wind speed (Km/ Hr.)**	**Total Rainfall (mm)**
April to September 2024	Max.	41.4	98.6	759.0	360.0	41.1	1412.0
	Min	20.1	9.3	742.2	0.0	0.1	
	Average/ Total	29.6	77.0	751.2	250.5	10.5	

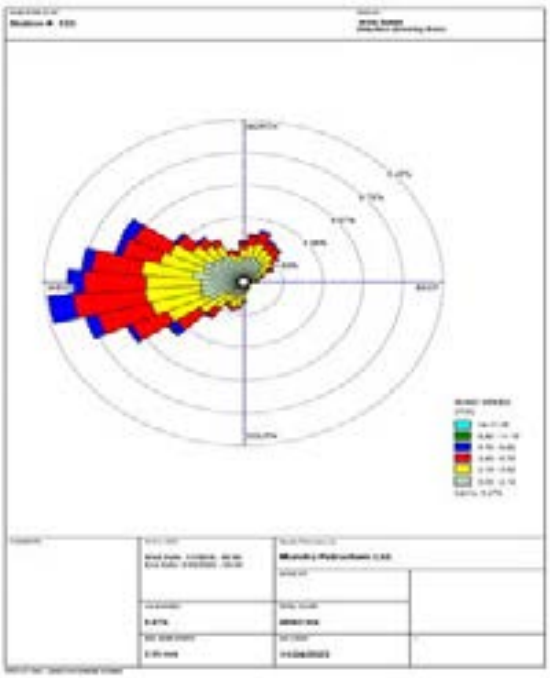
Total Rainfall for Year 2023 at the end of December 2023 is 694 MM.

Based on wind patterns data, monthly wind-rose diagrams are presented in below Figure along with historical windrose of area.

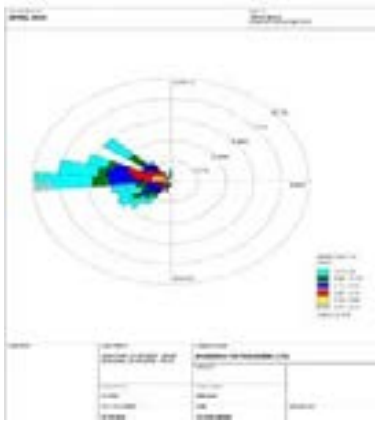
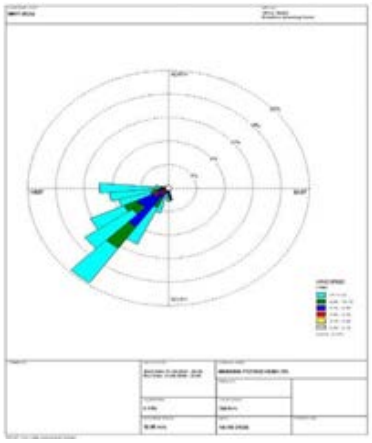
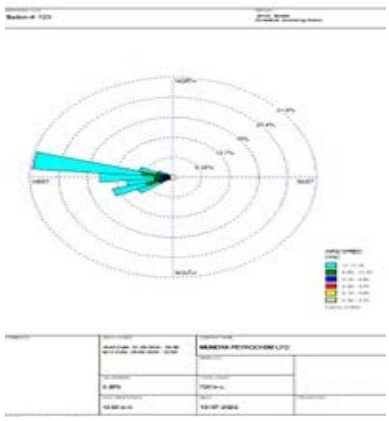
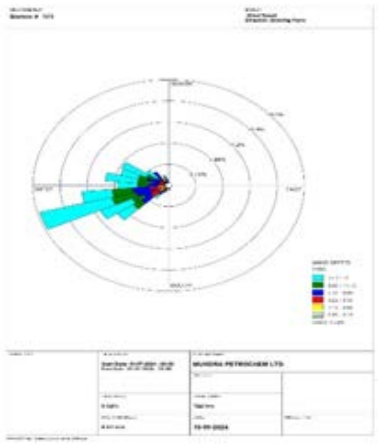
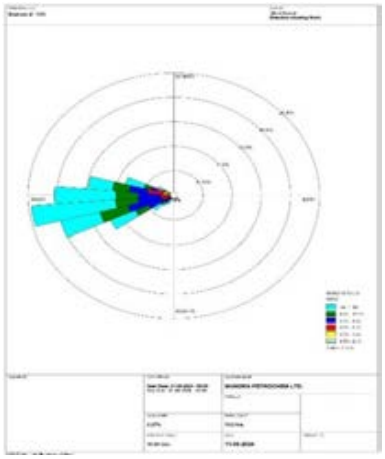
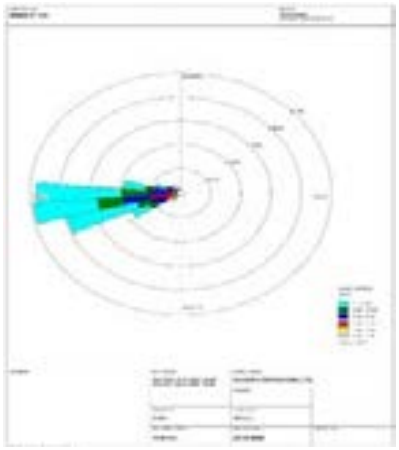
Figure 3-1: Season wise wind-rose diagrams.



Annual



Wind Rose 2018- 2023 APL, Mundra

		
Wind Rose Apr-24	Wind Rose May-24	Wind Rose Jun-24
		
Wind Rose Jul-24	Wind Rose Aug-24	Wind Rose Sep-24

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	180	400	1	20	6	5	1
Location : Project Site (Near to Pocket -1)													
1	Apr-24	65.6	20.5	18.5	22.3	<0.01	<5.0	<5.0	<0.5	<1.0	<1.0	<1.0	<0.1
2	May-24	70.2	24.6	20.1	23.3	<0.01	<5.0	<5.0	<0.5	<1.0	<1.0	<1.0	<0.1
3	Jun-24	61.4	21.3	17.3	20.9	<0.01	<5.0	<5.0	<0.5	<1.0	<1.0	<1.0	<0.1
4	Jul-24	45.3	15.2	7.3	10.3	<0.01	<5.0	<5.0	<0.5	<1.0	<1.0	<1.0	<0.1
5	Aug-24	41,2	14.2	10.5	13.2	<0.01	<5.0	<5.0	<0.5	<1.0	<1.0	<1.0	<0.1
6	Sep-24	45.6	17.8	12.3	15.6	<0.01	<5.0	<5.0	<0.5	<1.0	<1.0	<1.0	<0.1
Report Ref. No. - URA/24/04/A-097 dt. 03/05/2024, URA/24/05/A-038 dt. 03/06/2024, URA/24/06/A-068 dt. 04/07/2024, URA/24/07/A-062 dt. 06/08/2024, URA/24/08/A-033 dt. 02/09/2024, URA/24/09/A-074 dt. 03/10/2024													
Location: Project Site (Near to Pocket -2)													
1	Apr-24	62.7	21.8	19.5	23.1	<0.01	<5.0	<5.0	<0.5	<1.0	<1.0	<1.0	<0.1
2	May-24	66.7	23.6	21.6	24.7	<0.01	<5.0	<5.0	<0.5	<1.0	<1.0	<1.0	<0.1
3	Jun-24	59.7	20.4	19.2	22.1	<0.01	<5.0	<5.0	<0.5	<1.0	<1.0	<1.0	<0.1
4	Jul-24	40.7	14.5	8.5	11.3	<0.01	<5.0	<5.0	<0.5	<1.0	<1.0	<1.0	<0.1
5	Aug-24	39.9	13.8	13.2	16.3	<0.01	<5.0	<5.0	<0.5	<1.0	<1.0	<1.0	<0.1
6	Sep-24	42.3	15.4	14.6	17.8	<0.01	<5.0	<5.0	<0.5	<1.0	<1.0	<1.0	<0.1
Report Ref. No. - URA/24/04/A-099 dt. 03/05/2024, URA/24/05/A-051 dt. 03/06/2024, URA/24/06/A-077 dt. 04/07/2024, URA/24/07/A-063 dt. 06/08/2024, URA/24/08/A-034 dt. 02/09/2024, URA/24/09/A-080 dt. 03/10/2024													
Location: Project Site (Near to Pocket -3)													
1	Apr-24	66.6	24.5	17.7	24.4	<0.01	<5.0	<5.0	<0.5	<1.0	<1.0	<1.0	<0.1
2	May-24	69.8	26.1	18.2	21.4	<0.01	<5.0	<5.0	<0.5	<1.0	<1.0	<1.0	<0.1
3	Jun-24	63.1	23.1	16.8	19.7	<0.01	<5.0	<5.0	<0.5	<1.0	<1.0	<1.0	<0.1
4	Jul-24	48.1	14.7	9.2	12.5	<0.01	<5.0	<5.0	<0.5	<1.0	<1.0	<1.0	<0.1
5	Aug-24	42.3	15.3	11.6	14.5	<0.01	<5.0	<5.0	<0.5	<1.0	<1.0	<1.0	<0.1
6	Sep-24	45.1	16.9	13.2	16.7	<0.01	<5.0	<5.0	<0.5	<1.0	<1.0	<1.0	<0.1
Report Ref. No. - URA/24/04/A-086 dt. 03/05/2024, URA/24/05/A-045 dt. 03/06/2024, URA/24/06/A-063 dt. 04/07/2024, URA/24/07/A-064 dt. 06/08/2024, URA/24/08/A-035 dt. 02/09/2024, URA/24/09/A-082 dt. 03/10/2024													

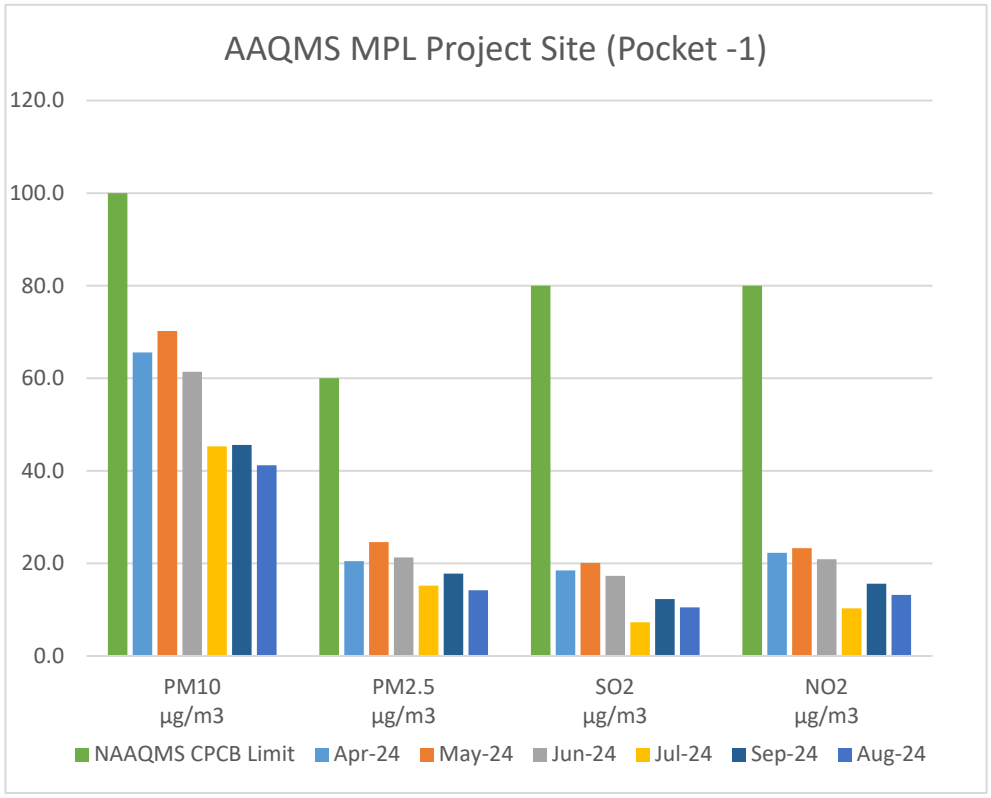
Location: Near Fabrication and Batching Plant													
1	Apr-24	64.7	22.3	16.4	20.7	<0.01	<5.0	<5.0	<0.5	<1.0	<1.0	<1.0	<0.1
2	May-24	68.4	25.7	19.4	22.6	<0.01	<5.0	<5.0	<0.5	<1.0	<1.0	<1.0	<0.1
3	Jun-24	62.1	23.5	18.5	21.5	<0.01	<5.0	<5.0	<0.5	<1.0	<1.0	<1.0	<0.1
4	Jul-24	43.7	15.3	8.7	11.6	<0.01	<5.0	<5.0	<0.5	<1.0	<1.0	<1.0	<0.1
5	Aug-24	40.6	12.7	12.8	15.6	<0.01	<5.0	<5.0	<0.5	<1.0	<1.0	<1.0	<0.1
6	Sep-24	44.8	15.8	13.6	16.7	<0.01	<5.0	<5.0	<0.5	<1.0	<1.0	<1.0	<0.1
Report Ref. No.- URA/24/04/A-082 dt. 03/05/2024, URA/24/05/A-042 dt. 03/06/2024, URA/24/06/A-055 dt. 04/07/2024, URA/24/07/A-061 dt. 06/08/2024, URA/24/08/A-036 dt. 02/09/2024, URA/24/09/A-076 dt. 03/10/2024													
Location : Village Navinal													
1	Apr-24	56.1	18.9	16.2	21.2	<0.01	<5.0	<5.0	<0.5	<1.0	<1.0	<1.0	<0.1
2	May-24	58.2	20.2	14.2	17.8	<0.01	<5.0	<5.0	<0.5	<1.0	<1.0	<1.0	<0.1
3	Jun-24	50.3	16.7	12.1	15.8	<0.01	<5.0	<5.0	<0.5	<1.0	<1.0	<1.0	<0.1
4	Jul-24	35.9	12.8	6.5	9.3	<0.01	<5.0	<5.0	<0.5	<1.0	<1.0	<1.0	<0.1
5	Aug-24	30.9	11.6	7.9	10.2	<0.01	<5.0	<5.0	<0.5	<1.0	<1.0	<1.0	<0.1
6	Sep-24	32.5	12.9	9.7	12.4	<0.01	<5.0	<5.0	<0.5	<1.0	<1.0	<1.0	<0.1
Report Ref. No. - URA/24/04/A-020 dt. 03/05/2024, URA/24/05/A-029 dt. 03/06/2024, URA/24/06/A-079 dt. 04/07/2024, URA/24/07/A-058 dt. 06/08/2024, URA/24/08/A-031 dt. 02/09/2024, URA/24/09/A-048 dt. 03/10/2024													
Location : Village Zarpara													
1	Apr-24	50.4	16.2	13.3	17.8	<0.01	<5.0	<5.0	<0.5	<1.0	<1.0	<1.0	<0.1
2	May-24	54.1	18.5	15.5	18.6	<0.01	<5.0	<5.0	<0.5	<1.0	<1.0	<1.0	<0.1
3	Jun-24	49.5	15.0	14.1	17.6	<0.01	<5.0	<5.0	<0.5	<1.0	<1.0	<1.0	<0.1
4	Jul-24	36.5	13.1	7.5	10.3	<0.01	<5.0	<5.0	<0.5	<1.0	<1.0	<1.0	<0.1
5	Aug-24	28.9	10.5	6.1	9.9	<0.01	<5.0	<5.0	<0.5	<1.0	<1.0	<1.0	<0.1
6	Sep-24	31.6	14.4	8.7	11.5	<0.01	<5.0	<5.0	<0.5	<1.0	<1.0	<1.0	<0.1
Report Ref. No. - URA/24/04/A-045 dt. 03/05/2024, URA/24/05/A-050 dt. 03/06/2024, URA/24/06/A-062 dt. 04/07/2024, URA/24/07/A-059 dt. 06/08/2024, URA/24/08/A-030 dt. 02/09/2024, URA/24/09/A-067 dt. 03/10/2024													
Location : Village Vandh													
1	Apr-24	58.9	20.4	18.6	23.8	<0.01	<5.0	<5.0	<0.5	<1.0	<1.0	<1.0	<0.1
2	May-24	55.6	17.3	16.2	19.5	<0.01	<5.0	<5.0	<0.5	<1.0	<1.0	<1.0	<0.1
3	Jun-24	48.4	14.2	13.4	16.7	<0.01	<5.0	<5.0	<0.5	<1.0	<1.0	<1.0	<0.1
4	Jul-24	41,2	14.3	7,1	10.2	<0.01	<5.0	<5.0	<0.5	<1.0	<1.0	<1.0	<0.1
5	Aug-24	25.3	10.6	5.2	8.7	<0.01	<5.0	<5.0	<0.5	<1.0	<1.0	<1.0	<0.1
6	Sep-24	29.8	13.2	7.6	10.9	<0.01	<5.0	<5.0	<0.5	<1.0	<1.0	<1.0	<0.1

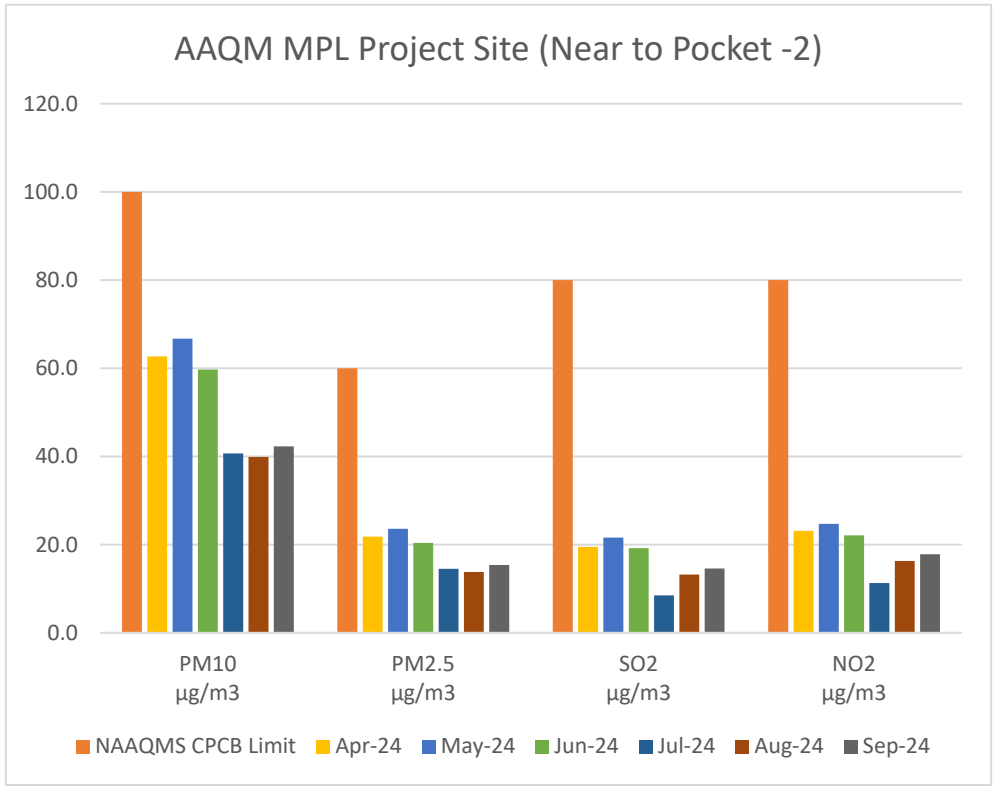
Report Ref. No.- URA/24/04/A-051 dt. 03/05/2024, URA/24/05/A-090 dt. 03/06/2024, URA/24/06/A-090 dt. 04/07/2024, URA/24/07/A-060 dt. 06/08/2024, URA/24/08/A-032 dt. 02/09/2024, URA/24/09/A-075 dt. 03/10/2024

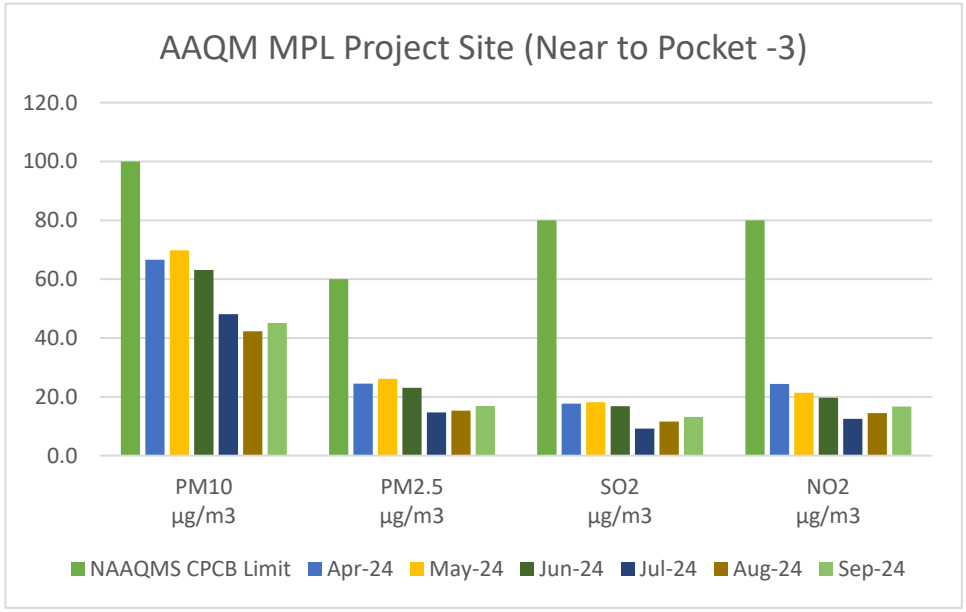
Observations

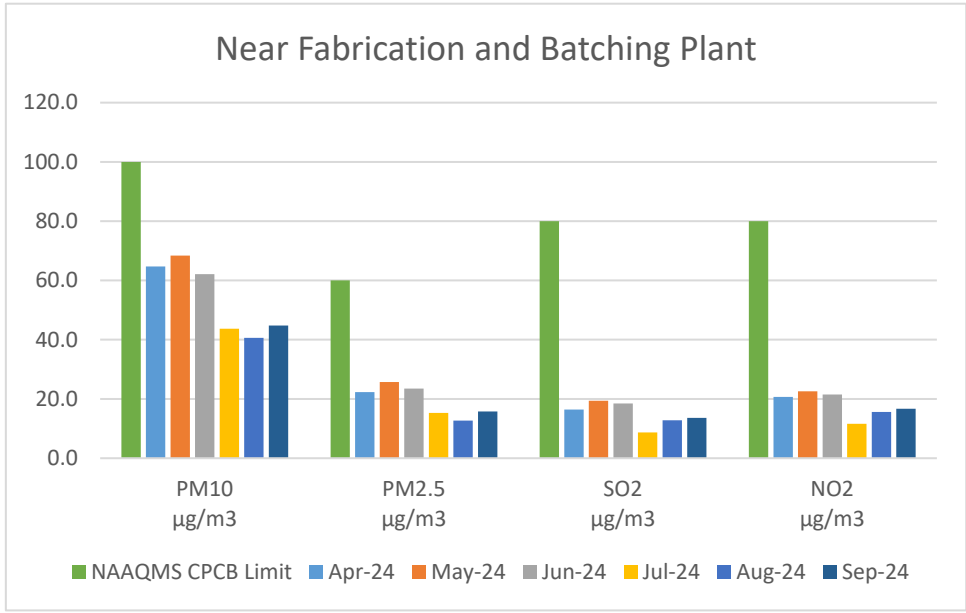
- The concentration of PM10 ranged from 70.2 µg/m3 at the Project Site (Pocket -1) to 25.3 µg/m3 in the Village of Vandh, with an average concentration of 49.8 µg/m3.
- The concentration of PM2.5 ranged from 26.1 µg/m3 at the Project Site - Pocket 3 to 10.5 µg/m3 in the Village of Zarpara, with an average concentration of 17.4 µg/m3.
- The concentration of SO2 ranged from 21.6 µg/m3 at the Project Site - Pocket 2 to 5.2 µg/m3 in the Village of Vandh, with an average concentration of 13.4 µg/m3.
- The concentration of NO2 ranged from 24.7 µg/m3 at the Project Site - Pocket 2 to 8.7 µg/m3 in the Village of Vandh, with an average concentration of 16.7 µg/m3.
- The concentrations of CO were below <0.01 mg/m3, & NH3 were below <5.0 µg/m3, O3 were below <5.0 µg/m3 at all the locations.
- The concentrations of Lead (Pb) were below <0.5 µg/m3, Arsenic (As) were below <1.0 ng/m3 & Nickel (Ni) were all below <1.0 ng/m3 at all the locations.
- The concentrations of Benzene were below <1.0 µg/m3 & BaP were all below <0.1 ng/m3 at all the locations.

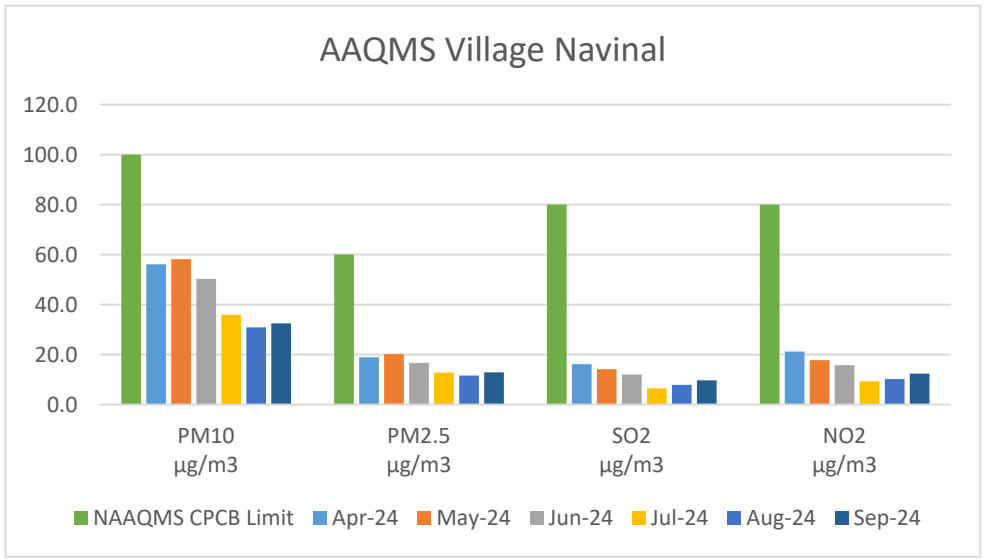
The concentrations of all monitored air quality parameters were found to be within the permissible limits as defined by the National Ambient Air Quality (NAAQ) Standards set by the Ministry of Environment, Forest and Climate Change (MoEF&CC).

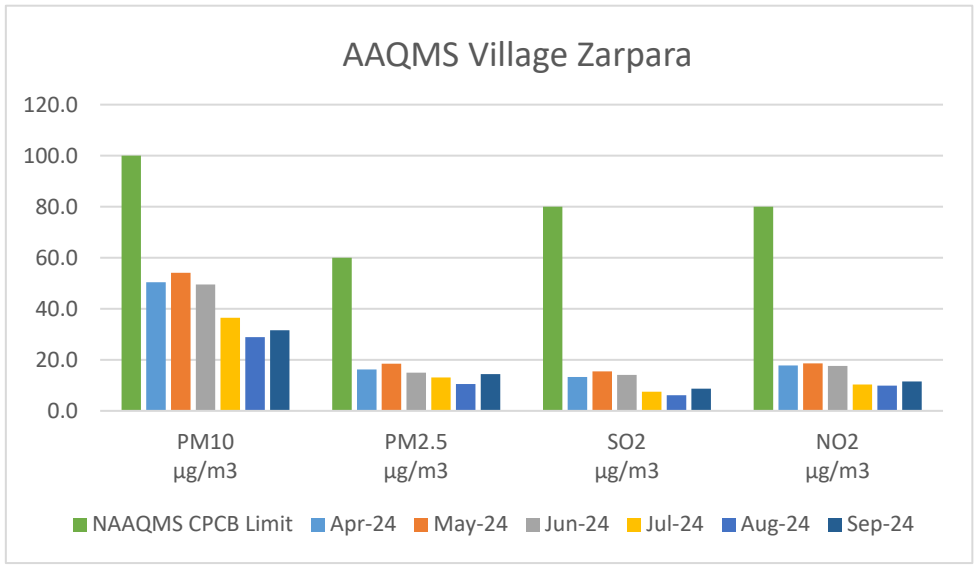

AAQMS MPL Project Site (Pocket -1)
120.0
100.0
80.0
60.0
40.0
20.0
0.0
PM10 µg/m3
PM2.5 µg/m3
SO2 µg/m3
NO2 µg/m3
NAAQMS CPCB Limit
Apr-24
May-24
Jun-24
Jul-24
Sep-24
Aug-24

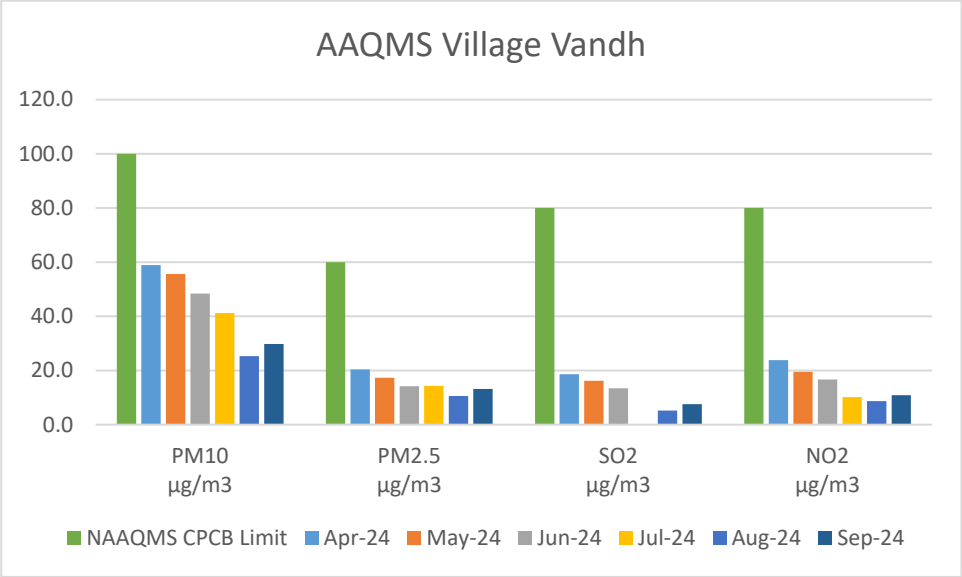

AAQM MPL Project Site (Near to Pocket -2)
120.0
100.0
80.0
60.0
40.0
20.0
0.0
PM10 µg/m3
PM2.5 µg/m3
SO2 µg/m3
NO2 µg/m3
NAAQMS CPCB Limit
Apr-24
May-24
Jun-24
Jul-24
Aug-24
Sep-24


AAQM MPL Project Site (Near to Pocket -3)
120.0
100.0
80.0
60.0
40.0
20.0
0.0
PM10 µg/m3
PM2.5 µg/m3
SO2 µg/m3
NO2 µg/m3
NAAQMS CPCB Limit
Apr-24
May-24
Jun-24
Jul-24
Aug-24
Sep-24


Near Fabrication and Batching Plant
120.0
100.0
80.0
60.0
40.0
20.0
0.0
PM10 µg/m3
PM2.5 µg/m3
SO2 µg/m3
NO2 µg/m3
NAAQMS CPCB Limit
Apr-24
May-24
Jun-24
Jul-24
Aug-24
Sep-24


AAQMS Village Navinal
120.0
100.0
80.0
60.0
40.0
20.0
0.0
PM10 µg/m3
PM2.5 µg/m3
SO2 µg/m3
NO2 µg/m3
NAAQMS CPCB Limit
Apr-24
May-24
Jun-24
Jul-24
Aug-24
Sep-24


AAQMS Village Zarpara
120.0
100.0
80.0
60.0
40.0
20.0
0.0
PM10 µg/m3
PM2.5 µg/m3
SO2 µg/m3
NO2 µg/m3
NAAQMS CPCB Limit
Apr-24
May-24
Jun-24
Jul-24
Aug-24
Sep-24



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	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	CPCB Limits	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24
1	Project Site (Pocket – 1)	75	59.8	59.6	59	59.7	58.1	57.6	70	48.2	46.8	45.9	45.9	45.2	46.0
2	Project Site (Pocket – 2)	75	58.2	58.5	58.4	58.9	58.6	56.9	70	48.9	45.5	46.1	45.8	46.1	45.3
3	Project Site (Pocket – 3)	75	58.7	59.9	61.4	58.9	57.4	58.2	70	46.8	46	47.1	45.5	43.6	45.0
4	Near Fabrication & Batching Plant	75	63.6	62.2	62.3	61.7	59.5	60.5	70	49	47.6	46.3	46.3	44.6	46.8
5	Village - Navinal	55	54.2	52.6	50.1	51	49.9	46.4	45	44.5	40.3	39.1	41.5	41.5	36.9

6	Village - Zarpara	55	50.4	49	49.6	50.9	50.2	48.7	45	42.4	41.6	40.8	41.9	40.4	37.2
7	Village - Vandh	55	51.5	52.2	50.6	51	48.3	47.4	45	43.1	41.1	41.6	42.8	38.9	39.9

Report Ref. No.-

URA/24/04/AN-063 dt. 03/05/2024, URA/24/05/AN-024 dt. 03/06/2024, URA/24/06/AN-034 dt. 04/07/2024, URA/24/06/AN-037 dt. 06/08/2024, URA/24/08/AN-011 dt. 02/09/2024, URA/24/09/AN-048 dt. 03/10/2024.

URA/24/04/AN-064 dt. 03/05/2024, URA/24/05/AN-035 dt. 03/06/2024, URA/24/06/AN-037 dt. 04/07/2024, URA/24/06/AN-012 dt. 06/08/2024, URA/24/08/AN-012 dt. 02/09/2024, URA/24/09/AN-051 dt. 03/10/2024.

URA/24/04/AN-057 dt. 03/05/2024, URA/24/05/AN-031 dt. 03/06/2024, URA/24/06/AN-026 dt. 04/07/2024, URA/24/06/AN-039 dt. 06/08/2024, URA/24/08/AN-013 dt. 02/09/2024, URA/24/09/AN-052 dt. 03/10/2024.

URA/24/04/AN-052 dt. 03/05/2024, URA/24/05/AN-028 dt. 03/06/2024, URA/24/06/AN-019 dt. 04/07/2024, URA/24/06/AN-036 dt. 06/08/2024, URA/24/08/AN-014 dt. 02/09/2024, URA/24/09/AN-050 dt. 03/10/2024.

URA/24/04/AN-012 dt. 03/05/2024, URA/24/05/AN-021 dt. 03/06/2024, URA/24/06/AN-038 dt. 04/07/2024, URA/24/06/AN-033 dt. 06/08/2024, URA/24/08/AN-009 dt. 02/09/2024, URA/24/09/AN-021 dt. 03/10/2024.

URA/24/04/AN-035 dt. 03/05/2024, URA/24/05/AN-060 dt. 03/06/2024, URA/24/06/AN-043 dt. 04/07/2024, URA/24/06/AN-035 dt. 06/08/2024, URA/24/08/AN-010 dt. 02/09/2024, URA/24/09/AN-049 dt. 03/10/2024.

URA/24/04/AN-028 dt. 03/05/2024, URA/24/05/AN-034 dt. 03/06/2024, URA/24/06/AN-025 dt. 04/07/2024, URA/24/06/AN-034 dt. 06/08/2024, URA/24/08/AN-008 dt. 02/09/2024, URA/24/09/AN-038 dt. 03/10/2024.

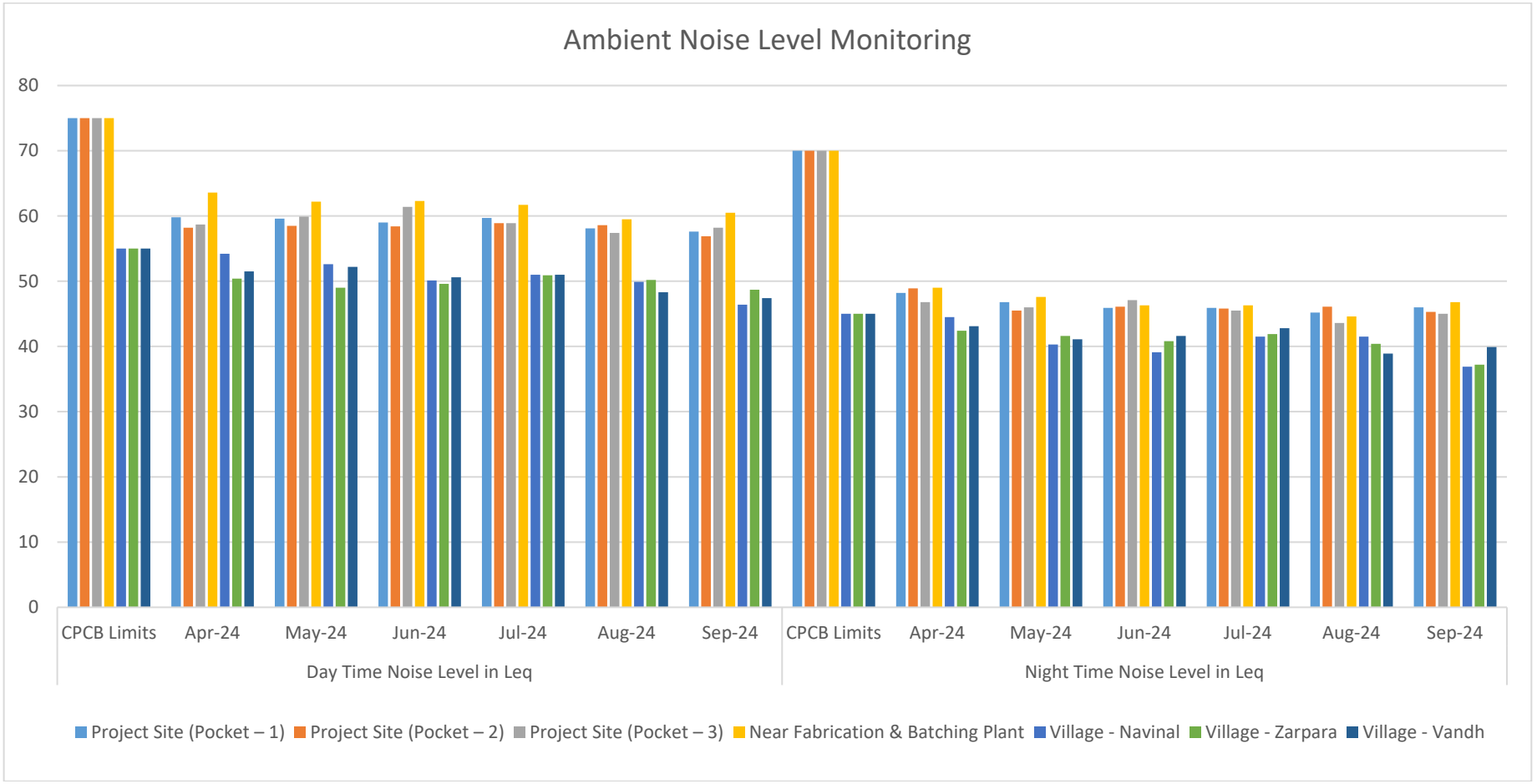
Observations

Industrial Zone

The Average Leq (equivalent continuous sound level) during the day for the industrial zone ranged from 61.7 dB(A) at Near Fabrication & Batching Plant to 54.8 dB(A) at Near Fabrication & Batching Plant. Similarly, the Leq during the night ranged from 49.4 dB(A) at Project Site - Pocket 1 & 3 to 46.2 dB(A) at Near 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 55.2 dB(A) in Village Navinal to 50.7 dB(A) in the village Vandh. Meanwhile, the Leq during the night ranged from 44.2 dB(A) in Village Navinal to 39.4 dB(A) in Village Navinal. 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.


Ambient Noise Level Monitoring
80
70
60
50
40
30
20
10
0
CPCB Limits
Apr-24
May-24
Jun-24
Jul-24
Aug-24
Sep-24
Day Time Noise Level in Leq
CPCB Limits
Apr-24
May-24
Jun-24
Jul-24
Aug-24
Sep-24
Night Time Noise Level in Leq
Project Site (Pocket – 1)
Project Site (Pocket – 2)
Project Site (Pocket – 3)
Near Fabrication & Batching Plant
Village - Navinal
Village - Zarpara
Village - Vandh

4.3 Water Quality

4.3.1 Ground Water Quality

Ground water was collected as grab samples from eight location & sent to laboratory for analysis for various parameters in the month of May 2024 as Pre-Monsoon sampling.

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 01 Nani Khakhar	GW 02 Moti Khakhar	GW 03 Mota Kandagra	GW 04 Siracha	GW 05 Navinal	GW 06 Tunda	GW 07- Nana Bhadiya	GW 08 Deshalpar
			Desirable limit	Permissible Limit in the Absence of Alternate Source								
1	pH	pH scale	6.5-8.5	NR	7.83	7.99	8.41	8.09	7.96	8.42	8.6	7.86
2	Temp	o C	NS	NS	32	32	32	32	29.5	32	32	32
3	Turbidity	NTU	1	5	0.1	0.1	BDL (MDL:0.1)	BDL (MDL:0.1)	BDL (MDL:0.1)	BDL (MDL:0.1)	BDL (MDL:0.1)	BDL (MDL:0.1)
4	TDS	mg/l	500	2000	612	2830	1800	1960	1820	3480	1290	2520
5	Electrical Conductivity	µS/ cm	NS	NS	927	4300	2860	2980	2750	5280	2080	3820
6	COD	mg/l	NS	NS	16	20	20	20	20.4	8.1	16	24
7	BOD	mg/l	NS	NS	BDL (MDL:1.0)	BDL (MDL:1.0)	BDL (MDL:1.0)	BDL (MDL:1.0)	2.5	BDL (MDL:1.0)	BDL (MDL:1.0)	BDL (MDL:1.0)
8	Phenol	mg/l	0.001	0.002	BDL (MDL:0.001)	BDL (MDL:0.001)	BDL (MDL:0.001)	BDL (MDL:0.001)	BDL (MDL: .001)	BDL (MDL: .001)	BDL (MDL: .001)	BDL (MDL: 0.001)
9	Chlorides	mg/l	250	1000	153.8	1121.6	590.6	714.7	667.8	1566.9	408	987.6
10	Sulphate	mg/l	200	400	39.3	195.5	95.5	175.9	38	118.7	64.9	208.8
11	Total Hardness	mg/l	200	600	181.8	585.8	131.3	272.7	236.1	307	84.8	474.7
12	Ca++ Hardness	mg/l	NS	NS	111.1	242.4	70.7	111.1	138.6	119.2	40.4	191.9
13	Mg++ Hardness	mg/l	NS	NS	70.7	343.4	60.6	161.6	97.5	187.9	44.4	282.8

Sr. No.	Parameter	Unit	IS 10500 Standard Limits for drinking water		GW 01 Nani Khakhar	GW 02 Moti Khakhar	GW 03 Mota Kandagra	GW 04 Siracha	GW 05 Navinal	GW 06 Tunda	GW 07- Nana Bhadiya	GW 08 Deshalpar
			Desirable limit	Permissible Limit in the Absence of Alternate Source								
14	Total Alkalinity	mg/l	200	600	156.8	455.7	509.6	343	289	465.5	465.5	352.8
15	Nitrate	mg/l	45	NR	0.6	4.5	5.8	0.7	1.1	3.5	2.2	9.9
16	Fluoride	mg/l	1	1.5	0.49	1.11	2.75	2.65	0.98	1.29	4.95	2.05
17	Sodium	mg/l	NS	NS	98.8	>500	496.2	496.5	410	>500	380	>500
18	Potassium	mg/l	NS	NS	3.3	8.8	13.8	6	34	9.2	8.8	6.9
19	Calcium	mg/l	75	200	44.5	97.2	28.4	44.5	55.6	47.8	16.2	76.9
20	Magnesium	mg/l	30	100	17.1	83.4	14.7	39.3	23.7	45.6	10.8	68.7
21	Salinity	ppt	NS	NS	0.28	2	1.07	1.29	1.206	2.8	0.38	1.78
22	Total Nitrogen	mg/l	0.5	NR	BDL (MDL:2.0)	BDL (MDL:2.0)	BDL (MDL:2.0)	BDL (MDL:2.0)	BDL (MDL: 2.0)	BDL (MDL: 2.0)	BDL (MDL: 2.0)	BDL (MDL: 2.0)
23	Total Phosphorous	mg/l	NS	NS	N.D	N.D	N.D	N.D	0.38	ND	ND	ND
24	Dissolved Oxygen	mg/l	NS	NS	6.9	6.8	6.7	7.2	4.1	6.6	7	7.1
25	Ammonical Nitrogen	mg/l	NS	NS	BDL (MDL:0.2)	BDL (MDL:0.2)	BDL (MDL:0.2)	BDL (MDL:0.2)	BDL (MDL: 0.2)	BDL (MDL: 0.2)	BDL (MDL: 0.2)	BDL (MDL: 0.2)
26	SAR	-	NS	NS	3.2	12.8	19.4	13.2	11.6	27.5	16.1	14.4
	Heavy Metals											
27	Arsenic (as As)	mg/l	0.01	0.05	BDL (MDL:0.01)	BDL (MDL:0.01	BDL (MDL:0.01	BDL (MDL:0.01	BDL (MDL:0.01	BDL (MDL:0.01	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)	BDL (MDL:0.003)	BDL (MDL:0.003)	BDL (MDL:0.003)	BDL (MDL:0.003)	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)	BDL (MDL:0.05)	BDL (MDL:0.05)	BDL (MDL:0.05)	BDL (MDL:0.05)	BDL (MDL:0.05)	BDL (MDL:0.05)

Sr. No.	Parameter	Unit	IS 10500 Standard Limits for drinking water		GW 01 Nani Khakhar	GW 02 Moti Khakhar	GW 03 Mota Kandagra	GW 04 Siracha	GW 05 Navinal	GW 06 Tunda	GW 07- Nana Bhadiya	GW 08 Deshalpar
			Desirable limit	Permissible Limit in the Absence of Alternate Source								
30	Copper (as Cu)	mg/l	0.05	1.5	BDL (MDL:0.05)	BDL (MDL:0.05)	BDL (MDL:0.05)	BDL (MDL:0.05)	BDL (MDL:0.05)	BDL (MDL:0.05)	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)	BDL (MDL:0.05)	BDL (MDL:0.05)	BDL (MDL:0.05)	BDL (MDL:0.05)	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)	BDL (MDL:0.1)	BDL (MDL:0.1)	BDL (MDL:0.1)	BDL (MDL:0.1)	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)	BDL (MDL:0.01)	BDL (MDL:0.01)	BDL (MDL:0.01)	BDL (MDL:0.01)	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)	BDL (MDL:0.001)	BDL (MDL:0.001)	BDL (MDL:0.001)	BDL (MDL:0.001)	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)	BDL (MDL:0.1)	BDL (MDL:0.1)	BDL (MDL:0.1)	BDL (MDL:0.1)	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)	BDL (MDL:0.02)	BDL (MDL:0.02)	BDL (MDL:0.02)	BDL (MDL:0.02)	BDL (MDL:0.02)	BDL (MDL:0.02)
37	Zinc (as Zn)	mg/l	5	15	BDL (MDL:0.05)	BDL (MDL:0.05)	BDL (MDL:0.05)	BDL (MDL:0.05)	BDL (MDL:0.05)	BDL (MDL:0.05)	BDL (MDL:0.05)	BDL (MDL:0.05)
38	Total Coliform	MPN	Shall not be detectable		Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent
39	Faecal Coliforms	MPN	Shall not be detectable		Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent
Report Ref. No. URC/24/XX/XXX & URB/24/XX/XXX					05/0472 05/0473	05/0474 05/0475	05/0466 05/0469	05/0478 05/0479	05/0480 05/0481	05/0468 05/0467	05/0470 05/0471	05/0476 05/0477

Observations :

The ground water samples are analysed as per IS: 10500 Standard.

4.3.2 Surface Water Quality

Surface water was collected as grab samples from one location Navinal village pond however other two location Nagavanti Nadi & Siracha village pond found dried during pre-monsoon sampling in month of May 2024.

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 046 Navinal Village pond
			Class E	Aug-23
1	pH	pH Scale	6.0 to 8.5	8.48
2	Dissolved Oxygen	mg/l	NA	6.5
3	TDS	mg/l	2100	350
4	Electrical Conductivity	µS/cm	2250	530
5	BOD	mg/l	NA	9
6	Colour	Pt.co	-	BDL (MDL: 5.0)
7	Total Hardness	mg/l	NA	72.7
8	Ca++ Hardness	mg/l	NA	19.4
9	Mg++ Hardness	mg/l	NA	5.9
10	Chlorides	mg/l	600	86
11	Sulphate	mg/l	1000	8.8
12	Nitrate	mg/l	NA	BDL (MDL: 0.1)
13	Fluoride	mg/l	-	0.55
14	Phenol	mg/l	NA	BDL (MDL: 0.001)
15	Ammonical Nitrogen	mg/l	NA	BDL (MDL: 0.2)
16	SAR		26	3.3
17	Copper (as Cu)	mg/l	NA	BDL (MDL: 0.05)
18	Iron (as Fe)	mg/l	NA	BDL (MDL: 0.1)
19	Manganese (as Mn)	mg/l	NA	BDL (MDL: 0.1)
20	Mercury	mg/l	NA	BDL (MDL: 0.001)
21	Cadmium (as Cd)	mg/l	NA	BDL (MDL: 0.003)
22	Arsenic (as As)	mg/l	NA	BDL (MDL: 0.01)
23	Cyanide	mg/l	NA	BDL (MDL: 0.05)
24	Lead (as Pb)	mg/l	NA	BDL (MDL: 0.01)
25	Zinc	mg/l	NA	BDL (MDL: 0.05)
26	Chromium (as Cr)	mg/l	NA	BDL (MDL: 0.05)
27	Boron	mg/l	2	BDL (MDL: 0.5)
28	Total Coliform	MPN/100ml	-	Absent
29	COD	mg/l	-	16.4
			Report Ref. No.	URC/24/05/0464 URB/24/05/0465

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	8.1	8
2	Dissolved Oxygen	mg/l	5	6.4	6.6
3	Colour & Odour	-	No Colour No Odour	BDL Agreeable	BDL Agreeable
4	Floating Matters	-	None	None	None
5	Total Suspended Solid	mg/l	None from Sewage or Industrial waste Origin	24	22
6	Turbidity	NTU	-	0.1	0.1
7	BOD	mg/l	-	2.8	3
8	Oil & Grease	mg/l	0.1	BDL	BDL
9	Mercury as Hg	mg/l	0.01	BDL	BDL
10	Lead (as Pb)	mg/l	0.01	BDL	BDL
11	Cadmium (as Cd)	mg/l	0.01	BDL	BDL
12	Iron (as Fe)	mg/l	-	0.172	0.194
13	Manganese (as Mn)	mg/l	-	BDL	BDL
14	Total Coliform	ml (MPN)	-	Absent	Absent
15	Sludge Deposits, Solid refuse floating Solids, Oil Grease and Scum	-	-	None	None
			Report Ref. No.	URC/24/05/0460 URB/24/05/0461	URC/24/05/0462 URB/24/05/0463

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 was collected as grab samples from STP outlet and 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	MOEFCC Limits	STP Outlet					
			Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24
1	pH @25°C	6.5 – 9.0	7.23	7.44	7.39	7.15	7.01	7.6
2	Total Suspended Solid	<50	14	18	16	19	14	15
3	Chemical Oxygen Demand (COD)	-	28.4	32.2	36.5	24.2	39.4	41.3

4	Biochemical Oxygen Demand (BOD) (5 days at 20 ^{0}C)	<30	8	10	6	8	9	8
5	Total Nitrogen	-	4.2	3.8	4.2	5.2	6.4	4.8
6	Total Phosphorus	-	1.1	1.4	1.1	1.4	1.2	1.9
7	Faecal Coliform	<1000	Absent	Absent	32	21	27	34
Report Ref. No. : URC/24/04/0688 dt. 08/05/2024, URC/24/05/0315 dt. 21/05/2024, URC/24/06/0338 dt. 02/07/2024, URC/24/08/0013 dt. 14/08/2024, URC/24/08/0183 dt. 03/09/2024, URC/24/09/0642 dt. 08/10/2024								

Observations :

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

ANNEXURE

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

Laboratory Recognition by MOEFCC


National Accreditation Board for Testing and Calibration Laboratories

CERTIFICATE OF ACCREDITATION

UNISTAR ENVIRONMENT AND RESEARCH LABS PVT. LTD. (LABORATORY DIVISION)

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2017

"General Requirements for the Competence of Testing & Calibration Laboratories"

for its facilities at

WHITE HOUSE,1ST & 2ND FLOOR, PLOT NO. C/5/14, CHAR RASTA, VAPI, VALSAD, GUJARAT, INDIA

in the field of

TESTING

Certificate Number: TC-7703

Issue Date: 23/09/2024 Valid Until: 22/09/2026

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.

Name of Legal Entity: UNISTAR ENVIRONMENT AND RESEARCH LABS PVT. LTD.

Signed for and on behalf of NABL

N. Venkateswaran
Chief Executive Officer

Laboratory Recognition by NABL


GUJARAT POLLUTION CONTROL BOARD
Paryavaran Bhavan
Sector - 10 A, Gandhinagar - 382 010.
Environment Audit Cell

R.P.A.D

To,
Unistar Environment and Research Labs Pvt. Ltd.,
White House, Plot No. C/5-24,
Near New GIDC Office, Char Rasta
Vapi-396195.

Sub: - Renewal of Recognition as Schedule-II Environmental Auditor with team member change.

Sir,

This refers to your application for renewal of 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 one team member change for carrying out the Environmental Audit under Environment Audit Scheme with following conditions.

1) Recognition is valid upto 31/12/2025.
2) You shall have maximum Two teams for the Environment Audit.
3) You shall carry out maximum 20 nos. of Environment Audit in a year.
4) Team members shall be as under :

Sr. No.	Name	Designation
Team-1		
1	Mr. G.G. Thumar	Environment Engineer
2	Mr. Devang B. Patel	Chemical Engineer
3	Mr. Jaivik S. Tandel	Chemist
4	Mr. Ranjan Mahanj	Microbiologist
Team-2		
1	Ms. Divya K. Patel	Environment Engineer
2	Ms. Bijal J. Patel	Chemical Engineer
3	Mr. Nitin B. Tandel	Chemist
4	Ms. Shweta A. Rana	Microbiologist

Clean Gujarat Green Gujarat P.T.O
An ISO 9001: 2008 & ISO 14001: 2004 Certified Organisation

Laboratory Recognition by GPCB


National Accreditation Board for Education and Training

Certificate of Accreditation

UniStar Environment and Research Labs Pvt. Ltd.

C-5/24, White House, Near GIDC Office, Char Rasta, Vapi Gujarat

NABET

NABET Certification

Annexure 2: Calibration Certificates

UniStar
Environment and Research Labs Pvt. Ltd.

White House
Near G.I.D.C. Office, Char Rasta,
Vapi - 396 195, Gujarat, India.
Phone : +91 260 2433986 / 2425610
Email : response@uerl.in Website : www.uerl.in

MoEF&CC (GOI) Recognized Environmental Laboratory under the EPA 1986 (31.03.2023 to 22.09.2024) | QCI/NABET Accredited EIA & GW Consultant Organization | GPCB Recognized Environmental Auditor (Schedule-I) | ISO 9001 : 2015 Certified Company | ISO 45001 : 2018 Certified Company

Calibration Certificate

Instrument Name	:	Respirable Dust Sampler
Instrument ID No.	:	UERL/AIR/RDS/27
Instrument Sr. No. Supplier	:	1751-DTA-2013, 1142-DTA-2013
Calibration Certificate No.	:	UERL/CC/RDS-27/0802/24-25
Date of Calibration	:	02/08/2024
Next Calibration due Date	:	01/08/2025

Sr. No.	Name of Unit Calibrated	Calibrator Traceable to	Calibration Certificate No. Date of Calibration
1.	Flow Meter	Top Loading Orifice Envirotech Calibration Laboratory Id No.: (UERL/MASTER/AIR/AA/MM/01)	ECL/UERLPL/2023-24/FLOW/2213 Date of Cali.: 06.08.2023
	ID. No. (UERL/AIR/RDS/FM/27)	Pressure Indicator Envirotech Calibration Laboratory	ECL/UERLPL/2022-23/MECH /3353 Date of Cali.: 22.10.2022
2.	Time Totalizer	Envirotech Calibration Laboratory	ECL/UERLPL/2022-23/ET/3351
	ID. No. (UERL/AIR/RDS/TT/27)	ID. No. (UERL/MASTER/AIR/TT/AA/01)	Date of Cali.: 22.10.2022
3.	Rotameter	Rotameter Envirotech Calibration Laboratory	ECL/UERLPL/2022-23/FLOW/3355
	ID. No. (UERL/AIR/RDS/RM/27)	ID. No. (UERL/MASTER/AIR/RM/02)	Date of Cali.: 22.10.2022

- UNCERTAINTY MEASUREMENT: Flow Meter : ± 0.061 m³/min.
- UNCERTAINTY MEASUREMENT: Time Totalizer : ± 0.031 hour
- UNCERTAINTY MEASUREMENT: Rotameter : ± 0.160 LPM

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

Prepared By:

Senior chemist

Approved By:

Technical manager

Regd. Office : 215, Royal Arcade, Near G.I.D.C.Office, Char Rasta,Vapi-396 195, Gujarat, India.
Extended Work Office : G.I.D.C., Dahej-II, Bharuch, Gujarat.
CIN:U73100GJ2007PTC051463

Calibration Certificate for RDS

UniStar
Environment and Research Labs Pvt. Ltd.

White House
Near G.I.D.C. Office, Char Rasta,
Vapi - 396 195. Gujarat, India.
Phone : +91 260 2433966 / 2425610
Email : response@uerl.in Website : www.uerl.in

MoEF&CC (GOI) Recognized Environmental Laboratory under the EPA-1986 (01.03.2023 to 22.09.2024) | QCI-NABET Accredited EIA & EM Consultant Organization | GPCB Recognized Environmental Auditor (Schedule-II) | ISO 9001 : 2015 Certified Company | ISO 45001 : 2018 Certified Company

Calibration Certificate

Instrument Name	:	Respirable Dust Sampler
Instrument ID No.	:	UERL/AIR/RDS/34
Instrument Sr. No. Supplier	:	1768-DTB-2013, 1147-DTB-2013
Calibration Certificate No.	:	UERL/CC/RDS-34/0802/24-25
Date of Calibration	:	02/08/2024
Next Calibration due Date	:	01/08/2025

Sr. No.	Name of Unit Calibrated	Calibrator Traceable to	Calibration Certificate No. Date of Calibration
1.	Flow Meter	Top Loading Orifice Envirotech Calibration Laboratory Id No.: (UERL/MASTER/AIR/AA/MM/01)	ECL/UERLPL/2023-24/FLOW/2213 Date of Cali.: 06.08.2023
	ID. No. (UERL/AIR/RDS/FM/34)	Pressure Indicator Envirotech Calibration Laboratory	ECL/UERLPL/2022-23/MECH /3353 Date of Cali.: 22.10.2022
2.	Time Totalizer	Envirotech Calibration Laboratory	ECL/UERLPL/2022-23/ET/3351
	ID. No. (UERL/AIR/RDS/TT/34)	ID. No. (UERL/MASTER/AIR/TT/AA/01)	Date of Cali.: 22.10.2022
3.	Rotameter	Rotameter Envirotech Calibration Laboratory	ECL/UERLPL/2022-23/FLOW/3355
	ID. No. (UERL/AIR/RDS/RM/34)	ID. No. (UERL/MASTER/AIR/RM/02)	Date of Cali.: 22.10.2022

- UNCERTAINTY MEASUREMENT: Flow Meter : ± 0.061 m³/min.
- UNCERTAINTY MEASUREMENT: Time Totalizer : ± 0.031 hour
- UNCERTAINTY MEASUREMENT: Rotameter : ± 0.160 LPM

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

Prepared By: Senior chemist

Approved By: Technical manager

Page 1 of 1 UERL/AIR/F-73/00

Regd. Office : 215, Royal Arcade, Near G.I.D.C.Office, Char Rasta,Vapi-396 195, Gujarat, India.
Extended Work Office : G.I.D.C., Dahej-II, Bharuch, Gujarat.
CIN:U73100GJ2007PTC051463

Calibration Certificate for RDS

UniStar
Environment and Research Labs Pvt. Ltd.

White House
Near G.I.D.C. Office, Char Rasta,
Vapi - 396 195. Gujarat, India.
Phone : +91 260 2433906 / 2425610
Email : response@uerl.in Website : www.uerl.in

Calibration Certificate

Instrument Name	:	Fine Particulate Sampler
Instrument ID No.	:	UERL/AIR/FPS/50
Instrument Sr. No. Supplier	:	APM – 550/129-DTL-2012
Calibration Certificate No.	:	UERL/CC/FPS-50/0803/24-25
Date of Calibration	:	03/08/2024
Next Calibration due Date	:	02/08/2025

Sr. No.	Name of Unit Calibrated	Calibrator Traceable to	Calibration Certificate No. Date of Calibration
1.	Rotameter ID. No. (UERL/AIR/FPS/RM/50)	Envirotech Calibration Laboratory (New Delhi) ID No. (UERL/MASTER/AIR/RM/01)	ECL/UERLPL/2023-24/FLOW/2214 Date of Cali.: 06.08.2023
2.	Time Totalizer ID. No. (UERL/AIR/FPS/TT/50)	Envirotech Calibration Laboratory ID. No. (UERL/MASTER/AIR/TT/AA/01)	ECL/UERLPL/2022-23/ET/3351 Date of Cali.: 22.10.2022

- UNCERTAINTY MEASUREMENT: Rotameter : ± 0.475 LPM
- UNCERTAINTY MEASUREMENT: Time Totalizer : ± 0.031 hour

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

Prepared By:

Senior chemist

Approved By:

Technical manager

Page 1 of 1

UERL/AIR/F-75/00

Regd. Office : 215, Royal Arcade, Near G.I.D.C.Office, Char Rasta,Vapi-396 195, Gujarat, India.
Extended Work Office : G.I.D.C., Dahej-II, Bharuch, Gujarat.
CIN:U73100GJ2007PTC051463

Calibration Certificate for PM 2.5

ENPRO Enviro Tech and Engineers Pvt. Ltd.

Calibration and Validation Laboratory

Service Provider : Dimension, Electrical, Flow, Mass, Pressure, Thermal, Volume

Plot No. D/29/16-17, Road No. 17, Hojiwala Industrial Estate, Gate No. 3,
Sachin-Palsana Road, Sachin, Surat - 394 230. Gujarat, INDIA.

Calibration Lab Ph. : +91-93275 00920 E-mail : callab@enpro.co.in

CC-2959

CALIBRATION CERTIFICATE

Calibration Certificate No :	**ENP2406275595-S**	**ULR NO :**	**CC295924000005595F**
Date of Receipt :	27/06/2024	**Name of Customer and Address**	
Date of Calibration :	27/06/2024	**UniStar Environment & Research Labs Pvt. Ltd** C-6/24,White House,Near GIDC Office,Char Rasta, Vapi,Dist. Valsad – 396195,Gujarat,INDIA. Regd.Office :215, Royale Arcade,Near GIDC Office, Char Rasta, Vapi, Dist. Valsad - 396195, Gujarat,INDIA.	
Due Date of Calibration : (Recommended by Customer)	26/06/2025		
Date of Issue :	29/06/2024		
Format No :	QR/7.8/01		

Details of UUC to be Calibrate :

Nomenclature of UUC	I.D. No. / Sr. No.	Make / Model	Least Count	Range	Accuracy	Type
Fine Particular Sampler (PM2.5)	UERL/AIR/FPS/22 / 44-DTC-2012	Envirotech / APM-550-MINI	See Calibration Result	As per Calibration Result	See in Calibration Result	NA

Description of Standard Instrument Used :

Nomenclature	I.D. No. / Sr. No.	Certificate No	Certified By	Valid Up To
Air Flow Meter(LFE)	ENP/GFC/F/01-1818	PICAL/1223/F/222	PI Calibration Laboratory	14/12/2024
Time Calibration Standard	ENP/TCS/E/01-4802B18	E/G0827-A/1807-1/2023	EQDC	19/10/2024

Environmental Condition :		**CSR No :**	240827251-S
Temperature (°C) :	24.5	**Condition of Item :**	OK
Relative Humidity (% RH) :	53.5	**Calibration Location :**	On Site
Parameter :	Fluide Flow	**Calibration Procedure :**	ENP/WI/F-03
Pressure (mbar) :	1010.2	**Calibration Standard Used :**	40 CFR PART 50 Appendix L
Company Location :	NA		

Approved and Reviewed By

29/06/2024

Technical Manager

Valshali Kapadiya

Calibrated By Rahul Kosambiya

Page 1 of 2

2306

ECL20242502

Calibration Certificate for PM 2.5

Matrix Test & Cal LLP
CERTIFIED CALIBRATION & VALIDATION SERVICES

ilac-MRA CC-2664

CALIBRATION CERTIFICATE

SUBJECT: CALIBRATION OF SOUND LEVEL METER	CERTIFICATE NO.: ML/MCH/0848/02/2024-25	
	Certificate Issue Date 08/07/2024	Page 1 of 1

1. Scope

1.1	Service Request Details	Calibration
1.1.1	Service Request No.	ML/0848/24-25
1.1.2	Service Request Finalized On	04/07/2024
1.1.3	Unique Lab Report Number (ULR No.)	CC266424000061115F
1.1.4	Discipline / Group	Mechanical / Acoustics
1.1.5	Name & Address of Organization	UNISTAR ENVIRONMENT RESEARCH LABS PVT. LTD. White House, 2nd Floor, Near G.I.D.C. Office, Char Rasta, Vapi, Gujarat, India, 396 195.

1.2 Item Details

1.2.1	Condition of the Item	Working		
1.2.2	Nomenclature	SOUND LEVEL METER		
	Make	Envirotech	Model No.	SLM 100
	ID No.	UERL/AIR/SLM/098	Sr.No.	310-DTK-2015
	Range	30 to 130 dB dB @1 kHz	Type	---
	Least Count	0.1 dB @1 kHz	Accuracy / Accep. Crite.	NA
	Department	---	Location	---
1.3	Item Received On	Dt. 05/07/2024		

1.4 Details of Test Equipments Used

Instrument Name	Range	UID No.	Certificate No.	Make	Due Date
Sound Level Calibrator	94 dB & 114 dB	ML/MSLC/001	FCRI/NVL-C/0947/23/203	Lutron	23/08/2024

1.4.1	Operating Procedures Used:	ML/SOP/M/AC/001
1.4.2	Reference Standard:	IS : 9779:1981
1.5	Date of Calibration:	06-July-2024
1.6	Recommended Due Date of Calibration:	05-July-2025
1.7	OBSERVATIONS:	
1.7.1	Laboratory Ambient: Temperature: 24.5 °C (25±3)	Humidity: 56.3 %RH (50±20)
1.7.2	Parameter:Sound (dB @1 kHz)	

1.7.3

CALIBRATION RESULTS					
Sr. No.	Calibration Point	Set Value on Master (A)	Measured Value on IUC (B)	Error (B - A)	(±) Expanded Uncertainty
1	94	94	94.1	0.1	1.1 dB @1 kHz
2	114	114	114.4	0.4	1.1 dB @1 kHz

Note: The value mentioned above is the mean of 5 readings.

1.8 General Remarks:

- The reported uncertainty is the expanded uncertainty in 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 to be calculated at Max Error / Full Range of IUC
- Any anomalies/Discrepancies in the certificate should be brought to our notice within 30 days from the date of issue Certificate.
- IUC* (Instrument Under Calibration)
- The Measurements are metrologically traceable to applicable national /International Standards.
- Any hand written corrections (except @) or photocopies of the report invalidates this certificate.
- The results related to the item calibrated.

Calibrated By: Hemant Patel, Technical Engineer

AUTHORISED SIGNATORY

396195 MATRIX CAL LLP VAPI

Ranjit Rohit / Hitesh Patel
Technical Director / Quality Manager

End of Certificate

B-209 & B-210 2nd Floor, "B"Wing, M Cube,The Business Hub, Opp. Taluka Seva Sadan, Ballima.
Vapi-396 195 Gujarat (India) Cell:098253 17475,Off. 097238 20970
Website : www.matrixlab.in, E-mail : info@matrixlab.co.in, matrixvapi@rediffmail.com

CERTIFICATE

Calibration Certificate for Sound Level Meter

Matrix Test & Cal LLP
CERTIFIED CALIBRATION & VALIDATION SERVICES

CC-2664

CALIBRATION CERTIFICATE

SUBJECT: CALIBRATION OF SOUND LEVEL METER	CERTIFICATE NO.: ML/MCH/0848/01/2024-25	
	Certificate Issue Date 08/07/2024	Page 1 of 1

1. **Scope**
1.1 **Service Request Details** — Calibration
1.1.1 **Service Request No.** — ML/0848/24-25
1.1.2 **Service Request Finalized On** — 04/07/2024
1.1.3 **Unique Lab Report Number (ULR No.)** — CC266424000061114F
1.1.4 **Discipline / Group** — Mechanical / Acoustics
1.1.5 **Name & Address of Organization** — **UNISTAR ENVIRONMENT RESEARCH LABS PVT. LTD.** White House, 2nd Floor, Near G.I.D.C. Office, Char Rasta, Vapi, Gujarat, India, 396 195.

1.2 **Item Details**
1.2.1 **Condition of the Item** — Working
1.2.2

Nomenclature	SOUND LEVEL METER		
Make	Envirotech	Model No.	SLM 100
ID No.	UERL/AIR/SLM/09A	Sr.No.	24DTE2008
Range	30 to 130 dB dB @1 kHz	Type	---
Least Count	0.1 dB @1 kHz	Accuracy / Accep. Crite.	NA
Department	---	Location	---

1.3 **Item Received On** — Dt. 05/07/2024
1.4 **Details of Test Equipments Used**

Instrument Name	Range	UID No.	Certificate No.	Make	Due Date
Sound Level Calibrator	94 dB & 114 dB	ML/MSLC/001	FCRI/NVL-C/0947/23/203	Lutron	23/08/2024

1.4.1 **Operating Procedures Used:** — **ML/SOP/M/AC/001**
1.4.2 **Reference Standard:** — IS : 9779:1981
1.5 **Date of Calibration:** — 06-July-2024
1.6 **Recommended Due Date of Calibration:** — **05-July-2025**
1.7 **OBSERVATIONS:**
1.7.1 **Laboratory Ambient:** Temperature: 25.4 °C (25±3) Humidity: 52.0 %RH (50±20)
1.7.2 **Parameter:Sound (dB @1 kHz)**
1.7.3

CALIBRATION RESULTS					
Sr. No.	Calibration Point	Set Value on Master (A)	Measured Value on IUC (B)	Error (B - A)	(±) Expanded Uncertainty
1	94	94	94.1	0.1	1.1 dB @1 kHz
2	114	114	114.5	0.5	1.1 dB @1 kHz
Note: The value mentioned above is the mean of 5 readings.					

1.8 **General Remarks:**

- The reported uncertainty is the expanded uncertainty in 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 to be calculated at Max Error / Full Range of IUC
- Any anomalies/Discrepancies in the certificate should be brought to our notice within 30 days from the date of issue Certificate.
- IUC* (Instrument Under Calibration)
- The Measurements are metrologically traceable to applicable national /International Standards.
- Any hand written corrections (except @) or photocopies of the report invalidates this certificate.
- The results related to the item calibrated.

Calibrated By: Hemant Patel, Calibration Engineer	
Ranjit Rohit / Hitesh Patel Technical Director / Quality Manager	AUTHORISED SIGNATORY

MATRIX TEST & CAL LLP 396195 VAPI

*** End of Certificate ***

B-209 & B-210 2nd Floor, "B"Wing, M Cube,The Business Hub, Opp. Taluka Seva Sadan, Bantha, Vapi-396 195 Gujarat (India) Cell:098253 17475,Off. 097238 20970
Website : www.matrixlab.in, E-mail : info@matrixlab.co.in, matrixvapi@rediffmail.com

CERTIFICATE

Calibration Certificate for Sound Level Meter

UniStar Environment & Research Labs Pvt. Ltd.

White House, Near GIDC Office, Char Rasta, Vapi,

Gujarat, India – 396195

Annexure - VIII

adani	**Adani Enterprises Ltd. (AEL)** **Environment Policy**

At Adani Enterprises Ltd. (AEL), we are committed to continuously improve our environmental performance by implementing a robust environmental management system across our businesses, to eliminate or minimize any adverse environmental impacts. Further, we aspire to achieve environmental excellence and leadership when compared with our peers. The policy is applicable to all AEL business operations, facilities, offices, manufacturing units and related activities.

AEL, its subsidiaries and joint ventures shall keep its commitment to:

- Comply with all the applicable national, regional, and local environment regulations and statutory obligations and endeavour to go beyond compliances.
- Reduce our impact on environment and climate change by taking appropriate mitigation & adaptation measures
- Continually improve the environmental performance by setting goals, targets, and processes for efficient use of natural resources, waste minimization, emission reduction and pollution prevention and product stewardship.
- Conserve and protect biodiversity in and around of our operational sites in cooperation with relevant stakeholders
- Achieve No-Net Loss at our project operations by implementing the mitigation hierarchy by avoiding, minimizing, and restoring the direct impacts and offsetting the residual impacts.
- Conduct environmental due diligence for new and expansion of existing projects, by set procedures.
- Create environmental awareness through continuous engagement with internal and external stakeholders to adopt principles and practices in alignment with this policy and industry best practices.
- Monitor, measure and report the progress on environmental performance in compliance with national and internationally recognized protocols and communicate approach and achievements to relevant stakeholders.
- Undertake internal and third-party audits at regular intervals to assess the environmental performance and subsequent mitigative actions.
- This policy will be communicated to all persons working for or on behalf of the company and will also be made available on the website of the company.

This Policy must be viewed in conjunction with other policies implemented by AEL, including – but not limited to – Energy Management Policy, Biodiversity Policy, Water Stewardship Policy, Waste Management Policy, Resource Conservation Policy, Climate Change Policy, ESG Policy.

The policy shall be reviewed periodically for its appropriateness and updated as necessary.

Annexure - IX

adani

Ref: AEL/MPL/ENV/MoEF&CC/2022 – September/11 Date: 30/09/2022

To,
Shri Shrawan Kumar Verma, IFS (Addl. Charge)
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

Subject: Environmental Clearance (EC) for proposed project activities "**Semi Coke–2030 KTPA, Calcium Carbide–2900 KTPA, Cement–6 MTPA; Clinker–4 MTPA near village Vandh & Tunda, Taluka Mundra, District Kachchh, Gujarat** by M/s Adani Enterprises Ltd.

Reference: EC Identification no EC22A009GJ154137, File no. IA-J-11011/423/2021-IA-II(IND-I) Dated 26/09/2022

Respected Sir,

With reference to above subject, this is to inform that Ministry of Environment Forest and Climate Change has granted Environment Clearance for our project "Semi Coke–2030 KTPA, Calcium Carbide–2900 KTPA, Cement–6 MTPA; Clinker–4 MTPA (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-Kutch, 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 EC22A009GJ154137, File no. IA-J-11011/423/2021-IA-II(IND-I) Dated 26/09/2022.

Accordingly, in compliance of Miscellaneous condition no. (i) & (ii) of Environmental clearance, we are submitting herewith copy of environmental clearance as **Annexure – A** along with copies of newspaper publications (**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://www.adanienterprises.com/-/media/4BAE7363F8C843B8B659F4AC21587F8A.ashx" for your reference and record 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

1/10/22

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 अरण्य भवन
Room No.407 & 409, A wing Aranya Bhavan
गांधीनगर (गुजरात) / Gandhinagar (Gujarat)

adani

The details of the newspaper publication are given below:

Sr. no.	Name of News Paper	Language	Date of Publication
1	Kutch Mitra	Gujarati	30/09/2022
2	Gujarat Samachar	Gujarati	30/09/2022
3	The Times of India	English	30/09/2022

Thanking You.
Yours Faithfully,

Authorized Signatory for Adani Enterprises Ltd,

Prodyut Maji (Project - Head)

Encl: As Above

Copy to:

1). **The Member Secretory,**
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

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

અદાણી એન્ટરપ્રાઇઝીસ લિમિટેડ

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

જાહેર નોટિસ

મે. અદાણી એન્ટરપ્રાઇઝીસ લિમિટેડ, APSEZ ઔદ્યોગિક જમીન, વાંઢ & ટૂંડા ગામ નજીક, તા: મુન્દ્રા, જી: કચ્છ, ગુજરાત ખાતે પ્રસ્તાવિત **"એક્ટીવીટી જેવીકે સેમી કોક -૨૦૩૦ કે.ટી.પી.એ.; કેલ્શિયમ કાર્બાઇડ - ૨૯૦૦ કે.ટી.પી.એ; સિમેન્ટ - ૬ એમ.ટી.પી.એ; ક્લિન્કર - ૪ એમ.ટી.પી.એ.** (જે સૂચિત કોલ ટુ પોલી-વિનાયલ (પી.વી.સી.) પ્રોજેક્ટ ના ભાગ રૂપે મે. અદાણી એન્ટરપ્રાઇઝીસ લિમિટેડ દ્વારા પ્રસ્તાવિત, APSEZ ઔદ્યોગિક જમીન, વાંઢ & ટૂંડા ગામ નજીક, તા: મુન્દ્રા, જી: કચ્છ, ગુજરાત, જેમાં ઇન્ડસ્ટ્રી-૧ પ્રોજેક્ટ-સેમી કોક-૨૦૩૦ કે.ટી.પી.એ.; સિમેન્ટ-૬ એમ.ટી.પી.એ; ક્લિનકર-૪ એમ.ટી.પી.એ; 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-એસિટિલિન-૮૬૦ કે.ટી.પી.એ. અને કોસ્ટિક સોડા-૧૩૧૦ કે.ટી.પી.એ અને કેલ્શિયમ કાર્બાઇડ-૨૯૦૦ 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. - EC22A009GJ154137, File No. - IA-J-11011/423/2021-IA-II(IND-I) dated 26/09/2022** 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 સાઈટ https://parivesh.nic.in પરથી પણ જોઈ શકાશે. તદ્ ઉપરાંત એન્વિરોમેન્ટ ક્લીયરન્સ ની કોપી કંપનીની વેબસાઈટ https://www.adanienterprises.com/-/media/4BAE7363F8CB43B8B659F4AC21587F8A.ashx પણ જોઈ શકાશે.

sd/-

પ્રોદ્યુત માજી (પ્રોજેક્ટ હેડ)

મે. અદાણી એન્ટરપ્રાઇઝીસ લિમિટેડ

News Paper: Kutch Mitra, Page no:5, Date:30/09/2022,
Language: Gujarati

અદાણી એન્ટરપ્રાઇઝીસ લિમિટેડ

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

જાહેર નોટિસ

મે. અદાણી એન્ટરપ્રાઇઝીસ લિમિટેડ, APSEZ ઔદ્યોગિક જમીન, વાંટ & ટૂંડા ગામ નજીક, તા: મુન્દ્રા, જી: કચ્છ, ગુજરાત ખાતે પ્રસ્તાવિત **"એકટીવીટી જેવીકે સેમી કોક -૨૦૩૦ કે.ટી.પી.એ.; કેલ્શિયમ કાર્બાઇડ - ૨૯૦૦ કે.ટી.પી.એ; સિમેન્ટ - ૬ એમ.ટી.પી.એ; ક્લિનકર - ૪ એમ.ટી.પી.એ.** (જે સૂચિત કોલ ટુ પોલી-વિનાયલ (પી.વી.સી.) પ્રોજેક્ટ ના ભાગ રૂપે મે. અદાણી એન્ટરપ્રાઇઝીસ લિમિટેડ દ્વારા પ્રસ્તાવિત, APSEZ ઔદ્યોગિક જમીન, વાંટ & ટૂંડા ગામ નજીક, તા: મુન્દ્રા, જી: કચ્છ, ગુજરાત, જેમાં ઇન્ડસ્ટ્રી-૧ પ્રોજેક્ટ-સેમી કોક-૨૦૩૦ કે.ટી.પી.એ.; સિમેન્ટ-૬ એમ.ટી.પી.એ; ક્લિનકર-૪ એમ.ટી.પી.એ; 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 કેલ્શિયમ કાર્બાઇડ-૨૯૦૦ 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. - EC22A009GJ154137, File No. - IA-J-11011/423/2021-IA-II(IND-I) dated 26/09/2022** 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 સાઈટ https://parivesh.nic.in પરથી પણ જોઈ શકાશે. તદ્ ઉપરાંત એન્વિરોન્મેન્ટ ક્લીયરન્સ ની કોપી કંપનનીની વેબસાઈટ https://www.adanienterprises.com/-/media/4BAE7363F8C843B8B659F4AC21587F8A.ashx પણ જોઈ શકાશે.

sd-

પ્રોદ્યુત માજી (પ્રોજેક્ટ હેડ)

મે. અદાણી એન્ટરપ્રાઇઝીસ લિમિટેડ

News Paper: Gujarat Samachar, Page no:7, Date:30/09/2022,
Language: Gujarati

Adani Enterprises Limited

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

PUBLIC NOTICE

M/s Adani Enterprises Limited, APSEZ Industrial Land, Near Village Vandh & Tunda, Taluka Mundra, District – Kachchh, Gujarat has been accorded Environmental Clearance (EC) for project **"Semi Coke–2030 KTPA, Calcium Carbide–2900 KTPA, Cement–6 MTPA; Clinker–4 MTPA** (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. - EC22A009GJ154137, File No. - IA-J-11011/423/2021-IA-II(IND-I) dated 26/09/2022**. 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/48AE7363F8C843888659F4AC21587F8A.ashx

sd-

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

News Paper: The Times of India, Page no:13, Date:30/09/2022, Language: English

Annexure - X

adani

O/C

Ref: AEL/MPL/ENV/MoEF&CC/2022 – September/08 Date: 28/09/2022

To,

Ms. Praveena D.K. (IAS),
Collector & DM,
Collector Office, Jilla Seva Sadan,
Bhuj – Kuchchh, 370 001

Subject: Environmental Clearance (EC) for proposed project activities "**Semi Coke–2030 KTPA, Calcium Carbide–2900 KTPA, Cement–6 MTPA; Clinker–4 MTPA near village Vandh & Tunda, Taluka Mundra, District Kachchh, Gujarat** by M/s Adani Enterprises Ltd.

Reference: EC Identification no. EC22A009GJ154137 File No. IA-J-11011/423/2021-IA-II(IND-I) Dated 26/09/2022

Respected Ma'am,

With reference to above subject, this is to inform that Ministry of Environment, Forest and Climate Change has granted Environment Clearance (EC) for our project "**Semi Coke–2030 KTPA; Calcium Carbide–2900 KTPA; Cement–6 MTPA; Clinker–4 MTPA** (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." Vide EC Identification no. EC22A009GJ154137, File No. IA-J-11011/423/2021-IA-II(IND-I) Dated 26/09/2022.

Accordingly, as required under Miscellaneous condition No. **ii** of EC, we are submitting herewith copy of Environment Clearance for the said project for your reference and further necessary action, please.

Thanking You.
Yours Faithfully,
Authorized Signatory for Adani Enterprises Ltd,

Prodyut Maji (Project - Head)

Encl: As Above

Copy to:

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

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

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

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

adani

Ref: AEL/MPL/ENV/MoEF&CC/2022 - September/08 Date: 28/09/2022

To,

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

Subject: Environmental Clearance (EC) for proposed project activities **"Semi Coke-2030 KTPA, Calcium Carbide-2900 KTPA, Cement-6 MTPA; Clinker-4 MTPA near village Vandh & Tunda, Taluka Mundra, District Kachchh, Gujarat** by M/s Adani Enterprises Ltd.

Reference: EC Identification no. EC22A009GJ154137 File No. IA-J-11011/423/2021-IA-II(IND-I) Dated 26/09/2022

Respected Ma'am,

With reference to above subject, this is to inform that Ministry of Environment, Forest and Climate Change has granted Environment Clearance (EC) for our project "**Semi Coke-2030 KTPA; Calcium Carbide-2900 KTPA; Cement-6 MTPA; Clinker-4 MTPA** (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." Vide EC identification no. EC22A009GJ154137, File No. IA-J-11011/423/2021-IA-II(IND-I) Dated 26/09/2022.

Accordingly, as required under Miscellaneous condition No. ii of EC, we are submitting herewith copy of Environment Clearance for the said project for your reference and further necessary action, please.

Thanking You.
Yours Faithfully,
Authorized Signatory for Adani Enterprises Ltd.

Prodyut Maji (Project - Head)

Encl: As Above

Copy to:

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

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

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

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

9/20/22

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

adani

Ref: AEL/MPL/ENV/EC/2022 -September/09 Date: 28/09/2022

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

Subject: Environment Clearance (EC) for proposed Project "**Semi Coke-2030 KTPA, Calcium Carbide-2900 KTPA, Cement-6 MTPA; Clinker-4 MTPA near village Vandh & Tunda, Taluka Mundra, District Kachchh, Gujarat** by M/s Adani Enterprises Ltd.

Reference: EC Identification no. EC22A009GJ154137 File No. IA-J-11011/423/2021-IA-II(IND-I) Dated 26/09/2022

Respected Sir / Ma'am,

With reference to above subject, this is to inform that Ministry of Environment, Forest and Climate Change has granted Environment Clearance (EC) for our project "**Semi Coke-2030 KTPA; Calcium Carbide-2900 KTPA; Cement-6 MTPA; Clinker-4 MTPA** (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." Vide EC Identification no. EC22A009GJ154137 File No. IA-J-11011/423/2022-IA-II(IND-I) Dated 26/09/2022.

Accordingly, 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.

Prodyut Maji (Project - Head)

Encl: As Above
Copy to:

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

2). **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

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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

adani

Ref: AEL/MPL/ENV/MoEF&CC/2022 – September/11 Date: 30/09/2022

To,
Shri Shrawan Kumar Verma, IFS (Addl. Charge)
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

Subject: Environmental Clearance (EC) for proposed project activities "**Semi Coke–2030 KTPA, Calcium Carbide–2900 KTPA, Cement–6 MTPA; Clinker–4 MTPA near village Vandh & Tunda, Taluka Mundra, District Kachchh, Gujarat** by M/s Adani Enterprises Ltd.

Reference: EC Identification no EC22A009GJ154137, File no. IA-J-11011/423/2021-IA-II(IND-I) Dated 26/09/2022

Respected Sir,

With reference to above subject, this is to inform that Ministry of Environment Forest and Climate Change has granted Environment Clearance for our project "Semi Coke–2030 KTPA, Calcium Carbide–2900 KTPA, Cement–6 MTPA; Clinker–4 MTPA (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-Kutch, 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 EC22A009GJ154137, File no. IA-J-11011/423/2021-IA-II(IND-I) Dated 26/09/2022.

Accordingly, in compliance of Miscellaneous condition no. (i) & (ii) of Environmental clearance, we are submitting herewith copy of environmental clearance as **Annexure – A** along with copies of newspaper publications (**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://www.adanienterprises.com/-/media/4BAE7363F8C843B8B659F4AC21587F8A.ashx" for your reference and record please.

Adani Enterprises Ltd
"Adani Corporate House",
Shantigram, Near Vaishno Devi Circle,
S. G. Highway, Khodiyar
Ahmedabad 382 421
Gujarat, India
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Registered Office: "Adani Corporate House", Shantigram, Near Vaishno Devi Circle, S. G. Highway, Khodiyar, Ahmedabad - 382421

1/10/22

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 अरण्य भवन
Room No.407 & 409, A wing Aranya Bhavan
गांधीनगर (गुजरात) / Gandhinagar (Gujarat)

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The details of the newspaper publication are given below:

Sr. no.	Name of News Paper	Language	Date of Publication
1	Kutch Mitra	Gujarati	30/09/2022
2	Gujarat Samachar	Gujarati	30/09/2022
3	The Times of India	English	30/09/2022

Thanking You.
Yours Faithfully,

Authorized Signatory for Adani Enterprises Ltd,

Prodyut Maji (Project - Head)

Encl: As Above

Copy to:

1). **The Member Secretory,**
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

Adani Enterprises Ltd
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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

Annexure - XI

From:	Vinay Kumar Singh
To:	kut-uh-gpcb@gujarat.gov.in
Cc:	ms-gpcb@gujarat.gov.in; ro-gpcb-kute@gujarat.gov.in; iro.gandhingr-mefcc@gov.in
Subject:	Environment Statement (Form – V) for the year 2023 – 2024 for the Project "Poly-vinyl Chloride (PVC)" near Village Vandh & Tunda, Taluka Mundra, District Kachchh, Gujarat by M/s Mundra Petrochem Limited – Reg.
Date:	Saturday, May 18, 2024 1:15:00 PM
Attachments:	0B. Form V 2023-2024.pdf

Ref: MPL/ENV/GPCB – Form – V/2024 – May/02 Date: 18/05/2024

To, PCB ID:86184
The Unit Head, (Kutch District)
Gujarat Pollution Control Board,
Paryavaran Bhavan, Sector-10A,
Gandhinagar – 382 010
E-mail : kut-uh-gpcb@gujarat.gov.in

Subject: Environment Statement (Form – V) for the year 2023 – 2024 for the Project "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.
3) MPL/ENV/GPCB – Form – V/2024 – June/01 Dated 29/06/2023.

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 "Poly-vinyl Chloride (PVC)" near Village Vandh & Tunda, Taluka Mundra, District Kachchh, Gujarat by M/s Mundra Petrochem Limited.

Presently, the PVC project is under final design & detail engineering stage, however, soil sampling & stabilization, boundary fencing, earth preparation & piling for foundation/pre-construction activities are in progress at site. The soft copy of the Environment Statement (Form – V) for the year 2023 – 2024 is enclosed for your ready reference & record please.

We hope you will find the above in order.

Thanking you,

Vinay Kumar Singh

Head – Environment & Sustainability

Encl: As Above

Green PVC Environment Clearance and Compliances

- Annual Return - Environmental Statement - Form - V 2023 - 2024
- Annual Return - Form - 4 2023 - 2024
- Six monthly EC Compliance report - Coal to PVC Project Industry - 1 - April 2023 to September 2023
- Six monthly EC Compliance report - Coal to PVC Project Industry - 2 - April 2023 to September 2023
- Six monthly EC Compliance report - Coal to PVC Project Industry - 3 - April 2023 to September 2023
- Six Monthly EC compliance Report - PVC project - Industry - 2 - October 23 to March 24
- Six Monthly EC compliance Report - PVC project - Industry - 3 - October 23 to March 24
- Six Monthly EC compliance Report - PVC project - Industry -1 - October 23 to March 24
- Six monthly EC Compliance report - Coal to PVC Project Industry - 1 - October 2022 to March 2023
- Six monthly EC Compliance report - Coal to PVC Project Industry - 2 - October 2022 to March 2023
- Six monthly EC Compliance report - Coal to PVC Project Industry - 3 - October 2022 to March 2023