



03/E&E/202/04  
01.12.2017

The Additional Principal Chief conservator of Forests (C)  
Ministry of Environment, Forest & Climate Change  
4<sup>th</sup> Floor, E&F Wings  
Kendriya sadan  
Koramangala  
Bangalore-560 034

Dear Sir,

**Sub: Submission of half yearly compliance report on Environmental Clearance  
issued by the Ministry of Environment, Forests and Climate Change.**

**Ref:** 1. Letter from MoEF&CC EP/12.1/33/KER dated. 1<sup>st</sup> July 2016  
2. EC No.J-11011/32/90-IA-II dt. 20.8.91 issued to our Project "Capacity expansion of M/s Bharat Petroleum Corporation Ltd, Kochi Refinery (Formerly Cochin Refineries Ltd.) from 4.5 to 7.5 MMTPA at Ambalamugal".

With reference to the above mentioned letter (Ref.1) from MoEF&CC, regarding the compliance report of the EC clearances referred (Ref.2), we would like to submit that the subject project has been commissioned in the year 2000.

Please find enclosed the compliance reports on the various conditions laid down by MoEF &CC, pertaining to the half year period from April 1<sup>st</sup>, 2017 to September 30<sup>th</sup>, 2017 for the subject project.

Thanking you

Very truly yours

For BPCl Kochi Refinery

  
Damien Gracious K.D

Chief General Manager (HSE)

Encl: 1.Six Monthly Compliance Report

Cc:

**1. The Member Secretary  
Central Pollution Control Board  
Parivesh Bhawan  
East Arjun Nagar  
Delhi - 110 032**

**2. The Member Secretary  
Kerala State Pollution Control Board  
Plamoodu Junction  
Pattom Palace  
Thiruvananthapuram - 695 004**

**COMPLIANCE STATUS OF ENVIRONMENTAL CLEARANCE CONDITIONS FOR  
CAPACITY EXPANSION PROJECT ACCORDED BY J-11011/32/90-IA.II  
DTD.20/08/1991**

**Status of the project:** Project commissioned in 1994

| Sl. No. | Stipulations of MoEF & CC  | Status as on 30.09.2017  |
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| 1       | The project authorities must strictly adhere to the stipulations laid down by the State Pollution Control Board and the State Government and a comprehensive EIA report must be submitted within two months.   | Complied.<br>EIA report was submitted in October 1991.   |
| 2       | Any expansion of the plant, either with the existing product mix or new products can be taken up only with the prior approval of this Ministry.  | Complied.  |
| 3       | The present policy of crude mix refining strategy of minimum 50% Indian crude including B.H and 50% of imported crude should be maintained and implemented under normal conditions.  | Crude mix is chosen to improve the gross refining margin of the refinery within the consented conditions of production and emission/effluent norms.                  |
| 4       | Sulphur Recovery Unit with more than 90% Sulphur recovery should be installed and commissioned before the expansion project is completed and precautions for its continuous operation must be taken. Techno-economic feasibility study for additional stand –by 'S' recovery system may be initiated after the installation of first unit.   | Sulphur Recovery Unit with more than 90% sulphur recovery commissioned during March 1995.<br>Standby Sulphur Recovery have been implemented as part of DHDS project. |
| 5       | Only LSHS should be used in boilers. The additional capacity for heaters, utility furnace must be based on LSHS use only. Low NOx burners should be used to avoid gaseous formation of NOx.  | Complied.  |
| 6       | The gaseous emissions from various process units should conform to the standards prescribed by the concerned authorities from time to time. At no time the emission level should go beyond the stipulated standards. In the event of the failure of any pollution control system adopted by the unit, the respective unit should be put out of operation immediately and should not be restarted until the control measures are rectified to achieve the desired efficiency. | Complied.  |
| 7       | Adequate number (a minimum of 7) of air quality monitoring stations should be set up in the down-wind direction as well as where   | As per letter No. J-11011/32/90-IA. II dated 19.05.1992. CRL was directed to put up 4 Nos. of AAQMS. Based on wind rose  |

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|    | <p>maximum ground level concentration is anticipated. Stack emission should be monitoring by monitoring unit. The data on stack emission should be submitted to the State Pollution Control Board once in three months and to this Ministry once in six months along with the statistical analysis. The air quality monitoring stations should be selected on the basis of modelling exercise to represent the short term ground level construction.</p> | <p>pattern at CRL and modelling exercise conducted, 3 AAQMS were found to be sufficient for monitoring the pollutants from CRL. KSPCB's approval was obtained to put up these 3 stations in CRL premises. 3 Nos. of AAQMS had been installed along with a Data Acquisition Centre and was commissioned in August 1997.</p> <p>Post CEMP- II project, commissioned in 2010 – 2011, BPCL KR has 5 AAQMS stations and 3 high volume samplers. The data from all the five AAQMS stations are being uploaded to CPCB servers.</p> <p>The data from AAQMS are being provided along with CEMP II clearance accorded vide MoEF&amp;CC letter J-11011/369/2005-IA II(I) dated 2<sup>nd</sup> February 2006 to KSPCB and MoEF&amp;CC as per the recommended time interval. Stack emission data attached as Annexure I.</p> |
| 8  | <p>Fugitive emissions should be regularly monitored and adequate provision should be made for the same.</p>  | <p>Complied.</p>   |
| 9  | <p>Fugitive emission of HC from storage tanks should be minimized by adopting the following measures:</p> <ol style="list-style-type: none"> <li>Provision of Floating Roof Tanks for volatile products</li> <li>Replacement of gland packing of pumps by means of mechanical seals.</li> <li>Use of submerged filling in product loading gantries</li> </ol>  | <p>Complied.</p> <p>All the pumps except pumps in heavy oil or water service are provided with mechanical seals.</p> <p>Complied.</p>  |
| 10 | <p>There should be no change in the stack design without the approval of the State Pollution Control Board. Alternate Pollution Control System and proper design in the stack should be provided to take care of excess emissions due to failure in any system of the plant.</p>   | <p>Complied</p>  |
| 11 | <p>Total raw water consumption (industrial as well as township) should not exceed the present level (i.e. 16,800 m<sup>3</sup>/day)</p>  | <p>Complied.</p>   |
| 12 | <p>The project authorities must recycle waste water to the maximum extent possible. The present practice of ETP effluent discharged into water logged areas should not be continued.</p> <p>The liquid effluent coming out of the plant should meet the stipulated standards and</p>   | <p>Complied.</p>   |

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|    | disposed through the channel only into the outfall point in Chitrapuzha river to be identified by the State Pollution Control Board. Flow of oil and grease into biological system should be avoided.  |   |
|    | Waste stream segregator should be installed before ETP.  |   |
| 13 | Adequate number of effluent quality (oil & grease, COD, BOD, Suspended solids, phenols, sulphides, pH and flow) monitoring stations must be set up in consultation with State Pollution Control Board  | On line treated effluent analyzer installed in consultation with State Pollution Control Board.   |
| 14 | No oily sludge should be generated and stored as was being done in the past.   | As part of IREP project, BPCL-KR has commissioned a Delayed Coker Unit (DCU). Sludge generated is processed in this DCU.  |
| 15 | The project authority should prepare a well designed scheme for solid and hazardous wastes disposal generated from CRL, taking into account the suggestions made by consultants in the EIA report. The plan for disposal duly approved from the State Pollution Control Board should be submitted to the Ministry within six months and adequate space should be provided for it, as far as possible on the premises itself. | <p>Scheme for solid and hazardous waste disposal was approved by KSPCB. Scheme was subsequently submitted to MoE&amp;F in March 1993.</p> <p>BPCL Kochi Refinery has implemented a scheme for recovery of oil from oily sludge. The oil recovery process consists of a series of physical separation processes. The oil recovered is reprocessed in the refinery process units. Bio remediation is carried out through TERI</p> <p>Spent catalyst is disposed by either returning to the original supplier or selling to the recycler or is disposed in secured land fill.</p> <p>ETP Chemical sludge is disposed in secured landfill.</p> <p>Bio sludge from effluent treatment plant is used as manure.</p> |
| 16 | Green belt, 500 meters wide, as recommended by the consultants in their report should be developed and maintained. The treated effluent conforming to the standard should be used for green belt development plan taking into account attenuation factors, soil characteristics etc. should be prepared and submitted to this Ministry within 6 months.  | Complied.   |
| 17 | Relocate LPG spheres so that risk due to these remains within the plant area   | As it was not feasible to relocate the LPG spheres, it had been desired by MoE&F to acquire land in the adjoining area where impact will be more. Accordingly, the adjoining  |

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|    |   | land of 63 acres had been acquired by CRL that has been occupied by IOC, HPC and BPC area.  |
|    |   | Further, LPG spheres are progressively being replaced with mounded storages.  |
| 18 | A detailed risk analysis study based on Maximum Credible Accident Analysis should be done and submitted to this Ministry once the process design / technology and lay out is frozen. Based on this, a Disaster Management Plan has to be prepared and after approval by the concerned Nodal Agency, should be submitted to this Ministry within six months. | Risk analysis study had been conducted and was submitted to MoEF &CC in October 1991. Disaster Management Plan was submitted to MoEF &CC in February 1992.          |
| 19 | Feasibility of using 20 tonner truck may be studied / assessed wherever road transport is being envisaged and report submitted to this Ministry in three months.  | 20 Tonner trucks are utilised wherever feasible.  |
| 20 | The project authority must set up laboratory facilities for collection and analysis of samples under the supervision of competent technical personnel, who will directly report to the Chief Executive.   | Complied  |
| 21 | A Separate Environmental Management Cell with suitably qualified people to carry out various functions should be set up under the control of Senior Executive, who will report directly to the Head of the organization.  | Already exists.   |
| 22 | The funds earmarked for the environmental protection measures should not be diverted for other purposes and year-wise expenditure should be reported this Ministry.   | Complied with. An estimated amount of Rs.74/- crores have been spent during implementation of Capacity Expansion Project towards environmental protection measures. |