

**F. No. J-11011/71/2012- IA II (I)**  
**Government of India**  
**Ministry of Environment, Forest and Climate Change**  
**(I.A. Division)**

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**Dated 18<sup>th</sup> April, 2016**

To,

Shri S P Baruah,  
Chief Technical Services Manager,  
M/s Indian Oil Corporation Ltd.  
Guwahati Refinery, IOCL, Noonmati,  
Guwahati, Assam- 781020

**E-mail : [guptaashok@iocl.co.in](mailto:guptaashok@iocl.co.in), [prasadr@indianoil.in](mailto:prasadr@indianoil.in); Fax No.: 011-24360765**

**Subject: Revamp of INDMAX Unit at Guwahati Refinery, Guwahati by M/s Indian Oil Corporation Ltd. – Environmental clearance reg.**

**Ref.: Your online proposal no. IA/AS/IND/20194/2013 dated 29<sup>th</sup> August, 2015.**

Sir,

This has reference to your online proposal no. IA/AS/IND/20194/2013 dated 29<sup>th</sup> August, 2015 alongwith project documents including Form 1, Prefeasibility Report, Draft Terms of References and EIA/EMP report, on the above mentioned subject.

2.0 The Ministry of Environment, Forest and Climate Change has examined your application. It is noted that the proposal is for revamping of INDMAX Unit at Guwahati Refinery, Guwahati by M/s Indian Oil Corporation. INDMAX is an indigenous technology developed by IOCL R & D for de-sulfurization of Gasoline/Diesel. Product sulfur meets Euro IV/Euro V standards. This is a demonstration unit at IOCL, Guwahati Refinery for production of Gasoline of BS-IV quality by de-sulphurization of Heavy Gasonile from INDMAX Unit. Existing INDMAX unit capacity will be increased from 0.1 MMTPA to 0.15 MMTPA. Guwahati Refinery has a capacity to handle 1 MMTPA crude oil. The proposed products (LPG and Gasoline) will be stored in the existing mounded bullet, Horton sphere and storage tank (FRTV) respectively. Total plot area of Guwahati Refinery is 490 acres. Land required for the proposed project will be 5200m<sup>2</sup>. No forest land is involved. Total cost of project is Rs32.37 crore. It is reported that Amchang Wildlife Sanctuary is located within 5 km distance.

3.0 Total SO<sub>2</sub> emissions from the refinery will be 5.14 TPD after installation of IND Max plant. Total water requirement will be increased from 455 m<sup>3</sup>/day to 456 m<sup>3</sup>/day after INDMAX Unit. Out of which, fresh water requirement will be increased from 290 m<sup>3</sup>/hr to 291 m<sup>3</sup>/hr and met from Brahmaputra River. Remaining water requirement (165 m<sup>3</sup>/hr.) will be met from recycled effluent. Increase in quantity of sour water will be 0.2 m<sup>3</sup>/hr. total sour water quantity will be 3.5 m<sup>3</sup>/hr total effluent generation will be 183.2 m<sup>3</sup>/hr and treated in the existing effluent treatment plant. 165 m<sup>3</sup>/hr of treated effluent will be recycled/reused and remaining will be discharged into surface water body i.e. River Brahmaputra after achieving



standards prescribed. Domestic sewage shall be treated in sewage treatment plant (STP). A total of 59.4 tons (maximum) per annum of e-cat (equilibrium catalyst) will be withdrawn from the unit. The Catalyst withdrawn will be stored in the refinery and used as e-cat as and when required. Oily sludge is generated during the cleaning of crude oil tanks, products storage tanks and regular withdrawal of sludge from API separator bottom will be treated via bioremediation process.

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 exempted under 7 (ii) of the EIA Notification, 2006.

6.0 The proposal was considered by the Expert Appraisal Committee (Industry) in its meetings held during 10<sup>th</sup>-11<sup>th</sup> June, 2013 and 16<sup>th</sup> - 17<sup>th</sup> December, 2015 respectively. Project Proponent and the EIA Consultant 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 14<sup>th</sup> September 2006, subject to the compliance of the following Specific and General Conditions:

**A. SPECIFIC CONDITIONS :**

- i. The environmental clearance is subject to obtaining prior clearance from Wildlife angle including clearance from the Standing Committee of the National Board for Wildlife in respect of Amchang Wildlife sanctuary.
- ii. Compliance to all the environmental conditions stipulated in the environmental clearance letter no. J-11011/1/2000-IA II(I) dated 24<sup>th</sup> April, 2000, J-11011/215/2007-IA II (I) dated 7<sup>th</sup> February, 2008 and J-11011/71/2012-IA II(I) dated 22<sup>nd</sup> January, 2015 shall be satisfactorily implemented and compliance reports submitted to the Ministry's Regional Office at Shillong.
- iii. 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 18<sup>th</sup> March, 2008.
- iv. 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.
- v. SO<sub>2</sub> emissions after expansion from the plant shall not exceed 5.14 TPD.
- vi. 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.

- vii. Ambient air quality monitoring stations, [PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, H<sub>2</sub>S, 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.
- viii. Ambient air quality data shall be collected as per NAAQES standards notified by the Ministry on 16<sup>th</sup> November, 2009 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. Total raw water requirement from Brahmaputra River shall not exceed 291 m<sup>3</sup>/hr. Industrial effluent (183.2 m<sup>3</sup>/hr) shall be treated in the effluent treatment plant. Treated effluent(165 m<sup>3</sup>/hr) shall be recycled/reused recycled as make up for the raw water cooling tower and coke cutting water. Remaining treated effluent (65 m<sup>3</sup>/hr) will be discharged into surface water body i.e. River Brahmaputra after achieving standards prescribed. Domestic sewage shall be treated in sewage treatment plant (STP).
- xi. Oil catchers/oil traps shall be provided at all possible locations in rain/ storm water drainage system inside the factory premises.
- xii. Treated effluent shall be passed through guard pond. Continuous online (24 x7) monitoring to be installed for pH meter, TOC analyzer and flow meter and measurement of pollutants within the treatment unit. Data to be uploaded on company's website and provided to the respective RO of MEF&CC and SPCB.
- xiii. Oily sludge shall be shall be treated via bioremediation process. Annual Oily sludge generation and disposal data shall be submitted to the Ministry's Regional Office and CPCB.
- xiv. 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.
- xv. The membership of common TSDF shall be obtained for the disposal of hazardous waste. Copy of authorization or membership of TSDF shall be submitted to Ministry's Regional Office at Bhopal. Chemical/inorganic sludge shall be sent to treatment storage disposal facility (TSDF) for hazardous waste. Spent catalyst shall be sent to authorised recyclers/re-processors.
- xvi. Proper oil spillage prevention management plan shall be prepared to avoid spillage/leakage of oil/petroleum products and ensure regular monitoring.



- xvii. The company shall strictly follow all the recommendation mentioned in the Charter on Corporate Responsibility for Environmental Protection (CREP).
- xviii. 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.
- xix. Green belt shall be developed at least in 33% of the plot area in and around the plant premises to mitigate the effects of fugitive emissions all around the plant as per the CPCB guidelines in consultation with DFO. Thick greenbelt with suitable plant species shall be developed around unit. Selection of plant species shall be as per the CPCB guidelines.
- xx. All the recommendations mentioned in the rapid risk assessment report, disaster management plan and safety guidelines shall be implemented.
- xxi. 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; PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, 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 31<sup>st</sup> 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. Principal Secretary, Department of Environment & Forest, Govt. of Assam, Guwahati, Assam.
2. Chairman, Assam Pollution Control Board, Bahunimatram, Assam, Guwahati.
3. Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, Delhi - 110032.
4. The Conservator of Forests (Central), Ministry of Environment & Forests, Regional Office (Northeast Eastern Regional Office, Uplands Road, Laitumkhrah, Shillong - 793003, Meghalaya.
5. Monitoring Cell, Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhawan, Jor Bagh, New Delhi.
6. Guard File/Record File/Notice Board.

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(Lalit Bokolia)  
Additional Director