



**Government of India
Ministry of Environment & Forests
(IA Division)**

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F. No. J-11011/415/2008-IA-II(I)

Dated : 4th September, 2009

To

The Executive Director,
M/s HPCL,
Petroleum House, 17,
Jamshedji Tata Road,
Mumbai -400020, Maharashtra

corphqo@hpcl.co.in, ravimathur@hpcl.co.in

Sub : Setting up of Diesel Hydro treating facilities at Mumbai Refinery, Complex at Mahul, Chembur, Mumbai by M/s HPCL – Environmental Clearance reg.

Sir,

This has reference to your letter No. CEE/09/AJ/DHTMR/077 dated March 06, 2009 alongwith EIA and Risk Assessment report seeking environmental clearance under EIA Notification, 2006 and subsequent communication vide your letter dated May 05, 2009, CEE/09/AJ/DHTMR/090 dated 22/26th June, 2009 and CEE/09/AJ/DHTMR/102 dated 26th August, 2009.

2.0 The Ministry of Environment and Forests has examined the application. It is noted that M/s HPCL have proposed for setting up of Diesel Hydro Treating (DHT) facilities at Mumbai Refinery, Complex at Mahul, Chembur, Mumbai. The current crude oil processing capacity of HPCL- Mumbai Refinery is 5.5 MMTPA and is implementing Green Fuels & Emission Control (GFEC) project which includes processing facilities such as Prime G+, Light Naphtha Isomerisation unit, Continuous and Catalytic Reformer unit. The crude processing capacity of Mumbai Refinery post-GFEC project will be 7.9 MMTPA. The total land available is 136 ha and green belt has been developed in 14% of the total land area. The new facilities being proposed are for products of Euro-IV grade HSD which is for reducing the vehicular emissions as part of Auto Fuel Policy and will be located within the existing premises and include the following:

1. Diesel Hydro treating Facility – 2.2 MMTPA
2. Hydrogen Generation unit - 20 KTPA
3. Sulphur recovery unit - 125 TPD
4. Sour Water Stripper-Two Stage - 15 m³/Hr.
5. Amine regeneration unit - 164m³/hr.
6. Flue gas desulphurization plant – 109 TPH

3.0 Major emissions will be sulphur dioxide (SO₂) and oxides of nitrogen (NO_x). The total SO₂ and NO_x emission will be maintained within existing limits of 12.6 MTPD of sulphur dioxide. Refinery will be using Fuel Gas, generated in the process units as well as low sulphur internal fuel oil (sulphur content within 0.5% wt) in the process heaters and boiler. Process design will be selected to minimise the emissions. The emergency vent gases will be collected in a closed vent alongwith flare system and will be burnt at high elevation to ensure safe combustion gases and their dispersion. It was noted that liquid effluents generated from the proposed project shall be treated in the integrated Effluent Treatment Plant (ETP) of the refinery to meet the Minimal National Standards (MINAS) before discharging at the existing disposal point. Solid wastes generated from the refinery are spent catalysts from process units, Chemical & Biological Sludge from ETP. Some of the catalysts will be sent back to the original supplier for reprocessing. Chemical & biological sludge after proper segregation and treatment from ETP will be sent to solid disposal facility at Taloja as well as sold to Mumbai Waste Management (MWM) limited.

4.0 All the petroleum refinery activities are listed at 4(a) under 'A' category in the Schedule of EIA Notification, 2006 and hence considered and appraised at central level in 1st meeting of the Expert Appraisal Committee (Industry - 2) held during 24th-25th July, 2009. The public hearing was exempted as per para 7(ii) of EIA Notification, 2006.

5.0 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. M/s HPCL shall comply with the stipulations made in the environmental clearance accorded by the Ministry for the existing plant.
 - ii. M/s HPCL 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. The project authorities shall submit a feasible plan which will be followed to ensure that SO₂ emission from the refinery does not exceed the stipulated figure of 12.6 TPD at any time.
- i. Gas firing based on gas liquid fuel shall be eliminated. Flue gas desulphurization on FCC shall be installed.
 - ii. All equipment and construction being carried to and from the refinery should be done in such a manner as not to create traffic congestion.
 - iii. The process emissions (SO₂, NO_x, HC, VOCs and Benzene) from various units should conform to the standards prescribed by the Maharashtra Pollution Control Board from time to time. At no time, the emission levels should go beyond the stipulated standards. In the event of failure of pollution control system(s) adopted by the unit, the unit should be immediately put out of operation and should not be restarted until the desired efficiency has been achieved.

- iv. Ambient air quality monitoring stations, [SPM, SO₂, NO_x, H₂S, Mercaptan, NMHC and Benzene] should be set up in the Refinery complex in consultation with SPCB, 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. Continuous on-line stack monitoring equipment should be installed for measurement of SO₂, NO_x, CO and CO₂. Low NO_x burners should be installed with online analyzers.
- v. The proponent shall upload the status of compliance of the stipulated EC conditions, including monitored data on their 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 SPCB. The criteria pollutant namely; SPM, RSPM, SO₂, NO_x (Ambient levels as well as stack emissions) VOC and HC, indicated for the project shall be monitored and displayed at the convenient location near the main gate of the Company in the public domain.
- vi. Monitoring of fugitive emissions should be carried out as per the guidelines of CPCB by fugitive emission detectors and reports should be submitted to the Ministry's regional office at Bhopal. For control of fugitive emission all unsaturated hydrocarbon will be routed to the flare system and the flare system should be designed for smoke less burning.
- vii. Fugitive emissions of HC from product storage tank yards etc. must be regularly monitored. Sensors for detecting HC leakage should also be provided at strategic locations. The company should use low sulphur fuel to minimize SO₂ emission. Sulphur recovery units should have efficiency of 99.5 %. Leak Detection and Repair programme should be implemented to control HC/VOC emissions. Work zone monitoring should be carried out near the storage tanks besides monitoring of HCs/VOCs in the work zone.
- viii. The waste water should be treated in the waste water treatment plant and the treated effluent should meet the prescribed standards. Efforts should be made to recycle the treated effluent to achieve zero discharge.
- ix. The project authorities must strictly comply with the rules and regulation with regard to handling and disposal of Hazardous Wastes (Management, Handling and Trans Boundary Movement) Rules, 1989/ 2003/ 2008 wherever applicable. Authorization from the State Pollution Control Board must be obtained for collections/ treatment/ storage/ disposal of hazardous wastes.
- x. The company should strictly follow all the recommendation mentioned in the charter on Corporate Responsibility for Environmental Protection (CREP) for the oil refineries.
- xi. The Company should take necessary measures to prevent fire hazards, containing oil spill and soil remediation as needed. At place of ground flaring, the overhead flaring stack with knockout drums should be installed to minimize gaseous emissions during flaring.

- xii. To prevent fire and explosion at Oil and Gas facility, potential ignition sources should be kept to a minimum and adequate separation distance between potential ignition sources and flammable material should be in place.
- xiii. Occupational health surveillance of worker should be done on a regular basis and records maintained as per the Factory Act.
- xiv. Greenbelt should be developed to mitigate the effect of fugitive emission all around the plant in a minimum 25% plant area in consultation with DFO as per CPCB guidelines.
- xv. The Company should undertake measures for rain water harvesting to recharge the ground water and minimize fresh water consumption.
- xvi. 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, mobile STP, 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 concerned State Pollution Control Board (SPCB) and the State Government and any other statutory body.
- ii. No further expansion or modification in the project shall be carried without prior approval of the Ministry of Environment and Forests. In case of deviations or alternations in the project proposal from those submitted to the Ministry for clearance, a fresh reference shall be made to the Ministry.
- iii. At no time, the emissions shall go beyond the prescribed standards. In the event of failure of any pollution control system, the respective facilities should be immediately put out of operation and should not be restarted until the desired efficiency has been achieved. Provision of adequate height of stack attached to DG sets & flare is to be done.
- iv. Waste water shall be properly collected and treated so as to conform to the standards prescribed under EP Act & Rules and mentioned in the Consents provided by the relevant SPCB.
- v. The overall noise levels in and around the premises shall be limited within the prescribed standards (75 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).
- vi. 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, if required. Requisite On-site and Off-site Disaster Management Plans will be prepared and implemented.

- vii. The project authorities will provide adequate funds as non-recurring and recurring expenditure 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.
- viii. The company shall develop rain water harvesting structures to harvest the run off water for recharge of ground water.
- ix. The stipulated conditions will be monitored by the concerned Regional Office of this Ministry/ Central Pollution Control Board/ State Pollution Control Board. A six monthly compliance report and the monitored data should be submitted to them regularly. It will also be displayed on the Website of the Company.
- x. The project proponent shall also submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both on hard copies as well as by e-mail) to the respective Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB.
- xi. 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 put up on the website of the Company by the proponent.
- xii. 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.
- xiii. 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 EC conditions and shall also be sent to the respective regional Office of the MoEF by e-mail.
- xiv. A separate environment management cell with full fledged laboratory facilities to carry out various management and monitoring functions shall be set up under the control of a Senior Executive.
- xv. 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

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

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


8.0 Any appeal against this environmental clearance shall lie with the National Environment Appellate Authority, Second Floor, Trikot-I, Bhikaji Cama Place, New Delhi-110066, if preferred within a period of 30 days as prescribed under Section 11 of the National Environment Appellate Authority Act, 1997.

9.0 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 Public Liability Insurance Act, 1991, Hazardous Waste (Management, Handling and Transboundary Movement) Rules, 1989/ 2003/ 2008 and Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 along with their amendments and rules.


(Dr. P L Ahujara)
Director

Copy to:

1. The Secretary, Department of Environment and Forests, Govt. of Maharashtra, Mumbai - 400 001, Maharashtra.
2. The Chief Conservator of Forests (Central), Ministry of Environment & Forests, Regional Office, Link Road No.3, E - 5, Arera Colony, Bhopal - 462 016, M.P.
3. The Chairman, Central Pollution Control Board Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, New Delhi - 110 032.
4. The Chairman, Maharashtra Pollution Control Board, Shri Chatrapati Shivaji Maharaj Municipal Market Building, 4th Floor, Mata Ramabai Ambedaker Road, Mumbai - 400 001, Maharashtra.
5. Monitoring Cell, Ministry of Environment and Forests, Paryavaran Bhavan, CGO Complex, New Delhi.
6. Guard File.
7. Monitoring File.
8. Record File.


(Dr. P L Ahujara)
Director