

F. No. J-11011/299/2013- IA II (I)
Government of India
Ministry of Environment, Forests and Climate Change
(I.A. Division)

Indira Paryavaran Bhawan
Aliganj, Jorbagh Road,
New Delhi -110003

E-mail : lk.bokolia@nic.in
Telefax: 011-24695313
Dated: 4th March, 2016

To,

Mr. P. S. Goswami
Chief Technical Services Manager
India Oil Corporation Ltd.
Haldia Refinery, P.O. Haldia Oil Refinery
Dist. Purba Medinipur 721606

E-mail:goswami_ps@indianoil.in ; Fax No.- 03224-252141

Subject: Proposed Capacity Expansion from 7.5 MTPA to 8 MTPA along with Distillate Yield Improvement Project (DYIP) and Installation of Feed Preparation Unit (FPU) at District Medinipur, West Bengal by M/s Indian Oil Corporation, Haldia Refinery – Environmental clearance reg.

Ref.: Your online proposal no. IA/WB/IND2/27191/2013 dated 30th April, 2015.

Sir,

This has reference to your online proposal no. IA/WB/IND2/27191/2013 dated 30th April, 2015 alongwith project documents including Form 1, Prefeasibility Report, Draft Terms of References and EIA/EMP report on the above mentioned subject and subsequent submission of additional information vide letter dated 16th October, 2015.

2.0 The Ministry of Environment, Forest and Climate Change has examined your application. It is noted that the proposal is for expansion from 7.5 MTPA to 8 MTPA along with Distillate Yield Improvement Project (DYIP) and Installation of Feed Preparation Unit (FPU) at District Medinipur, West Bengal by M/s Indian Oil Corporation, Haldia Refinery. Following is the project configuration:

S.N.	Proposed Unit	Capacity
1	A) Under Capacity Expansion Project	
	Revamp of Existing CDU-I	From existing 3.3 MTPA to 3.8 MTPA
	Revamp of Existing VDU-I	From existing 1.5 MTPA to 1.7 MTPA
	B) Under Distillate Yield Improvement Project	
	i. Delayed Coking Unit (DCU)	1.7 MTPA
	ii. Coker Gas Oil Hydrotreater Unit (CGO HDTU)	1.4 MTPA
	iii. Coker LPG MEROX Unit	70 TMTPA
	iv. Sulphur Recovery Unit (SRU)	80 TPD
	v. Amine Treating Unit (ATU)	260 TPH
	vi. Sour Water Stripper (SWS)	65 TPH
	C) Feed Preparation Unit	650 TMTPA

For capacity expansion project and proposed Feed Preparation Unit (FPU) for Catalytic Dewaxing Unit (CDWU), no additional land shall be required. In capacity expansion project, the existing CDU-I and VDU-I shall be revamped. The proposed Feed Preparation Unit will be installed in the vacant plot (Area: 3600 m²), available near the existing OHCU within the refinery complex. Delayed Coker project will be housed in the 83 acres land, acquired from old Hindustan Fertilizer Corporation (HFC) on long-term lease basis. Cost of project is Rs. 3217 Crores. Hoogly River and Haldi River are flowing at a distance of 1.0 Km and 6.0 km respectively. It is reported that there is no National Park, Wildlife Sanctuary, Eco sensitive area & Reserve Forest within 10 km. radius of the Project Site.

3.0 It is reported that the SO₂ emission from the refinery after expansion will be 941 kg/hr. Heater/furnace will be provided with low NO_x burner to reduce the NO_x emissions. The height of new stack will be determined taking into consideration the guidelines for minimum stack height. Fuel oil with Sulphur content less than 0.6 % shall be used. Sulphur recovery unit with tail gas treating facilities having 99.9 % efficiency will be provided. Flare gas recovery system will be installed. Total fresh water requirement from Geonkhali Water Supply System and ground water source (16 deep tube wells) will be 1270 m³/hr. Wastewater generation will be increased from 850 to 1144 m³/hr after expansion. Effluent will be treated in the ETP capacity of 1250 m³/hr. To achieve the maximum reuse of treated effluent water, RO-based Tertiary treatment plant with capacity of 1250 m³/hr was commissioned. The tertiary treatment plant for ETP treated water is having latest technologies of DMF, UF, and MCF & Reverse osmosis. After treating the ETP treated water in TTP, it is being reused as cooling tower make up water and DM water. The treated effluent (112 m³/hr) will be finally discharged into surface water body through the existing system. The raw oily sludge, generated during tank M & I is removed from tank and transferred to Melting Pit for heat treatment for oily recovery. In the Melting Pit, oil is separated and recovered oil thus extracted, is pumped to refinery slop tank for re-processing in the refinery into products. Approximately 1200 MT of spent catalyst is being generated in the refinery on annual basis, which is also disposed through WBWML. Power requirement will be 30.34 MW and will be met from WBSEB and from the existing power plant of refinery.

4.0 All the Petroleum Refinery Plants are listed at S.N. 4(a) under Category 'A' and appraised at the Central level.

5.0 Public Hearing was held on 9th February, 2015.

6.0 The proposal was considered by the Expert Appraisal Committee (Industry) in its 14th meeting held during 19th – 20th December, 2013, 30th meeting held during 22nd – 23rd December, 2014, 44th meeting held during 20th-21st July, 2015 and 2nd meeting held during 16th -17th December, 2015 respectively. Project Proponent and the EIA Consultant namely M/s Envirotech East (P) Ltd. have presented EIA / EMP report as per the TOR. EAC has found the EIA / EMP Report and additional information to be adequate 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. Compliance to all the environmental conditions stipulated in the environmental clearance letter no. J-11011/39/96-IA II(I) dated 18th December, 1992, F. No. J-

11011/99/96- IA II (I) dated 1st October, 1997 and J-11011/28/2000- IA II (I) dated 21st August, 2000 shall be satisfactorily implemented and compliance reports submitted to the Ministry's Regional Office at Bhubaneswar.

- ii. M/s IOCL shall comply with new standards/norms for Oil Refinery Industry notified under the Environment (Protection) Rules, 1986 vide G.S.R. 186(E) dated 18th March, 2008.
- iii. Continuous on-line stack monitoring for SO₂, NO_x and CO of all the stacks shall be carried out. Low NO_x burners shall be installed.
- iv. The process emissions [SO₂, NO_x, HC (Methane & Non-methane)], VOCs and Benzene from various units shall conform to the standards prescribed under the Environment (Protection) Act. At no time, the emission levels shall go beyond the stipulated standards. In the event of failure of pollution control system(s) adopted by the unit, the unit shall be immediately put out of operation and shall not be restarted until the desired efficiency of the pollution control device has been achieved.
- v. Leak Detection and Repair programme shall be prepared and implemented to control HC/VOC emissions. Focus shall be given to prevent fugitive emissions for which preventive maintenance of pumps, valves, pipelines are required. Proper maintenance of mechanical seals of pumps and valves shall be given. A preventive maintenance schedule for each unit shall be prepared and adhered to. Fugitive emissions of HC from product storage tank yards etc. must be regularly monitored. Sensors for detecting HC leakage shall be provided at strategic locations.
- vi. SO₂ emissions after expansion from the refinery shall not exceed 941 Kg/hr. Sulphur recovery units shall be installed for control of H₂S emissions. The overall sulphur recovery efficiency of Sulphur recovery unit with tail gas treating shall not be less than 99.9%.
- vii. As proposed, record of sulphur balance shall be maintained at the Refinery as part of the environmental data on regular basis. The basic component of sulphur balance include sulphur input through feed (sulphur content in crude oil), sulphur output from Refinery through products, byproduct (elemental sulphur), atmospheric emissions etc.
- viii. Ambient air quality monitoring stations, [PM₁₀, PM_{2.5}, SO₂, NO_x, H₂S, mercaptan, non-methane-HC and Benzene] shall be set up in the complex in consultation with Maharashtra Pollution Control Board, based on occurrence of maximum ground level concentration and down-wind direction of wind. The monitoring network must be decided based on modeling exercise to represent short term GLCs and trend analysis w.r.t past monitoring results shall also be carried out. Adequate measures based on the trend analysis shall be taken to improve the ambient air quality in the project area.
- ix. 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. Besides, acoustic enclosure /silencer shall be installed wherever noise levels exceed the limit.
- x. Fresh water requirement from Geonkhali Water Supply System and ground water source (16 deep tube wells) will be 1270 m³/hr.
- xi. Industrial effluent generation shall not exceed 1150 m³/hr. after expansion. Industrial effluent shall be treated in the effluent treatment plant. Treated effluent shall be

MS

recycled/ reused as make up for the raw water cooling tower and remaining treated effluent (112 m³/hr) shall be discharged into surface water bodies.

- xii. All the effluents after treatment shall be routed to a properly lined guard pond for equalization and final control. In the guard pond, automatic monitoring system for flowrate, pH and TOC shall be provided.
- 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. 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, Regional Office of MoEF&CC and in the Company's website.
- xv. Oil catchers/oil traps shall be provided at all possible locations in rain/ storm water drainage system inside the factory premises.
- xvi. As proposed, spent catalyst shall be sent to the authorized recycler/re-processors. Oily Sludge shall be treated in the Sludge Centrifuge provided in the ETP and the cake generated from the centrifuge is further sent for bioremediation for disposal.
- xvii. The Company should strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 as amended in October, 1994 and January, 2000. Hazardous waste should be disposed of as per Hazardous Waste (Management, Handling and Trans-boundary Movement) Rules, 2008 and amended time to time.
- xviii. The membership of common TSDF should be obtained for the disposal of hazardous waste. Copy of authorization or membership of TSDF should be submitted to Ministry's Regional Office at Bhubaneswar. Chemical/inorganic sludge shall be sent to treatment storage disposal facility (TSDF) for hazardous waste. Spent catalyst shall be sent to authorized recyclers/re-processors.
- xix. Proper oil spillage prevention management plan shall be prepared to avoid spillage/leakage of oil/petroleum products and ensure regular monitoring.
- xx. Acoustic enclosure /silencer shall be installed wherever it is possible.
- xxi. Occupational Health Surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.
- xxii. The company should make the arrangement for protection of possible fire and explosion hazards during construction and operation phase. To prevent fire and explosion at oil and gas facility, potential ignition sources shall be kept to a minimum and adequate separation distance between potential ignition sources and flammable materials shall be in place.
- xxiii. The company shall strictly follow all the recommendation mentioned in the Charter on Corporate Responsibility for Environmental Protection (CREP).
- xxiv. All the recommendations mentioned in the rapid risk assessment report, disaster management plan and safety guidelines shall be implemented.

- xxv. As proposed, spent catalyst shall be sent to the authorized recycler/re-processors. Oily Sludge shall be treated in the Sludge Centrifuge provided in the ETP and the cake generated from the centrifuge is further sent for bioremediation for disposal.
- xxvi. Green belt over 19.5 acres land area should be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
- xxvii. All the commitments made to the public during public hearing/public consultation meeting held on 12th September, 2014 shall be satisfactorily implemented and adequate budget provision shall be made accordingly.
- xxviii. At least 2.5 % of the total cost of the project should be earmarked towards the corporate social responsibility and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Bhubaneswar. Implementation of such program should be ensured accordingly in a time bound manner.
- xxix. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, Safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

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 modification in the project shall be carried out without prior approval of the Ministry of Environment & 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 project authorities must strictly comply with the rules and regulations under Manufacture, Storage and Import of Hazardous Chemicals Rules, 2000 as amended subsequently. Prior approvals from Chief Inspectorate of Factories, Chief Controller of Explosives, Fire Safety Inspectorate etc. must be obtained, wherever applicable.
- 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 EPA Rules, 1989 viz. 75 dBA (daytime) and 70 dBA (nighttime).
- v. A separate Environmental Management Cell equipped with full fledged laboratory facilities must be set up to carry out the environmental management and monitoring functions.
- vi. Adequate funds shall be earmarked towards capital cost and recurring cost/annum for environment pollution control measures and shall be used to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government alongwith the implementation schedule for all the conditions stipulated herein. The funds so provided shall not be diverted for any other purposes.

- vii. The Regional Office of this Ministry/Central Pollution Control Board/State Pollution Control Board will monitor the stipulated conditions. A six monthly compliance report and the monitored data along with statistical interpretation shall be submitted to them regularly.
- viii. A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad / Municipal Corporation, Urban Local Body and the local NGO, if any, from whom suggestions / representations, if any, were received while processing the proposal. The clearance letter shall also be put on the web site of the company by the proponent.
- ix. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the MOEF, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; PM₁₀, PM_{2.5}, SO₂, NO_x, HC (Methane & Non-methane), VOCs (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.
- x. The project proponent shall also submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MOEF, the respective Zonal Office of CPCB and the SPCB. The Regional Office of this Ministry / CPCB / SPCB shall monitor the stipulated conditions.
- xi. The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent 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 alongwith the status of compliance of environmental conditions and shall also be sent to the respective Regional Offices of the MOEF by e-mail.
- xii. 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 and may also be seen at Website of the Ministry of Environment and Forests at <http://envfor.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 Regional office.
- xiii. 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 commencing the land development work.

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 shall 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 Water 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.



(Lalit Bokolia)
Additional Director

Copy to :-

1. The Secretary, Department of Environment, Govt. of West Bengal, Kolkata, West Bengal.
2. The Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110032.
3. The Chairman, West Bengal Pollution Control Board, Parivesh Bhawan, 10A Block-LA Sector-III, Salt Lake, Kolkata - 700091, West Bengal.
4. The Chief Conservator of Forests, Regional Office (EZ), Ministry of Environment and Forests, A-3, Chandrashekharpur, Bhubaneswar – 751 023, Orissa.
5. Monitoring Cell, Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhavan, Jorbagh Road, New Delhi.
6. Guard File / Record File/ Notice Board.



(Lalit Bokolia)
Additional Director