

भारत सरकार
पर्यावरण एवं वन मंत्रालय
GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT & FORESTS

E-mail : sansom_2859@yahoo.co.in
sanchita@menf.nic.in

Telefax : 011-2436 0488

No. J-11011/422/2006 - IA II (I)

Date : 6th March 2007

To,

Shri Ambaris Panda
General Manager (S& EP)
Indian Oil Corporation Limited
Haldia, Purba Medinipore
Kolkata
West Bengal

Subject: Environmental Clearance for Expansion of Crude Oil Refining Capacity by Revamping of RFCCU from 0.7 MMTPA to 1.0 MMTPA at Haldia Refinery, Haldia, Purba Medinipore, West Bengal by M/s Indian Oil Corporation Limited (IOCL).

Sir,

This has reference to your letter no. EP/EC-APPL dated 20th November 2006 seeking environmental clearance for the above-mentioned project.

2. The Ministry of Environment and Forests has examined the proposal. It is noted that the proposal is to increase the crude oil refining capacity by revamping the existing Resid Fluidized Catalytic Cracking Unit (RFCCU) from 0.7 MMTPA to 1.0 MMTPA and installing a Gas Turbine of 20 MW Capacity at the Haldia Refinery. Cost of the project is Rs. 240 Crores. The expansion is at the existing site of 500 Acres which is located at village Haldia in Purba Medinipur District of the State of West Bengal. No additional land acquisition is required. No ecologically sensitive area exists in 15 Km periphery of the project site. The project does not involve any R&R. Simultaneous revamping of flue gas scrubbing section, LPG treating section and Gasoline treating section will also be undertaken. Fuel gas will be used as fuel, which will be supplied from the

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वहाँ है खुशहाली।।

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PARYAVARAN BHAWAN, C.G.O. COMPLEX, LODHI ROAD, NEW DELHI - 110 003

internal source. There will be no increase in the SO₂ emission as augmentation of Flue Gas Scrubbing section will also be undertaken. The feed quality will also be improved which will have less Sulphur resulting in lesser SO₂ emission. A requirement of about 40 m³/hr of additional fresh water will be met from the existing facilities. Additional waste water of around 5 m³/hr will be generated from the proposed project which will be treated in the existing ETP. Hazardous waste generated will be sent to the common waste disposal site. No additional risk is envisaged due to the project and an On-site Disaster Management Plan exists. Public Hearing of the project was held on 27.10.06.

3. The Project was received after 14th September 2006, the date of EIA Notification, 2006 however was considered as per the EIA Notification, 1994 in accordance with the sub-Para (i) (a) of Para 2.2 of the Interim Operational Guidelines dated 13th October 2006 issued by the Ministry of Environment and Forests under Para 12 of the EIA Notification 2006 as EIA/EMP was prepared and Public Hearing was already held.

4. Based on the information submitted by you, 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. The gaseous emissions (SO₂, NO_x, HC, VOC and Benzene) from various process units shall conform to the standards prescribed by the concerned State Pollution Control Board. All the measures detailed in the EMP shall be taken to control the point/stack and fugitive gaseous emissions from the proposed facilities, RFCCU, process and storage units etc. for ensuring that the ambient air quality around the Refinery due to the expansion is maintained at the predicted 24 hourly average maximum concentration levels and shall not exceed for the worst scenario predicted for SO₂ (15.7 Micro gram/m³).
- ii. There will be no increase in the pollution load of SO₂ emission as augmentation of Flue Gas Scrubbing section will be undertaken to keep the SO₂ emission levels within the existing levels. A new Sulphur



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Recovery Unit (SRU) with more than 99% of efficiency shall be installed under once through Hydro-Cracker Unit to keep SO₂ emission levels within the existing levels.

- iii. No additional stack is envisaged for the revamp of RFCCU. There will be no increase in emission levels of SO₂ from the existing two stacks in the RFCCU of 100 and 60 M attached to the regenerator and the heater.
- iv. The emission levels of the other pollutants shall also remain within the existing levels.
- v. Low sulphur internal fuel oil will be fired in process heaters and boilers.
- vi. Regular Ambient Air Quality Monitoring shall be carried out. The location and results of existing monitoring stations will be reviewed in consultation with the concerned State Pollution Control Board based on the occurrence of maximum ground level concentration and downwind direction of wind. Additional Stations shall be set up, if required. It will be ensured that at least one monitoring station is set up in up-wind & in down-wind direction along with those in other directions.
- vii. On-line data for air emissions shall be transferred to the CPCB and SPCB regularly. The instruments used for ambient air quality monitoring shall be calibrated regularly. The monitoring protocol shall ensure continuous monitoring of all the parameters.
- viii. The practice of acoustic plant design shall be adopted to limit noise exposure for personnel to an 8 hr time weighted average of 90 db(A).
- ix. For control of fugitive emissions, all unsaturated hydrocarbons will be routed to the flare system. The flare system shall be designed for smokeless burning.
- x. All the pumps and other equipment's where there is a likelihood of HC leakages shall be provided with LEL indicators. Provision for immediate isolation of such equipment, in case of a leakage will also be made. The company shall adopt Leak Detection and Repair (LDAR) programme for quantification and control of fugitive emissions.

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- xii. The product loading gantry shall be connected to the product sphere in closed circuit through the vapour arm connected to the tanker. Data on fugitive emissions shall be regularly monitored and records will be maintained.
- xiii. The company shall ensure that no halogenated organic is sent to the flares. If any of the halogenated organic are present then the respective streams may be incinerated, if there are no technically feasible or economically viable reduction/recovery options. Any stream containing organic carbon, other than halogenated shall be connected to proper flaring system, if not to a recovery device or an incinerator.
- xiv. All new standards/norms that are being proposed by the CPCB for petrochemical plants shall be applicable for the proposed expansion unit. The company shall conform to the process vent standards for organic chemicals including non-VOCs and all possible VOCs i.e. TOCs standard and process vent standards for top priority chemicals. The company shall install online monitors for VOC measurements. Regular monitoring will be carried out for VOC and HC.
- xv. No additional fresh water will be used for the expansion project. The requirement of 40 m³/hr of additional fresh water will be met from the existing facilities.
- xvi. Additional waste water generation from the expansion project will be around 5 m³/hr which will be treated in the existing ETP. Part of the treated effluent shall be recycled and remaining shall be disposed into the river Hoogly through closed pipeline.
- xvii. An additional generation of 1.5 T/day of Spent Catalyst (including filter cake), will be disposed off through the common hazardous waste disposal site of WBIDC at Haldia. Oily sludge shall be sent to melting pit treatment for recovery of oil. The recovered oil shall be recycled into the refinery system. The residual sludge will be stored in HDPE lined pit for disposal through bio-remediation inside the refinery premises. Bio sludge will be stored in drying pit for natural weathering and then used as

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manure inside refinery premises. Remaining sludge will be incinerated in their own incinerator.

- xvii. Green belt shall be provided to mitigate the effects of fugitive emissions all around the plant in a minimum of 33% of the plant area in consultation with DFO as per CPCB guidelines.
- xviii. The company shall strictly follow all the recommendations mentioned in the Charter on Corporate Responsibility for Environmental Protection (CREP).
- xix. The Company must harvest surface as well as rainwater from the rooftops of the buildings proposed in the expansion project and storm water drains to recharge the ground water and use the same water for the various activities of the project to conserve fresh water.
- xx. Occupational Health Surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.
- xxi. The Company shall implement all the recommendations made in the EIA /EMP report and risk assessment report.

B. GENERAL CONDITIONS

- i. The project authorities must strictly adhere to the stipulations made by the concerned State Pollution Control Board (SPCB) and the State Government.
- ii. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests.
- iii. At no time, the emissions should go beyond the prescribed standards. In the event of failure of any pollution control system adopted by the units, the respective unit should be immediately put out of operation and should not be restarted until the desired efficiency has been achieved.

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- iv. Adequate number of influent and effluent quality monitoring stations shall be set up in consultation with the SPCB. Regular monitoring shall be carried out for relevant parameters.
- v. Industrial wastewater shall be properly collected and treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May 1993 and 31st December, 1993 or as amended from time to time. The treated wastewater shall be utilized for plantation purpose.
- vi. The overall noise levels in and around the plant area shall be limited within the prescribed standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).
- vii. The project authorities must strictly comply with the provisions made in Manufacture, Storage and Import of Hazardous Chemicals Rules 1989 as amended in 2000 for handling of hazardous chemicals etc. Necessary approvals from Chief Controller of Explosives must be obtained before commission of the expansion project.
- viii. Authorization from the State Pollution Control Board must be obtained for collections/treatment/storage/disposal of hazardous wastes.
- ix. The project authorities will provide adequate funds both recurring and non-recurring 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 provided should not be diverted for any other purposes.

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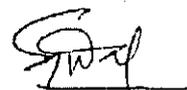
ol Board/State Pollution
and the monitored data
also be displayed on the

implementation schedule for all the c
funds so provided should not be diverte

Office of this Ministry /Central Pollution Contr
Control Board. A six monthly compliance report
should be submitted to them regularly. It will
Website of the Company.

- xi. The Project Proponent should inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the State Pollution Control Board/ Committee and may also be seen at Website of the Ministry of Environment and Forests at <http://www.envfor.nic.in>. This should 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 should be forwarded to the concerned Regional office of this Ministry.
 - xii. The date of Financial Closure and final approval of the project by the concerned authorities and the date of commencing the land development work as well as the commissioning of the project will be informed to the Ministry and its Regional Office.
 - xiii. Proper House keeping and adequate occupational health programmes shall be taken up. Regular Occupational Health Surveillance Programme for the relevant diseases shall be carried out and the records shall be maintained properly for at least 30-40 years. Sufficient preventive measures shall be adopted to avoid direct exposure to emission and other Hydrocarbons etc.
 - xiv. A separate environment management cell with full fledge laboratory facilities to carry out various management and monitoring functions shall be set up under the control of a Senior Executive.
5. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
 6. The Ministry reserves the right to stipulate additional conditions if found necessary. The company will implement these conditions in a time bound manner.
 7. 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

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Public Liability Insurance Act, 1991, Hazardous Waste (Management & Handling) Rules, 1989 and Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 along with their amendments and rules.


(Sanchita Jindal)
Additional Director

Copy to :

1. The Secretary, Department of Environment, Government of West Bengal, Writer's Building, Kolkata - 700 001, West Bengal.
2. The Chief Conservator of Forests (Eastern Region), Ministry of Environment & Forests, Regional Office, A/3, Chandrashekharpur, Bhubaneswar - 751 023.
3. The Chairman, Central Pollution Control Board Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, New Delhi - 110 032.
4. The Chairman, West Bengal Pollution Control Board, Paribesh Bhawan, 10 A, Block - LA, Sector-III, Salt Lake City, Kolkata - 700 096.
5. Joint Secretary (CCI-I) Ministry of Environment and Forests, Paryavaran Bhavan, CGO Complex, New Delhi.
6. Monitoring Cell, Ministry of Environment and Forests, Paryavaran Bhavan, CGO Complex, New Delhi.
7. Guard File.
8. Monitoring File.
9. Record File.

(Sanchita Jindal)
Additional Director