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03/ENV/202/04  
06.12.2019

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 – Environmental Clearance issued by the Ministry of Environment, Forests and Climate Change**

**Ref:** EC No.J-16011/38/2003-IA-III 12.8.2004 issued to the project "Development of crude oil Receipt facilities (CORE), Facilities include Single point Mooring, Submarine Pipe line from SPM to Shore Tank Farm, STF and Pipe line from STF to KRL for M/s Bharat Petroleum Corporation Ltd, Kochi Refinery (Formerly Kochi Refinery)"

With reference to the above we would like to appraise the following points.

1. The project has been commissioned in 2006.
2. The crude oil receipt facilities are for receiving crude at Single point mooring facility and transporting the crude oil to refinery storage tanks. This facility does not have any other operation other than transport of crude oil into refinery tanks. Hence there is no continuous emission/effluent generation from this facility.

Please find enclosed the compliance reports on the various conditions laid down by MoEF &CC, pertaining to the half year period from 1<sup>st</sup> April 2019 to 30<sup>th</sup> September, 2019 for the Project mentioned in the Ref. 2 above. The data on ambient and storm water details for the above said period are given as Annexure-I.

Thanking you,

Very truly yours  
For BPCL Kochi Refinery

**Babu Joseph**  
**Chief General Manager (HSE)**

- Encl: 1. Six Monthly Compliance Report  
2. Annexure -1: Ambient Air Details & Quality of Storm water

Cc:

**1. The Member Secretary**  
**Central Pollution Control Board**  
**Parivesh Bhawan, Delhi 110032**

**2. The Member Secretary**  
**Kerala State Pollution Control Board**  
**Plamoodu Junction, Trivandrum**

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**COMPLIANCE STATUS OF ENVIRONMENTAL CLEARANCE CONDITIONS FOR CRUDE OIL RECEIPT FACILITIES (CORE), FACILITIES INCLUDE SINGLE POINT MOORING, SUBMARINE PIPE LINE FROM SPM TO SHORE TANK FARM, STF AND PIPE LINE FROM STF TO KRL FOR M/S KOCHI REFINERIES LTD. ACCORDED BY J-16011/38/2003-IA-III DT.12.8.2004**

**Status of the project:** Project commissioned in 2006

Sl. No.	Condition	Status as on 30.09.2019
(i)	All the conditions stipulated by Kerala Pollution Control Board vide letter No. PCB/CE/EK/595/2003 dated 05.12.03 shall be effectively implemented.	Complied.
(ii)	All the conditions stipulated by Forest & Environment Department, Govt. of Kerala vide their letter No. 65/B1/2004/CZMA dated 31.03.04 shall be effectively implemented. The project shall be implemented in such a manner that no portion of the project site should be located in CRZ-I(i) and no damage is caused to the mangroves or other sensitive coastal eco-systems due to project activities.	Complied.
(iii)	It shall be ensured that there is no displacement of people, houses or fishing activity as a result of the project.	Complied
(iv)	It shall be ensured that due to the project, there is no adverse impact on the drainage of the area and recharge of groundwater. No groundwater should be tapped in the project area falling in Coastal Regulation Zone.	Complied
(v)	The project proponents must make necessary arrangements for disposal of solid wastes and for the treatment of effluents/liquid wastes. It must be ensured that the effluents/liquid wastes are not discharged into the backwater.	Normally there is no liquid effluent generation from the facility. An ETP is set up to handle effluents generated if any. Oily sludge generated in the crude tanks is subjected to oil recovery.

Sl. No.	Condition	Status as on 30.09.2019
(vi)	The camps of labour shall be kept outside the Coastal Regulation Zone area. Proper arrangements for cooking fuel shall be made for the labour during construction phase so as to ensure that mangroves are not cut /destroyed for this purpose.	Complied during the project construction phase.
(vii)	Regular drills should be conducted to check the effectiveness of the on-site Disaster Management Plan. The recommendations made in the Environmental Management Plan and Disaster Management Plan, as contained in the Environmental Impact Assessment and Risk Analysis reports of the project, shall be effectively implemented and adequate budgetary provisions may be made for the same. Details in this regard may be furnished to this Ministry.	Regular Drills are being conducted. Fire Emergency drill once in every month and mock drill on-site in every six months.  Recommendations of the EIA and Risk analysis reports have been implemented
(viii)	The entire stretch of the pipelines shall be buried underground except at the booster pumping station, which will be properly fenced and the station would be manned round the clock. The buried lines will be protected with anticorrosive coal tar based coating. The coating will be tested by high voltage detector in accordance with prescribed standards.	Pipe lines are laid underground with CTE /3 LP coating. Further, these buried pipe lines are provided Cathodic protection and regular monitoring of the voltage is being done. Crude in transit storage and booster pump facilities are manned round the clock.
(ix)	Markers shall be installed at every 30 m to indicate the position of the line.	Complied
(x)	The smooth and safe operation of the system will be ensured by incorporating a computerized SCADA (Supervisory Control and Data Acquisition) system.	Computerized control system implemented.
(xi)	There should be display boards at critical locations along the pipeline viz. road/rail/river crossings giving emergency instructions as well as contact details of Kochi Refineries Limited.	Complied
(xii)	During operation phase, proper precautions should be taken to avoid any oil spills and no oily wastes shall be discharged into the water bodies.	Proper precautions are taken to avoid any oil discharge in to water bodies.

Sl. No.	Condition	Status as on 30.09.2019
(xiii)	It shall be ensured that the mangroves along with proposed alignment of the pipeline, if any shall not be adversely affected due to the project.	Ensured.
(xvi)	Storage of petroleum products shall be permitted within the provisions of the CRZ Notification, 1991 and its subsequent amendments.	Complied
(xv)	The impact of oceanographic parameters on the sub-sea pipeline such as buckling, slope stability, prediction of marine growth, local bad effects, pipeline spanning, liquefaction, etc. shall be studied.	It was taken care during the pipeline design by M/s. INTEC, Malaysia, based on Geo-technical studies and the subsea pipe lines were laid incorporating all these safe guards.

**AMBIENT AIR QUALITY DATA FOR THE HALF YEAR PERIOD  
APRIL 2019 -SEPTEMBER 2019**

AMBIENT AIR QUALITY MONITORING STATION						
STF AAQMS-1						
month	April	May	June	July	August	September
Unit	$\mu\text{g}/\text{m}^3$	$\mu\text{g}/\text{m}^3$	$\mu\text{g}/\text{m}^3$	$\mu\text{g}/\text{m}^3$	$\mu\text{g}/\text{m}^3$	$\mu\text{g}/\text{m}^3$
PM 10	57.5	59.3	52	47.4	35.6	26.8
PM2.5	79	78.6	43	23.7	25.4	28.1
SO2	1	7	3	0.8	1.0	1.9

AMBIENT AIR QUALITY MONITORING STATION						
STF AAQMS-2						
MONTH	April	May	June	July	August	September
UNIT	$\mu\text{g}/\text{m}^3$	$\mu\text{g}/\text{m}^3$	$\mu\text{g}/\text{m}^3$	$\mu\text{g}/\text{m}^3$	$\mu\text{g}/\text{m}^3$	$\mu\text{g}/\text{m}^3$
PM 10	39.4	41.8	57	28.4	20.4	16.3
PM2.5	26.4	23.6	52	17.8	14.4	11.4
SO2	1.6	2.7	2	4.7	5.9	5.7

AMBIENT AIR QUALITY MONITORING STATION						
STF AAQMS-3						
MONTH	April	May	June	July	August	September
UNIT	$\mu\text{g}/\text{m}^3$	$\mu\text{g}/\text{m}^3$	$\mu\text{g}/\text{m}^3$	$\mu\text{g}/\text{m}^3$	$\mu\text{g}/\text{m}^3$	$\mu\text{g}/\text{m}^3$
PM 10	56.5	61.9	76	41.2	30.7	20.4
PM2.5	30.4	25.3	53	21.8	16.7	12.5
SO2	8.3	5.1	6	3.6	4.6	6.3

## STF STORM WATER QUALITY DATA FOR THE HALF YEAR PERIOD

APRIL 2019- SEPTEMBER 2019

EFFLUENT MONITORING STATION STORM WATER-STF							
MONTH	Oil & Grease	Phenol	Sulphides	TSS	BOD (3 DAYS @27 C)	COD	pH
	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	
	Avg	Avg	Avg	Avg	Avg	Avg	
<b>Permissible limits</b>	5	0.35	0.5	20	15	125	6.0 to 8.5
<b>April</b>	<4.0	0.15	0.4	<1	14	70	7.3
<b>May</b>	<4.0	0.15	0.4	<1	12	105	8.2
<b>June</b>	<4.0	0.15	0.4	2	10	42	7.2
<b>July</b>	<4.0	0.15	0.4	3	9	36	7.1
<b>August</b>	<4.0	0.15	0.4	<1	14	45	7.3
<b>September</b>	<4.0	0.12	0.4	1	11	29	7.9