ENVIRONMENTAL CLEARANCE

PARIVESH

(Pro-Active and Responsive Facilitation by Interactive, and Virtuous Environment Single-Window Hub)

Government of India
Ministry of Environment, Forest and Climate Change
(Impact Assessment Division)

To,

The Authorized Signatory and Project Manager
ADANI ENTERPRISES LTD
Adani Enetrprises Ltd,
Shantigram, S.G.Highway, Ahmedabad - 382421,,Ahmedabad,Gujarat-382421

Subject: Grant of Environmental Clearance (EC) to the proposed Project Activity under the provision of EIA Notification 2006-regarding

Sir/Madam,

This is in reference to your application for Environmental Clearance (EC) in respect of project submitted to the Ministry vide proposal number IA/GJ/IND3/239895/2021 dated 08 Jun 2022. The particulars of the environmental clearance granted to the project are as below.

1.	**EC Identification No.**	**EC22A013GJ127411**
2.	**File No.**	IA-J-11011/149/2021-IA-II(I)
3.	**Project Type**	New
4.	**Category**	A
5.	**Project/Activity including Schedule No.**	4(d) Chlor-alkali industry
6.	**Name of Project**	Proposed Caustic Soda (1310 KPTA) and Acetylene (860 KTPA) plants near Village Vandh & Tunda, Taluka Mundra, District Kachchh, Gujarat
7.	**Name of Company/Organization**	ADANI ENTERPRISES LTD
8.	**Location of Project**	Gujarat
9.	**TOR Date**	10 Dec 2021

The project details along with terms and conditions are appended herewith from page no 2 onwards.

Date: 31/08/2022

(e-signed)
Mr. Motipalli Ramesh
Scientist E
IA - (Industrial Projects - 3 sector)

Note: A valid environmental clearance shall be one that has EC identification number & E-Sign generated from PARIVESH.Please quote identification number in all future correspondence.

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F. No. IA-J-11011/149/2021-IA-II(I)
Government of India
Ministry of Environment, Forest and Climate Change
(Impact Assessment Division)
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Indira Paryavaran Bhawan
Jorbagh Road, New Delhi - 110003

Dated: 31st August, 2022

To

M/s. Adani Enterprises Ltd.
Shantigram, S.G. Highway,
Ahmedabad, Gujarat-382421
Email: prasad.suryarao@adani.com

Project: Proposal for Manufacturing of Caustic Soda (1310 KTPA) and Acetylene (860 KTPA) (as a part of Proposed Coal to Poly-Vinyl Chloride (PVC) Project) located at industrial area of APSEZ, Taluka-Mundra, District-Kutch, Gujarat by Adani Enterprises Ltd. - Environmental Clearance

Sir,

This has reference to your proposal No. **IA/GJ/IND3/239895/2021** dated 7th June, 2022, on the above subject matter.

2. The Ministry of Environment, Forest and Climate Change has examined the proposal for Environmental Clearance to the project for Manufacturing of Caustic Soda (1310 KTPA) and Acetylene (860 KTPA) (as a part of Proposed Coal to Poly-Vinyl Chloride(PVC) Project) located at industrial area of APSEZ, Taluka- Mundra, District-Kutch, Gujarat by Adani Enterprises Ltd.

3. The project/activity is covered under Category 'A' of item 4(d) Chlor-alkali industry & 5(f) Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates) of Schedule of Environment Impact Assessment (EIA) Notification, 2006 (as amended) and requires appraisal at Central Level by Expert Appraisal Committee (EAC).

4. The Project Proponent (PP) applied for ToR vide proposal number IA/GJ/IND3/239895/2021 dated 03.12.2021 and the Standard ToR has been issued by the Ministry, vide letter No. IA-J-11011/149/2021-IA-II(I) dated 10.12.2021. Public Hearing was conducted by Gujarat Pollution Control Board on 30.04.2022. The PP applied for Environment Clearance on 07.06.2022 in Form-2 and submitted EIA/EMP Report and other documents. The PP reported in Form-2 that it is a **Fresh EC.** Due to some shortcomings, the Project was referred back to PP and reply to the same was submitted on 08.06.2022. The proposal was placed in 33rd EAC Meeting held on 20-22 June, 2022, wherein the Project Proponent and an accredited Consultant, Kadam Environmental Consultants [Accreditation number NABET/EIA/2023/SA0164 Valid up to March, 19, 2023] made a detailed presentation on the salient features of the project.

5. The PP reported that the proposed land area is 323.69 Ha and no R&R is involved in the Project. The proposed products and their production capacity are as follows:

Sr. No.	Product Name	CAS No.	Capacity	Uses
Caustic Soda Plant (Chlor-Alkali Process)				
1	Caustic Soda	1310-73-2	1310 KTPA	Textile industries, paper industries, Aluminum industry
2	Caustic Soda (50% wt)	1310-73-2	810 KTPA	
3	Hydrochloric Acid	7647-01-0	1232 KTPA	In-house uses for VCM production
4	Sodium Hypochlorite	7681-52-9	16 KTPA	Use for water treatment for bleaching agent in Textile industries, for household products.
5	Caustic Potash	1310-58-3	130 KTPA	In-house uses, liquid fertilizers, soap and detergents
6	Potassium Carbonate	584-08-7	33 KTPA	Uses in agricultural as fertilizers, in agrochemical industries
7	Sodium bi-carbonate	144-55-8	66 KTPA	In-house use for brine purification
8	Caustic Soda flakes	1310-73-2	600 KTPA	Textiles, Paper industries, Aluminum industry
9	Liquid Chlorine	7782-50-5	60 KTPA	Use in value added products like chloromethane, chlorinated Paraffin wax
10	Sodium Sulphate	7757-82-6	75 KTPA	Use as filler in detergents, textile industries
Acetylene Plant				
1	Acetylene	74-86-2	860 KTPA	In-house uses for VCM production
2	Carbide Lime Sludge	1305-62-0	5700 KTPA	In-house uses for Cement plant

6. The PP reported that there is no violation case as per the Notification No. S.O.804(E) dated 14.03.2017 and no Direction issued under E(P) Act/Air Act/Water Act. One Court Case is pending against the project and/or land in which the project is proposed to be set up.

7. The PP reported that there are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site. Dhanesri River flows at a distance of 1.71 km in NE direction. Forest clearance is not required for the project as the land is already a notified industrial area. Total 7 species of fauna, i.e. Gazella Bennettii, Varanus bengalensis, Lissemus punctatea, Pavo cristatus, Acipiter Badius, Circus aeruginosus and Platalealeucordia of Schedule-I species exist within 10 km study area of the project. The Chief Wildlife Warden, Gandhinagar vide letter no. WLP/32/C/297- 298/2022-2023 dated 18/06/2022 has approved the Wildlife Conservation plan for the proposed project with budgetary provision of ₹ 24,50,000. The PP committed to implement the plan in five years.

8. The PP reported that Ambient Air Quality monitoring was carried out at 12 Locations during 22nd March, 2021 to 22nd June, 2021 and base line data indicates the ranges of

average concentrations as: PM_{10} (63-81µg/m^3), $PM_{2.5}$ (17-40 µg/m^3), SO_2 (6.5 – 11.4 µg/m^3) and NO_2 (12.1-19.1 µg/m^3). AAQ modelling study for point source emissions indicates that maximum incremental GLCs after the proposed project would be 8.8 µg/m^3, 6.2 µg/m^3, 5.8 µg/m^3 and 11.7 µg/m^3 for PM_{10}, $PM_{2.5,}$ SO_x and NOx respectively. The resultant GLCs are within the National Ambient Air Quality Standards (NAAQS). Noise level during daytime & night time, in Industrial area & Residential area was observed within CPCB standards i.e. Industrial area (75 dBA (d) & 70 dBA (n)), Residential area (55 dBA (d) & 45 dBA (n)) and Silence area (50 dBA (d) & 40 dBA (n) The surface water TDS in pond and river waters (SW- 4 (Nagvanti Nadi), 5 (Zarpara village Pond), 6 (Navinal village Pond) and 7 (Siracha village Pond)) are between 720 mg/l to 1840 mg/l. Value of BOD in the surface water (SW4 and SW6) is found high since the pond and rivers are expected to be contaminated due to washing of clothes and also agricultural discharges. Quality of SW 4 can be considered in Class E and SW 5 can be considered in Class C as per classification of inland surface water standards and can be used in Propagation of wild life, fisheries and Drinking water source with conventional treatment followed by disinfection. The Quality of SW 6 and SW 7 can be considered in Class E and D as per inland surface water classification and can be used for Irrigation/Industrial Cooling and Propagation of wild life, fisheries. The Quality of creek/sea water (SW 1 (Intake Channel of APL), 2 (Kotadi Creek) and 3 (Baradi Mata Creek)) can be considered in class SW-I or V as per water marine standards and can be used for navigation and controlled waste disposal purposes. The study area is in vicinity of sea, relatively groundwater is of good quality. The TDS ranges from 412 (Nana Bhadiya) – 3968 (Siracha). The reason for this could be the location of observation well near the Stream and the season of water sample collection. TDS found in samples GW 04 (Siracha) & GW 08 (Desalpur) is above their permissible limit & higher as compared to the contain of TDS in other samples found. Only sample found at GW 07 (Nana Bhadiya) is within the desirable limit. Total Hardness found in almost all samples are within their permissible limit and this variation in total hardness could be due to varying proportion of TDS in water samples. The presence of Nitrate found in ground water sample could be due to by-product of organic compounds, septic system and animal manure, agriculture waste. The presence of higher variation in contains of Nitrate at Moti Khakhar (2.37 mg/lit) and Deshalpar (32.83 mg/lit) could be due to the probability of leakage from upper aquifer into lower aquifer. Soil samples were taken from 8 locations namely Project Site (ST1), Vandh (ST2), Tragadi (ST3), Motakandagra (ST4), Moti Khakhar (ST5), Nani Bhujpur (ST6), Jarpara (ST7) & Navinal (ST8). Porosity ranged from 37 – 54% and Water Holding Capacity varied from 31.07 – 37.87%, while permeability ranged from 16.02 – 41.40 mm/hr. The moderate porosity and Water Holding Capacity as well as good permeability due to loamy sand to sandy loam texture of soils. The Electrical Conductivity ranged from 102-9310 µmho/cm. pH of the soils is normal (pH 7.34 to 9.23) to alkaline (pH>8.5).

9. The PP reported that there will be no groundwater extraction for this project. The total water requirement is 2,22,875 KLD including 1,60,053 KLD of continuous make-up water, which will be met from APSEZL Seawater Desalination plant and rest will be met from internal recycling of water. The PP reported that the total water requirement is 2,22,875 KLD of which fresh water requirement of 1,60,053 KLD, will be met from APSEZL Desalination plant. This make-up water consumption quantity is arrived after recycling of water Quantity 62,822 KLD (Boiler: 7860 KLD, Cooling tower: 48,636 KLD, MEE Condensate: 5109 KLD, Treated sewage: 1217 KLD). Effluent of 54,254 KLD will be treated through Effluent Treatment Plants. The plant will be based on Zero Liquid Discharge system.

10. The PP reported that during the construction phase, the power requirement of 30 MW will be provided by DISCOM within APSEZL. During operation phase, the power requirement of 2000 MW will be provided by DISCOM within APSEZL. DG sets of 20,000

KVA total capacity (1250 KVA – 10 Units and 750 KVA – 10 units) are being proposed for the Proposed Project in case of emergency/power failure.

11. Details of Process Emissions Generation and their Management:

Name of the plant	Vent attached to	No. of vents	Vent height	Emission	Pollutants emitted	Air Pollution Control Measures Attached
Caustic Soda Plant	Hydrochloric Acid Section exhaust vent (Units - 1, 2, 3, 4) - 8 vents for each unit	32	50	Continuous	HCl	Caustic Scrubber
	H2 vent (1 common vent for each Phase) - 2 vents	2	50	Intermittent	H_2	NA
	chlorine gas treatment section exhaust vents (Units - 1, 2, 3, 4) - 4 vents - one for each unit	4	50	Intermittent	CL_2	Caustic Scrubber
Acetylene plant	Unit 1&2 - Calcium Carbide dust collector	1	50	Intermittent	Particulate Matters	Bag Filter
	Unit 3 & 4 - Calcium Carbide dust collector	1	50	Intermittent	Particulate Matters	Bag Filter

12. Details of Solid Waste Generation and its Management:

S. No	Plant/ Unit	Waste Description	Quantity in (TPA)	Category as per Hazardous waste management rule 2016	Collection Method	Mode of Transport	Distance from site (km)	Treatment / Disposal Mode
1.	Handling of hazardous	Empty barrels, containers, liners	4000	33.1	Drums/containers/ bags	By road	70	Disposed to authorized

	chemicals and waste	contaminated with hazardous chemicals Empty						TSDF facility
2.	MEE Area	MEE Salt	4801	35.3	Bags	By road	70	Disposed to authorized TSDF facility
3.	ETP Area	Chemical Sludge	2254	35.3	Bags	By road	70	Disposed to authorized TSDF facility
4.	DM plant	Ionic Membranes /Resins	8	35.2	Barrels/ Drums/ Bags	By road	70	Disposed to authorized TSDF facility
5.	Industrial Operation using mineral orSynthetic Oil aslubricant in hydraulic system or other applications, e.g. workshop / Heavy m/c	Used Oil / Spent Oi	75	5.1	Barrels/ Drums/	By road	60	Sent to registered oil reprocessor
	Caustic Soda and Cl2 Manufacturing plant	Spent ion exchange resin containing toxic metal	25 m3/year	35.2	Barrels/ Drums/	By road	70	Disposed to authorized TSDF facility

Details of Non-Hazardous (Solid) Waste Generation and its Management:

S. No.	Plant/Unit	Type of Waste	Composition of Waste	Generation Frequency	Quantity per Year (Tons)	Mode of Transportation	Mode of Treatment / Disposal
1.	Production of Caustic Soda and Cl_2 Manufacturing plant	Brine sludge	Brine sludge	Continuous	17030	Truck	Disposal to authorised TSDF / Sanitary Landfill site / sale to authorised brick manufacturers
2	STP Area	Biological Sludges	Biological Sludges	Solid	110	Bags	Used as Manure for Greenbelt within site premises
3	Boiler Plant (Pocket-1)	Boiler Ash	Ash	Solid	28800	Fly Ash bulk trailers	Use in house in Cement Plant
		Bottom Ash	Ash	Solid	14400	Fly Ash bulk trailers	Use in house in Cement Plant
4	Boiler Plant (Pocket-3)	Boiler Ash	Ash	Solid	14400	Fly Ash bulk trailers	Use in house in Cement Plant
		Bottom Ash	Ash	Solid	7200	Fly Ash bulk trailers	Use in house in Cement Plant

13. The PP submitted that advertisement for Public Hearing was published in newspaper viz *"' **Gujarat Samachar & Kutch Mitra** dated 28.3.2022 and in English newspaper **"Times of India" dated 28.3.2022*** and the Public Hearing has been conducted by Gujarat Pollution Control Board on 30.4.2022, which was presided by Additional Collector and Additional District Magistrate, Bhuj-Kutch. Employment, CSR, cumulative impact and land related issues were raised during the Public Hearing.

14. The Budget earmarked towards Environmental Management Plan (EMP) is ₹ 2874.59 Crore (capital) and ₹ 1494.55 Crore (recurring) which includes Air pollution control systems [₹ 1650 crore (capital) and ₹ 450 crore (Recurring) and ₹ 3.5 crore (Recurring for third party ambient air monitoring)], Material consumption of air pollution control [₹ 175 Crore (Recurring)], online continuous emissions monitoring system for APCM [₹ 390 Crore (capital) and ₹ 39 crore (Recurring)], water pollution control system [₹ 553.21 Crore (capital cost for ETP and STP) and ₹ 451.5 Crore (Recurring cost for ETP and STP) ₹ 1.97 (capital cost for Monitoring systems) ₹ 2.95 Crore (Recurring cost for Monitoring), [material

consumption of water pollution control ₹ 124.5crore(Recurring)], Online continuous Emission monitoring system for effluent [₹ 98.3Crore (capital) and ₹ 9.8 Crore (Recurring)] and solid hazardous waste handling and management site [₹ 36.11 crore (capital) and ₹ 156.8 crore (Recurring)], solid hazardous waste handling and management site [₹ 36.11 crore (capital) and ₹ 156.8 crore (Recurring)] hazardous waste disposal [₹40 crore (Recurring)]Environment management system [₹ 25 crore (capital) and ₹ 3.5 crore(Recurring)] Laboratory [₹ 45 crore (capital) and ₹ 8 crore (Recurring)] Greenbelt within the project area and eco- development drive in study area [₹ 75 crore (capital) and ₹ 30 crore (Recurring)]. Industry proposes to allocate ₹ 75 crore towards CSR to focus on education development, community health, sustainable livelihood and community rural infrastructure development like providing facility for potable drinking water by providing RO Plants, drinking water supply system, overhead tank and underground pump in villages, Creation of clean and hygienic environment by proper drainage systems, sewage treatment plants, community led sanitation campaign etc., Construction of various community centres to facilitate social activities, upgradation of facility at crematoriums, Gaushala, and creation of bus stands etc. Conservation of water by construction of check dams and pond, Upgradation of primary health centres, renovation of roads and expansion of roads, construction of toilet facilities etc. Provision of solar street lighting, green nurturing programs, implementation of Swachchh Bharat initiatives, Contingency and monitoring.

15. The Budget earmarked towards occupational health and safety is ₹ 6 crore for construction phase workers. The PP reported that once project is commenced, pre-medical check-up report and periodic medical check-up report will be maintained.

16. The industry will develop greenbelt in an area of 33 % i.e., 107.14 ha out of total area of the project. Industry will plant 2,67,600 numbers of trees in 5 years.

17. The PP proposed to set up an Environment Management Cell (EMC), it is proposed to engage Chief Sustainability Officer (CSO), Head Environment, lead Environment at corporate level, EC/CTO wise site environment engineer and Laboratory analytical staff for the functioning of EMC.

18. The PP submitted that Coal to PVC project will support reduction in CO_2 emission at country level on the basis of end use of PVC in comparison to Steel. Example production of schedule -40 PVC pipe for water delivery per km will emit 70% less CO_2 in comparison to Schedule-40 Steel pipe. Coal to PVC project will be Net Carbon Positive as a standalone PVC project but 70% neutral when compared with MS steel manufacturing for on product basis as example given above. Efforts will be made to optimise the carbon emission from respective processes in detailed engineering and operational stage and renewable consumption.

19. The PP submitted the disaster and Onsite and Offsite Emergency Plan in the EIA report. The PP also informed that District administration will be informed by them about the hazards involved in the project for needful preparedness for administration point of view also, after the grant of EC and copy of EC shall also be submitted to district administration.

20. The PP submitted an undertaking with reference to O.M. No. J-11013/41/2006-IA. II (I) dated 5.10.*2011* "We *hereby given an undertaking that the data and the information given in the EIA Report and its relevant enclosures, prepared by Kadam Environmental Consultants, are factually correct to the best of our knowledge and belief"*

21. The consultant submitted an undertaking that with reference to O.M. No. J-11013/41/2006-IA.II(I)dated 4.8.2009 that "*We, Kadam Environmental Consultant, have been engaged by M/s. Adani Enterprises Limited located at near village vandh & Tunda,*

Tuluka Mundra, District Kachchh, Gujarat for conducting and EIA study in compliance with the EIA notification dated September 14,2006 as amended till date and the prescribed ToRs issued by Ministry of Environment, Forests and Climate Change (MoEF&CC), New Delhi. We hereby given an undertaking that the data and the information given in the EIA Report and its relevant enclosures, are factually correct to the best of our knowledge and belief and that the prescribed ToRs issued by MoEF&CC have been complied with".

22. The estimated project cost is ₹ 6000 Crore for the proposed plant within domain of Industry-3 sector and total cost of coal to PVC project is ₹ 34,900 Crore. Total employment will be ~12000 numbers during construction phase (i.e. ~5000 direct and ~7000 indirect) and ~11,600 numbers during operation phase (i.e. ~3600 on direct and ~8000 indirect).

23. Project Proponent has given an undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the EIA/EMP reports. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.

24. The EAC noted that the EIA/EMP reports are in compliance of the ToR issued for the project, reflecting the present environmental status and the projected scenario for all the environmental components. The Committee deliberated on the proposed mitigation measure towards Air, Water, Noise and Soil pollutions. The Committee suggested that the storage of toxic/explosive raw materials/products shall be undertaken with utmost precautions and following the safety norms and best practices.

The EAC deliberated on the wildlife conservation plan for Schedule-I species, which was also approved the Wildlife Conservation plan for the proposed project. The EAC also deliberated on the Carbon footprint of project with details of sources causing carbon emissions. PP submitted the carbon footprint of projects with details of sources causing carbon emissions. The EAC noted the STP tertiary level treatment in light of the fact that treated STP water is to be used for gardening only. PP committed that AEL has proposed to provide STPs with primary, biological and tertiary chlorination, pressure sand filtration and carbon adsorption treatment. The reason for doing so is the possibility of using this treated water in the future for other uses such as toilet flushing. Since this would require a higher level of treatment, tertiary treatment including PSF and ACF have been provided. This tertiary treatment will only be operated whenever end use of this treated water is required to make-up the water system for toilet flushing and sanitation in the plant.

The EAC also deliberated on the Greenbelt/Plantation and suggested that rather to deploy uniform greenbelt of equal width all-round the plant boundary, it may reduce the width of the green belt by 15 to 25 meters on seaward side of the project and increase the width of the greenbelt on landward side of the project maintaining the total 33% of the greenbelt. This will result in more width attenuation of the noise going towards residential area on west and landward side. PP committed for increasing the width of green belt towards noise and air emissions impact point of view.

The EAC noted that the project boundary was superimposed on the CZMP map by NCSCM, Chennai. PP submitted that the Proposed Project Boundary of all 3 pockets of the land falls outside the CRZ area. PP has submitted the CRZ maps superimposed with project boundary and report received from NCSCM which concludes that, Pocket Ill falls outside the CRZ Categories such as CRZ-IA, (Mangroves, 50 m Mangrove Buffer Zone, Mudflat and Reserved Forest), CRZ-IB, CRZ II, CRZ Ill and CRZ IV area. The minimum distance between the Proposed Project Boundary to CRZ-III (No Development Zone) is about 5 m to 6 m, which runs parallel to the south side of Pocket –Ill, falls in Reserved Forest (as given in Land Use Map of 2011) and the same area has been shown as Diversion of Reserved Forest area in the approved CZMP as per the proposed Project Boundary (CRZ Notification,

2011). The CRZ map (1:4000 scale) has been prepared in accordance with the CRZ Notification 2011 and approved CZMP maps of Gujarat State. The Proposed Project Boundary - Pocket III falls within the Sheet Number F 42 J 9/SW and Map Number GJ 179 of approved CZMP of Gujarat State prepared as per CRZ Notification 2011. The proposed layout plan of the proposed project activities is not superimposed into the CRZ map. A CRZ map covering about 7 km radius of the proposed project boundaries of Pocket-I, Pocket-II and Pocket-III/representing CRZ categories based on approved CZMP.

The EAC deliberated on the Onsite and Offsite Emergency plan and various mitigation measures to be proposed during implementation of the project and advised the PP to implement the provisions of the Rules and guidelines issued under the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996. In addition to this the Committee also suggested for Public Liability Insurance for workers, appointment of Environment Health and safety officer according to qualification before the construction activities.

The EAC deliberated on the proposal with due diligence in the process as notified under the provisions of the EIA Notification, 2006, as amended from time to time and accordingly made the recommendations to the proposal. The Experts Members of the EAC found the proposal in order and recommended for grant of environmental clearance. The minutes of the meeting and all the project documents are available on PARIVESH, which can be accessed at **http://parivesh.nic.in**.

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

25. Based on the proposal submitted by the project proponent and recommendations of the EAC (Industry-3), the Ministry of Environment, Forest and Climate change hereby accords Environmental clearance to the project for Manufacturing of Caustic Soda (1310 KTPA) and Acetylene (860 KTPA) (as a part of Proposed Coal to Poly-Vinyl Chloride(PVC) Project) located at industrial area of APSEZ, Taluka-Mundra, District-Kutch, Gujarat by M/s. Adani Enterprises Ltd. under the provisions of the EIA Notification, 2006, subject to the compliance of terms and conditions as under:-

A. Specific Conditions:

(i). The Environmental Clearance (EC) is subject to the outcome of the PIL No. 36 of 2022 pending before the Hon'ble High Court of Gujarat.

(ii). The PP shall develop Greenbelt over an area at least 107.14 ha by planting 2,67,600 number of trees in 5 years from the grant of EC. The saplings selected for the plantation should be of sufficient height, preferably 6-ft. In addition to this as committed by the PP, Industry shall deploy a uniform greenbelt of equal width all-round the plant boundary, it will reduce the width of the green belt by 15 to 25 meters on seaward side of the project and will increase the width of the greenbelt on landward side of the project maintaining the total 33% of the greenbelt. The budget earmarked for the plantation shall be ₹ 75 crore and shall be kept in separate account and should be audited annually. The PP should annually submit the audited statement along with proof of activities viz. photographs (before & after with geo-location date & time), details of expert agency engaged, details of species planted,

number of species planted, survival rate, density of plantation etc. to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

(iii). A separate Environmental Management Cell (having qualified persons with Environmental Science/Environmental Engineering/specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions. As committed PP shall engage CSO, Head Environment, lead Environment at corporate level, EC/CTO wise site environment engineer and Laboratory analytical staff as per the qualification given in Factories Act 1948 shall be engaged within a month of grant of EC. PP should annually submit the audited statement of amount spent towards the engagement of qualified persons in EMC along with details of person engaged to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

(iv). The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented. The budget propose under EMP is ₹ 2874.59 Crore (Capital cost) and ₹ 1494.55 Crore (Recurring cost) shall be kept in separate account and should be audited annually. The PP should submit the annual audited statement along with proof of implementation of activities proposed under EMP duly supported by photographs (before & after with geo-location date & time) and other document as applicable to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

(v). The total water requirement (including the existing) will be 2,22,875 KLD that includes desalinated sea water 1,60,053 KLD which will be met from APSEZL Desalination plant and rest will be met form the internal recycling of the water. Project has obtained willingness letter for 220 MLD water supply from APSEZL. The PP should ensure that water utilization should not be above the permissible limit and only after obtaining valid agreement from the Concerned Authority. The PP should submit the details of water abstraction and utilization to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year. In addition to this the PP shall submit the target for reduction of GW utilization to Regional Office of MoEF&CC within a period of one year.

(vi). As committed by PP, the tertiary treatment for STP will be operated only when end use of the treated water is required to make-up the water system for toilet flushing and sanitation in the plant.

(vii). No banned chemicals shall be manufactured by the project proponent. No banned raw materials shall be used in the unit. The project proponent shall adhere to the notifications/guidelines of the Government in this regard.

(viii). The project proponent shall utilize modern technologies for capturing of carbon emitted and shall also develop carbon sink/carbon sequestration resources capable of capturing more than emitted. The implementation report shall be submitted to the IRO, MoEF&CC in this regard.

(ix). The species-specific conservation plan of Schedule-I species shall be implemented within time limit and as per the approval of the Chief Wildlife Warden of the State Government.

(x). All necessary precautions shall be taken to avoid accidents and action plan shall be implemented for avoiding accidents. The project proponent shall implement the onsite/offsite emergency plan/mock drill etc. and mitigation measures as prescribed under the rules and guidelines issued in the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996.

(xi). The volatile organic compounds (VOCs)/Fugitive emissions shall be controlled at 99.97 % with effective chillers/modern technology. Regular monitoring of VOCs shall be carried out.

(xii). The project proponent shall explore possibilities for recycling and reusing of treated water in the unit to reduce the fresh water demand and waste disposal.

(xiii). As already committed by the project proponent, the Effluent (54,254 KLD) will be treated through ETPs and Zero Liquid Discharge (ZLD) shall be ensured.

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

(xv). The storage of toxic/hazardous raw material shall be bare minimum with respect to quantity and inventory. Quantity and days of storage shall be submitted to the Regional Office of Ministry and SPCB along with the compliance report.

(xvi). The occupational health centre for surveillance of the worker's health shall be set up. The health data shall be used in deploying the duties of the workers. All workers & employees shall be provided with required safety kits/mask for personal protection.

(xvii). Training shall be imparted to all employees on safety and health aspects for handling chemicals. Safety and visual reality training shall be provided to employees. Action plan for mitigation measures shall be properly implemented based on the safety and risk assessment studies.

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

(xix). The solvent management shall be carried out as follows: (a) Reactor shall be connected to chilled brine condenser system. (b) Reactor and solvent handling pump shall have mechanical seals to prevent leakages. (c) Solvents shall be stored in a separate space specified with all safety measures. (d) Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done. (e) Entire plant shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses. (f) All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.

(xx). The storm water from the roof top shall be channelized through pipes to the storage tank constructed for harvesting of rain water in the premises and harvested water shall be used for various industrial processes in the unit. No recharge shall be permitted within the premises. Process effluent/ any wastewater shall not be allowed to mix with storm water.

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

(xxii). The activities and the action plan proposed by the project proponent to address the issues raised during the public hearing as well as the related socio-economic issues in the study area shall be completed as per the schedule presented before the Committee and as described in the EIA report in letter and spirit.

B. General Conditions: The grant of environmental clearance is further subject to compliance of other general conditions as under:-

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

(ii) The Project proponent shall strictly comply with the rules and guidelines issued under the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996, and Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016 and other rules notified under various Acts.

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

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

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

(vi) The company shall earmark sufficient funds towards capital cost and recurring cost per annum to implement the conditions stipulated by the Ministry of Environment, Forest and Climate Change as well as the State Government along with the

implementation schedule for all the conditions stipulated herein. The funds so earmarked for environment management/ pollution control measures shall not be diverted for any other purpose.

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

(viii) The project proponent shall also upload/submit six monthly reports on Parivesh Portal on the status of compliance of the stipulated Environmental Clearance conditions including results of monitored data to the respective Integrated Regional Office of MoEF&CC, the respective Zonal Office of CPCB and SPCB. A copy of Environmental Clearance and six monthly compliance status report shall be posted on the website of the company.

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

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

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

(xii) 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.

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

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

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

29. The above conditions shall be enforced, *inter-alia* under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.

This issues with approval of the competent authority.

(Dr. Motipalli Ramesh)
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Copy to: -

1. The Principal Secretary, Forests & Environment Department, Government of Gujarat, Sachivalaya, 8th Floor, Gandhi Nagar - 382010 (Gujarat)
2. The Deputy Director General of Forests (C), Ministry of Env., Forest and Climate Change, Integrated Regional Office, Gandhi Nagar, A-Wing – 407 & 409, Aranya Bhawan, Near CH-3 Circle, Sector-10A, Gandhi Nagar - 382010
3. The Chairman, Central Pollution Control Board Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, Delhi -32
4. The Member Secretary, Gujarat Pollution Control Board, Paryavaran Bhawan, Sector 10 A, Gandhi Nagar-382 043 (Gujarat)
5. The Member Secretary, Central Ground Water Authority, Jamnagar House, 18/11, Man Singh Road Area, New Delhi, Delhi 110001
6. The District Collector, District Kutch, Gujarat
7. Guard File/Monitoring File/PARIVESH

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