



सत्यमेव जयते

Yogendra Pal Singh
Scientist 'D'

F. No. J-11011/96/2015-IA-II (I)

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

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Dated: 20th March, 2017

To,

The DGM (HSE)
M/s Indian Oil Corporation Ltd.
Gujarat Refinery
P.O. Jawaharnagar,
Vadodara - 391 320, Gujarat

Sub: Proposed BS-IV and BS-VI Project of Gujarat Refinery at District Vadodara, Gujarat by M/s IOCL Ltd. - Environmental Clearance - reg.

Ref.: Your online proposal no. IA/GJ/IND2/60736/2016; dated 29th November, 2016.

Sir,

This has reference to your online proposal no. IA/GJ/IND2/60736/2016; dated 29th November, 2016 along with project documents including Form I, Terms of References, Pre-feasibility Report, EIA/EMP Report along with Public Hearing Report regarding above mentioned project.

2.0 The Ministry of Environment, Forests and Climate Change has examined the application. It is noted that proposal is for Proposed BS-IV and BS-VI Project of Gujarat Refinery at District Vadodara, Gujarat by M/s IOCL Ltd. Gujarat Refinery has a total area of 925 acres. Green belt of 148 acres have already been developed around the periphery of Refinery with a total of about 2,15,000 trees planted in the green belts. Additionally, about 70 acres of green patch has been developed at Refinery Township area (at a distance of approx 1 km from Refinery battery area) which also includes 40 acres of land consisting of dense plantations. PP also requested that since no additional vacant land is available in and around Gujarat Refinery, it has been planned that further development of dense plantation of around 21 acres shall be undertaken at Headworks area (owned by IOCL) which is at a distance of about 10 km from Refinery. Capital Cost for BS IV is ₹ 930.76 Crore and and for BS VI is ₹ 2770.68 Crore. Proposed expansion project will provide employment to 106 persons. It is reported that no national parks, reserved forest/Protected forest and Wildlife Sanctuaries lies within 10 km distance. The following products will be generated by the company. Capacity of process units pre and post revamp for BS-IV are as follows:

Capacity of process units pre and post revamp for BS-IV

S. No	Unit	Present capacity (MMTPA)	Post revamp Capacity (MMTPA)	New Unit Capacity
1	DHDT	2.2	2.86	--
2	DHDS	1.77	2.2	--
3	VGO-HDT	2.1	2.73	--
4	SWS-VI (New Unit)	--	--	55 MT/hr

Capacity of process units pre and post revamp for BS-VI

S. No.	Process Units	Capacity	Present capacity	Post revamp Capacity
1.	New DHDT	2.0 MMTPA	--	--
2.	New HGU	72.5 KTPA	--	--
3.	New FCC-GDS	700 KTPA	--	--
4.	New ARU	190 TPH	--	--
5	CCRU (Revamp)	--	600 KTPA	780 KTPA
6	ISOM (Revamp)	--	230 KTPA	276 PA

3.0 Total water requirement will be increased from 56.37 MLD to 60.07 MLD, which will be sourced from Mahi River. Additional generation of 50-100 m³/hr of wastewater envisaged in the proposed projects. Wastewater will be treated in CETP and balance quantity of Treated Effluent is discharged to Vadodara Enviro Channel Ltd (VECL) which is finally discharged into Gulf of Khambhat.

No additional infrastructure for Power for BS-VI will be made, as the requirement will be met through the existing power infrastructure available. Fuel Consumption for proposed BS-IV project: 20 MT/ hr. Natural Gas (NG) requirement for HGU-3 will increase by 30% i.e. by 10.1 KNm³/hr (8.7 MT/hr). However same can be met by refinery naphtha in case of unavailability of NG. Incremental Fuel Consumption for proposed BS-VI project: Natural Gas (NG) requirement will increase by 134 KTPA. Emission from emission post BS-IV/BS-VI project is as follows:

- SO_x: 40 kg/hr (960 kg/day)
- NO_x: 30 kg/hr (720 kg/day)
- PM: 7 kg/hr
- CO: 1 kg/hr.

During presentation EAC restricted the SO_x and NO_x emission within 900 kg/day and 720 kg/day respectively.

4.0 Public Hearing for the proposed project has been conducted by the Gujarat Pollution Control Board on 5.11.2016.

5.0 All Petroleum refining industry are listed at S.N. 4(a) under category 'A' and appraised by Expert Appraisal Committee (I).

6.0 The proposal was considered by the Expert Appraisal Committee (Industry) in its 18th meetings held during 23rd - 25th January, 2017. Project Proponent and the EIA Consultant namely M/s Hubert Enviro Care Systems Pvt. Ltd., have presented EIA/EMP report as per the TOR. EAC has found the EIA/EMP Report

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is satisfactory and in full consonance with the presented TORs. The Committee recommended the proposal for environmental clearance.

7.0 Based on the information submitted by the project proponent, the Ministry of Environment and Forests hereby accords environmental clearance to above project under the provisions of EIA Notification dated 14th September 2006, subject to the compliance of the following Specific and General Conditions:

A. SPECIFIC CONDITIONS:

- i. All pollution control and monitoring equipments shall be installed, tested and interlocked with the process. SPCB shall grant 'Consent to Operate' after ensuring that all the mentioned pollution control equipments, construction of storm water drain, rain water harvesting structure, Greenbelt, uploading of compliance report on the website etc have been implemented.
- ii. SO₂ emissions after expansion from the plant shall not exceed 900 kg/day and further efforts shall be made for reduction of SO₂ load through use of low sulphur fuel. Sulphur recovery units shall be installed for control of H₂S emissions.
- iii. Ambient air quality data shall be collected as per NAAEQS standards notified by the Ministry vide G.S.R. No. 826(E) dated 16th September, 2009. The levels of PM₁₀, PM_{2.5}, SO₂, NO_x, VOC and CO shall be monitored in the ambient air and emissions from the stacks and displayed at a convenient location near the main gate of the company and at important public places. The company shall upload the results of monitored data on its website and shall update the same periodically. It shall simultaneously be sent to the Regional office of MOEF, the respective Zonal office of CPCB and the state Pollution Control Board (SPCB).
- iv. In plant control measures for checking fugitive emissions from all the vulnerable sources shall be provided. Fugitive emissions shall be controlled by providing closed storage, closed handling & conveyance of chemicals/materials, multi cyclone separator and water sprinkling system. Dust suppression system including water sprinkling system shall be provided at loading and unloading areas to control dust emissions. Fugitive emissions in the work zone environment, product, raw materials storage area etc. shall be regularly monitored. The emissions shall conform to the limits stipulated by the SPCB.
- v. The gaseous emissions from DG set shall be dispersed through adequate stack height as per CPCB standards. Acoustic enclosure shall be provided to the DG sets to mitigate the noise pollution.
- vi. The Total fresh water requirement from Mahi River shall not exceed 60.07 MLD and prior permission shall be obtained from the Competent Authority. No ground water shall be used without permission.
- vii. Wastewater shall be sent to CETP and balance quantity of treated effluent shall be discharged to Vadodara Enviro Channel Ltd. (VECL) which is finally discharged into Gulf of Khambat.
- viii. Automatic/online monitoring system (24 x 7 monitoring devices) for flow measurement and relevant pollutants in the treatment system to be installed. The data to be made available to the respective SPCB and in the Company's website.

- ix. Adequate odour management plan and its mitigation measure to be implemented on priority.
- x. Regular VOC monitoring to be done at vulnerable points.
- xi. 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.
- xii. 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.
- xiii. Oil catchers/oil traps shall be provided at all possible locations in rain/storm water drainage system inside the factory premises.
- xiv. Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm. Solvent transfer shall be by pumps.
- xv. 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.
- xvi. 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.
- xvii. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
- xviii. At least 2.5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details shall be prepared and submitted to the Ministry's Regional Office. Implementation of such program shall be ensured accordingly in a time bound manner.
- xix. All the commitments made during the Public Hearing/Public Consultation meeting held on 5.11.2016 should be satisfactorily implemented and adequate budget provision should be made accordingly.
- xx. As proposed, green belt over 70 acres area shall be developed at Refinery Township area and dense plantation of around 21 acres shall be undertaken at Headworks area. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO. Existing Green belt of 148 acres shall be maintained around the periphery of Refinery with a total of about 2,15,000 trees in the green belts.

B. GENERAL CONDITIONS:

- i. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board (SPCB), State Government and any other statutory authority.
- ii. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests. 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.
- iii. 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 stations is installed in the upwind and downwind

- direction as well as where maximum ground level concentrations are anticipated.
- iv. 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.
 - v. 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).
 - vi. The Company shall harvest rainwater from the roof tops of the buildings and storm water drains to recharge the ground water and use the same water for the process activities of the project to conserve fresh water.
 - vii. 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.
 - viii. 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, risk mitigation measures and public hearing relating to the project shall be implemented.
 - ix. The company shall undertake all relevant measures for improving the socio-economic conditions of the surrounding area. CSR activities shall be undertaken by involving local villages and administration.
 - x. The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment.
 - xi. A separate Environmental Management Cell equipped with full fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.
 - xii. The company shall earmark sufficient funds towards capital cost and recurring cost per annum to implement the conditions stipulated by the Ministry of Environment and Forests 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.
 - xiii. A copy of the clearance letter shall be sent by the project proponent to concerned Panchayat, ZilaParisad/Municipal Corporation, Urban local body and the local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal.
 - xiv. 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, the respective Zonal Office of CPCB and concerned SPCB. A copy of Environmental Clearance and six monthly compliance status report shall be posted on the website of the company.
 - xv. 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 by e-mail.

- xvi. 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 at <http://moef.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.
- xvii. 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.

8.0 The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.

9.0 The Ministry reserves the right to stipulate additional conditions, if found necessary. The company in a time bound manner will implement these conditions.

10.0 The above conditions will be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous Waste (Management, Handling and Trans-boundary Movement) Rules, 2008 and the Public Liability Insurance Act, 1991 along with their amendments and rules.


20.3.2017
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Copy to:-

1. The Principal Secretary, Forests & Environment Department, Government of Gujarat, Sachivalaya, 8th Floor, Gandhi Nagar - 382 010, Gujarat.
2. The Chief Conservator of Forests (Western Zone), Ministry of Environment & Forests, Regional Office, E-5, Arera Colony, Link Road - 3, Bhopal - 462 016, M.P.
3. The Chairman, Central Pollution Control Board Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, New Delhi - 110 032.
4. The Chairman, Gujarat State Pollution Control Board, Paryavaran Bhawan, Sector 10 A, Gandhi Nagar - 382 043, Gujarat.
5. Monitoring Cell, Ministry of Environment and Forests, Paryavaran Bhawan, CGO Complex, New Delhi.
6. Guard File/Monitoring File/Record File.


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