adani

Ref: MPL/ENV/GPCB – Form – V/2025 –May/02 **Date:12/05/2025**

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

Subject: Environment Statement (Form – V) for the FY 2024-25 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 – May/02 Dated 18/05/2024.

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.

The PVC project is currently in the final design, detailed engineering, and procurement stages, with construction activities also underway at the site. Enclosed is the soft copy of the Environment Statement (Form – V) for the fiscal year 2024–25 for your reference and records.

We hope you will find the above in order.

Thanking you,

Vinay Kumar Singh
CSO & BU Environment Head

Mundra Petrochem Limited

Encl: As Above

Copy to : 1. Member Secretory, GPCB : ms-gpcb@gujarat.gov.in
2. Regional Office, GPCB (Kutch East): ro-gpcb-kute@gujarat.gov.in
3. Integrated Regional Office, MoEF&CC, Gandhinagar: iro.gandhingr-mefcc@gov.in

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

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Fax + 91 79 2555 5500
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www.adani.com

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

FORM – V
(See Rule 14)

From:
M/s Mundra Petrochem Limited,
Survey no.180/Part (Unsurveyed Land),
Mundra Forest (Diverted for SEZ),
Vill: Tunda, Ta: Mundra, Dist: Kutch 370 421

To,
Gujarat Pollution Control Board,
Sector 10 – A,
Gandhinagar 382 043
Environmental Statement for the financial year ending the 31st March 2025.

PART – A

i	Name and address of the owner / occupier of the industry operation or process	Mr. Rajesh Jagannathan (Factory Manager), Adani Corporate House, Shantigram, Near Vaishnodevi Circle, S.G.Highway, Ahmedabad – 382 421
ii	Industry Category – Primary – STC Code Secondary – STC Code	Red (Large Scale)
iii	Production Capacity Units	As per Annexure - I
iv	Year of establishment	Under Construction Stage - Presently, the PVC project is under final design, detailed engineering & procurement stage along with simultaneous construction activities are in progress at site.
v	Date of the last Environmental Statement Submitted	18/05/2024

PART – B

Water and Raw material Consumption

i	Water Consumption M^3/day		365.712 M^3/day
	Process (Construction Activities)		360.532 M^3/day
	Cooling		0
	Domestic		5.180 M^3/day
	Name of Product	Process water consumption per unit of product output*	
		During the previous financial year (2023–24)	During the current financial year (2024–25)
	As per Annexure - I	NIL	NIL

ii	Raw Material Consumption*			
	Name of raw materials	Name of products	Consumption of raw material per unit of output	
			During the previous financial year (2023-24).	During the current financial year (2024-25).
	NIL	NIL	NIL	NIL

* Presently, the PVC project is under final design, detailed engineering & procurement stage along with simultaneous construction activities are in progress at site. Thus, water consumption is mainly for domestic & construction activities.

PART - C

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

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

* : Presently, the PVC project is under final design, detailed engineering & procurement stage along with simultaneous construction activities are in progress at site. However, necessary environment management measures being taken during construction activities are mentioned as **annexure - II.**

Part - D

Hazardous Wastes

[As specified under the Hazardous & Other Wastes (Management and Transboundary Movement) Rules-2016]

Hazardous Wastes	Total Quantity (KG)	
	During the Previous Financial Year (2023-24)	During the Current Financial Year (2024-25)
(a) From Process	NIL*	NIL*
(b) From pollution control facilities.	NIL*	NIL*

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

Part - E

Solid waste

	Total Quantity (MT)	
	During the Previous Financial Year (2023-24)	During the Current Financial Year (2024-25)
(a) From Process	NIL*	825.6
(b) From pollution control facilities.	NIL*	NIL*
(c) 1 - Quantity recycled OR re-utilized within the unit.	NIL*	825.6
2 - Sold	NIL*	NIL*
3 - Disposed	NIL*	NIL*

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

Part – F

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

Presently, the PVC project is under final design, detailed engineering & procurement stage along with simultaneous construction activities are in progress at site. The details of anticipated waste generation and disposal practices to be adopted for Hazardous & Other Solid waste are given below -

Hazardous Waste:

M/s Mundra Petrochem Limited has taken membership of Common TSDF site operated by M/s Saurashtra Enviro Projects Private Limited, Kutch for safe disposal of following hazardous waste during construction and/or operation phase.

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

Solid Waste:

Presently, the PVC project is under simultaneous procurement cum construction stage. Moreover, the following practices being and/or will be adopted during construction and/or operational phase of the project.

Type of Solid waste	Composition of Waste	Quantity (MT/Annum)	Mode of Transportation	Mode of Treatment / Disposal
Brine Sludge	Brine Sludge	17030	Truck	Disposal to authorized TSDF / Sanitary Landfill site / Sale to authorized brick manufacturers.
Carbon from coke drying tail gas dust removal system	Coke / Carbon fine particles	120000	Truck	To be Used in in-house cement plant as fuel along with coal OR Sent to TSDF if found hazardous after characterization.
Residues from Lime kiln cinder and shaker gravel	Limestone, Lime and dust	108000	Truck	To be Used in in-house Cement plant / offsite cement plant as fuel along with coal OR sent to TSDF if found hazardous after characterization.
Residues from furnace gas purifies dust of dust collector	Carbon Fines	215000	Truck	To be Use in in-house Cement plant / offsite cement plant as fuel along with coal OR Sent to TSDF if found hazardous after characterization.
Calcium Carbide furnace slag	SiO2, MgO etc.	400	Truck	To be Used in in-house cement plant / offsite cement plant as fuel along with coal OR sent to TSDF if found Hazardous after characterization.
Coke fine from sieve and dust collector	Coke	100000	Truck	To be Used in in-house cement plant / offsite cement plant as fuel along with Coal OR sent to TSDF if found hazardous after characterization.
Lime fines from sieve and dust collector	Lime	120000	Truck	To be Used in in-house cement plant / offsite cement plant as fuel along with coal OR sent to TSDF if

Type of Solid waste	Composition of Waste	Quantity (MT/Annum)	Mode of Transportation	Mode of Treatment / Disposal
				found hazardous after characterization.
Boiler Ash	Boiler Ash	43200	Fly Ash Bulk trailer	To be Used in in-house cement plant
	Bottom Ash	21600	Fly Ash Bulk trailer	To be used in in-house cement plant.
Sewage Treatment Plant Sludge	Biological Sludges	602	Within site premises	Will be used as manure for gardening.
Municipal Solid waste	Canteen waste, scraped office stuff	~1270	Bags / Bins/ Dedicated area in scrap yard	The composting of organic waste and its subsequent use as manure, sale of segregated recyclable waste to recyclers or disposal at authorized landfill sites.
Biomedical Waste	Waste generated from Hospital activities.	As & when generated	Authorized collection vehicle	Bio medical waste to be sent to authorized common TSDF site.
Used lead acid batteries	Acid and other chemicals	As & when generated	Authorized collection vehicle	100 % buy - back policy implemented at site for collection and disposal of such type of waste.
Electronic waste	Damaged / obsolescence Electronic items	As & when generated	Vehicle of authorized recycler	To be sent to authorized recycler.
Construction and Demolition waste	Sand, cement, etc.	As & when generated	Truck	To be used for leveling of low laying area within the plant premises.

Part – G

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

Presently, the PVC project is under final design, detailed engineering & procurement stage along with simultaneous construction activities are in progress at site. Necessary environment management measures are being implemented during construction.

Details of control measures for conservation of natural resources and productivity during construction & operation phase are given below-

Aspect	Mitigation Measures
Air	**Construction phase:** • Only PUC certified vehicles are to be deployed / used. • Use of dust covers for loose construction material during transportation. • Stabilization of dust prone areas by sprinkling water. • Preventive maintenance of transport, heavy equipment and construction equipment to be carried out at site. • Use of low Sulphur fuel i.e diesel. • Use of personal protective equipment's / mask, in case of high dust generation. • Regular monitoring of ambient air quality at construction sites as well in surrounding villages. • Periodic checking of vehicles and construction machinery to ensure compliance with emission standards • Water sprinkling on haul roads **Operation Phase:** • Adequate stack height will be provided to all flue gas stacks. • Highly efficient Air Pollution Control Equipment will be installed with proposed process stacks & flue gas stacks. • Installation of Online CEMS and CAQMS wherever applicable • Closed loop system will be implemented for the transfer of liquid / solid raw material from storage / tank farm area to processing areas as per requirements. • Adequate greenbelt area will be developed at the facility. • Attenuation of pollution / protection of receptor through greenbelt / green cover. • Regular monitoring of air pollutant concentrations at source of emission as well as in the ambient air. • All trucks shall be PUC Certified from time to time. • Vehicles with applicable Bharat Stage exhaust emission norms will be used.
Noise	**Construction Phase:** ▪ Regular preventive maintenance of vehicles and construction equipment ▪ Earmuffs/ ear plugs will be provided to workers working at high noise area and / or using machinery & earth moving equipment. ▪ Provision of signages & temporary barricading around site in case of high noise prone area. ▪ Use of well – maintained equipment. ▪ Ensure acoustic enclosures / noise mufflers in heavy equipment & D.G. sets as applicable.

Aspect	Mitigation Measures
	▪ Monitoring ambient noise quality at construction sites as well in surrounding villages. **Operation Phase:** ▪ The high noise generating equipment's like ID Fans, Compressors, DG Sets shall be provided with noise insulation, Acoustic laggings and silencers to ensure that the noise level at 1 meter from the machines remain below 85dB(A) or minimum 25dB(A) noise attenuation. ▪ Proper PPEs will be provided to the workers working in the high noise area within the plant and compliance will be done with applicable regulations. ▪ Job Rotation of workers working in the high noise area. ▪ Implement good working practices (equipment selection) to minimize noise and reduce its impacts on human health (earmuffs, safe distances, and enclosures). ▪ Development of thick greenbelt within the plant premises and along project boundary to screen/attenuation of high noise.
Water	▪ No abstraction and/or use of ground water during construction and/or operation phase. ▪ Only desalinated sea water supplied by APSEZL is being used during construction phase and same is also proposed for operation phase ▪ No adverse impacts on surface water, ground water or soil. There will be no disposal of effluent outside project premises. ▪ All effluent will be reduced at source by reused and/or recycling after proper treatment to achieve the Zero Liquid Discharge (ZLD). ▪ No discharge of contaminated water into nearby water body and/or land area. ▪ Secondary containment and dykes in Hazardous material storage areas shall be provided. **Mitigation measures and ZLD Scheme** ▪ ETP and STPs will be installed for the treatment of industrial and domestic effluent, respectively. ▪ The ETPs will consist of primary, secondary & tertiary treatment processes. After tertiary treatment, treated water is made to pass through UF, RO System and MEE (wherever required). RO permeate and MEE condensate are recycled back for utilization in utility areas and/or process. Hence, No discharge of treated effluent from the premises i.e Zero Liquid Discharge (ZLD) status shall be maintained. ▪ Similarly, treated sewage will be reused in gardening and greenbelt development i.e reducing the overall freshwater demand. ▪ The Solids waste generated from ETP will be disposed of through TSDF and Bio sludge from STP will be utilized as manure in greenbelt
Soil	▪ Project site is already identified as industrial area of APSEZ, hence. necessary measures will be provided for soil conservation. ▪ Free area will be paved.

Aspect	Mitigation Measures
	▪ Tree plantations will be carried out to avoid soil erosion during storms. ▪ Shrubs and grass will be planted wherever open land is available. ▪ Topsoil to be kept aside and reused in Greenbelt development wherever possible. ▪ Segregation of waste to facilitate reuse / recycling. Adequate facilities for the storage of segregated waste materials on site. ▪ Waste construction material like bricks, cement etc. will be reused as land fill material. ▪ Non-hazardous recyclable wastes (wooden, plastic, metal scrap etc.) will be segregated and sent for reuse / recycling.

Part - H

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

Presently, the PVC project is under simultaneous procurement cum construction stage. Moreover, the following measures / activities have been carried out for the betterment of the environment.

- Native tree plantations activities (i.e more than 88536 number of trees) have been carried out at nearby villages and/or surroundings, which include the fruit trees like mangos, dates, etc. which are fostering the ecosystem of surrounding area.
- Conducted Awareness program at nearby villages for "Ban on Single Use plastic" and "Wildlife conservation and it's benefit".
- Biodiversity Conservation and Go Green Initiatives for fostering the sustainable environment through preserving species diversity, promoting sustainable use of resources, safeguarding essential ecological processes, Expanding green cover and minimization of plastic pollution.

Part - I

Any other particulars for improving the quality of the environment.

Presently, the PVC project is under simultaneous procurement cum construction stage. Moreover, the following measures / activities have been initiated for the betterment of environment.

- To combat environmental degradation by promoting sustainable solutions like water conservation, Terrestrial Plantation, Coastal Plantation and Go Green initiatives at nearby villages and/or community.
- Construction of Rainwater Harvesting / restoration structures, RRWH systems, cleaning of rivers, deepening and repairing of check dams, rivers etc. at nearby villages resulting in improving water level as well as water quality at nearby area.
- MPL has also organized training program on "Jivamrut preparation". More than 250 Gram Sevak across Kutch had participated and made aware about systematic and

scientific way for effective Natural farming practices and ensure to incorporate it into Farm.

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

Mundra Petrochem Limited

Signature:
Name: Mr. Vinay Kumar Singh
Designation: CSO & BU Environment Head

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

Annexure – I
List of Product

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

Annexure – II.

Environmental Management & Monitoring Plan During Construction Phase.

Mundra Petrochem Limited has prepared and implemented an 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 simultaneous procurement cum construction stage. 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. Etc.) • 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 on regular intervals. • 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 a 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 of manpower, materials and equipment.	• Vehicular exhaust and dust emissions on the road. • Noise generation • Risk involved in transportation activity such as accidents damage to properties etc.	• Only PUC certified vehicles are allowed to enter the premises. • The speed of vehicles has been restricted to certain speed limits to control the spillage, emissions OR air born generation. • Idling trucks and dumper on the roads are not allowed.	• Entry and exit of vehicles' registration / records have been maintained. • Vehicle movement security systems have been in service so that Photographs / video of each

Sr. No.	Affected Environmental component	Likely Impacts in absence of mitigation measures	Mitigation measures have been taken	Remark
			• Construction materials are brought in batches with covered with tarpaulin sheets. • Defensive driving / awareness training has been provided to drivers on regular interval.	vehicle have been recorded during entry of vehicles.

Photographs (Environment):



Water Sprinkling on Internal Roads

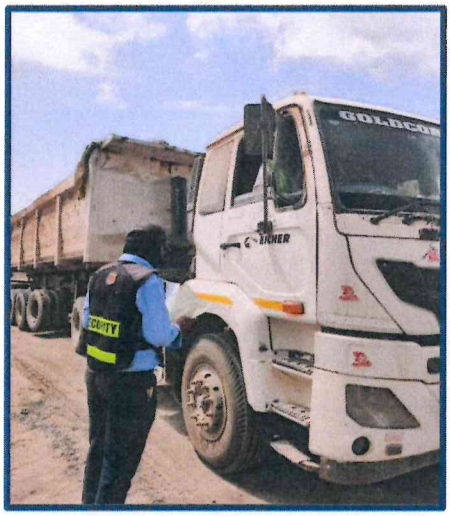
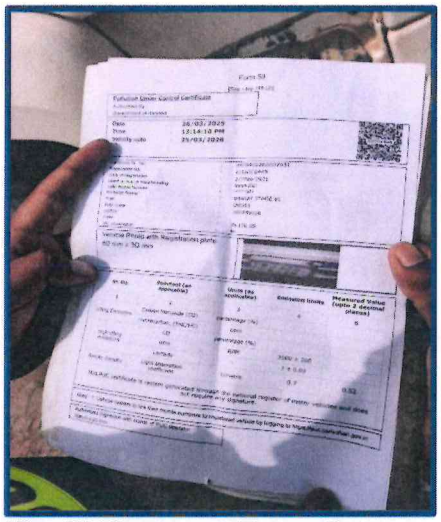


Material Covered with Sheet during transportation

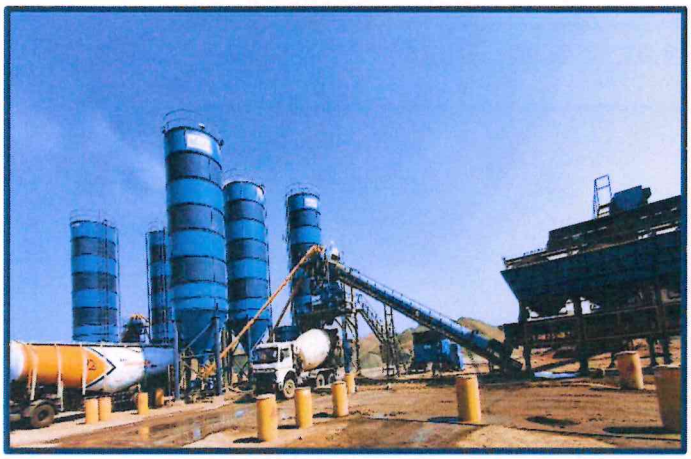




Tree plantation during celebration of World Environment Day

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




Batching Units / Facilities have been set up inside the premises





Awareness on "No to Singe use plastic"



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