



KR.HSE ENV.05.HSSE.HECCR/01/2022/ EC No.J-11011/78/96-IA-II
15.06.2022

To

The Additional Principal Chief conservator of Forests (C)
Ministry of Environment, Forest & Climate Change
4th 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 (MoEF & CC)

Ref: EC No.J-11011/78/96-IA-II dated. 05.03.1997 issued for the Project "Installation of Diesel Hydro De-Sulphurisation (DHDS) project M/s Bharat Petroleum Corporation Ltd - Kochi Refinery (Formerly Cochin Refineries Ltd)".

Please find enclosed the compliance reports on the various conditions laid down by MoEF &CC, pertaining to the half year period from **1st October 2021 to 31st March 2022** for the said project.

Thanking you,

Very truly yours

For BPCL Kochi Refinery

Ramachandran, M.K

General Manager in Charge (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 installation of Diesel Hydro Desulphurisation (DHDS) project accorded by J-11031/78/96-IA-II dated 05.03.1997

Status of the project: Project commissioned in 2000

ITEM NO.	ITEM DESCRIPTION	STATUS AS ON 31.03.2022
1	All conditions stipulated by MoEF & CC while according approval for Capacity Expansion Project	Complied
2	No expansion or modernization of the Plant should be carried out without approval of the MoEF & CC	Complied.
3	The project authority must strictly adhere to the stipulations laid down by the Kerala State Pollution Control Board and the State Govt.	Complied
4	The total SO ₂ emission from BPCI Kochi Refinery including DHDS Project should not exceed the norm of 1607 Kg/hr. (Refer MoEF & CC vide letter No.J-110/1/78/96.IA.II dated 9 th February, 1999)	Complied; It has been reduced to 1579 kg/hr. as per latest EC for M5 block project.
5	The existing ETP should be adequately augmented or additional treatment facilities should be provided to accommodate the additional effluent load from DHDS project before commissioning the project to ensure that the treated effluent meets the MINAS standard.	New ETP has been commissioned along with the DHDS Project.
6	Time bound action plan for disposal of oil sludge / recovery of oil and design details of the solid waste disposal pit should be furnished to the Ministry within a period of 3 months.	Complied. A scheme for the recovery of oil from accumulated sludge has been implemented. All the accumulated sludge at that point of time was processed and currently there is no accumulated stock of oily sludge. Sludge is being processed in Delayed Coker Unit, which has been commissioned as part of IRIP.

		<p>project.</p> <p>A secured landfill facility for storing hazardous wastes was commissioned in March, 2005.</p>
7	SRU having an efficiency of more than 99% should be installed.	Complied.
8	The ground water quality should be monitored and the report should be submitted to The Ministry every six months.	Complied. Ground water quality report attached as Annexure I .



QUALITY CONTROL DEPARTMENT
BPCL-KOCHI REFINERY, AMBALAMUGAL

BOREWELL WATER TEST REPORT

Bore well No. 9

Date of Sample: 09.10.2021


Date of Testing: 15.10.2021

KR.TECH.QC.26.DRINK.WATR

Sl No:	Test Parameters	Unit	Method	Result	Acceptable limit
5	pH		IS 3025 (P:11)	7.1	6.5 - 8.5
15	Oil	mg/L	IS 3025 (P:39)	nil	nil
Metals					
16	Silver (as Ag)	mg/L	IS13428 Annexe J	BDL (MDL=0.005)	0.1 (Max)
17	Aluminium (as Al)	mg/L	IS 3025 (P:55)	BDL(MDL=0.002)	0.03 (Max)
18	Boron (as B)	mg/L	IS 3025 (P:57)	BDL(MDL=0.01)	0.5 (Max)
19	Barium (as Ba)	mg/L	IS13428 Annexe F	BDL(MDL=0.01)	0.7 (Max)
20	Calcium (as Ca)	mg/L	IS 3025 (P:40)	30	75 (Max)
21	Cadmium (as Cd)	mg/L	IS 3025 (P:41)	BDL(MDL=0.001)	0.003 (Max)
22	Chromium (as Cr)	mg/L	IS 3025 (P:52)	BDL(MDL=0.01)	0.05 (Max)
23	Copper (as Cu)	mg/L	IS 3025 (P:42)	BDL(MDL=0.01)	0.05 (Max)
24	Iron (as Fe)	mg/L	IS 3025 (P:53)	0.03	0.3 (Max)
25	Magnesium (as Mg)	mg/L	IS 3025 (P:46)	6.9	30 (Max)
26	Manganese (as Mn)	mg/L	IS 3025 (P:59)	BDL(MDL=0.01)	0.1 (Max)
27	Nickel (as Ni)	mg/L	IS 3025 (P:54)	BDL(MDL=0.01)	0.02 (Max)
28	Molybdenum (as Mo)	mg/L	IS 3025 (P:02)	BDL(MDL=0.002)	0.07 (Max)
29	Lead (as Pb)	mg/L	IS 3025 (P:47)	BDL(MDL=0.01)	0.01 (Max)
30	Zinc (as Zn)	mg/L	IS 3025 (P:49)	0.1	5 (Max)
31	Arsenic (as As)	mg/L	IS 3025 (P:37)	BDL(MDL=0.005)	0.01 (Max)
32	Mercury (as Hg)	mg/L	IS 3025 (P:48)	BDL(MDL=0.0001)	0.001 (Max)
33	Selenium (as Se)	mg/L	IS 3025 (P:56)	BDL(MDL=0.001)	0.1 (Max)
34	Antimony (as Sb)	mg/L	APHA:3113B	BDL(MDL=0.001)	Max0.1

BDL: Below Detection Limit

MDL: Minimum Detection Limit


S. Mahamed Iqbal
Manager (Quality Control)


QUALITY CONTROL DEPARTMENT
BPCL-KOCHI REFINERY, AMBALAMUGAL

BOREWELL WATER TEST REPORT

Bore well No. 27

Date of Sample: 13.11.2021

Date of Testing: 17.11.2021

KR.TECH.QC.26.DRINK.WATR

Sl No:	Test Parameters	Unit	Method	Result	Acceptable limit
5	pH		IS 3025 (P:11)	7.6	6.5 - 8.5
15	Oil	mg/l	IS 3025 (P:39)	nil	nil
Metals					
16	Silver (as Ag)	mg/L	IS13428 Annexe J	BDL (MDL=0.005)	0.1 (Max)
17	Aluminium (as Al)	mg/L	IS 3025 (P:55)	BDL(MDL=0.002)	0.03 (Max)
18	Boron (as B)	mg/L	IS 3025 (P:57)	BDL(MDL=0.01)	0.5 (Max)
19	Barium (as Ba)	mg/L	IS13428 Annexe F	BDL(MDL=0.01)	0.7 (Max)
20	Calcium (as Ca)	mg/L	IS 3025 (P:40)	36	75 (Max)
21	Cadmium (as Cd)	mg/L	IS 3025 (P:41)	BDL(MDL=0.001)	0.003 (Max)
22	Chromium (as Cr)	mg/L	IS 3025 (P:52)	BDL(MDL=0.01)	0.05 (Max)
23	Copper (as Cu)	mg/L	IS 3025 (P:42)	BDL(MDL=0.01)	0.05 (Max)
24	Iron (as Fe)	mg/L	IS 3025 (P:53)	0.03	0.3 (Max)
25	Magnesium (as Mg)	mg/L	IS 3025 (P:46)	7	30 (Max)
26	Manganese (as Mn)	mg/L	IS 3025 (P:59)	BDL(MDL=0.01)	0.1 (Max)
27	Nickel (as Ni)	mg/L	IS 3025 (P:54)	BDL(MDL=0.01)	0.02 (Max)
28	Molybdenum (as Mo)	mg/L	IS 3025 (P:02)	BDL(MDL=0.002)	0.07 (Max)
29	Lead (as Pb)	mg/L	IS 3025 (P:47)	BDL(MDL=0.01)	0.01 (Max)
30	Zinc (as Zn)	mg/L	IS 3025 (P:49)	0.3	5 (Max)
31	Arsenic (as As)	mg/L	IS 3025 (P:37)	BDL(MDL=0.005)	0.01 (Max)
32	Mercury (as Hg)	mg/L	IS 3025 (P:48)	BDL(MDL=0.0001)	0.001 (Max)
33	Selenium (as Se)	mg/L	IS 3025 (P:56)	BDL(MDL=0.001)	0.1 (Max)
34	Antimony (as Sb)	mg/L	APHA:3113B	BDL(MDL=0.001)	Max 0.1

BDL: Below Detection Limit

MDL: Minimum Detection Limit


S. Mahamed Iqbal
Manager (Quality Control)



QUALITY CONTROL DEPARTMENT
BPCL-KOCHI REFINERY, AMBALAMUGAL

BOREWELL WATER TEST REPORT

Bore well No. 44

Date of Sample: 24.12.2021

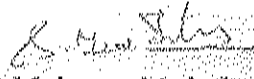
Date of Testing: 26.12.2021

KR.TECH.QC.26.DRINK.WATR

Sl No:	Test Parameters	Unit	Method	Result	Acceptable limit
5	pH		IS 3025 (P:13)	7.3	6.5 - 8.5
15	Oil	mg/L	IS 3025 (P:39)	nil	nil
Metals					
16	Silver (as Ag)	mg/L	IS13428 Annex E	BDL (MDL=0.005)	0.1 (Max)
17	Aluminium (as Al)	mg/L	IS 3025 (P:55)	BDL(MDL=0.002)	0.03 (Max)
18	Boron (as B)	mg/L	IS 3025 (P:57)	BDL(MDL=0.01)	0.5 (Max)
19	Barium (as Ba)	mg/L	IS13428 Annex F	BDL(MDL=0.01)	0.7 (Max)
20	Calcium (as Ca)	mg/L	IS 3025 (P:40)	28	75 (Max)
21	Cadmium (as Cd)	mg/L	IS 3025 (P:41)	BDL(MDL=0.001)	0.003 (Max)
22	Chromium (as Cr)	mg/L	IS 3025 (P:52)	BDL(MDL=0.01)	0.05 (Max)
23	Copper (as Cu)	mg/L	IS 3025 (P:42)	BDL(MDL=0.01)	0.05 (Max)
24	Iron (as Fe)	mg/L	IS 3025 (P:53)	0.05	0.3 (Max)
25	Magnesium (as Mg)	mg/L	IS 3025 (P:46)	6.5	30 (Max)
26	Manganese (as Mn)	mg/L	IS 3025 (P:59)	BDL(MDL=0.01)	0.1 (Max)
27	Nickel (as Ni)	mg/L	IS 3025 (P:54)	BDL(MDL=0.01)	0.02 (Max)
28	Molybdenum (as Mo)	mg/L	IS 3025 (P:02)	BDL(MDL=0.002)	0.07 (Max)
29	Lead (as Pb)	mg/L	IS 3025 (P:47)	BDL(MDL=0.01)	0.01 (Max)
30	Zinc (as Zn)	mg/L	IS 3025 (P:49)	0.1	5 (Max)
31	Arsenic (as As)	mg/L	IS 3025 (P:37)	BDL(MDL=0.005)	0.01 (Max)
32	Mercury (as Hg)	mg/L	IS 3025 (P:48)	BDL(MDL=0.0001)	0.001 (Max)
33	Selenium (as Se)	mg/L	IS 3025 (P:56)	BDL(MDL=0.001)	0.1 (Max)
34	Antimony (as Sb)	mg/L	APHA:3113B	BDL(MDL=0.001)	Max:0.1

BDL: Below Detection Limit

MDL: Minimum Detection Limit


S. Mahamed Iqbal
Manager (Quality Control)



QUALITY CONTROL DEPARTMENT
BPCL-KOCHI REFINERY, AMBALAMUGAL

BOREWELL WATER TEST REPORT

Bore well No. 26

Date of Sample: 14.1.2022

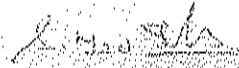
Date of Testing: 20.1.2022

KR.TECH.QC.26.DRINK.WATR

Sl No:	Test Parameters	Unit	Method	Result	Acceptable limit
5	pH	-	IS 3025 (P:11)	7.8	6.5 - 8.5
15	Oil	mg/L	IS 3025 (P:39)	nil	nil
Metals					
16	Silver (as Ag)	mg/L	IS13428 Annexe J	BDL (MDL=0.005)	0.1 (Max)
17	Aluminium (as Al)	mg/L	IS 3025 (P:55)	BDL(MDL=0.002)	0.03 (Max)
18	Boron (as B)	mg/L	IS 3025 (P:57)	BDL(MDL=0.01)	0.5 (Max)
19	Barium (as Ba)	mg/L	IS13428 Annexe F	BDL(MDL=0.01)	0.7 (Max)
20	Calcium (as Ca)	mg/L	IS 3025 (P:40)	31	75 (Max)
21	Cadmium (as Cd)	mg/L	IS 3025 (P:41)	BDL(MDL=0.001)	0.003 (Max)
22	Chromium (as Cr)	mg/L	IS 3025 (P:52)	BDL(MDL=0.01)	0.05 (Max)
23	Copper (as Cu)	mg/L	IS 3025 (P:42)	BDL(MDL=0.01)	0.05 (Max)
24	Iron (as Fe)	mg/L	IS 3025 (P:53)	0.06	0.3 (Max)
25	Magnesium (as Mg)	mg/L	IS 3025 (P:46)	5.0	30 (Max)
26	* Manganese (as Mn)	mg/L	IS 3025 (P:59)	BDL(MDL=0.01)	0.1 (Max)
27	Nickel (as Ni)	mg/L	IS 3025 (P:54)	BDL(MDL=0.01)	0.02 (Max)
28	Molybdenum (as Mo)	mg/L	IS 3025 (P:02)	BDL(MDL=0.002)	0.07 (Max)
29	Lead (as Pb)	mg/L	IS 3025 (P:47)	BDL(MDL=0.01)	0.01 (Max)
30	Zinc (as Zn)	mg/L	IS 3025 (P:49)	0.1	5 (Max)
31	Arsenic (as As)	mg/L	IS 3025 (P:37)	BDL(MDL=0.005)	0.01 (Max)
32	Mercury (as Hg)	mg/L	IS 3025 (P:48)	BDL(MDL=0.0001)	0.001(Max)
33	Selenium (as Se)	mg/L	IS 3025 (P:56)	BDL(MDL=0.001)	0.1 (Max)
34	Antimony (as Sb)	mg/L	APHA:31138	BDL(MDL=0.001)	Max0.1

BDL: Below Detection Limit

MDL: Minimum Detection Limit


S. Mahamed Iqbal
Manager (Quality Control)