



KR.HSE.ENV.05. HSSE.HECCR/01/2026/EC No: J-11011/369/2005-IA II (I)
30.06.2026

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

Ref: EC No: J-11011/369/2005-IA II (I) dated 2nd February 2006, granting environmental clearance for Capacity Expansion cum Modernisation Project (Phase-II).

Please find enclosed the compliance report on the various conditions laid down by MoEF &CC, pertaining to the half year period from **1st October 2025 to 31st March 2026** for the Project mentioned in above reference.

Thanking you

Very truly yours
For BPCL Kochi Refinery

Suresh K S

Dy. General Manager (HSE - Environment)

Encl: 1. Six Monthly Compliance Report
2. Stack Emission Details
3. Ambient Air Details
4. Treated Water effluent discharge report

CC:

1.
The Member Secretary
Central Pollution Control Board
Parivesh Bhawan
East Arjun Nagar, New Delhi- 110032

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

पोस्ट बैग नं: 2, अम्बलमुगल - 682 302, एरणाकुलम ज़िला, केरल, दूरभाष: 0484 - 2722061 - 69 फैक्स: 0484 - 2720961 / 2721094
पंजीकृत कार्यालय: भारत भवन, 4 & 6, करीमभाय रोड, बेल्लर्ड इस्टेट, पी. बी. नं. 688 मुंबई - 400 001

Compliance status of Environmental clearance conditions for CAPACITY EXPANSION CUM MODERNISATION PROJECT (PHASE-II) accorded by J-11011/369/2005-IA II (I) dated 2nd February 2006

Status of the project: Project commissioned in 2010 - 2011

Sl. No	Conditions	Status as on 31.03.2026
A.	SPECIFIC CONDITIONS	
1.	The gaseous emissions from various process units shall conform to the standards prescribed by the concerned authorities from time to time. The KSPCB may specify more stringent standards for the relevant parameters keeping in view the nature of the industry and its size and location. At no time, the emissions levels should go beyond the prescribed standards. In the event of failure of any pollution control system adopted by the unit, the respective unit should not be restarted until the control measures are rectified to achieve the desired efficiency.	Complied. Gaseous emissions from all process units are monitored regularly and are maintained within the emission standards prescribed under the Environment (Protection) Rules, 1986, and the consent conditions stipulated by the Kerala State Pollution Control Board (KSPCB), as amended from time to time. Continuous Emission Monitoring Systems (CEMS) are installed on the applicable stacks for real-time monitoring of emission parameters, and the monitoring data are transmitted to KSPCB and CPCB servers. The refinery operates and maintains all pollution control systems effectively through preventive maintenance and periodic performance evaluation. In the event of any malfunction or failure of an emission control system, appropriate corrective actions are taken immediately, and the concerned unit is operated only after ensuring that the pollution control system is restored to achieve the prescribed emission standards. Continuous monitoring and operational controls ensure that emissions remain within the applicable statutory limits.
2.	On-line continuous monitoring facilities shall be provided on all the stacks of adequate height as per CPCB guidelines. SO₂, CO, HC, NO_x etc. shall be maintained within the CPCB limits. Low sulphur fuels shall be used for heaters. Sulphur Recovery Unit (SRU) shall be installed and SO₂ emissions from the plant shall not exceed existing 1607 kg/h and further efforts shall be made to further reduce SO₂ emissions. Low NO_x burners shall be installed to control the NO_x emissions.	Complied. Online Continuous Emission Monitoring Systems (CEMS) have been installed on all applicable stacks of adequate height in accordance with CPCB guidelines for continuous monitoring of emission parameters. Stack emissions are monitored regularly, and SO₂, NO_x, CO, particulate matter, and other applicable parameters are maintained within the prescribed CPCB/KSPCB standards. Refinery Fuel Gas with controlled sulphur content and other approved low-sulphur fuels, wherever applicable, are used in process heaters to minimize sulphur emissions. Sulphur Recovery Units (SRUs) are in operation for recovery of sulphur from acid gases, and continuous efforts are made to optimize sulphur recovery efficiency and minimize SO₂ emissions. Total SO₂ emission from the refinery is within the limit. The allowable limit as per latest EC /CTO (BS – VI MS Project) is 1579 kg/hr: maintaining well below of this limit.


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Sl. No	Conditions	Status as on 31.03.2026
		To reduce sulphur content in the fuel gas used in heaters, Amine Absorption treatment is employed for effective removal of sulphur compounds. The recovered acid gas is routed to three (3) Sulphur Recovery Units (SRUs) with a combined processing capacity of 904 TPD, ensuring efficient sulphur recovery and compliance with emission standards. The heaters and boilers installed as part of the CEMP Phase-II project are equipped with low-NOx burners to minimise nitrogen oxide (NOx) emissions and ensure compliance with applicable environmental standards.
3.	Continuous ambient air quality monitoring stations for SO ₂ , SPM, and H.C. shall be installed in all the 4 directions in consultation with the KSPCB. Data shall be regularly monitored, and records maintained, and report submitted to the Ministry/CPCB/KSPCB once in six months.	Complied. Continuous Ambient Air Quality Monitoring Stations (CAAQMS) have been installed at strategically selected locations in and around the refinery in consultation with the Kerala State Pollution Control Board (KSPCB). The stations continuously monitor the prescribed ambient air quality parameters, including SO₂, NOx, PM10, PM2.5, Methane, Non-methane HC, Benzene, NH₃, H₂S, CO. The monitoring data are recorded, reviewed, and maintained on a regular basis. The ambient air quality monitoring results are submitted periodically to the Ministry of Environment, Forest and Climate Change (MoEF&CC), and Kerala State Pollution Control Board (KSPCB) as part of the Environmental Clearance and statutory compliance requirements.
4.	As indicated in the EIA/EMP reports, out of total 1700 m ³ /d industrial effluent generated, 360 m ³ /d sour water will be recycled in the plant after stripping of Ammonia and Hydrogen Sulphide and will be used for desalting of crude in de-salters and as wash water in air fin condensates etc. Besides, 300 KL /day, treated wastewater will be used for firefighting, process area cleaning, cooling water make up and for green belt development. Remaining treated effluent will be discharged to Chitrapuzha river after conforming to the prescribed standards. Generation of wastewater shall be reduced by installation of sour water stripper unit; use of closed blow down system for all hydrocarbon liquid discharge from the process units, proper segregation and collection of various effluents; paving the process area to avoid contamination of soil, ground water, comprehensive wastewater management etc.	A new Sour water Stripping unit (SWS) of capacity 412.8 m³/d was installed along with the project. The stripped water is recycled in the plant. Stripped water is used in De-salters in Crude Distillation units Closed blow down (CBD) system is provided in all units. Proper collection / segregation facilities are installed for effluent streams. The effluent treatment plant (ETP) put up as part of CEMP-Phase II project is running continuously. The treated effluent water is being recycled through RO based DM plant and producing DM water for further process usages. Any quantity other than this is being discharged to Chithrappuzha with prescribed standards. Process areas are paved to avoid contamination of the soil.

Sl. No	Conditions	Status as on 31.03.2026
5.	No ground water contamination in and around factory premises shall be ensured by making all the underground lines carrying hydrocarbons, closed drainage system, storage tank etc. leak proof in order to avoid any leakages. Regular monitoring of ground water in and around factory premises shall be carried out by installing piezometer wells and six-monthly reports shall be submitted to the Regional Office of this Ministry at Bangalore/CPCB/KSPCB.	Hydrocarbon storage tanks are provided with MS bottom plates to prevent leaching of oil into the soil. In addition, LDPE lining is installed beneath the tank pad for new tanks as an added safeguard against seepage into sub-surface strata and groundwater. A closed drainage system is provided for all storage tanks to ensure safe collection and disposal of draining, thereby eliminating the possibility of land or groundwater contamination during tank draining operations. A total of 49 borewells have been installed within the refinery premises, and groundwater samples from these wells are monitored periodically to assess groundwater quality. (Borewell water analysis reports are attached.)
6.	The domestic wastewater shall be treated in the sewage treatment plant and treated wastewater conforming to the standards for land application shall be reused for green belt development.	STP of 250 m ³ /day capacity has been installed and running continuously for treating the domestic sewage wastewater and the treated water from this unit is being utilized for gardening / Green belt purposes.
7.	Regular monitoring of the quality of effluent discharged and at river water intake point shall be ensured to ensure no pollution of the Chitrapuzha river.	Quality of treated effluent water discharged to the Chitrapuzha river is being analysed and monitored on regular / continuous basis to ensure the stipulated standards. The river water intake to refinery is located near to Aluva from river Periyar and the quality of the same is also monitored. Online effluent monitoring systems and periodic laboratory analysis are undertaken, and the results are maintained within the prescribed standards. Monitoring records are maintained and submitted to the statutory authorities as required.
8.	In-plant control measures for checking fugitive emissions from spillage/raw materials handling etc. should be provided. Proper maintenance of equipment shall be ensured to reduce fugitive emissions.	Closed Blow Down (CBD) systems are provided in all process plants to enable closed loop recycling of all hydrocarbon drains, without fugitive emissions. Double seal floating roof are provided for all the Crude tanks. Hydrocarbons detectors are installed at identified locations as per operational requirements. Regular and preventive maintenance of all equipment is carried out to ensure reliable performance. A quarterly fugitive emission monitoring

Sl. No	Conditions	Status as on 31.03.2026
		programme under the Leak Detection and Repair (LDAR) system is implemented, and all identified emissions or leaks are promptly attended and rectified.
9.	Solid waste generated in the form of oil sludge, chemical sludge, catalyst, spent molecular sieves and bio-sludge shall be properly treated / reprocessed / reused or properly disposed-off. Spent catalyst, a hazardous waste shall either be sent back to supplier(s) for reprocessing or disposed-off in the secured landfill. Oil sludge shall be subjected to maximum recovery followed by bioremediation. Bio-sludge for ETP shall be used as manure after ensuring all the parameters within the permissible limits whereas chemical sludge from ETP shall be collected and disposed in Secured Landfill (SLF).	Post IREP, chemical - oily sludge generated in ETP is processed in DCU to the maximum possible extent thereby ensuring recovery of hydrocarbons and minimization of waste sent for disposal. BPCL Kochi Refinery has implemented an oil recovery system from Oily sludges, wherein oil is recovered and reused in the refinery process. The residual solids after oil recovery are subjected to bioremediation, and the treated sludge is subsequently disposed of at an authorised TSDF in compliance with applicable environmental regulations. Spent catalyst is disposed by either returning to the original supplier or selling to the authorized recycler or is disposed in secured land fill depends on the nature of the catalyst. Bio sludge from effluent treatment plant is used as manure.
10.	Green belt of adequate width and density shall be provided to mitigate the effects of fugitive emissions all around the plant. Green belt shall be developed in 116 hectares out of total 461.7 hectares land with local species in consultation with the DFO and as per the CPCB guidelines.	BPCL-KR is having a total area of 1336.05 acres of land (including the new projects IREP/ MSBP / PDPP). In this, Plant area accounts (including offsite, Pipe rack, Buildings, Roads) for 767.20 acres. The statutory requirement of green belt as specified in this Environmental Clearance is 25% (116 hectares out of 461.7 hectares). Based on latest survey done by Kerala State Remote Sensing And Environment Centre, total green cover of 441.263 acres (33%) which is well above the required.
11.	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	Health surveillance done regularly, and records maintained.
12.	As committed in the EIA/EMP report, the company shall earmark Rs.78.30 crores for environment protection measures and Rs.51.00crores for community development activities.	Complied.

Sl. No	Conditions	Status as on 31.03.2026
13.	All the other recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Refinery sector shall be implemented. CREP guidelines regarding discharge of treated effluent within 0.4 m ³ /MT of crude shall be strictly followed.	Complied. All applicable recommendations under the Charter on Corporate Responsibility for Environmental Protection (CREP) for the petroleum refining sector have been implemented. The refinery maintains specific treated effluent discharge 0.14m ³ /MT of crude processed well within the CREP guideline of 0.4 m ³ /MT of crude processed through effective water conservation, process optimization, and maximum reuse and recycling of treated wastewater. Compliance is monitored regularly as part of the refinery's Environmental Management System.
B.	GENERAL CONDITIONS:	
1.	The project authorities must strictly adhere to the stipulations made by the KSPCB and the State Government.	Complied. The project is operated in compliance with all the stipulations and conditions prescribed by the Kerala State Pollution Control Board (KSPCB), the Government of Kerala, and other applicable statutory authorities.
2.	No expansion or modification in the plant shall be carried out without prior approval of the Ministry of Environment & Forests.	Noted and Complied. No expansion or modification requiring prior approval of MoEF&CC has been undertaken without obtaining the requisite statutory Environmental Clearance.
3.	Adequate AAQMS should be established in the downward direction as well as where maximum ground level concentration of SPM, SO ₂ and NO _x are anticipated in consultation with the KSPCB. Data on ambient air quality, fugitive emission and stack emissions shall be regularly submitted to this Ministry including its Regional Office at Bangalore once in six months and monthly to KSPCB.	In consultation with KSPCB, the refinery has installed Six continuous AAQM Stations. Online data are being continuously transferred to CPCB from all AAQMS stations. Compiled data on ambient air quality for the half yearly period from 1 st October 2025 to 31 st March 2026 is attached. Data on stack emissions for the half year period from 1 st October 2025 to 31 st March 2026 is attached.



Sl. No	Conditions	Status as on 31.03.2026
4.	The overall noise levels in and around the plant area should be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules. 1989 viz 75 dBA (daytime) and 70 dBA (night-time).	Complied. Continuous Noise monitoring station also installed in the boundary area at two locations near to Motor Spirit Block Project and Pet-chem Project. The noise levels are well within limit.
5.	The project authorities shall provide adequate funds (both recurring and non-recurring) 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 condition stipulated herein. The funds so provided should not be diverted for any other purposes.	Complied.
6.	The Regional Office of this Ministry at Bangalore/CPCB/ KSPCB will monitor the stipulated conditions. A six-monthly compliance report and the monitored data along with statistical interpretation should be submitted to them regularly.	Complied. Six-monthly compliance reports, along with environmental monitoring data and statistical interpretation, are regularly submitted to the Regional Office of MoEF&CC, CPCB, and KSPCB, as applicable. The stipulated conditions are monitored by the regulatory authorities, and necessary information is furnished during inspections and as required.
7.	The company 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 KSPCB / Committee and may also be seen at Website of the MoEF &CC at http://envfor.nic.in . This should 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 should be forwarded to the Regional Office.	Complied.
8.	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 commencing the land development work.	The final approval for the implementation of the project was obtained on 27.04.2006. The same was informed MoEF & CC vide letter No. 10/MPT/CEMP-II/04 dated 18 th May 2006. The project has been commissioned.

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Air Quality data for the period 1st APRIL 2025 to 30th SEPTEMBER 2025

AAQMS - CISF Quarters (Old W/L) area

Parameter	SO2	H2S	NOx	NH3	CO	Benzene	Methane	NMHC	PM 10	PM 2.5
Units	µg/m3	µg/m3	µg/m3	µg/m3	mg/m3	µg/m3	PPM	PPM	µg/m3	µg/m3
Limit	Daily 80 Annual 50	No limits are prescribed	Daily 80 Annual 40	Daily 400 Annual 100	8 hrs - 2 4 hrs - 4	Daily 05 Annual 05	No limits are prescribed		Daily 100 Annual 60	Daily 60 Annual 40
Apr 2025	16.0	2.1	39.6	28.4	0.9	0.0	0.0	0.0	52.5	32.3
May 2025	13.4	2.2	49.8	36.6	1.0	0.0	0.0	0.0	38.2	22.1
June 2025	15.6	1.6	38.4	27.7	1.3	0.0	0.0	0.0	43.0	16.9
July 2025	21.2	1.773	18.9	19.9	1.0	0.0	0.02	0.5	42.1	19.3
Aug 2025	5.23	0.99	11.59	9.63	0.39	0.00	0.00	0.03	45.41	21.91
Sept 2025	4.2	1.2	22.7	0.1	1.7	0.0	0.0	1.1	46.9	23.2

AAQMS - Jwalagiri Colony area

Parameter	SO2	H2S	NOx	NH3	CO	Benzene	Methane	NMHC	PM 10	PM 2.5
Units	µg/m3	µg/m3	µg/m3	µg/m3	mg/m3	µg/m3	PPM	PPM	µg/m3	µg/m3
Limit	Daily 80 Annual 50	No limits are prescribed	Daily 80 Annual 40	Daily 400 Annual 100	8 hrs - 2 4 hrs - 4	Daily 05 Annual 05	No limits are prescribed		Daily 100 Annual 60	Daily 60 Annual 40
Apr 2025	35.2	0.3	14.1	2.7	0.9	0.0	0.0	0.0	71.6	29.5
May 2025	29.2	0.2	14.0	2.5	1.0	0.0	0.0	0.0	32.9	21.8
June 2025	10.8	0.6	16.5	4.1	1.1	0.0	0.003	0.0	26.4	17.6
July 2025	25.3	0.70	15.3	10.5	1.1	NA	0.02	0.0	27.3	25.3
Aug 2025	19.16	2.82	17.30	8.12	1.01	NA	0.02	0.00	28.90	19.60
Sept 2025	22.6	3.2	15.8	4.3	1.6	0.0	0.0	0.0	33.4	22.3

AAQMS - DHDS Chalikkara Gate

Parameter	SO2	H2S	NOx	NH3	CO	Benzene	Methane	NMHC	PM 10	PM 2.5
Units	µg/m3	µg/m3	µg/m3	µg/m3	mg/m3	µg/m3	PPM	PPM	µg/m3	µg/m3
Limit	Daily 80 Annual 50	No limits are prescribed	Daily 80 Annual 40	Daily 400 Annual 100	8 hrs - 2 4 hrs - 4	Daily 05 Annual 05	No limits are prescribed		Daily 100 Annual 60	Daily 60 Annual 40
Apr 2025	39.7	14.4	22.2	0.0	0.8	0.0	0.0	0.0	42.5	30.1
May 2025	16.1	1.8	4.3	0.1	0.7	0.0	0.0	0.0	38.8	21.6
June 2025	22.3	3.9	10.2	0.8	0.8	0.0	0.0	0.0	29.5	16.3
July 2025	27.6	7.09	4.6	0.1	1.2	NA	0.02	0.0	30.8	17.3
Aug 2025	28.31	10.59	16.55	1.76	0.40	0.22	0.00	1.04	35.21	19.51
Sept 2025	12.01	21.46	22.9	8.02	0.47	0.013	0.01	0.013	41.98	19.8


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Air Quality data for the period 1 st APRIL 2025 to 30 th SEPTEMBER 2025										
AAQMS - Marketing Office area										
Parameter	SO2	H2S	NOx	NH3	CO	Benzene	Methane	NMHC	PM 10	PM 2.5
Units	µg/m3	µg/m3	µg/m3	µg/m3	mg/m3	µg/m3	PPM	PPM	µg/m3	µg/m3
Limit	Daily 80 Annual 50	No limits are prescribed	Daily 80 Annual 40	Daily 400 Annual 100	8 hrs - 2 4 hrs - 4	Daily 05 Annual 05	No limits are prescribed		Daily 100 Annual 60	Daily 60 Annual 40
Apr 2025	32.0	1.6	27.0	4.7	1.0	0.0	0.0	0.0	54.9	22.8
May 2025	34.5	2.4	23.2	6.0	1.2	0.0	0.0	Faulty	23.2	23.2
June 2025	35.7	3.2	24.4	6.8	2.1	0.0	0.0	0.0	31.0	22.0
July 2025	28.5	1.98	22.8	4.8	1.0	0.0	0.0	0.0	31.9	22.9
Aug 2025	25.3	4.79	21.8	8.8	0.3	0.0	0.0	0.0	34.0	21.9
Sept 2025	20.6	5.1	19.0	9.5	0.4	0.0	0.0	0.0	36.0	20.4
AAQMS - NHT CCR - 01 South side										
Parameter	SO2	H2S	NOx	NH3	CO	Benzene	Methane	NMHC	PM 10	PM 2.5
Units	µg/m3	µg/m3	µg/m3	µg/m3	mg/m3	µg/m3	PPM	PPM	µg/m3	µg/m3
Limit	Daily 80 Annual 50	No limits are prescribed	Daily 80 Annual 40	Daily 400 Annual 100	8 hrs - 2 4 hrs - 4	Daily 05 Annual 05	No limits are prescribed		Daily 100 Annual 60	Daily 60 Annual 40
Apr 2025	5.6	1.4	0.65	0.10	0.18	NA	0.0	0.90	51.6	27.3
May 2025	5.0	2.1	7.9	1.5	0.0	NA	0.0	1.3	67.1	12.8
June 2025	4.6	1.9	0.7	0.1	0.20	NA	0.0	0.7	53.6	23.6
July 2025	6.21	2.72	30.1	1.89	0.46	NA	1.47	0.32	38.31	16.42
Aug 2025	6.10	2.20	26.2	1.23	0.32	NA	0.37	0.45	33.20	18.20
Sept 2025	6.1	2.7	0.0	0.0	0.40	NA	1.3	0.20	42.1	26.3
AAQMS - PDPP side										
Parameter	SO2	H2S	NOx	NH3	CO	Benzene	Methane	NMHC	PM 10	PM 2.5
Units	µg/m3	µg/m3	µg/m3	µg/m3	mg/m3	µg/m3	PPM	PPM	µg/m3	µg/m3
Limit	Daily 80 Annual 50	No limits are prescribed	Daily 80 Annual 40	Daily 400 Annual 100	8 hrs - 2 4 hrs - 4	Daily 05 Annual 05	No limits are prescribed		Daily 100 Annual 60	Daily 60 Annual 40
Apr 2025	18.5	0.0	10.9	0.32	1.6	0.0	0.0	0.0	24.9	41.1
May 2025	17.4	0.0	8.2	3.3	1.1	0.0	0.0	0.0	31.5	18.2
June 2025	19.5	0.0	3.7	7.0	1.6	0.0	0.019	0.0	19.8	12.6
July 2025	23.0	0.71	68.9	4.6	1.4	0.0	0.02	0.0	33.8	18.3
Aug 2025	27.2	0.00	10.1	3.3	0.8	0.0	0.02	0.0	31.7	16.9
Sept 2025	34.1	0.0	7.3	2.4	0.8	0.0	0.0	0.0	27.2	9.2


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Water discharge Quality data for the period 1st APRIL 2025 to 30th SEPTEMBER 2025

Parameter	pH	BOD	COD	Oil & Grease	Sulphide	TSS	Phenol
Spec. Limit	6-8.5	15	125	5	0.5	20	0.35
Unit	**	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
April - 2025	7.34	14.2	43.53	3.16	0.40	16.97	0.17
May – 2025	7.4	11.6	35	3.1	0.40	13	19.3
June - 2025	7.3	11.5	35	2.99	0.40	16.1	0.13
July - 2025	7.3	12	36	2.95	0.40	15	0.13
Aug - 2025	7.36	11.45	34.32	2.89	0.40	13.4	0.13
Sept - 2025	7.36	11.15	34.33	2.86	0.40	16.3	0.13

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**Bharat Petroleum Corporation Limited
Kochi Refinery**

FORM 4

[See rules 6(5), 13(8), 16(6) and 20(2)]

FORM FOR FILING ANNUAL RETURNS

[To be submitted to State Pollution Control Board by 30th day of June of every year for the preceding period April to March]

Statement for the Period 2025 -26

1. Name and address of facility	BPCL Kochi Refinery Post Bag No.2, Ambalamugal, Kochi, Kerala
2. Authorisation No. (CTO) and date of Issue	1. PCB/HO/EKM-II/ICO-R/03/2022 dated 05.02.2022, for the IREP units. 2. PCB/HO/EKM-2/ICO-R/07/2023 dated 08.08.2023, for the Old Refinery units 3. KSPCB/ER1/ICO/10039049/2023 dated 23/09/2023 for the Shore Tank Farm project. 4. KSPCB/ER2/ICO/10034459/2023 dated 18/10/2023 for Heat Traced Pipeline project. 5. PCB/HO/EKM-II/ICO-R/05/2022, dated 31/03/2022 for PDPP 6. PCB/HO/EKM-II/ICO-R/06/2022 dated 07/04/2022 for Motor Spirit Block project.
7. Name of the occupier / authorised person and full address with telephone no., fax number and e-mail	Chacko. M Jose Executive Director - BPCL Kochi Refinery Post Bag No.2, Ambalamugal, Kochi Ph: 0484-2722061 Extn: 1102 Fax: 0484 2721095
8. Production during the year (product wise), wherever applicable:	Total Feed charge 17656031 MT



**Bharat Petroleum Corporation Limited
Kochi Refinery**

Part A - To be filled by hazardous waste generators.

Part - A	To be filled by Hazardous category wise		
1	Total quantity Generated: Waste Category wise		
Sl. No:	Hazardous Waste item	Schedule & Category	Quantity in (MT)
1	PFCCU / FCCU Cat. Fines (On wet basis)	1-4.2	533.05
2	Oily Sludge: (Tank sludge) / shutdown sludge	1-4.1	578.885
3	Spent Charcoal	1- 4.2	28.38
4	Spent catalyst & Alumina Balls	1-4.2	81.51
5	Spent Resin from DM plant	**	12.47
6	FCCU & ARU spent clay	1-4.5	264.19
7	Contaminated Insulation wool	1-5.2	351.98
8	Soiled Sulphur waste	III- H4.1	344.55
9	Sulphur Guard N HGU / Chloride Guard	1-4.2	17.6
10	Poly propylene / poly Amide Filter element	1-22.2	31.03
11	Empty Chemical bags / drums	1-33.1	56.49
12	Non -Spec Acrylic Acid Polymer	1-22.2	228.55
13	Flue gas Contaminated Refractory Material	1-4.2	19.53
14	Bio-remediated sludge	**	92.77
15	Chemical / Oil Sludge from ETP	1-35.3	8373.82
Total (MT)			11014.805

** Not Classified as Hazardous waste



**Bharat Petroleum Corporation Limited
Kochi Refinery**

Part - A (2)	Quantity Dispatched		
	To Disposal Facility (TSDF)		
Sl. No:	Hazardous Waste item	Schedule & Category	Quantity in MT
1	PFCCU / FCCU Cat. Fines (On wet basis)	1-4.2	533.05
2	Oily Sludge: (Tank sludge) / shutdown sludge	1-4.1	578.885
3	Spent Charcoal	1- 4.2	28.38
4	Spent catalyst & Alumina Balls	1-4.2	81.51
5	Spent Resin from DM plant	**	12.47
6	FCCU & ARU spent clay	1-4.5	264.19
7	Contaminated Insulation wool	1-5.2	351.98
8	Soiled Sulphur waste	III- H4.1	344.55
9	Sulphur Guard N HGU / Chloride Guard	1-4.2	17.6
10	Poly propylene / poly Amide Filter element	I-22.2	31.03
11	Empty Chemical bags / drums	I-33.1	56.49
12	Non -Spec Acrylic Acid Polymer	I-22.2	228.55
13	Flue gas Contaminated Refractory Material	1-4.2	19.53
14	Bio-remediated sludge	**	92.77
	TOTAL		2640.985

Part - A (3)	Quantity Dispatched		
	To Recycler or Re-processor		
Sl. No:	Hazardous Waste item	Schedule & Category	Quantity in (MT)
1	NIL	N A	0.00
	TOTAL		0.00



**Bharat Petroleum Corporation Limited
Kochi Refinery**

Part - A	Quantity Dispatched		
(4)	To Others		
Sl. No:	Hazardous Waste item	Schedule & Category	Quantity in (MT)
1	NIL	N A	0
TOTAL			0

Part - A	Quantity Dispatched		
(5)	Consumed in-house / Storage		
Sl. No:	Hazardous Waste item: Re-processed in-house	Schedule & Category	Quantity in MT
1	Chemical / Oil Sludge from ETP to Delayed Coker Unit (DCU)	1-35.3	8373.82
TOTAL			8373.82
1	Quantity in storage at the end of the year	NA	0

Part B.

To be filled by Treatment, storage, and disposal facility operators -----N. A

1. Total quantity received -
2. Quantity in stock at the beginning of the year -
3. Quantity treated -
4. Quantity disposed in landfills as such and after treatment -
5. Quantity incinerated (if applicable) -
6. Quantity processed other than specified above -
7. Quantity in storage at the end of the year -

Part C.

To be filled by recyclers or co-processors or other users. -----N. A

1. Quantity of waste received during the year -
 - a. Domestic sources
 - b. imported (if applicable)
2. Quantity in stock at the beginning of the year -
3. Quantity recycled or co-processed or used -
4. Quantity of products dispatched (wherever applicable) -

5. Quantity of waste generated -
 6. Quantity of waste disposed -
 7. Quantity re-exported (wherever applicable)
 8. Quantity in storage at the end of the year
-

Signature of the Occupier or Authorized person of the Organization



Suresh K S

Dy. General Manager – HSE (Environment)

Date : 29.06.2026

Place : Ambalamugal



QUALITY CONTROL DEPARTMENT
BPCL-KOCHI REFINERY, AMBALAMUGAL

BOREWELL WATER TEST REPORT

Bore well Water-16

Date of Sample: 10.02.2026

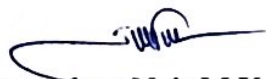
Date of Testing: 13.02.2026

KR. TECH.QC.26. BWEL.WATR

SI No	Test Parameters	Unit	Method	Result	Acceptable limit
1	pH	-	IS 3025 (P:11)	7.3	6.5 – 8.5
2	Oil	mg/L	IS 3025 (P:39)	Nil	nil
Metals					
3	Silver (as Ag)	mg/L	IS13428 Annex J	BDL (MDL=0.005)	0.1 (Max)
4	Aluminium (as Al)	mg/L	IS 3025 (P:55)	BDL(MDL=0.002)	0.03 (Max)
5	Boron (as B)	mg/L	IS 3025 (P:57)	BDL(MDL=0.01)	0.5 (Max)
6	Barium (as Ba)	mg/L	IS13428 Annex F	BDL(MDL=0.01)	0.7 (Max)
7	Calcium (as Ca)	mg/L	IS 3025 (P:40)	19	75 (Max)
8	Cadmium (as Cd)	mg/L	IS 3025 (P:41)	BDL(MDL=0.001)	0.003 (Max)
9	Chromium (as Cr)	mg/L	IS 3025 (P:52)	BDL(MDL=0.01)	0.05 (Max)
10	Copper (as Cu)	mg/L	IS 3025 (P:42)	BDL(MDL=0.01)	0.05 (Max)
11	Iron (as Fe)	mg/L	IS 3025 (P:53)	0.09	0.3 (Max)
12	Magnesium (as Mg)	mg/L	IS 3025 (P:46)	2.9	30 (Max)
26	Manganese (as Mn)	mg/L	IS 3025 (P:59)	BDL(MDL=0.01)	0.1 (Max)
13	Nickel (as Ni)	mg/L	IS 3025 (P:54)	BDL(MDL=0.01)	0.02 (Max)
14	Molybdenum (as Mo)	mg/L	IS 3025 (P:02)	BDL (MDL=0.002)	0.07 (Max)
15	Lead (as Pb)	mg/L	IS 3025 (P:47)	BDL(MDL=0.01)	0.01 (Max)
16	Zinc (as Zn)	mg/L	IS 3025 (P:49)	0.02	5 (Max)
17	Arsenic (as As)	mg/L	IS 3025 (P:37)	BDL(MDL0.005)	0.01 (Max)
18	Mercury (as Hg)	mg/L	IS 3025 (P:48)	BDL(MDL0.0001)	0.001(Max)
19	Selenium (as Se)	mg/L	IS 3025 (P:56)	BDL(MDL=0.001)	0.1 (Max)
20	Antimony (as Sb)	mg/L	APHA:3113B	BDL(MDL=0.001)	Max0.1

BDL: Below Detection Limit

MDL: Minimum Detection Limit


Jayendran Nair M K
Manager (Quality Control)



QUALITY CONTROL DEPARTMENT
BPCL-KOCHI REFINERY, AMBALAMUGAL

BOREWELL WATER TEST REPORT

Bore well Water-26

Date of Sample: 09.01.2026

Date of Testing: 12.01.2026

KR. TECH.QC.26. BWEL.WATR

Sl No	Test Parameters	Unit	Method	Result	Acceptable limit
1	pH	-	IS 3025 (P:11)	7.2	6.5 – 8.5
2	Oil	mg/L	IS 3025 (P:39)	Nil	nil
Metals					
3	Silver (as Ag)	mg/L	IS13428 Annex J	BDL (MDL=0.005)	0.1 (Max)
4	Aluminium (as Al)	mg/L	IS 3025 (P:55)	BDL(MDL=0.002)	0.03 (Max)
5	Boron (as B)	mg/L	IS 3025 (P:57)	BDL(MDL=0.01)	0.5 (Max)
6	Barium (as Ba)	mg/L	IS13428 Annex F	BDL(MDL=0.01)	0.7 (Max)
7	Calcium (as Ca)	mg/L	IS 3025 (P:40)	24	75 (Max)
8	Cadmium (as Cd)	mg/L	IS 3025 (P:41)	BDL(MDL=0.001)	0.003 (Max)
9	Chromium (as Cr)	mg/L	IS 3025 (P:52)	BDL(MDL=0.01)	0.05 (Max)
10	Copper (as Cu)	mg/L	IS 3025 (P:42)	BDL(MDL=0.01)	0.05 (Max)
11	Iron (as Fe)	mg/L	IS 3025 (P:53)	0.14	0.3 (Max)
12	Magnesium (as Mg)	mg/L	IS 3025 (P:46)	2.7	30 (Max)
26	Manganese (as Mn)	mg/L	IS 3025 (P:59)	BDL(MDL=0.01)	0.1 (Max)
13	Nickel (as Ni)	mg/L	IS 3025 (P:54)	BDL(MDL=0.01)	0.02 (Max)
14	Molybdenum (as Mo)	mg/L	IS 3025 (P:02)	BDL (MDL=0.002)	0.07 (Max)
15	Lead (as Pb)	mg/L	IS 3025 (P:47)	BDL(MDL=0.01)	0.01 (Max)
16	Zinc (as Zn)	mg/L	IS 3025 (P:49)	0.03	5 (Max)
17	Arsenic (as As)	mg/L	IS 3025 (P:37)	BDL(MDL0.005)	0.01 (Max)
18	Mercury (as Hg)	mg/L	IS 3025 (P:48)	BDL(MDL0.0001)	0.001(Max)
19	Selenium (as Se)	mg/L	IS 3025 (P:56)	BDL(MDL=0.001)	0.1 (Max)
20	Antimony (as Sb)	mg/L	APHA:3113B	BDL(MDL=0.001)	Max0.1

BDL: Below Detection Limit

MDL: Minimum Detection Limit


Jayendran Nair M K
Manager (Quality Control)



**QUALITY CONTROL DEPARTMENT
BPCL-KOCHI REFINERY, AMBALAMUGAL**

BOREWELL WATER TEST REPORT

Bore well Water-12

Date of Sample: 28.01.2026

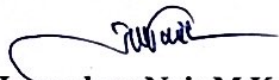
Date of Testing: 31.01.2026

KR. TECH.QC.26. BWEL.WATR

Sl No	Test Parameters	Unit	Method	Result	Acceptable limit
1	pH	-	IS 3025 (P:11)	6.9	6.5 – 8.5
2	Oil	mg/L	IS 3025 (P:39)	Nil	nil
Metals					
3	Silver (as Ag)	mg/L	IS13428 Annex J	BDL (MDL=0.005)	0.1 (Max)
4	Aluminium (as Al)	mg/L	IS 3025 (P:55)	BDL(MDL=0.002)	0.03 (Max)
5	Boron (as B)	mg/L	IS 3025 (P:57)	BDL(MDL=0.01)	0.5 (Max)
6	Barium (as Ba)	mg/L	IS13428 Annex F	BDL(MDL=0.01)	0.7 (Max)
7	Calcium (as Ca)	mg/L	IS 3025 (P:40)	18	75 (Max)
8	Cadmium (as Cd)	mg/L	IS 3025 (P:41)	BDL(MDL=0.001)	0.003 (Max)
9	Chromium (as Cr)	mg/L	IS 3025 (P:52)	BDL(MDL=0.01)	0.05 (Max)
10	Copper (as Cu)	mg/L	IS 3025 (P:42)	BDL(MDL=0.01)	0.05 (Max)
11	Iron (as Fe)	mg/L	IS 3025 (P:53)	0.11	0.3 (Max)
12	Magnesium (as Mg)	mg/L	IS 3025 (P:46)	3.0	30 (Max)
26	Manganese (as Mn)	mg/L	IS 3025 (P:59)	BDL(MDL=0.01)	0.1 (Max)
13	Nickel (as Ni)	mg/L	IS 3025 (P:54)	BDL(MDL=0.01)	0.02 (Max)
14	Molybdenum (as Mo)	mg/L	IS 3025 (P:02)	BDL (MDL=0.002)	0.07 (Max)
15	Lead (as Pb)	mg/L	IS 3025 (P:47)	BDL(MDL=0.01)	0.01 (Max)
16	Zinc (as Zn)	mg/L	IS 3025 (P:49)	0.03	5 (Max)
17	Arsenic (as As)	mg/L	IS 3025 (P:37)	BDL(MDL0.005)	0.01 (Max)
18	Mercury (as Hg)	mg/L	IS 3025 (P:48)	BDL(MDL0.0001)	0.001(Max)
19	Selenium (as Se)	mg/L	IS 3025 (P:56)	BDL(MDL=0.001)	0.1 (Max)
20	Antimony (as Sb)	mg/L	APHA:3113B	BDL(MDL=0.001)	Max0.1

BDL: Below Detection Limit

MDL: Minimum Detection Limit


Jayendran Nair M K
 Manager (Quality Control)



QUALITY CONTROL DEPARTMENT
BPCL-KOCHI REFINERY, AMBALAMUGAL

BOREWELL WATER TEST REPORT

Bore well Water-44

Date of Sample: 07.11.2025

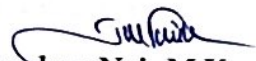
Date of Testing: 10.11.2025

KR. TECH.QC.26. DRINK.WATR

Sl No	Test Parameters	Unit	Method	Result	Acceptable limit
1	pH	-	IS 3025 (P:11)	6.9	6.5 – 8.5
2	Oil	mg/L	IS 3025 (P:39)	nil	nil
Metals					
3	Silver (as Ag)	mg/L	IS13428 Annex J	BDL (MDL=0.005)	0.1 (Max)
4	Aluminium (as Al)	mg/L	IS 3025 (P:55)	BDL(MDL=0.002)	0.03 (Max)
5	Boron (as B)	mg/L	IS 3025 (P:57)	BDL(MDL=0.01)	0.5 (Max)
6	Barium (as Ba)	mg/L	IS13428 Annex F	BDL(MDL=0.01)	0.7 (Max)
7	Calcium (as Ca)	mg/L	IS 3025 (P:40)	20	75 (Max)
8	Cadmium (as Cd)	mg/L	IS 3025 (P:41)	BDL(MDL=0.001)	0.003 (Max)
9	Chromium (as Cr)	mg/L	IS 3025 (P:52)	BDL(MDL=0.01)	0.05 (Max)
10	Copper (as Cu)	mg/L	IS 3025 (P:42)	BDL(MDL=0.01)	0.05 (Max)
11	Iron (as Fe)	mg/L	IS 3025 (P:53)	0.12	0.3 (Max)
12	Magnesium (as Mg)	mg/L	IS 3025 (P:46)	1.9	30 (Max)
26	Manganese (as Mn)	mg/L	IS 3025 (P:59)	BDL(MDL=0.01)	0.1 (Max)
13	Nickel (as Ni)	mg/L	IS 3025 (P:54)	BDL(MDL=0.01)	0.02 (Max)
14	Molybdenum (as Mo)	mg/L	IS 3025 (P:02)	BDL (MDL=0.002)	0.07 (Max)
15	Lead (as Pb)	mg/L	IS 3025 (P:47)	BDL(MDL=0.01)	0.01 (Max)
16	Zinc (as Zn)	mg/L	IS 3025 (P:49)	0.03	5 (Max)
17	Arsenic (as As)	mg/L	IS 3025 (P:37)	BDL(MDL0.005)	0.01 (Max)
18	Mercury (as Hg)	mg/L	IS 3025 (P:48)	BDL(MDL0.0001)	0.001(Max)
19	Selenium (as Se)	mg/L	IS 3025 (P:56)	BDL(MDL=0.001)	0.1 (Max)
20	Antimony (as Sb)	mg/L	APHA:3113B	BDL(MDL=0.001)	Max0.1

BDL: Below Detection Limit

MDL: Minimum Detection Limit


Jayendran Nair M K
Manager (Quality Control)



QUALITY CONTROL DEPARTMENT
BPCL-KOCHI REFINERY, AMBALAMUGAL

BOREWELL WATER TEST REPORT

Bore well Water-31

Date of Sample: 11.10.2025

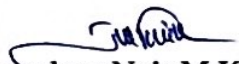
Date of Testing: 13.10.2025

KR. TECH.QC.26. DRINK.WATR

Sl No	Test Parameters	Unit	Method	Result	Acceptable limit
1	pH	-	IS 3025 (P:11)	7.4	6.5 – 8.5
2	Oil	mg/L	IS 3025 (P:39)	Nil	nil
Metals					
3	Silver (as Ag)	mg/L	IS13428 Annex J	BDL (MDL=0.005)	0.1 (Max)
4	Aluminium (as Al)	mg/L	IS 3025 (P:55)	BDL(MDL=0.002)	0.03 (Max)
5	Boron (as B)	mg/L	IS 3025 (P:57)	BDL(MDL=0.01)	0.5 (Max)
6	Barium (as Ba)	mg/L	IS13428 Annex F	BDL(MDL=0.01)	0.7 (Max)
7	Calcium (as Ca)	mg/L	IS 3025 (P:40)	22	75 (Max)
8	Cadmium (as Cd)	mg/L	IS 3025 (P:41)	BDL(MDL=0.001)	0.003 (Max)
9	Chromium (as Cr)	mg/L	IS 3025 (P:52)	BDL(MDL=0.01)	0.05 (Max)
10	Copper (as Cu)	mg/L	IS 3025 (P:42)	BDL(MDL=0.01)	0.05 (Max)
11	Iron (as Fe)	mg/L	IS 3025 (P:53)	0.09	0.3 (Max)
12	Magnesium (as Mg)	mg/L	IS 3025 (P:46)	2.8	30 (Max)
26	Manganese (as Mn)	mg/L	IS 3025 (P:59)	BDL(MDL=0.01)	0.1 (Max)
13	Nickel (as Ni)	mg/L	IS 3025 (P:54)	BDL(MDL=0.01)	0.02 (Max)
14	Molybdenum (as Mo)	mg/L	IS 3025 (P:02)	BDL (MDL=0.002)	0.07 (Max)
15	Lead (as Pb)	mg/L	IS 3025 (P:47)	BDL(MDL=0.01)	0.01 (Max)
16	Zinc (as Zn)	mg/L	IS 3025 (P:49)	0.04	5 (Max)
17	Arsenic (as As)	mg/L	IS 3025 (P:37)	BDL(MDL0.005)	0.01 (Max)
18	Mercury (as Hg)	mg/L	IS 3025 (P:48)	BDL(MDL0.0001)	0.001(Max)
19	Selenium (as Se)	mg/L	IS 3025 (P:56)	BDL(MDL=0.001)	0.1 (Max)
20	Antimony (as Sb)	mg/L	APHA:3113B	BDL(MDL=0.001)	Max0.1

BDL: Below Detection Limit

MDL: Minimum Detection Limit


Jayendran Nair M K
Manager (Quality Control)



Bharat Petroleum Corporation Limited - Kochi Refinery
Post Bag No: 2, Ambalamugal – 682302

15.11.2025

Effluent monitoring report for the Period 01.10.2025 to 31.10.2025 attached herewith.

A. Treated Effluent Standards

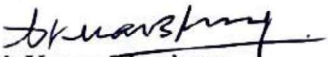
Sl. No.	Characteristics	unit	Tolerance limit for Outlet - A (max.)	Tolerance limit for Outlet - B (max.)	Outlet Results	Reason for Non-conformity	Action taken proposed to comply with consent conditions and expected date of achievement
1	pH	**	6.0 – 8.5	6.0 – 8.5	Effluent analysis report is given in the first part of the report.	All consent conditions are satisfied.	Not Applicable
2	Suspended Solids	mg. /lit.	20	100			
3	BOD (3 days @27 °C)	mg. /lit.	15	30			
4	Sulfides	mg. /lit.	0.5	--			
5	Phenols	mg. /lit.	0.35	--			
6	Oil & Grease	mg. /lit.	5	10			

B. Effluent Discharged.

	Limit m3 / day	Measurement m3/day (avg.)	Mode of measurement	Reason for Non-conformity	Action taken / proposed to Comply with consent condition and Expected date of Completion
Outlet - A	9848.50	6836	Rectangular Weir type.	Complied	Nil
Outlet - B	50	0	Flow meter	N. A	Discharge is zero as Chullichira Water treatment plant is not in operation.

C. Any other matter to be reported: Only treated Effluents are discharged through Outlet - A & Outlet – B

Signature, Name and Designation of Occupier / Authorized Officer:


Santosh Kumar Varshney
DY. GENERAL MANAGER – HSE (ENVIRONMENT)

Treated Effluent Water Analysis Report for the Month of October 2025

ULR No. TC148142500006603F

Issue Date 20-10-2025

Issued To

M/s Bharat Petroleum Corporation Limited

Kochi Refinery

Ambalamugal, Kochi, Pin-682 302

Ref. No.: PO. No. 4601005329 dated 07.03.2024

Sampling done by Nitya Laboratories

Sl. No:	Parameter	Unit	Value reported	Limits as per notification-GSR 186 (E) dt. 18.03.2008	Test Method
1	pH	**	7.72	6 - 8.5	IS:3025 (P-11)
2	Oil & Grease	mg/l	ND	5.0	IS:3025 (P-39)
3	BOD (3days) 27°C	mg/l	6	15.0	IS:3025 (P-44)
4	Total Suspended Solids (TSS)	mg/l	14	20.0	IS:3025 (P-17)
5	Phenols	mg/l	ND	0.4	IS:3025 (P-43)
6	Sulfides	mg/l	ND	0.5	IS:3025 (P-29)
7	Chemical Oxygen Demand (COD)	mg/l	34	125.0	IS:3025 (P-58)
8	Cyanide (CN)	mg/l	ND	0.2	IS:3025 (P-27)
9	Ammonia as Nitrogen	mg/l	0.19	15.0	IS:3025 (P-34)
10	Total Kjeldahl Nitrogen (TKN)	mg/l	0.28	40.0	IS:3025 (P-34)
11	Phosphate (P)	mg/l	ND	3.0	IS:3025 (P-31)
12	Chromium (Cr) (Hexavalent)	mg/l	ND	0.1	APHA 23 rd Ed.
13	Chromium (Cr) (Total)	mg/l	ND	2.0	APHA 23 rd Ed.
14	Lead (Pb)	mg/l	ND	0.1	APHA 23 rd Ed.
15	Mercury (Hg)	mg/l	ND	0.0	APHA 23 rd Ed.
16	Zinc (Zn)	mg/l	0.12	5.0	APHA 23 rd Ed.
17	Nickel (Ni)	mg/l	ND	1.0	APHA 23 rd Ed.
18	Copper Cu	mg/l	ND	1.0	APHA 23 rd Ed.

Remark: ND-Not Detected, DL-Detection Limit

End of the Report.....



TC-14814



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CORPORATE OFFICE & CENTRAL LABORATORIES :-

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labsnitya@gmail.com

www.nityalab.com

Treated Effluent Water Analysis Report for the Month of October 2025

Test Report No. 202510090110	Issued To
Issue Date: 20-10-2025	M/s Bharat Petroleum Corporation Limited
	Kochi Refinery
	Ambalamugal, Kochi, Pin-682 302
Ref. No.: PO. No. 4601005329 dated 07.03.2024	
Sampling done by: Nitya Laboratories	

Sl. No:	Parameter	Unit	Value reported	Limits as per notification-GSR 186 (E) dt. 18.03.2008	Test Method
1	Vanadium (V)	mg/l	ND	0.2	IS:3025 (P-56)
2	Benzene	mg/l	ND	100.0	USEPA-8270C
3	Benzo (a) - Pyrene	mg/l	ND	200.0	USEPA-8270C

Remark: ND-Not Detected, DL-Detection Limit

..... End of the Report.....

(AUTHORISED SIGNATORY)
(RAVINDER MITTAL)

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CORPORATE OFFICE & CENTRAL LABORATORIES :-

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QUALITY CONTROL LABORATORY
Bharat Petroleum Corporation Ltd
KOCHI REFINERY

Report of Analysis of Treated Effluent water from Outlet A for the month of October 2025.

Sl. No.	Characteristics	DATE & RESULT																															
		Tolerance Limit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1	p ^H	6 to 8.5	7.90	8.30	8.30	7.60	7.80	7.50	7.30	7.70	7.60	7.70	7.80	7.00	7.20	7.40	7.40	7.40	7.70	7.50	7.60	7.50	7.80	7.90	7.40	7.90	7.60	8.30	7.80	7.20	7.60	7.70	7.60
2	Sulphides (as S)	0.5 mg/l Max	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
3	COD	125mg/mlMax	34	38	32	38	40	37	36	34	39	41	36	32	36	38	36	34	36	32	35	34	34	32	34	32	33	39	37	35	36	34	35
4	Cyanide	0.2mg/l Max	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
5	Suspended Solids	20 mg/l Max	19	8	10	12	14	19	16	18	17	18	17	15	18	17	14	17	18	20	19	18	18	17	16	18	17	18	18	15	18	14	14
6	Oil & Grease	5 mg/l Max	3.0	2.6	3.0	3.2	3.0	3.1	3.0	2.8	2.6	2.4	3.0	3.0	3.0	2.8	3.2	3.0	3.0	2.8	2.8	3.0	2.8	3.0	2.8	3.0	3.0	3.0	2.8	3.2	3.0	3.2	3.2
7	B.O.D (3 days @ 27°C)	15 mg/l Max	10	12	10	12	12	12	12	12	11	12	12	10	12	12	12	10	12	11	12	11	11	11	10	10	11	13	12	11	12	12	12
8	Phenolic Compounds	0.35 mg/l Max	0.13	0.10	0.12	0.14	0.12	0.14	0.13	0.14	0.13	0.12	0.12	0.13	0.13	0.13	0.13	0.13	0.14	0.12	0.13	0.12	0.13	0.14	0.12	0.14	0.13	0.13	0.12	0.14	0.13	0.13	0.13

Saleev.b
Saleev.b
Chief Manager (QC)
BPCL-Kochi Refinery
Ambalamugal - 682302.



Bharat Petroleum Corporation Limited - Kochi Refinery
Post Bag No: 2, Ambalamugal – 682302

15.12.2025

Effluent monitoring report for the Period 01.11.2025 to 30.11.2025 attached herewith.

A. Treated Effluent Standards

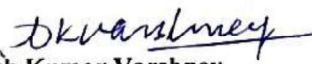
Sl. No.	Characteristics	unit	Tolerance limit for Outlet - A (max.)	Tolerance limit for Outlet - B (max.)	Outlet Results	Reason for Non-conformity	Action taken proposed to comply with consent conditions and expected date of achievement
1	pH	**	6.0 – 8.5	6.0 – 8.5	Effluent analysis report is given in the first part of the report.	All consent conditions are satisfied.	Not Applicable
2	Suspended Solids	mg. /lit.	20	100			
3	BOD (3 days @27 °C)	mg. /lit.	15	30			
4	Sulfides	mg. /lit.	0.5	--			
5	Phenols	mg. /lit.	0.35	--			
6	Oil & Grease	mg. /lit.	5	10			

B. Effluent Discharged.

	Limit m3 / day	Measurement m3/day (avg.)	Mode of measurement	Reason for Non-conformity	Action taken / proposed to Comply with consent condition and Expected date of Completion
Outlet - A	9848.50	6426	Rectangular Weir type.	Complied	Nil
Outlet - B	50	0	Flow meter	N. A	Discharge is zero as Chullichira Water treatment plant is not in operation.

C. Any other matter to be reported: Only treated Effluents are discharged through Outlet - A & Outlet – B

Signature, Name and Designation of Occupier / Authorized Officer:


Santosh Kumar Varshney
DY. GENERAL MANAGER – HSE (ENVIRONMENT)



QUALITY CONTROL LABORATORY
Bharat Petroleum Corporation Ltd
KOCHI REFINERY

Report of Analysis of Treated Effluent water from Outlet A for the month of November 2025.

Sl No.	Characteristics	DATE & RESULT																															
		Tolerance Limit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
1	p ^H	6 to 8.5	8.50	8.40	8.30	7.40	7.50	7.60	7.80	7.80	8.40	7.80	7.60	8.10	7.40	7.90	7.80	7.50	7.50	7.90	8.30	7.50	8.10	8.10	8.10	8.20	8.10	8.20	8.30	8.40	8.40	8.30	8.40
2	Sulphides (as S)	0.5 mg/l Max	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	
3	COD	125mgm/lMax	36	34	33	34	35	33	34	35	33	36	34	33	36	32	34	36	33	34	34	33	32	36	32	32	34	34	32	34	32	34	38
4	Cyanide	0.2mg/l Max	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
5	Suspended Solids	20 mg/l Max	18	18	17	18	18	19	19	18	18	14	18	19	17	16	18	13	7	12	14	19	10	19	18	18	17	12	17	14	8	13	
6	Oil & Grease	5 mg/l Max	3.0	3.0	3.0	3.2	3.0	3.2	2.8	3.0	3.0	2.8	3.0	3.2	3.0	2.8	2.8	3.0	2.8	3.0	3.0	2.8	2.8	3.0	3.0	3.0	2.8	2.8	2.8	2.8	3.0	2.8	
7	B.O.D (3 days @ 27°C)	15 mg/l Max	12	11	11	11	12	11	11	12	11	12	11	11	10	10	11	12	13	11	11	10	11	12	10	11	12	10	11	11	11	12	
8	Phenolic Compounds	0.35 mg/l Max	0.13	0.14	0.13	0.14	0.14	0.13	0.14	0.13	0.14	0.12	0.14	0.13	0.13	0.12	0.14	0.13	0.14	0.12	0.12	0.14	0.13	0.12	0.13	0.12	0.13	0.14	0.12	0.10	0.10	0.12	

Saleev.D
Chief Manager (QC)
BPCL-Kochi Refinery
Ambalamugal - 682302.

Treated Effluent Water Analysis Report for the Month of November 2025

ULR No. TC148142500007721F

Issue Date: 08-12-2025

Issued To

M/s Bharat Petroleum Corporation Limited

Kochi Refinery

Ambalamugal, Kochi, Pin-682 302

Ref. No.: PO. No. 4601005329 dated 07.03.2024

Sampling done by: Nitya Laboratories

Sl. No:	Parameter	Unit	Value reported	Limits as per notification-GSR 186 (E) dt. 18.03.2008	Test Method
1	pH	**	7.66	6 - 8.5	IS:3025 (P-11)
2	Oil & Grease	mg/l	ND	5.0	IS:3025 (P-39)
3	BOD (3days) 27°C	mg/l	7	15.0	IS:3025 (P-44)
4	Total Suspended Solids (TSS)	mg/l	16	20.0	IS:3025 (P-17)
5	Phenols	mg/l	ND	0.4	IS:3025 (P-43)
6	Sulfides	mg/l	ND	0.5	IS:3025 (P-29)
7	Chemical Oxygen Demand (COD)	mg/l	38	125.0	IS:3025 (P-58)
8	Cyanide (CN)	mg/l	ND	0.2	IS:3025 (P-27)
9	Ammonia as Nitrogen	mg/l	0.21	15.0	IS:3025 (P-34)
10	Total Kjeldahl Nitrogen (TKN)	mg/l	0.31	40.0	IS:3025 (P-34)
11	Phosphate (P)	mg/l	ND	3.0	IS:3025 (P-31)
12	Chromium (Cr) (Hexavalent)	mg/l	ND	0.1	APHA 23 rd Ed.
13	Chromium (Cr) (Total)	mg/l	ND	2.0	APHA 23 rd Ed.
14	Lead (Pb)	mg/l	ND	0.1	APHA 23 rd Ed.
15	Mercury (Hg)	mg/l	ND	0.0	APHA 23 rd Ed.
16	Zinc (Zn)	mg/l	0.10	5.0	APHA 23 rd Ed.
17	Nickel (Ni)	mg/l	ND	1.0	APHA 23 rd Ed.
18	Copper Cu)	mg/l	ND	1.0	APHA 23 rd Ed.

Remark: ND-Not Detected, DL-Detection Limit

..... End of the Report.....



NOTE: The laboratory accepts the responsibility for contents of report. The results contained in the test report related only to the sample tested. Test report shall not be reproduced or used in any manner without written approval of the laboratory. This report is intended only for your guidance and not for legal purpose or for advertisement. This report shall not be reproduced except in full without the written approval of this organization. Samples will be destroyed after 30 days from the date of issue of test certificate unless otherwise specified. Any complaints about this report should be communicated in writing within 7 days of issue of this report. Total liability of Nitya Laboratories is limited to the amount payable. If you have any complaints/feedback regarding the sample collection/testing/test report, please send an email at info@nityalab.com and call at +91-191-2465597, +91-9673924092

CORPORATE OFFICE & CENTRAL LABORATORIES :-

43, PLOT NO. 118, CHURCH ROAD, BEHIND KAUSIK VATIKA, BHAGAT SINGH COLONY, BALLABHGARH, FARIDABAD - 121004, HARYANA, INDIA

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Treated Effluent Water Analysis Report for the Month of November 2025

Test Report No. 202511280110	Issued To
Issue Date: 08-12-2025	M/s Bharat Petroleum Corporation Limited
	Kochi Refinery
	Ambalamugal, Kochi, Pin-682 302
Ref. No.: PO. No. 4601005329 dated 07.03.2024	
Sampling done by: Nitya Laboratories	

Sl. No:	Parameter	Unit	Value reported	Limits as per notification-GSR 186 (E) dt. 18.03.2008	Test Method
1	Vanadium (V)	mg/l	ND	0.2	IS:3025 (P-56)
2	Benzene	mg/l	ND	100.0	USEPA-8270C
3	Benzo (a) - Pyrene	mg/l	ND	200.0	USEPA-8270C

Remarks: ND-Not Detected, DL-Detection Limit

..... End of the Report.....

(AUTHORISED SIGNATORY)
(RAVINDER MITTAL)

NOTE: The laboratory accepts the responsibility for content of report. The results contained in this test report related only to the sample tested. Test report shall not be reproduced except in full without the written approval of this organization. Samples will be destroyed after 30 days from the date of issue of test certificate unless otherwise specified. Any complaints about this report should be communicated in writing within 7 days of issue of this report. Total liability of Nitya Laboratories is limited to the amount of the invoice. If you have any complaint/feedback regarding the sample collection/testing/test report, please send an email at info@nityalab.com and call at +91-191-2465597, +91-9873924093

CORPORATE OFFICE & CENTRAL LABORATORIES :-

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Bharat Petroleum Corporation Limited - Kochi Refinery
Post Bag No: 2, Ambalamugal – 682302

15.01.2026

Effluent monitoring report for the Period 01.12.2025 to 31.12.2025 attached herewith.

A. Treated Effluent Standards

Sl. No.	Characteristics	unit	Tolerance limit for Outlet - A (max.)	Tolerance limit for Outlet - B (max.)	Outlet Results	Reason for Non-conformity	Action taken proposed to comply with consent conditions and expected date of achievement
1	pH	**	6.0 – 8.5	6.0 – 8.5	Effluent analysis report is given in the first part of the report.	All consent conditions are satisfied.	Not Applicable
2	Suspended Solids	mg. /lit.	20	100			
3	BOD (3 days @27 °C)	mg. /lit.	15	30			
4	Sulfides	mg. /lit.	0.5	--			
5	Phenols	mg. /lit.	0.35	--			
6	Oil & Grease	mg. /lit.	5	10			

B. Effluent Discharged.

	Limit m3 / day	Measurement m3/day (avg.)	Mode of measurement	Reason for Non-conformity	Action taken / proposed to Comply with consent condition and Expected date of Completion
Outlet - A	9848.50	6371	Rectangular Weir type.	Complied	Nil
Outlet - B	50	0	Flow meter	N. A	Discharge is zero as Chullichira Water treatment plant is not in operation.

C. Any other matter to be reported: Only treated Effluents are discharged through Outlet - A & Outlet – B

Signature, Name and Designation of Occupier / Authorized Officer:

Santosh Kumar Varshney
DY. GENERAL MANAGER – HSE (ENVIRONMENT)

Treated Effluent Water Analysis Report for the Month of December 2025

ULR No. TC148142500007900F
Issue Date 19-12-2025

Issued To
M/s Bharat Petroleum Corporation Limited
Kochi Refinery
Ambalamugal, Kochi, Pin-682 302

Ref. No.: PO. No. 4601005329 dated 07.03.2024

Sampling done by: Nitya Laboratories

Sl. No:	Parameter	Unit	Value reported	Limits as per notification-GSR 186 (E) dt. 18.03.2008	Test Method
1	pH	**	7.74	6 - 8.5	IS 3025 (P-11)
2	Oil & Grease	mg/l	ND	5.0	IS 3025 (P-39)
3	BOD (3days) 27°C	mg/l	6	15.0	IS 3025 (P-44)
4	Total Suspended Solids (TSS)	mg/l	18	20.0	IS 3025 (P-17)
5	Phenols	mg/l	ND	0.4	IS 3025 (P-43)
6	Sulfides	mg/l	ND	0.5	IS 3025 (P-29)
7	Chemical Oxygen Demand (COD)	mg/l	30	125.0	IS 3025 (P-58)
8	Cyanide (CN)	mg/l	ND	0.2	IS 3025 (P-27)
9	Ammonia as Nitrogen	mg/l	0.40	15.0	IS 3025 (P-34)
10	Total Kjeldahl Nitrogen (TKN)	mg/l	0.56	40.0	IS 3025 (P-34)
11	Phosphate (P)	mg/l	ND	3.0	IS 3025 (P-31)
12	Chromium (Cr) (Hexavalent)	mg/l	ND	0.1	APHA 23 rd Ed.
13	Chromium (Cr) (Total)	mg/l	ND	2.0	APHA 23 rd Ed.
14	Lead (Pb)	mg/l	ND	0.1	APHA 23 rd Ed.
15	Mercury (Hg)	mg/l	ND	0.0	APHA 23 rd Ed.
16	Zinc (Zn)	mg/l	0.14	5.0	APHA 23 rd Ed.
17	Nickel (Ni)	mg/l	ND	1.0	APHA 23 rd Ed.
18	Copper Cu	mg/l	ND	1.0	APHA 23 rd Ed.

Remark: ND-Not Detected, DL-Defection Limit

..... End of the Report



NOTE: The laboratory accepts the responsibility for content of report. The results contained in this test report related only to the sample tested. Test report shall not be reproduced except in full, without written approval of the laboratory. This report is intended only for your guidance and not for legal purpose or for advertisement. This report shall not be reproduced except in full without the written approval of this organization. Samples will be destroyed after 30 days from the date of issue of test certificate unless otherwise specified. Any complaints about this report should be communicated in writing within 7 days of issue of this report. Total liability of Nitya Laboratories is limited to the amount paid for the test. If you have any complaint/feedback regarding the sample collection/testing/test report, please send an email at info@nityalab.com and call at +91-191-2465597, +91-9873924093

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Treated Effluent Water Analysis Report for the Month of December 2025

Test Report No. 202512100110

Issue Date: 19-12-2025

Issued To

M/s Bharat Petroleum Corporation Limited

Kochi Refinery

Ambalamugal, Kochi, Pin-682 302

Ref. No.: PO. No. 4601005329 dated 07.03.2024

Sampling done by: Nitya Laboratories

Sl. No:	Parameter	Unit	Value reported	Limits as per notification-GSR 186 (E) dt. 18.03.2008	Test Method
1	Vanadium (V)	mg/l	ND	0.2	IS 3025 (P-56)
2	Benzene	mg/l	ND	100.0	USEPA-8270C
3	Benzo (a) - Pyrene	mg/l	ND	200.0	USEPA-8270C

Remark:

ND-Not Detected, DL-Detection Limit

..... End of the Report.....



NOTE: The laboratory accepts the responsibility for content of report. The results contained in this test report related only to the sample tested. Test report shall not be reproduced except in full, without written approval of the laboratory. This report is intended only for your guidance and not for legal purpose or for advertisement. This report shall not be reproduced except in full without the written approval of the organization. Samples will be destroyed after 30 days from the date of issue of test certificate unless otherwise specified. Any complaints about this report should be communicated in writing within 7 days of issue of this report. Total liability of Nitya Laboratories is limited to the amount paid only. If you have any complaint/feedback regarding the sample collection/testing/test report, please send an email at info@nityalab.com and call at +91-191-2465597, +91-8873524093

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QUALITY CONTROL LABORATORY
Bharat Petroleum Corporation Ltd
KOCHI REFINERY

Report of Analysis of Treated Effluent water from Outlet A for the month of December 2025.

Sl. No.	Characteristics	Tolerance Limit	DATE & RESULT																																
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
1	p ^H	6 to 8.5	7.80	7.90	7.80	7.60	8.00	8.00	7.70	8.10	8.30	7.80	7.70	7.90	7.50	8.10	7.80	7.90	8.00	8.10	8.20	8.20	8.20	8.20	7.80	8.20	7.70	7.40	7.80	8.40	7.80	7.90	8.00	7.50	
2	Sulphides (as S)	0.5 mg/l Max	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	
3	COD	125mgm/lMax	34	36	33	38	34	36	34	36	33	34	36	34	36	34	36	35	38	36	32	34	36	32	30	32	30	32	30	32	30	32	30	32	30
4	Cyanide	0.2mg/l Max	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
5	Suspended Solids	20 mg/l Max	19	8	19	19	13	19	18	19	16	13	13	18	19	12	19	19	18	12	14	19	18	15	19	17	16	14	19	18	19	18	18	18	
6	Oil & Grease	5 mg/l Max	2.8	3.0	3.0	2.8	3.0	2.8	3.0	2.8	2.8	3.0	3.2	3.0	2.8	3.0	3.0	3.2	3.0	2.8	2.4	2.6	2.8	3.0	2.8	2.6	2.8	3.0	2.8	2.6	2.8	3.0	2.8	2.8	
7	B.O.D (3 days @ 27°C)	15 mg/l Max	11	12	11	12	11	12	11	12	11	11	12	11	12	11	12	11	12	12	11	11	12	11	10	9	10	11	10	11	10	11	10	11	10
8	Phenolic Compounds	0.35 mg/l Max	0.13	0.11	0.13	0.11	0.12	0.10	0.11	0.12	0.12	0.11	0.12	0.12	0.11	0.11	0.10	0.11	0.10	0.12	0.11	0.10	0.11	0.12	0.12	0.11	0.10	0.13	0.12	0.11	0.12	0.13	0.13	0.12	


 Sajeev.D
 Chief Manager (QC)
 BPCL-Kochi Refinery
 Ambalamugal - 682302.



Bharat Petroleum Corporation Limited - Kochi Refinery
Post Bag No: 2, Ambalamugal – 682302

16.02.2026

Effluent monitoring report for the Period 01.01.2026 to 31.01.2026 attached herewith.

A. Treated Effluent Standards

Sl. No.	Characteristics	unit	Tolerance limit for Outlet - A (max.)	Tolerance limit for Outlet - B (max.)	Outlet Results	Reason for Non-conformity	Action taken proposed to comply with consent conditions and expected date of achievement
1	pH	**	6.0 – 8.5	6.0 – 8.5	Effluent analysis report is given in the first part of the report.	All consent conditions are satisfied.	Not Applicable
2	Suspended Solids	mg. /lit.	20	100			
3	BOD (3 days @27 °C)	mg. /lit.	15	30			
4	Sulfides	mg. /lit.	0.5	--			
5	Phenols	mg. /lit.	0.35	--			
6	Oil & Grease	mg. /lit.	5	10			

B. Effluent Discharged.

	Limit m3 / day	Measurement m3/day (avg.)	Mode of measurement	Reason for Non-conformity	Action taken / proposed to Comply with consent condition and Expected date of Completion
Outlet - A	9848.50	6418	Rectangular Weir type.	Complied	Nil
Outlet - B	50	0	Flow meter	N. A	Discharge is zero as Chullichira Water treatment plant is not in operation.

C. Any other matter to be reported: Only treated Effluents are discharged through Outlet - A & Outlet – B

Signature, Name and Designation of Occupier / Authorized Officer:

Santosh Kumar Varshney
DY. GENERAL MANAGER – HSE (ENVIRONMENT)

Treated Effluent Water Analysis Report for the Month of January 2026

ULR No. TC14814260000402F

Issue Date: 09-02-2026

Issued To

M/s Bharat Petroleum Corporation Limited

Kochi Refinery

Ambalamugal, Kochi, Pin-682 302

Ref. No.: PO. No. 4601005329 dated 07.03.2024

Sampling done by: Nitya Laboratories

Sl. No:	Parameter	Unit	Value reported	Limits as per notification-GSR 186 (E) dt. 18.03.2008	Test Method
1	pH	**	7.59	6 - 8.5	IS:3025 (P-11)
2	Oil & Grease	mg/l	ND	5.0	IS:3025 (P-39)
3	BOD (3days) 27°C	mg/l	8	15.0	IS:3025 (P-44)
4	Total Suspended Solids (TSS)	mg/l	16	20.0	IS:3025 (P-17)
5	Phenols	mg/l	ND	0.4	IS:3025 (P-43)
6	Sulfides	mg/l	ND	0.5	IS:3025 (P-29)
7	Chemical Oxygen Demand (COD)	mg/l	40	125.0	IS:3025 (P-58)
8	Cyanide (CN)	mg/l	ND	0.2	IS:3025 (P-27)
9	Ammonia as Nitrogen	mg/l	0.19	15.0	IS:3025 (P-34)
10	Total Kjeldahl Nitrogen (TKN)	mg/l	0.28	40.0	IS:3025 (P-34)
11	Phosphate (P)	mg/l	ND	3.0	IS:3025 (P-31)
12	Chromium (Cr) (Hexavalent)	mg/l	ND	0.1	APHA 23 rd Ed.
13	Chromium (Cr) (Total)	mg/l	ND	2.0	APHA 23 rd Ed.
14	Lead (Pb)	mg/l	ND	0.1	APHA 23 rd Ed.
15	Mercury (Hg)	mg/l	ND	0.0	APHA 23 rd Ed.
16	Zinc (Zn)	mg/l	0.24	5.0	APHA 23 rd Ed.
17	Nickel (Ni)	mg/l	ND	1.0	APHA 23 rd Ed.
18	Copper Cu)	mg/l	ND	1.0	APHA 23 rd Ed.

Remark: ND-Not Detected, DL-Detection Limit

..... End of the Report.....



TC-14814



NOTE: The laboratory accepts the responsibility for content of report. The results contained in this test report related only to the sample tested. Test report shall not be reproduced except in full, without written approval of the laboratory. This report is intended only for your guidance and not for legal purpose or for advertisement. The report shall not be reproduced except in full without the written approval of this organization. Samples will be destroyed after 30 days from the date of issue of test certificate unless otherwise specified. Any complaints about this report should be communicated in writing within 7 days of issue of the report. Total liability of Nitya Laboratories is limited to the amount paid only. If you have any complaint/feedback regarding the sample collection/testing/test report, please send an email at info@nityalab.com and call at +91-191-2465597, +91-9873924093

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Treated Effluent Water Analysis Report for the Month of January 2026

Test Report No. 202601280110

Issue Date: 09-02-2026

Issued To

M/s Bharat Petroleum Corporation Limited

Kochi Refinery

Ambalamugal, Kochi, Pin-682 302

Ref. No.: PO. No. 4601005329 dated 07.03.2024

Sampling done by: Nitya Laboratories

Sl. No:	Parameter	Unit	Value reported	Limits as per notification-GSR 186 (E) dt. 18.03.2008	Test Method
1	Vanadium (V)	mg/l	ND	0.2	IS:3025 (P-56)
2	Benzene	mg/l	ND	100.0	USEPA-8270C
3	Benzo (a) - Pyrene	mg/l	ND	200.0	USEPA-8270C

Remark:

ND-Not Detected, DL-Detection Limit

..... End of the Report.....



NOTE: The laboratory accepts the responsibility for content of report. The results contained in this test report related only to the sample tested. Test report shall not be reproduced except in full, without written approval of the laboratory. This report is intended only for your guidance and not for legal purpose or for advertisement. This report shall not be reproduced except in full without the written approval of this organization. Samples will be destroyed after 30 days from the date of issue of test certificate unless otherwise specified. Any complaints about this report should be communicated in writing within 7 days of issue of this report. Total liability of Nitya Laboratories is limited invoiced amount only. If you have any complaint/feedback regarding the sample collection/testing/test report, please send an email at info@nityalab.com and call at +91-191-2465597, +91-9873924093

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QUALITY CONTROL LABORATORY
Bharat Petroleum Corporation Ltd
KOCHI REFINERY

Report of Analysis of Treated Effluent water from Outlet A for the month of Jan. 2026.

Sl. No.	Characteristics	Tolerance Limit	DATE & RESULT																														
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1	p ^H	6 to 8.5	6.2	7.2	7.8	8.3	8	6.9	7.4	7.6	7.5	7.5	7.5	7.5	7.5	7.5	7.3	7.6	7.8	7.8	8.2	7.5	8	7.6	7.5	7.6	7.8	7.5	7.5	7.4	7.5	7.2	7.4
2	Suspended Solids	20 mg/l Max	16	14	15	19	16	14	16	15	14	13	19	13	9	20	19	18	16	17	14	20	18	20	18	16	19	18	20	18	17	18	19
3	B.O.D (3 days @ 27°C)	15 mg/l Max	14	13	13	13	12	13	14	12	14	13	13	14	13	14	14	14	13	13	14	15	14	14	13	14	15	12	13	15	14	13	15
4	Sulphides (as S)	0.5 mg/l Max	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	
5	Phenolic Compounds	0.35 mg/l Max	0.15	0.15	0.16	0.15	0.16	0.15	0.16	0.15	0.15	0.15	0.14	0.16	0.16	0.15	0.14	0.15	0.16	0.16	0.16	0.16	0.15	0.15	0.15	0.14	0.16	0.15	0.14	0.15	0.15	0.14	
6	Oil & Grease	5 mg/l Max	3.0	3.0	3.1	3.1	3.0	3.1	3.0	3.1	3.0	3.0	3.1	3.0	3.1	3.0	3.0	3.2	3.0	3.0	3.1	3.1	3.0	3.1	3.0	3.1	3.0	3.0	3.0	3.0	3.0	3.5	
7	COD	125 mg/l Max	42	41	42	41	43	40	43	38	42	41	39	40	42	43	44	42	40	41	44	46	42	42	42	40	44	46	38	40	45	43	40
8	Cyanide	0.2mg/l Max	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	

QC F-151A Rev 1

QC F-121A Rev 1

Sateev D
Senior Manager (QC)
BPCL-Kochi Refinery
Ambalamugal - 682302.



Bharat Petroleum Corporation Limited - Kochi Refinery
Post Bag No: 2, Ambalamugal – 682302

12.03.2026

Effluent monitoring report for the Period 01.02.2026 to 28.02.2026 attached herewith.

A. Treated Effluent Standards

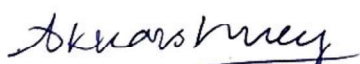
Sl. No.	Characteristics	unit	Tolerance limit for Outlet - A (max.)	Tolerance limit for Outlet - B (max.)	Outlet Results	Reason for non-conformity	Action proposed to comply with consent conditions and expected date of achievement
1	pH	**	6.0 – 8.5	6.0 – 8.5	Effluent analysis report is given in the first part of the report.	All consent conditions are satisfied.	Not Applicable
2	Suspended Solids	mg. /lit.	20	100			
3	BOD (3 days @27 °C)	mg. /lit.	15	30			
4	Sulfides	mg. /lit.	0.5	--			
5	Phenols	mg. /lit.	0.35	--			
6	Oil & Grease	mg. /lit.	5	10			

B. Effluent Discharged.

	Limit m3 / day	Measurement m3/day (avg.)	Mode of measurement	Reason for non-conformity	Action taken / proposed to Comply with consent condition and Expected date of Completion
Outlet - A	9848.50	7812	Rectangular Weir type.	Complied	Nil
Outlet - B	50	0	Flow meter	N. A	Discharge is zero as Chullichira Water treatment plant is not in operation.

C. Any other matter to be reported: Only treated Effluents are discharged through Outlet - A & Outlet – B

Signature, Name and Designation of Occupier / Authorized Officer:


Santosh Kumar Varshney
DY. GENERAL MANAGER – HSE (ENVIRONMENT)

Treated Effluent Water Analysis Report for the Month of February 2026

ULR No.	TC148142600000611F	Issued To	M/s Bharat Petroleum Corporation Limited
Issue Date:	18-02-2026	Kochi Refinery	Ambalamugal, Kochi, Pin-682 302
Ref. No.:	PO. No. 4601005329 dated 07.03.2024		
Sampling done by:	Nitya Laboratories		

Sl. No:	Parameter	Unit	Value reported	Limits as per notification-GSR 186 (E) dt. 18.03.2008	Test Method
1	pH	**	7.66	6 - 8.5	IS:3025 (P-11)
2	Oil & Grease	mg/l	ND	5.0	IS:3025 (P-39)
3	BOD (3days) 27°C	mg/l	6	15.0	IS:3025 (P-44)
4	Total Suspended Solids (TSS)	mg/l	12	20.0	IS:3025 (P-17)
5	Phenols	mg/l	ND	0.4	IS:3025 (P-43)
6	Sulfides	mg/l	ND	0.5	IS:3025 (P-29)
7	Chemical Oxygen Demand (COD)	mg/l	32	125.0	IS:3025 (P-58)
8	Cyanide (CN)	mg/l	ND	0.2	IS:3025 (P-27)
9	Ammonia as Nitrogen	mg/l	0.38	15.0	IS:3025 (P-34)
10	Total Kjeldahl Nitrogen (TKN)	mg/l	0.56	40.0	IS:3025 (P-34)
11	Phosphate (P)	mg/l	ND	3.0	IS:3025 (P-31)
12	Chromium (Cr) (Hexavalent)	mg/l	ND	0.1	APHA 23 rd Ed.
13	Chromium (Cr) (Total)	mg/l	ND	2.0	APHA 23 rd Ed.
14	Lead (Pb)	mg/l	ND	0.1	APHA 23 rd Ed.
15	Mercury (Hg)	mg/l	ND	0.0	APHA 23 rd Ed.
16	Zinc (Zn)	mg/l	0.32	5.0	APHA 23 rd Ed.
17	Nickel (Ni)	mg/l	ND	1.0	APHA 23 rd Ed.
18	Copper Cu)	mg/l	ND	1.0	APHA 23 rd Ed.

Remark: ND-Not Detected, DL-Detection Limit

..... End of the Report.....



NOTE: The laboratory accepts the responsibility for content of report. The results contained in this test report related only to the sample tested. Test report shall not be reproduced except in full, without written approval of the laboratory. This report is intended only for your guidance and not for legal purpose or for advertisement. This report shall not be reproduced except in full without the written approval of this organization. Samples will be destroyed after 30 days from the date of issue of test certificate unless otherwise specified. Any complaints about this report should be communicated in writing within 7 days of issue of this report. Total liability of Nitya Laboratories is limited to the amount only. If you have any complaint/feedback regarding the sample collection/testing/test report, please send an email at info@nityalab.com and call at +91-191-2465597, +91-9873924093

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Treated Effluent Water Analysis Report for the Month of February 2026

Test Report No. 202602090110	Issued To
Issue Date: 18-02-2026	M/s Bharat Petroleum Corporation Limited
	Kochi Refinery
	Ambalamugal, Kochi, Pin-682 302
Ref. No.: PO. No. 4601005329 dated 07.03.2024	
Sampling done by: Nitya Laboratories	

Sl. No:	Parameter	Unit	Value reported	Limits as per notification-GSR 186 (E) dt. 18.03.2008	Test Method
1	Vanadium (V)	mg/l	ND	0.2	IS:3025 (P-56)
2	Benzene	mg/l	ND	100.0	USEPA-8270C
3	Benzo (a) - Pyrene	mg/l	ND	200.0	USEPA-8270C

Remark: ND-Not Detected, DL-Detection Limit

..... End of the Report.....


(AUTHORISED SIGNATORY)
(RAVINDER MITTAL)

NOTE: The laboratory accepts the responsibility for content of report. The results contained in this test report related only to the sample tested. Test report shall not be reproduced except in full, without written approval of the laboratory. This report is intended only for your guidance and not for legal purpose or for advertisement. This report shall not be reproduced except in full without the written approval of this organization. Samples will be destroyed after 30 days from the date of issue of test certificate unless otherwise specified. Any complaints about this report should be communicated in writing within 7 days of issue of this report. Total liability of Nitya Laboratories is limited invoiced amount only. If you have any complaint/feedback regarding the sample collection/testing/test report, please send an email at info@nityalab.com and call at +91-191-2465597, +91-9873924093

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QUALITY CONTROL LABORATORY
Bharat Petroleum Corporation Ltd
KOCHI REFINERY

Report of Analysis of Treated Effluent water from Outlet A for the month of Feb 2026.

Sl. No.	Characteristics	Tolerance Limit	DATE & RESULT																												
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	
1	p ^H	6 to 8.5	7.60	7.60	8.30	8.40	7.60	7.80	7.60	8.20	8.20	7.80	7.60	8.00	7.60	7.90	8.00	8.10	8.40	8.10	7.70	7.60	7.40	7.80	7.90	7.40	7.70	7.60	7.60	7.40	
2	Sulphides (as S)	0.5 mg/l Max	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
3	COD	125mgm/lMax	36	35	34	31	32	30	28	34	33	36	38	36	32	35	37	38	36	39	36	34	32	36	34	42	36	34	32	31	
4	Cyanide	0.2mg/l Max	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
5	Suspended Solids	20 mg/l Max	18	13	15	19	19	16	18	18	18	19	18	19	14	18	16	14	13	17	10	15	13	16	14	15	14	16	16	16	14
6	Oil & Grease	5 mg/l Max	3.2	2.9	3.0	3.0	3.2	3.0	2.8	3.0	2.8	2.6	2.8	3.0		2.9	2.8	3.0	3.2	3.0	3.3	3.0	3.0	3.2	3.0	3.2	2.8	3.0	2.8	2.8	2.6
7	B.O.D (3 days @ 27°C)	15 mg/l Max	12	12	11	10	11	10	9	11	11	12	12	11	10	12	12	13	12	13	12	11	11	12	11	14	12	10	11	11	10
8	Phenolic Compounds	0.35 mg/l Max	0.13	0.11	0.11	0.12	0.13	0.15	0.13	0.12	0.15	0.13	0.11	0.12	0.13	0.12	0.13	0.14	0.12	0.11	0.14	0.11	0.12	0.13	0.12	0.14	0.11	0.12	0.14	0.14	0.15


Sajeev B
Chief Manager (QC)
BPCL-Kochi Refinery
Ambalamugal - 682302.



Bharat Petroleum Corporation Limited - Kochi Refinery
Post Bag No: 2, Ambalamugal – 682302

17.04.2026

Effluent monitoring report for the Period 01.03.2026 to 31.03.2026 attached herewith.

A. Treated Effluent Standards

Sl. No.	Characteristics	unit	Tolerance limit for Outlet - A (max.)	Tolerance limit for Outlet - B (max.)	Outlet Results	Reason for non-conformity	Action proposed to comply with consent conditions and expected date of achievement
1	pH	**	6.0 – 8.5	6.0 – 8.5	Effluent analysis report is given in the first part of the report.	All consent conditions are satisfied.	Not Applicable
2	Suspended Solids	mg. /lit.	20	100			
3	BOD (3 days @27 °C)	mg. /lit.	15	30			
4	Sulfides	mg. /lit.	0.5	--			
5	Phenols	mg. /lit.	0.35	--			
6	Oil & Grease	mg. /lit.	5	10			

B. Effluent Discharged.

	Limit m3 / day	Measurement m3/day (avg.)	Mode of measurement	Reason for non-conformity	Action taken / proposed to Comply with consent condition and Expected date of Completion
Outlet - A	9848.50	5938	Rectangular Weir type.	Complied	Nil
Outlet - B	50	0	Flow meter	N. A	Discharge is zero as Chullichira Water treatment plant is not in operation.

C. Any other matter to be reported: Only treated Effluents are discharged through Outlet - A & Outlet – B

Signature, Name and Designation of Occupier / Authorized Officer:

Santosh Kumar Varshney
DY. GENERAL MANAGER – HSE (ENVIRONMENT)



Stack Emission Data as per On-line Analyzer data _October 2025											
Sl. No.	Stack Name	Flow rate (Nm ³ /hr)	PM (mg/Nm ³)	NO _x (mg/Nm ³)	Units Run (max)	PM (kg/hr)	NO _x (kg/hr)	CO (mg/Nm ³)	CO (kg/hr)	SO ₂ (mg/Nm ³)	SO ₂ (kg/hr)
		Avg. Value			Hrs						
1	KH01B (KHDS)	22953	3.322	12.597	744	0.08	0.29	60.785	1.40	9.005	0.21
2	FH01 (FCCU)	24235	0.98	46.424	744	0.02	1.13	6.519	0.16	8.877	0.22
3	FH03/COB (FCCU)	84321	32.085	18.283	744	2.71	1.54	127.232	10.73	3.837	0.32
4	CH21 (CDU - II)	90531	0	92.874	744	0.00	8.41	1.981	0.18	21.534	1.95
5	CH22 (CDU - II)	33510	0	88.092	744	0.00	2.95	1.616	0.05	14.113	0.47
6	CH223 (CDU - II)	50563	1.241	31.127	744	0.06	1.57	0.965	0.05	18.428	0.93
7	DD-HO1 (DHDS)	25998	4.499	42.552	744	0.12	1.11	4.593	0.12	24.767	0.64
8	DS-X-002 (SRU - 01)	29135	31.268	159.726	744	0.91	4.65	92.959	2.71	3449.454	100.50
9	DSX 301 (SRU - 02)	14151	23.498	50.565	744	0.33	0.72	152.278	2.15	4377.371	61.94
10	BS-101 (Biturox)	14174	9.49	37.276	744	0.13	0.53	4.27	0.06	5.199	0.07
11	VH HO1/02 (VGO HDS)	52233	6.098	8.881	744	0.32	0.46	40.641	2.12	39.567	2.07
12	NHT CCR - 01	104483	8.883	2.864	744	0.93	0.30	42.609	4.45	30.06	3.14
13	UB07 (Boiler)	111963	12.239	41.826	744	1.37	4.68	10.925	1.22	41.957	4.70
14	UB08 (Boiler)	29524	20.19	0.976	744	0.60	0.03	4.903	0.14	13.049	0.39
15	UB09 (Boiler) (UX200)	30622	15.701	45.913	744	0.48	1.41	7.316	0.22	59.55	1.82
16	UB 10 (Boiler)	40255	6.984	53.269	744	0.28	2.14	0	0.00	152.28	6.13
17	UB 11 (Boiler)	71246	34.391	273.132	744	2.45	19.46	9.476	0.68	638.447	45.49
18	HRS G 1 (CPP - 01)	161184	0	43.769	744	0.00	7.05	1.932	0.31	2.755	0.44
19	GT2/HRS G - 02 (CPP - 02)	151867	2.352	110.26	744	0.36	16.74	6.859	1.04	0	0.00
20	SRU III Train A (IS LZ 102)	91703	17.542	1.822	744	1.61	0.17	139.219	12.77	1201.139	110.15
21	SRU III Train B (IS LZ 202)	90130	13.363	19.996	744	1.20	1.80	100.811	9.09	1131.278	101.96
22	CDU-III (ICH 101/102)	252659	1.637	1.142	744	0.00	0.29	57.211	14.45	32.896	8.31
23	DHDT (IGH 101/102)	58678	1.785	5.427	744	0.00	0.32	34.319	2.01	8.206	0.48
24	VGO-HDT (IVH 101/201)	54092	1.412	2.69	744	0.08	0.15	38.706	2.09	22.867	1.24
25	PFCCU-Heater (IFH 002)	21661	0	9.18	744	0.00	0.20	27.952	0.61	8.604	0.19
26	PFCCU-Regen. (IFLS 001)	170940	22.463	159.197	744	3.84	27.21	10.892	1.86	13.478	2.30
27	DCU-1 (IDH 101)	77894	2.272	2.269	744	0.18	0.18	40.697	3.17	11.383	0.89
28	DCU-2 (IDH 102)	77012	2.455	1.499	744	0.19	0.12	35.165	2.71	9.173	0.71
29	HRS G 3 (IUS HRS G 05LZ554)	161009	3.45	5.289	744	0.56	0.85	60.735	9.78	0.886	0.14
30	HRS G 4 (IUS HRS G 05LZ554)	142276	1.52	4.905	744	0.22	0.70	68.441	9.74	3.525	0.50
31	HRS G-5 (IUS HRS G 05LZ554)	143106	60.806	13.662	744	8.71	1.96	1.08	0.15	2.67	0.38
32	UB 12 (Boiler) (IUS UB12 LZ08)	122932	2.543	6.246	744	0.31	0.77	91.626	11.26	35.784	4.40
33	UB 13 (Boiler) (IUS UB12 LZ08)	123507	3.182	7.343	744	0.39	0.91	84.597	10.45	39.485	4.88
34	NHT -Isom. (NH-2/ H H 101)	53005	0	62.931	744	0.00	3.34	0	0.00	0	0.00
35	PWILS 110 (PDPP INC - 01)	70957	0.507	1.825	744	0.04	0.13	0.6	0.04	0.364	0.03
36	LS021A (PDPP INC - 02)	71924	0	0.236	744	0.00	0.02	2.81	0.20	0	0.00
37	MSBP - HOH	158034	0.831	26.806	744	0.13	4.24	5.376	0.85	20.032	3.17
38	MRH 01/02/03/04 (MSBP - CCR)	06064	2.145	1.136	744	0.21	0.11	51.243	4.97	8.051	0.78
						28.81	118.61		124.01		471.93
						PM (kg/hr)	NO _x (kg/hr)		CO (kg/hr)		SO ₂ (kg/hr)

राजेंद्र प्रसाद के जी RAJENDRA PRASAD K G
 सहायक प्रबंधक एचएसई (पर्यावरण)
 Asst. Manager HSE (Environment)
 भारत पेट्रोलियम कॉर्पोरेशन लिमिटेड
 BHARAT PETROLEUM CORPORATION LTD.
 कोच्चि रिफाइनरी KOCHI REFINERY
 अम्बलमगल Ambalamugal-682 302
 एरणाकुलम जिला Ernakulam Dist. Kerala

15/11/25

Stack Emission Data as per On-line Analyzer data _November 2025										
Sl. No.	Stack Name	Flow rate (Nm ³ /hr)	PM (mg/Nm ³)	NOx (mg/Nm ³)	PM (kg/hr)	NOx (kg/hr)	CO (mg/Nm ³)	CO (kg/hr)	SO2 (mg/Nm ³)	SO2 (kg/hr)
		Avg. Value								
1	KH01B (KHDS)	22953	3.347	16.038	0.08	0.37	74.886	1.72	3.38	0.08
2	FH01 (FCCU)	24235	0.98	48.019	0.02	1.16	6.182	0.15	6.178	0.15
3	FH03/COB (FCCU)	84321	34.488	33.073	2.91	2.79	37.064	3.13	13.808	1.16
4	CH21 (CDU - II)	90531	0	81.084	0.00	7.34	1.526	0.14	48.73	4.41
5	CH22 (CDU - II)	33510	0	85.106	0.00	2.85	2.161	0.07	35.459	1.19
6	CH223 (CDU - II)	50563	0.95	38.128	0.05	1.93	0.448	0.02	50.444	2.55
7	DD-HO1 (DHDS)	23998	4.389	40.415	0.11	1.05	4.163	0.11	23.015	0.60
8	DS-X-002 (SRU - 01)	29135	34.018	101.224	0.99	2.95	49.141	1.43	1526.153	44.46
9	DSX 301 (SRU - 02)	14151	22.827	62.835	0.32	0.89	190.134	2.69	4849.267	68.62
10	BS-101 (Biturox)	14174	11.126	33.852	0.16	0.48	3.173	0.04	7.449	0.11
11	VH H01/02 (VGO HDS)	52233	2.466	6.77	0.13	0.35	17.118	0.89	36.433	1.90
12	NHT CCR - 01	104483	8.674	2.56	0.91	0.27	45.296	4.73	9.324	0.97
13	UB07 (Boiler)	111963	12.635	39.833	1.41	4.46	13.377	1.50	47.771	5.35
14	UB08 (Boiler)	29524	17.897	0.136	0.53	0.00	10.812	0.32	0	0.00
15	UB09 (Boiler) (UX200)	30622	0.505	0.561	0.02	0.02	3.064	0.09	0	0.00
16	UB 10 (Boiler)	40255	3.962	3.368	0.16	0.14	9.186	0.37	17.901	0.72
17	UB 11 (Boiler)	71246	30.516	272.575	2.17	19.42	9.743	0.69	660.408	47.05
18	HRSG 1 (CPP - 01)	161184	0	34.775	0.00	5.61	1.535	0.25	0	0.00
19	GT2/HRSG -02 (CPP - 02)	151867	2.352	119.343	0.36	18.12	3.915	0.59	0	0.00
20	SRU III Train A (IS LZ 102)	91703	17.273	1.468	1.58	0.13	132.867	12.18	1654.632	151.73
21	SRU III Train B (IS LZ 202)	90130	13.71	2.85	1.24	0.26	118.84	10.71	1459.125	131.51
22	CDU-III (ICH 101/102)	252659	1.613	0.9	0.00	0.23	56.17	14.19	40.142	10.14
23	DHDT (IGH 101/102)	58678	0	5.677	0.00	0.33	32.537	1.91	11.508	0.68
24	VGO-HDT (IVH 101/201)	54092	1.442	2.538	0.08	0.14	35.245	1.91	16.171	0.87
25	PFCCU-Heater (IFH 002)	21661	0	14.205	0.00	0.31	24.619	0.53	3.886	0.08
26	PFCCU-Regen. (IFLS 001)	170940	25.717	173.429	4.40	29.65	4.663	0.80	7.42	1.27
27	DCU-1 (IDH 101)	77894	2.395	4.934	0.19	0.38	36.073	2.81	8.952	0.70
28	DCU-2 (IDH 102)	77012	0	4.463	0.00	0.34	51.879	4.00	15.402	1.19
29	HRSG 3 (IUS HRSG 05LZ554)	161009	3.619	4.787	0.58	0.77	61.053	9.83	1.063	0.17
30	HRSG 4 (IUS HRSG 05LZ554)	142276	1.509	4.431	0.21	0.63	69.092	9.83	5.107	0.73
31	HRSG-5 (IUS HRSG 05LZ554)	141306	62.895	13.726	9.01	1.97	0.255	0.04	2.163	0.31
32	UB 12 (Boiler) (IUS UB12 LZ08)	122932	2.532	7.996	0.31	0.98	93.019	11.44	32.555	4.00
33	UB 13 (Boiler) (IUS UB12 LZ08)	123507	3.414	7.355	0.42	0.91	87.255	10.78	38.439	4.75
34	NHT -Isom. (NH-2/ H H 101)	53005	0	68.465	0.00	3.63	1.452	0.08	0	0.00
35	PW1 LS 110 (PDPP INC - 01)	70957	0.579	1.79	0.04	0.13	0.545	0.04	0.309	0.02
36	LS021A (PDPP INC - 02)	71924	0	0.236	0.00	0.02	2.808	0.20	0	0.00
37	MSBP HOH	158034	0.853	25.477	0.13	4.03	3.168	0.50	17.345	2.74
38	MSBP HOH	96964	2.141	1.051	0.21	0.10	51.446	4.99	8.811	0.85
					28.73	115.13		115.70		491.08
					PM (kg/hr)	NOx (kg/hr)		CO (kg/hr)		SO2 (kg/hr)


 M. K. Prasad
 Asst. Mgr.
 O&PCL - KCR.

Stack Emission Data as per On-line Analyzer data _December 2025

Sl. No.	Stack Name	Flow rate (Nm ³ /hr)	PM (mg/Nm ³)	NOx (mg/Nm ³)	PM (kg/hr)	NOx (kg/hr)	CO (mg/Nm ³)	CO (kg/hr)	SO2 (mg/Nm ³)	SO2 (kg/hr)
		Avg. Value								
1	KH01B (KHDS)	22953	3.658	15.666	0.08	0.36	97.219	2.23	4.208	0.10
2	FH01 (FCCU)	24235	0.98	49.271	0.02	1.19	3.51	0.09	4.604	0.11
3	FH03/COB (FCCU)	84321	30.693	36.051	2.59	3.04	40.98	3.46	33.166	2.80
4	CH21 (CDU - II)	90531	0	85.738	0.00	7.76	1.693	0.15	30.79	2.79
5	CH22 (CDU - II)	33510	0	85.424	0.00	2.86	2.302	0.08	20.898	0.70
6	CH223 (CDU - II)	50563	2.033	34.749	0.10	1.76	0.177	0.01	18.961	0.96
7	DD-HO1 (DHDS)	25998	3.515	43.046	0.09	1.12	4.438	0.12	22.14	0.58
8	DS-X-002 (SRU - 01)	29135	0	82.69	0.00	2.41	46.429	1.35	1668.75	48.62
9	DSX 301 (SRU - 02)	14151	24.015	56.06	0.34	0.79	170.176	2.41	4955.548	70.13
10	BS-101 (Biturox)	14174	15.154	23.944	0.21	0.34	2.73	0.04	3.873	0.05
11	VH H01/02 (VGO HDS)	52233	2.708	7.41	0.14	0.39	15.916	0.83	37.028	1.93
12	NHT CCR - 01	104483	8.388	3.152	0.88	0.33	49.614	5.18	25.438	2.66
13	UB07 (Boiler)	111963	10.351	34.709	1.16	3.89	4.706	0.53	4.034	0.45
14	UB08 (Boiler)	29524	34.646	6.664	1.02	0.20	4.269	0.13	67.172	1.98
15	UB09 (Boiler) (UX200)	30622	1.747	7.648	0.05	0.23	0	0.00	3.501	0.11
16	UB 10 (Boiler)	40255	11.636	68.799	0.47	2.77	34.935	1.41	277.56	11.17
17	UB 11 (Boiler)	71246	30.995	258.61	2.21	18.42	9.82	0.70	678.117	48.31
18	HRSO 1 (CPP - 01)	161184	0	37.327	0.00	6.02	0.941	0.15	7.584	1.22
19	GT2/HRSO -02 (CPP - 02)	151867	2.353	128.844	0.36	19.57	2.108	0.32	0	0.00
20	SRU III Train A (IS LZ 102)	91703	17.216	1.259	1.58	0.12	119.549	10.96	1336.219	122.54
21	SRU III Train B (IS LZ 202)	90130	13.433	2.536	1.21	0.23	109.668	9.88	1520.423	137.04
22	CDU-III (ICH 101/102)	252659	1.758	0.744	0.00	0.19	52.914	13.37	33.254	8.40
23	DHDT (IGH 101/102)	58678	0.19	6.621	0.00	0.39	32.746	1.92	10.007	0.59
24	VGO-HDT (IVH 101/201)	54092	1.102	2.792	0.06	0.15	33.215	1.80	19.03	1.03
25	PFCCU-Heater (IFH 002)	21661	0	4.732	0.00	0.10	31.287	0.68	5.706	0.12
26	PFCCU-Regen. (IFLS 001)	170940	19.634	134.152	3.36	22.93	2.608	0.45	11.617	1.99
27	DCU-1 (IDH 101)	77894	2.437	14.027	0.19	1.09	32.468	2.53	11.828	0.92
28	DCU-2 (IDH 102)	77012	-2.738	1.832	-0.21	0.14	42.886	3.30	10.572	0.81
29	HRSO 3 (IUS HRSO 05LZ554)	161009	3.766	3.967	0.61	0.64	64.988	10.46	1.627	0.26
30	HRSO 4 (IUS HRSO 05LZ554)	142276	1.516	3.156	0.22	0.45	85.96	12.23	2.203	0.31
31	HRSO-5 (IUS HRSO 05LZ554)	143306	61.405	13.71	8.80	1.96	0.62	0.09	2.967	0.43
32	UB 12 (Boiler) (IUS UB12 LZ08)	122932	2.504	12.483	0.31	1.53	90.928	11.18	33.896	4.17
33	UB 13 (Boiler) (IUS UB12 LZ08)	123507	3.467	7.711	0.43	0.95	93.556	11.55	39.342	4.86
34	NHT -Isom. (NH-2/ H H 101)	53005	-1.427	72.111	-0.08	3.82	3.577	0.19	-1.603	-0.08
35	PWLS 110 (PDPP INC - 01)	70957	0.721	1.763	0.05	0.13	0.511	0.04	0.28	0.02
36	LS021A (PDPP INC - 02)	71924	0	0.229	0.00	0.02	2.811	0.20	0	0.00
37	MSBP _ HOH	158034	0.807	23.38	0.13	3.69	3.743	0.59	17.617	2.78
38	MRH 01/02/03/04 (MSBP _ CCR)	96964	1.962	1.287	0.19	0.12	50.069	4.85	4.537	0.44
					26.57	112.11		115.45		481.29
					PM (kg/hr)	NOx (kg/hr)		CO (kg/hr)		SO2 (kg/hr)



Stack Emission Monitoring Report for the Month of Dec 2025

ULR No. TC148142500007836F-7838F, 7841F-78443F,
7850F-7851F, 7908F-7911F, 7947F-7948F,
7970F-7971F

Issued To
M/s Bharat Petroleum Corporation Limited
Kochi Refinery
Ambalamugal, Kochi, Pin-682 302

Issue Date: 20-12-2025

Ref. No.: PO. No. 4601005329 dated 07.03.2024

Sampling done by: Nitya Laboratories

Sl. No:	Stack / Unit	Date of Monitoring / Sampling	Time of Monitoring	Lab Id. Code / No:	Analysis Started on (date)	Analysis completed on (date)
1	GT1/HRSG-01 (CPP - 01)	05-12-2025	11:40 AM	S/12/01	15-12-2025	19-12-2025
2	UB 10 (Boiler) (IUS UB12 LZ08)	05-12-2025	01:55 PM	S/12/02	15-12-2025	19-12-2025
3	UB-07 (BOILER)	05-12-2025	03:10 PM	S/12/03	15-12-2025	19-12-2025
4	HRSG 4 (IUS HRSG 05LZ554)	06-12-2025	10:10 AM	S/12/04	15-12-2025	19-12-2025
5	HRSG 3 (IUS HRSG 05LZ554)	06-12-2025	11:40 AM	S/12/05	15-12-2025	19-12-2025
6	HRSG 5 (IUS HRSG 05LZ554)	06-12-2025	03:00 PM	S/12/06	15-12-2025	19-12-2025
7	UB-12 (BOILER) (IUS-UB-12-LZ-08)	08-12-2025	11:25 AM	S/12/07	15-12-2025	19-12-2025
8	UB-13 (BOILER) (IUS-UB-12-LZ-08)	08-12-2025	02:10 PM	S/12/08	15-12-2025	19-12-2025
9	DS-X-301 (SRU - 02)	10-12-2025	09:30 AM	S/12/09	15-12-2025	19-12-2025
10	SRU III Train A (IS LZ 102)	10-12-2025	10:45 AM	S/12/10	15-12-2025	19-12-2025
11	SRU III Train B (IS LZ 202)	10-12-2025	12:50 PM	S/12/11	15-12-2025	19-12-2025
12	DS-X-002 (SRU-01)	10-12-2025	02:40 PM	S/12/12	15-12-2025	19-12-2025
13	PFCCU-Heater (IFH 002)	11-12-2025	10:50 AM	S/12/13	15-12-2025	19-12-2025
14	PFCCU-Regen. (IFLS 001)	11-12-2025	02:20 PM	S/12/14	15-12-2025	19-12-2025
15	VGO-HDT(Vacuum Gas Oil Hydro Treater) (IVH 101/201)	11-12-2025	03:25 PM	S/12/15	15-12-2025	19-12-2025
16	UB 11 (Boiler)	12-12-2025	10:20 AM	S/12/16	15-12-2025	19-12-2025
17	DD-HO1 (DHDS)	12-12-2025	11:40 AM	S/12/17	15-12-2025	19-12-2025

Instruments used for Monitoring				
Stack Monitoring kit, with all assembly Make: Enviro Instruments	Calibrated on	05-03-2025	Calibration due on	06-03-2026



(CHECKED BY)

(SANGEET SAINI)

[illegible]

CORPORATE OFFICE & CENTRAL LABORATORIES :-

CORPORATE OFFICE & CENTRAL LABORATORIES :-
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Stack Emission Monitoring Report for the Month of Dec 2025

Test Report No.: 202512050110-126

Issue Date: 20-12-2025

Issued To

M/s Bharat Petroleum Corporation Limited

Kochi Refinery

Ambalamugal, Kochi, Pin-682 302

Ref. No.: PO, No. 4601005329 dated 07.03.2024

Sampling done by: Nitya Laboratories

Sl. No:	Stack / Unit	Date of Sampling	Ambient Air Temp. (°C)	Sampling Temp. (°C)	Flow rate Result (Nm ³ /Hr)	SO ₂ (mg/N m ³)	NO _x (mg/N m ³)	CO (mg/N m ³)	Ni + V (mg/Nm ³)	O ₂ %
1	GT1/HRSG -01 (CPP - 01)	05-12-2025	26	128	334208.0	12.5	25.7	45.9	ND (DL-0.5)	6.9
2	UB 10 (Boiler) (IUS UB12 LZ08)	05-12-2025	26	48	291045.5	12.5	9.2	7.8	ND (DL-0.5)	7.1
3	UB-07 (BOILER)	05-12-2025	26	112	243060.1	108	116	7.5	ND (DL-0.5)	6.6
4	HRSG 4 (IUS HRSG 05LZ554)	06-12-2025	26	148	241316.8	4.5	19.1	5.6	ND (DL-0.5)	7.9
5	HRSG 3 (IUS HRSG 05LZ554)	06-12-2025	26	74	320190.6	8.6	42.6	4.8	ND (DL-0.5)	7.5
6	HRSG 5 (IUS HRSG 05LZ554)	06-12-2025	26	76	313278.0	0.0	13.8	5.8	ND (DL-0.5)	6.9
7	UB-12 (BOILER) (IUS-UB-12-LZ-08)	08-12-2025	26	49	289669.2	123	156.6	5.4	ND (DL-0.5)	7.0
8	UB-13 (BOILER) (IUS-UB-12-LZ-08)	08-12-2025	25	41	323809.0	8.1	7.9	5.1	ND (DL-0.5)	6.7
9	DS-X-301 (SRU - 02)	10-12-2025	26	598	48905.8	1310	34.2	146	ND (DL-0.5)	7.8
10	SRU III Train A (IS LZ 102)	10-12-2025	25	267	127464.9	1169	11.5	5.9	ND (DL-0.5)	6.7
11	SRU III Train B (IS LZ 202)	10-12-2025	25	298	111846.0	1210	18.6	4.2	ND (DL-0.5)	6.1
12	DS-X-002 (SRU-01)	10-12-2025	24	590	47686.4	1190	33.2	149	ND (DL-0.5)	7.9
13	PFCCU-Heater (IFH 002)	11-12-2025	25	259	77490.1	18.5	14.3	8.5	ND (DL-0.5)	7.1
14	PFCCU-Regen. (IFLS 001)	11-12-2025	25	211	299582.6	13.8	20.5	53.7	ND (DL-0.5)	7.6
15	VGO-HDT (Vacuum Gas Oil Hydro Treater) (IVH 101/201)	11-12-2025	25	165	135365.6	9.5	19.7	2.8	ND (DL-0.5)	6.2
16	UB 11 (Boiler)	12-12-2025	24	40	330438.6	110	196.3	9	ND (DL-0.5)	6.9
17	DD-HO1 (DHDS)	12-12-2025	24	110	71282.4	6.8	51.8	0.0	ND (DL-0.5)	8.1

(CHECKED BY)

(SANDEEP SAINI)

[illegible]

CORPORATE OFFICE & CENTRAL LABORATORIES :-

❖ PLOT NO. 118, CHURCH ROAD, BEHIND KAUSIK VATIKA, BHAGAT SINGH COLONY, BALLABHGARH, FARIDABAD - 121004, HARYANA, INDIA

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Stack Emission Data as per On-line Analyzer data _ February 2026

Sl. No.	Stack Name	Flow rate (Nm ³ /hr)	PM (mg/Nm ³)	NOx (mg/Nm ³)	PM (kg/hr)	NOx (kg/hr)	CO (mg/Nm ³)	CO (kg/hr)	SO2 (mg/Nm ³)	SO2 (kg/hr)
		Avg. Value								
1	KH01B (KHDS)	22953	3.492	15.702	0.08	0.36	89.326	2.05	0.944	0.02
2	FH01 (FCCU)	24235	0.98	37.135	0.02	0.90	7.684	0.19	9.73	0.24
3	FH03/COB (FCCU)	84321	31.413	37.614	2.65	3.17	47.503	4.01	10.648	0.90
4	CH21 (CDU - II)	90531	0	78.25	0.00	7.08	3.815	0.35	28.001	2.53
5	CH22 (CDU - II)	33510	0	73.291	0.00	2.46	7.559	0.25	11.124	0.37
6	CH223 (CDU - II)	50563	5.053	32.469	0.26	1.64	0	0.00	11.672	0.59
7	DD-HO1 (DHDS)	25998	3.341	44.462	0.09	1.16	7.61	0.20	2.029	0.05
8	DS-X-002 (SRU - 01)	29135	0	106.769	0.00	3.11	18.682	0.54	2545.794	74.17
9	DSX 301 (SRU - 02)	14151	26.096	42.055	0.37	0.60	114.5	1.62	3432.98	48.58
10	BS-101 (Biturox)	14174	10.908	18.222	0.15	0.26	3.371	0.05	2.789	0.04
11	VH H01/02 (VGO HDS)	52233	15.775	6.454	0.82	0.34	16.183	0.85	46.22	2.41
12	NHT CCR - 01	104483	8.126	1.396	0.85	0.15	53.761	5.62	6.405	0.67
13	UB07 (Boiler)	111963	10.961	9.385	1.23	1.05	3.742	0.42	5.376	0.60
14	UB08 (Boiler)	29524	39.035	0.131	1.15	0.00	44.361	1.31	37.449	1.11
15	UB09 (Boiler) (UX200)	30622	2.317	94.418	0.07	2.89	51.446	1.58	11.013	0.34
16	UB 10 (Boiler)	40255	6.792	0	0.27	0.00	11.805	0.48	22.479	0.90
17	UB 11 (Boiler)	71246	32.386	181.534	2.31	12.93	7.239	0.52	358.445	25.54
18	HRSR 1 (CPP - 01)	161184	0	2.118	0.00	0.34	2.926	0.47	5.269	0.85
19	GT2/HRSR - 02 (CPP - 02)	151867	2.246	112.342	0.34	17.06	2.841	0.43	0	0.00
20	SRU III Train A (IS LZ 102)	91703	16.918	1.4	1.55	0.13	84.404	7.74	1188.537	108.99
21	SRU III Train B (IS LZ 202)	90130	13.438	2.167	1.21	0.20	105.698	9.53	1322.654	119.21
22	CDU-III (ICH 101/102)	252659	1.512	5.83	0.00	1.47	56.957	14.39	33.192	8.39
23	DHDT (IGH 101/102)	58678	1.184	5.357	0.00	0.31	31.761	1.86	2.712	0.16
24	VGO-HDT (IVH 101/201)	54092	0.866	4.023	0.05	0.22	29.228	1.58	16.15	0.87
25	PFCCU-Heater (IFH 002)	21661	0	27.209	0.00	0.59	15.285	0.33	7.361	0.16
26	PFCCU-Regen. (IFLS 001)	170940	17.931	29.696	3.07	5.08	4.142	0.71	16.253	2.78
27	DCU-1 (IDH 101)	77894	1.449	3.544	0.11	0.28	42.74	3.33	20.155	1.57
28	DCU-2 (IDH 102)	77012	0	0.177	0.00	0.01	51.384	3.96	15.205	1.17
29	HRSR 3 (IUS HRSR 05LZ554)	161009	4.223	2.392	0.68	0.39	43.508	7.01	1.444	0.23
30	HRSR 4 (IUS HRSR 05LZ554)	142276	3.01	3.758	0.43	0.53	77.73	11.06	9.559	1.36
31	HRSR-5 (IUS HRSR 05LZ554)	143306	55.483	13.897	7.95	1.99	0.339	0.05	2.101	0.30
32	UB 12 (Boiler) (IUS UB12 LZ08)	122932	2.571	7.006	0.32	0.86	105.179	12.93	24.619	3.03
33	UB 13 (Boiler) (IUS UB12 LZ08)	123507	2.944	6.345	0.36	0.78	88.513	10.93	27.423	3.39
34	NHT -Isom. (NH-2/ H H 101)	53005	0	57.705	0.00	3.06	1.186	0.06	4.449	0.24
35	PWT LS 110 (PDPP INC - 01)	70957	0.533	1.833	0.04	0.13	0.616	0.04	0.384	0.03
36	LS021A (PDPP INC - 02)	71924	0	0.241	0.00	0.02	2.899	0.21	0	0.00
37	MSBP_HOH	158034	0.808	26.672	0.13	4.22	5.971	0.94	15.03	2.38
38	MRH 01/02/03/04 (MSBP_CCR)	96964	2.008	2.053	0.19	0.20	49.731	4.82	6.244	0.61
					26.75	75.96		112.39		414.77
					PM (kg/hr)	NOx (kg/hr)	CO (kg/hr)	SO2 (kg/hr)		

Stack Emission Data as per On-line Analyzer data _March 2026											
Sl. No.	Stack Name	Flow rate (Nm ³ /hr)	PM (mg/Nm ³)	NOx (mg/Nm ³)	Units Run (max)	PM (kg/hr)	NOx (kg/hr)	CO (mg/Nm ³)	CO (kg/hr)	SO2 (mg/Nm ³)	SO2 (kg/hr)
		Avg. Value			Hrs						
1	KHO1B (KHDS)	22953	3.251	19.22	744	0.07	0.44	75.668	1.74	8.858	0.20
2	FH01 (FCCU)	24235	0.98	27.598	720	0.02	0.67	16.056	0.39	12.273	0.30
3	FH03/COB (FCCU)	84321	38.149	21.543	720	3.22	1.82	22.083	1.86	14.831	1.25
4	CH21 (CDU - II)	90531	0	101.877	720	0.00	9.22	1.789	0.16	49.664	4.50
5	CH22 (CDU - II)	33510	0	88.289	720	0.00	2.96	2.787	0.09	36.453	1.22
6	CH223 (CDU - II)	50563	4.03	38.089	720	0.20	1.93	0	0.00	32.436	1.64
7	DD-HO1 (DHDS)	25998	2.919	39.278	720	0.08	1.02	8.261	0.21	30.602	0.80
8	DS-X-002 (SRU - 01)	29135	30.543	185.836	720	0.89	5.41	49.478	1.44	2975.483	86.69
9	DSX 301 (SRU - 02)	14151	27.184	46.987	720	0.38	0.66	109.288	1.55	4700.816	66.52
10	BS-101 (Biturox)	14174	13.452	27.038	720	0.19	0.38	4.718	0.07	9.68	0.14
11	VH H01/02 (VGO HDS)	52233	19.155	8.736	720	1.00	0.46	40.172	2.10	41.093	2.15
12	NHT CCR - 01	104483	8.199	0.665	720	0.86	0.07	39.939	4.17	44.04	4.60
13	UB07 (Boiler)	111963	13.79	60.357	720	1.54	6.76	8.564	0.96	139.01	15.56
14	UB08 (Boiler)	29524	102.66	2.79	720	3.03	0.08	29.237	0.86	109.81	3.24
15	UB09 (Boiler) (UX200)	30622	0.681	123.218	720	0.02	3.77	43.699	1.34	94.714	2.90
16	UB 10 (Boiler)	40255	5.83	0.651	720	0.23	0.03	6.591	0.27	-5.685	-0.23
17	UB 11 (Boiler)	71246	41.183	154.804	720	2.93	11.03	11.872	0.85	517.685	36.88
18	HRSG 1 (CPP - 01)	161184	0	26.747	720	0.00	4.31	1.563	0.25	12.084	1.95
19	GT2/HRSG-02 (CPP - 02)	151867	2.247	135.654	720	0.34	20.60	0	0.00	32.676	4.96
20	SRU III Train A (IS LZ 102)	91703	17.351	2.18	720	1.59	0.20	63.281	5.80	796.469	73.04
21	SRU III Train B (IS LZ 202)	90130	13.545	2.167	720	1.22	0.20	124.606	11.23	1551.014	139.79
22	CDU-III (ICH 101/102)	252659	1.401	6.403	720	0.00	1.62	53.004	13.39	35.236	8.90
23	DHDT (IGH 101/102)	58078	0.605	7.95	720	0.00	0.47	33.425	1.96	1.783	0.10
24	VGO-HDT (IVH 101/201)	54092	1.126	5.339	720	0.06	0.29	29.5	1.60	17.948	0.97
25	PFCCU-Heater (IFH 002)	21661	0	29.053	720	0.00	0.63	14.234	0.31	7.826	0.17
26	PFCCU-Regen. (IFLS 001)	170940	17.047	15.209	720	2.91	2.60	4.449	0.76	14.232	2.43
27	DCU-1 (IDH 101)	77894	1.445	2.384	720	0.11	0.19	44.727	3.48	26.343	2.05
28	DCU-2 (IDH 102)	77012	0	10.824	720	0.00	0.83	47.201	3.64	13.717	1.06
29	HRSG 3 (IUS HRSG 05LZ554)	161009	4.639	2.725	720	0.75	0.44	122.824	19.78	25.824	4.16
30	HRSG 4 (IUS HRSG 05LZ554)	142276	3.252	6.538	720	0.46	0.93	23.723	3.38	4.41	0.63
31	HRSG-5 (IUS HRSG 05LZ554)	143306	52.109	15.047	720	7.47	2.16	4.5	0.64	1.944	0.28
32	UB 12 (Boiler) (IUS UB12 LZ08)	122932	2.57	4.68	720	0.32	0.58	96.226	11.83	38.547	4.74
33	UB 13 (Boiler) (IUS UB12 LZ08)	123507	3.033	7.682	720	0.37	0.95	103.111	12.73	46.524	5.75
34	NHT-Isom. (NH-2/ H H 101)	53005	0	51.556	720	0.00	2.73	2.437	0.13	9.062	0.48
35	PWI LS 110 (PDPP INC - 01)	70957	0.47	1.839	720	0.03	0.13	0.631	0.04	0.399	0.03
36	LS021A (PDPP INC - 02)	71924	0	0.251	720	0.00	0.02	2.92	0.21	0	0.00
37	MSBP _ HOH	158034	0.833	29.503	720	0.13	4.66	9.615	1.52	20.061	3.17
38	MRH 01/02/03/04 (MSBP _ CCR)	96964	1.97	2.593	720	0.19	0.25	42.109	4.08	8.363	0.81
						30.65	91.49		114.82		483.83
						PM (kg/hr)	NOx (kg/hr)	CO (kg/hr)		SO2 (kg/hr)	

