

F. No. J-11011/413/2014-IA.II (I)
Government of India
Ministry of Environment, Forest and Climate Change
(I.A. Division)

Indira Paryavaran Bhawan
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Dated: 31st January, 2017

To,

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

Subject: Proposed expansion of Mumbai Refinery from 7.5 MMTPA to 9.5 MMTPA at BD Patil Marg, Mahul, Mumbai, Maharashtra by M/s HPCL-EC reg.

Ref.: Your online proposal no. IA/MH/IND2/26662/2014.

Sir,

This has reference to your online proposal no. IA/MH/IND2/26662/2014 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 expansion of Mumbai Refinery from 7.5 MMTPA to 9.5 MMTPA at BD Patil Marg, Mahul, Mumbai, Maharashtra by M/s HPCL. M/s HPCL has proposed to enhance the refining capacity of its Mumbai refinery upto 9.5 MMTPA including Propylene Recovery Unit (PRU) and revamp of existing Captive Power Plant (CPP).

The total cost of the project is ₹3223.43 Crores for refinery expansion and PRU & revamping of CPP with a capital investment of Rs.622.45 Crores. All new facilities are coming up within existing refinery having 13, 95,477 sq.m. The total area for setting up of new units within refinery premises is 2.1 acres. It is reported that no National Park and Wildlife Sanctuary is located within 10 km of the project site. Mahul creek is a shallow wetland area where lots of birds are seen in winter season. Capacities of existing and proposed units are as given below:

PRODUCTS	Existing production (KTPA)
LPG	332
LAN	272
SCN	96
Treated Hexane	30
Solvent 1425	8.5

MS Euro III	1075
MS Euro IV	0
MTO	48
ATF	600
SKO	52
Euro III Diesel	1810
Euro IV Diesel	776
LDO	88
RPO	70
FO 180 cst	567
Sulphur	37
150 N Gr-I	81
500 N Gr-I	206
Bright Stock	61
IO-100	9
VG-10 Bitumen	229
VG-30 Bitumen	478

The proposed expansion of products:-

Units	Design Capacity (KTPA)	Expansion Case (KTPA)
FRAPS/VPS	4000 (Kuwait)	6000
FREAPS/VPS	3500 (BH)	3500
NAPHTHA SPILTTER UNIT	1222	1222
Naphtha Hydro Treater (NHT) /Isomerisation	250	300
NHT/Continous Catalytic Reformer	545	654
PRIME G+	475	570
New Fludised Catalytic Cracking Unit (FCCU)	1227	1227
Old FCCU	950	950
Diesel Hydro Desulphurisation Unit	2270	2270
Diesel Hydro Treater Unit	2200	2200
PDA	755	755
Hydrogen Generation Unit (HGU)	14.5	14.5
New HGU	-	36
Visbreaker (VBU)-New Residue upgradation unit	-	565
Propylene Recovery Unit (PRU)	-	100
New GTG		81 MW

Total SOx emission from the refinery post expansion is expected to be 8.62 TPD which will be well within the existing permissible limit of 12.6 TPD as stipulated by MOEF/SPCB. Fresh water requirement from BMC will be increased from 426 m³/hr to 538m³/hr after expansion. The additional power required for MREP shall be 13 MW, for PRU 600 KW (415 V LT) + 622 KW (6.6 KV HT). Recovery efficiency of existing two SRU trains will be increased from 99% to 99.9%. Low NOx burners will be installed to reduce NOx emission from all furnaces.

Effluent generation will be increased from 130 m³/hr to 178 m³/hr after expansion. PP confirmed that as the existing IETP can handle the above flow of 178 m³/hr, no new ETP is proposed for treatment. It is proposed that ETP treated water

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from Reverse Osmosis system will be routed to DM Plant for reuse. Spent catalyst will be sent to the authorized recycler/re-processors.

3.0 Public Hearing/Public Consultation meeting conducted by the Maharashtra Pollution Control Board on 13th May, 2016.

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 The proposal was considered by the Expert Appraisal Committee (Industry) in its 12th and 14th meeting held during 23rd -24th August, 2016 and 26th-27th October, 2016 respectively. Project Proponent and the EIA Consultant namely M/s EIL have presented EIA / EMP report as per the TOR. EAC has found the EIA / EMP Report and additional information to be satisfactory and in full consonance with the presented TORs. The Committee recommended the proposal for environmental clearance.

6.0 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 standards/norms for Oil Refinery Industry notified under the Environment (Protection) Rules, 1986 vide G.S.R. 186(E) dated 18th March, 2008.
- ii. Continuous on-line stack monitoring for SO₂, NO_x and CO of all the stacks shall be carried out.
- iii. 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.
- 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. SO₂ emissions after expansion from the plant shall not exceed 525 kg/hr 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. The overall sulphur recovery efficiency of Sulphur recovery unit with tail gas treating shall not be less than 99.9%.



- 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. Flare gas recovery system shall be installed.
- 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 Kerala State 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.
- ix. Total freshwater requirement from BMC after expansion of proposed project shall not exceed 538 m³/hr and prior permission shall be obtained from the competent authority.
- x. As proposed, Industrial effluent generation shall not exceed 178 m³/hr after proposed expansion and treated in the integrated effluent treatment plant. Treated effluent shall be recycled/reused within the factory premises. Domestic sewage shall be treated in sewage treatment plant (STP).
- xi. Automatic mechanical Oil catchers/oil traps shall be provided at all possible locations in rain/ storm water drainage system inside the factory premises.
- xii. At least 2.5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment (ESR) based on Public Hearing issues and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Bangalore.

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 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.

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


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

6.0 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.


31.1.2017
(Yogendra Pal Singh)
Scientist 'D'

Copy to:-

1. The Principal Secretary, Environment Department, Government of Maharashtra, 15th Floor, New Administrative Building, Mantralaya, Mumbai - 400 032
2. The Additional Principal Chief Conservator of Forests, Regional Office (WCZ), Ministry of Environment, Forest and Climate Change, Nagpur.
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, Kalpataru Point, 3rd and 4th floor, Opp. Cine Planet, Sion Circle, Mumbai-400 022.
5. Monitoring Cell, Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhavan, Jor Bagh Road, New Delhi.
6. Guard File/Monitoring File/Record File.


31.1.2017
(Yogendra Pal Singh)
Scientist 'D'