

**J-11011/43/2016-IA II (I)**  
**Government of India**  
**Ministry of Environment, Forest and Climate Change**  
**(I.A. Division)**

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Dated: 20<sup>th</sup> October 2016

To,

**Shri Mohan**  
**Chief Manager – Project Technic**  
**M/s Bharat Petroleum Corporation Limited.**  
**Post bag-2, Ambalamugal, Erankulam,**  
**Kochi, Kerala**

**Subject: BS VI quality Fuel Up gradation and a new MS block comprising of NHT, NSU, LNISM and CCR and associated facilities at Tehsil Kunnathunad, District Ernakulum, Ambalamugal Kochi, Kerala by M/s Bharat Petroleum Corporation Limited – Environmental Clearance reg.**

**Ref.: Your online proposal no. IA/KL/IND2/42817/2016; dated 6<sup>th</sup> June, 2016.**

Sir,

This has reference to your online proposal no IA/KL/IND2/42817/2016; dated 6<sup>th</sup> June, 2016 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 BS VI quality Fuel Up gradation and a new MS block comprising of NHT, NSU, LNISM and CCR and associated facilities at Tehsil Kunnathunad, District Ernakulum, Ambalamugal Kochi, Kerala by M/s Bharat Petroleum Corporation Limited. BPCL Kochi Refinery is in process to expand its refinery capacity from 9.5 MMTPA to 15.5 MMTPA for which environmental clearance has already been obtained. In addition to the expansion, quality upgradation of auto fuels to BS -IV/ V norms and upgradation of refinery residue to value added products are envisaged as part of the project. In this regard, following units will be installed:

**Design Capacities of New/Revamp Process Units**

<b>A.</b>	<b>Main Processing Unit</b>	<b>Capacity(MMTPA)</b>
1	Naphtha Hydrotreater Unit.	1.5
2	Light Naphtha Isomerization Unit	0.71
3	Continuous Catalytic Reformer Unit	0.80



3.0 Total area required for the proposed BS VI project shall be 7 Acres. Total area of existing refinery is 1265 acres approximately and the plant area is about 633 acres. Presently about 40 acres of greenbelt is developed within the refinery. In addition it is proposed to acquire about 168 acre of additional land from FACT which is presently full of lush greenbelt. The total project cost for the proposed BS VI facilities is Rs. 3313.06 Crores. It is estimated that to SO<sub>2</sub> emission rate will be 1579 Kg/hr post BS VI project. Total fresh water requirement from Pariyar River after IREP and BS VI project will be 1372.2 m<sup>3</sup>/hr. Effluent generation from BS VI will be 5 m<sup>3</sup>/hr and treated in the ETP. Spent caustic effluent will be 0.6 m<sup>3</sup>/day will be treated in the spent caustic treatment facility. The Committee suggested the Environmental Consultant i.e. EIL to give cumulative figure of water consumption and wastewater generation in the EIA Report. Oily effluent stream will be treated in the Wastewater Treatment Plant of Post IREP. Spent catalyst will be sent to authorized recycler.

4.0 Public hearing was exempted under 7 (ii) of EIA Notification, 2006, as public hearing was conducted on 23rd December 2014 for Propylene Derivative Petrochemical Project at Kochi.

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

6.0 The proposal was considered by the Expert Appraisal Committee (Industry-2) in its 9th meetings held during 27th-28th June, 2016. Project Proponent and the EIA Consultant namely M/s Engineers India Ltd., 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.

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. M/s BPCL 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.
- ii. Continuous on-line stack monitoring for SO<sub>2</sub>, NO<sub>x</sub> and CO of all the stacks shall be carried out.
- iii. The process emissions [SO<sub>2</sub>, NO<sub>x</sub>, 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

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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. SO<sub>2</sub> emissions after expansion from the plant shall not exceed 1579 kg/hr and further efforts shall be made for reduction of SO<sub>2</sub> load through use of low sulphur fuel. Sulphur recovery units shall be installed for control of H<sub>2</sub>S 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, [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 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 water requirement from River Periyar after after implementation of IREP and BS VI project shall not exceed 1372.2 m<sup>3</sup>/hr and prior permission shall be obtained from the competent authority.
- x. As proposed, Industrial effluent generation shall not exceed 5.6 m<sup>3</sup>/hr from proposed expansion and treated in the effluent treatment plant. Treated effluent shall be recycled/reused within the factory premises. 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.

**B. GENERAL CONDITIONS:**


- i. The project authorities must strictly adhere to the stipulations made by the Kerala State Pollution Control Board (KSPCB), 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 KSPCB and it shall be ensured that at least one station is installed in the upwind and downwind direction as well as where maximum ground level concentrations are anticipated.
- 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 Environment (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).
- v. 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.
- vi. During transfer of materials, spillages shall be avoided and garland drains be constructed to avoid mixing of accidental spillages with domestic wastewater and storm water drains.
- vii. Usage of Personnel Protection Equipments by all employees/ workers shall be ensured.
- viii. 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.
- ix. The company shall also comply with all the environmental protection measures and safeguards proposed in the project report 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.
- x. The company shall undertake CSR activities and all relevant measures for improving the socio-economic conditions of the surrounding area.
- xi. The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment.

- xii. A separate Environmental Management Cell equipped with full fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.
- xiii. The company shall earmark sufficient funds for 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.
- xiv. 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 who suggestions/ representations, if any, were received while processing the proposal.
- xv. 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 the Kerala State Pollution Control Board. A copy of Environmental Clearance and six monthly compliance status report shall be posted on the website of the company.
- xvi. The environmental statement for each financial year ending 31<sup>st</sup> March in Form-V as is mandated shall be submitted to the Kerala 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 Bhopal Regional Offices of MoEF by e-mail.
- xvii. 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://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 concerned Regional Office of the Ministry.
- xviii. 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.
- 5.0 The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- 6.0 The Ministry reserves the right to stipulate additional conditions, if found necessary. The company in a time bound manner will implement these conditions.

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7.0 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 Kerala, Secretariat Annex Building, Room – 604, C Block, 6th Floor, Government Secretariat, Thiruvananthapuram.
2. The Chairman, Kerala State Pollution Control Board, Pattom P.O., Thiruvananthapuram
3. The Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, Delhi - 110032.
4. The Chief Conservator of Forests, Regional Office (Southern Zone, Bangalore) Kendriya Sadan, 4th Floor, E&F Wing, II Block Koramangala, Bangalore-560034.
5. Monitoring Cell, Ministry of Environment, Forests and Climate Change, Indira Paryavaran Bhawan, Jor Bagh, New Delhi-110003.
6. Guard File/Record File.

  
(Lalit Bokolia)  
Additional Director