



F. No. J-11011/370/2016-IA-II(I)
Government of India
Ministry of Environment, Forest & Climate Change
Impact Assessment Division

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

Dated: 5th March, 2020

To,

M/s Indian Oil Corporation Limited,
Village Dumad, Taluk Vadodara,
District **Vadodara** (Gujarat)

Sub: Proposed Acrylics/ Oxo Alcohol Project, Creation of necessary facility for origination of Koyali - Ahmednagar - Sholapur pipeline (KAHSPL) & installation of Tank Truck Loading facility (TTL) for linear Alkyl Benzene and laying of 9 Piggable, dedicated hydrocarbon service cross country pipelines (Including LPG supply and return) between refinery and Dumad in the existing Right of Way (ROW) at Village Dumad, Tehsil & District Vadodara (Gujarat) by M/s Indian Oil Corporation Limited, Gujarat Refinery (JR) - Environmental Clearance - reg.

Sir,

This has reference to your online proposal No. IA/GJ/IND2/109376/2017, dated 14th August, 2019 for environmental clearance to the above mentioned project.

2. The Ministry of Environment, Forest and Climate Change has examined the proposal for environmental clearance to the project for proposed Acrylics/ Oxo Alcohol Project, Creation of necessary facility for origination of Koyali - Ahmednagar - Sholapur pipeline (KAHSPL) & installation of Tank Truck Loading facility (TTL) for linear Alkyl Benzene and laying of 9 Piggable, dedicated hydrocarbon service cross country pipelines (Including LPG supply and return) between refinery and Dumad in the existing Right of Way (ROW) at Village Dumad, Tehsil & District Vadodara (Gujarat) by M/s Indian Oil Corporation Limited, Gujarat Refinery (JR). The proposal also involves 15 Km RLNG pipe line.

3. The details of products and capacity as under:

S. No	Product Details	Storage Tank Capacity (KL)		
		Existing	Proposed	Total
1	LPG	8351.64	0	8351.64
2	HSD	43095	120000	163095
3	MS	11824	75000	86824
4	ATF	0	30000	30000
5	PCK	0	20000	20000
6	SKO	14190	10000	24190
7	Ethanol	281	0	281
8	LMW	0	15000	15000
9	HMW	0	5000	5000
10	DHPP-A	4730	0	4730
11	Bio Diesel	74	0	74

12	Fresh Water	0	24000	24000
13	Service Water	0	6000	6000
14	N-Butanol	0	2380	2380
15	I-Butanol	0	300	300
16	Acrylic Acid	1583	-	1583
17	Butyl Acrylate	0	7620	7620
18	Propylene	0	2820	2820
	Total	84128.64	318120	402248.64

Cross Country Pipelines Proposed

S. No	Product Details	From	To
1	ATF	Koyali	Dumad
2	PCK		
3	Fresh Water		
4	LMW		
5	HMW		
6	n- Butanol		
7	Iso Butanol		
8	Propylene		
9	Raw Water		

4. Existing land area is 17,56,336 m². No additional land will be required for proposed expansion. Expansion will be carried out within the existing facility. Green belt will be developed in 33% i.e. 17,56,336 sqm of the total area of the project. The estimated project cost is Rs. 4577 crores including existing investment of Rs.192 crores. Total capital cost earmarked towards environmental pollution control measures is Rs.85.185 and the recurring cost (operation and maintenance) will be about Rs.5.79 Crores per annum. Total Employment will be 252 persons as direct & 595 persons as indirect after expansion.

5. There are No national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc within 10 km distance from the project site. Viswamitri River flows at a distance of 0.01 m in East direction.

6. Total water requirement is 13632 m³/day including fresh water requirement of 8952 m³/day, proposed to be met from existing French wells at Head works of Gujarat refinery in Mahi River. Effluent of 125 KLPH quantity will be treated through 190KLPH Combined ETP and 150 KLPH oil waste Separator. The plant will be based on Zero Liquid discharge system.

Power requirement after expansion will be 29 MW proposed to be met from Gujarat State Power Distribution Corporation Limited (GSPDCL). Existing unit has 5 DG sets. Two more DG set of capacity 3 MW will be used as standby during power failure. Stack of 12 m height will be provided as per CPCB norms.

7. The project/activity is covered under category A of item 4 (a) 'Petroleum refining industry' and 5(c) 'Petrochemical Complexes' of the schedule to the Environmental Impact Assessment Notification, 2006 and requires appraisal/approval at Central level in the Ministry.

8. The terms of reference (ToR) for the project was granted on 22nd March, 2017 followed by amendment on 2nd Jan 2018. Public hearing was conducted by the State

Pollution Control Board on 31st January, 2019. The main issues raised during the public hearing are related to safety of public and impact on agriculture due to Industry.

9. The proposal for environmental clearance was considered by the EAC (Industry-2) in its meetings held on 26-27 September, 2019 and 20-22 November, 2019. The project proponent and their consultant have presented the EIA/EMP report. The Committee found the EIA/EMP report to be satisfactory, complying with the ToR, and recommended the project for grant of environmental clearance.

10. The Committee noted that the EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. Issues raised during the public hearing have been duly addressed by the project proponent.

11. Based on the proposal submitted by the project proponent and recommendations of the EAC (Industry-2), Ministry of Environment, Forest and Climate Change hereby accords environmental clearance to the project for **proposed Acrylics/ Oxo Alcohol Project, Creation of necessary facility for origination of Koyali - Ahmednagar - Sholapur pipeline (KAHSPL) & installation of Tank Truck Loading facility (TTL) for linear Alkyl Benzene and laying of 9 Piggable, dedicated hydrocarbon service cross country pipelines (Including LPG supply and return) between refinery and Dumad in the existing Right of Way (ROW) at Village Dumad, Tehsil & District Vadodara (Gujarat) by M/s Indian Oil Corporation Limited**, Gujarat Refinery (JR) under the provisions of the EIA Notification, 2006, and the amendments therein, subject to compliance of the terms and conditions as under:-

A. Specific Condition

(i) 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, shall be obtained from the State Pollution Control Board as required.

(ii) Necessary authorization required under the Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016 and Solid Waste Management Rules, 2016 shall be obtained and the provisions contained in the Rules shall be strictly adhered to.

(iii) As already committed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises.

(iv) The National Emission Standards for Petroleum Oil Refinery issued by the Ministry vide G.S.R. 186(E) dated 18th March, 2008 and G.S.R.595(E) dated 21st August, 2009 as amended from time to time, shall be followed.

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

(vi) Total fresh water requirement shall not exceed 8952 cum/day to be met from existing French wells. Prior permission in this regard shall be obtained from the concerned regulatory authority/CGWA.

- (vii) Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.
- (viii) Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm, and solvent transfer to be done through pumps.
- (ix) Process organic residue and spent carbon, if any, shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF. The ash from boiler shall be sold to brick manufacturers/cement industry.
- (x) The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time. All transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act (MVA), 1989.
- (xi) Regular VOC monitoring to be done at vulnerable points.
- (xii) The oily sludge shall be subjected to melting pit for oil recovery and the residue shall be bio-remediated. The sludge shall be stored in HDPE lined pit with proper leachate collection system.
- (xiii) Comprehensive water audit to be conducted on annual basis and report to the concerned Regional Office of MEF&CC. Outcome from the report to be implemented for conservation scheme.
- (xiv) Oil catchers/oil traps shall be provided at all possible locations in rain/ storm water drainage system inside the factory premises.
- (xv) The company shall undertake waste minimization measures as below:-
(a) Metering and control of quantities of active ingredients to minimize waste.
(b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.
(c) Use of automated filling to minimize spillage.
(d) Use of Close Feed system into batch reactors.
(e) Venting equipment through vapour recovery system.
(f) Use of high pressure hoses for equipment clearing to reduce wastewater generation.
- (xvi) The green belt of 5-10 m width shall be developed in more than 33% of the total project area, mainly along the plant periphery, in downward wind direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.
- (xvii) The fund provision for Corporate Environment Responsibility (CER) shall be provided as per the guidelines issued by the Ministry dated 1st may 2018 and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office.
- (xviii) For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.
- (xix) 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.

(xx) Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises. In case of the treated effluent to be utilized for irrigation/gardening, real time monitoring system shall be installed at the ETP outlet.

(xxi) Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.

B. General Conditions:

- (i) The Project Proponent shall obtain all other statutory/necessary permissions/recommendations/NOCs prior to start of construction/operation of the project, which inter alia include, permission/approvals under the Forest (Conservation) Act, 1980; the Wildlife (Protection) Act, 1972; the Coastal Regulation Zone Notification, 2019, as amended from time to time, and other Office Memoranda/Circular issued by the Ministry of Environment, Forest and Climate Change from time to time, as applicable to the project.
- (ii) The project proponent shall ensure compliance of 'National Emission Standards', as applicable to the project, issued by the Ministry from time to time. The project proponent shall also abide by the rules/regulations issued by the CPCB/SPCB for control/abatement of pollution.
- (iii) The project authorities shall adhere to the stipulations made by the State Pollution Control Board/Committee, Central Pollution Control Board, State Government and any other statutory authority.
- (iv) The project proponent shall prepare a site specific conservation plan and wildlife management plan in case of the presence of Schedule-1 species in the study area, as applicable to the project, and submit to Chief Wildlife Warden for approval. The recommendations shall be implemented in consultation with the State Forest/Wildlife Department in a time bound manner.
- (v) 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. 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 to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.
- (vi) The energy source for lighting purpose shall be preferably LED based, or advance having preference in energy conservation and environment betterment.
- (vii) The locations of ambient air quality monitoring stations shall be decided in consultation with the State Pollution Control Board (SPCB) and it shall be ensured that at least one station each is installed in the upwind and downwind direction as well as where maximum ground level concentrations are anticipated.
- (viii) The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 shall be followed.
- (ix) 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 Environment (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).

- (x) The Company shall harvest rainwater from the roof tops of the buildings and storm water drains to recharge the ground water and to utilize the same for process requirements.
- (xi) Training shall be imparted to all employees on safety and health aspects of chemicals handling. Pre-employment and routine periodical medical examinations for all employees shall be undertaken on regular basis. Training to all employees on handling of chemicals shall be imparted.
- (xii) The company shall also 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.
- (xiii) The company shall undertake all relevant measures for improving the socio-economic conditions of the surrounding area. CER activities shall be undertaken by involving local villages and administration and shall be implemented.
- (xiv) The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment.
- (xv) A separate Environmental Management Cell (having qualified person 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.
- (xvi) 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.
- (xvii) 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.
- (xviii) The project proponent shall also submit six monthly reports on the status of compliance of the stipulated Environmental Clearance conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional Office of MoEF&CC, the respective Zonal Office of CPCB and SPCB. A copy of Environmental Clearance and six monthly compliance status report shall be posted on the website of the company.
- (xix) The environmental statement for each financial year ending 31st March in Form-V as is mandated shall be submitted to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Regional Offices of MoEF&CC by e-mail.
- (xx) 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.
- (xxi) 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.

(xxii) 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.

12. 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.

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

14. 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.

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

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


(Dr. R. B. Lal)

Scientist 'E'/Additional Director

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

Copy to: -

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


(Dr. R. B. Lal)

Scientist 'E'/Additional Director