



इंडियन ऑयल कॉर्पोरेशन लिमिटेड
बरौनी रिफाइनरी, डाकघर : बरौनी ऑयल रिफाइनरी,
जिला : बेगूसराय, बिहार - 851 114

Indian Oil Corporation Limited
Barauni Refinery, P.O.: Barauni Oil Refinery,
Distt.: Begusarai, Bihar - 851 114

वेबसाइट : www.iocl.com

ई-मेल : baraunirefinery @indianoil.in

दूरभाष : 06243-240159/240110

फैक्स : 06243-240150/240278



रिफाइनरीज़ प्रभाग

Refineries Division

Ref No : BR/HSE/EC-01/2025-26/ 3140

ISO : 9001, 14001 @ OHSAS:18001 Certified Refinery
Date: 26/06/2026

To,

The Dy. Director General of Forest (Central),
(MoEF&CC),
Integrated Regional Office,
2nd Floor, Headquarter- Jharkhand State Housing Board,
Harmu Chowk, Ranchi, Jharkhand - 834002.

Sub: Compliance of Environmental Clearance condition for

- Catalytic Reformer at Barauni refinery
- Augmentation of Crude processing capacity of Barauni Refinery from 3.3 to 4.2 MMTPA
- 6.0 MMTPA expansion of Barauni Refinery project
- MS & HSD quality upgradation & high sulphur crude maximization project
- MS quality upgradation and HSD quality upgradation in Barauni Refinery
- Expansion of Barauni Refinery from 6 MMTPA to 9 MMTPA along with polymer units by M/s Indian Oil Corporation Limited at Barauni

Ref.:

- Ministry's clearance letter no. J-11011/10/89-IA dated 25.07.1989
- Ministry's clearance letter no J-11011/48/95-IA-II dated 17.05.1996
- Ministry's clearance letter no J-1101/23/98-IA II (I) dated 08.03.1999
- Ministry's clearance letter no J-11011/15/2015-IA II (I) dated 15.02.2019
- Ministry's clearance letter no J-1101/491/2007-IA II (I) dated 18.03.2008
- Ministry's clearance letter no J-11011/15/2015-IA II (I) dated 06.03.2017

Dear Sir,

As required in the above clearance letters, please find enclosed the six monthly status reports on EC conditions for the subject projects along with environmental monitoring data for the period from October'2025 to March'2026 for your kind perusal.

Thanking you,

Yours faithfully,

(R K Samad)

DEPUTY GENERAL MANAGER (HSE)

Encl: As above

Page 1 of 2



Barauni Refinery - In harmony with nature



पंजीकृत कार्यालय : जी-9, अली यावर जंग मार्ग, बान्द्रा (पूर्व), मुम्बई-400 051, महाराष्ट्र (भारत)
Regd. Office : G-9, Ali Yavar Jung Marg, Bandra (East), Mumbai-400 051, Maharashtra (India)
CIN - L 23201 MH 1959 GOI 011388

- CC: The Member Secretary,
Bihar State Pollution Control Board,
Parivesh Bhawan, Plot No. NS-B/2,
Patliputra Industrial Area,
Patliputra, Patna (Bihar) - 800 010
- CC: The Member Secretary,
Central Pollution Control Board,
Ministry of Environment & Forests, Govt. of India,
Parivesh Bhavan, East Arjun Nagar, Shahdara,
New Delhi – 110032
- CC: Dr. Rita Saha, Scientist 'D'
Central Pollution Control Board,
Southernd Conclave, Block 502,
5th and 6th Flors, 1582
Rajdanga Main Road,
Rajdanga Nabapalli,
Kolkata, West Bengal
700107

F. No.J-11011/15/2015-IA-II (I)
Government of India
Ministry of Environment, Forest and Climate Change
(IA Division)

Indira Paryavaran Bhawan
Jor Bagh Road, N Delhi - 3
Dated: 15th February, 2019

To,

M/s Indian Oil Corporation Limited,
Barauni Refinery,
District **Begusarai** (Bihar)

Sub: Expansion of Barauni Refinery from 6 MMTPA to 9 MMTPA along with polymer units by M/s Indian Oil Corporation Limited at Barauni, District Begusarai (Bihar) - Environmental Clearance - reg.

Ref: Online Proposal No.IA/BR/IND2/28027/2015 dated 2nd February, 2019.

Sir,

This has reference to your online proposal No.IA/BR/IND2/28027/2015 dated 2nd February, 2019 along with the EIA/EMP report containing public hearing proceedings for the above mentioned project.

2. The Ministry of Environment, Forest and Climate Change has examined the proposal for environmental clearance to the project for expansion of Barauni Refinery from 6 MMTPA to 9 MMTPA along with polymer units by M/s Indian Oil Corporation Limited in a total area of 3592921sqm at Barauni, District Begusarai (Bihar).

3. The details of the existing/proposed products are as under:-

S. No.	Product/By-product	Existing (TMTPA)	Proposed (TMTPA)	Total (TMTPA)
1	LPG	318	169.1	487.1
2	Poly Propylene	0	203	203
3	Naphtha	83.4	35.3	118.7
4	MS (BS-VI)	1351.6	372.4	1724.0
5	Aviation Turbine Fuel	204.0	(-)0.8	203.2
6	Superior Kerosene	370.0	0	370.0
7	HSD (BS-VI)	2787.1	1833.9	4621.0
8	Fuel Oil	46.9	(-) 45.9	1.0
9	Bitumen	74.0	0	74.0
10	Carbon Black Feed Stock	0	0	0
11	Raw Pet Coke (LS)	154.0	(-) 30.0	124.0
12	Raw Pet Coke (HS)	0	184.0	184.0
13	Sulfur	21.7	34.3	56.0
14	Fuel & Loss	591	243.0	834
Total		6000	3000	9000

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4. Details of existing and proposed process units are as under:-

Existing		Proposed		Final	
Process Unit	Capacity (TMTPA)	Process Unit	Capacity (TMTPA)	Process Unit	Capacity (TMTPA)
AVU I	1750				
AVU II	1750				
AVU III	2500				
		New AVU-IV	9000	New AVU-IV	9000
NSU	800			NSU	800
NHDT + CRU	210	NHDT + CRU	300	NHDT + CRU	300
NHT (ISOM)	183			NHT (ISOM)	183
ISOM	126			ISOM	126
RFCCU	1400	RFCC	1700	RFCC	1700
PRIME G+	840			PRIME G+	840
COKER B	500	COKER B	662	COKER B	662
BITUROX	100			BITUROX	100
DHDT	3300			DHDT	3300
COKER A	600			COKER A	600
Existing SRU	2x40 TPD			Existing SRU	2x40 TPD
HGU	54			HGU	54
NHDT + CCRU	375			NHDT + CCRU	375
		New SRU	2x80 TPD	New SRU	2x80 TPD
		New NHT (ISOM)	360	New NHT (ISOM)	360
		New ISOM	304	New ISOM	304
		New DHDT	1200	New DHDT	1200
		New HGU	61	New HGU	61
		New OHCU	1000	New OHCU	1000
		New PRU	562	New PRU	562
		New PP	200	New PP	200
		New LTU	390	New LTU	390
		New NSU	880	New NSU	880
		New ARU	500 MT/hr	New ARU	500 MT/hr
		New SWS	220 MT/hr	New SWS	220 MT/hr
		New FGTU	6178 kg/hr	New FG TU	6178 kg/hr

5. Existing land area is 3592921 sqm and no additional land is required for the proposed expansion. Industry has already developed greenbelt in an area of 26% i.e. 933124 m² out of total area of the project. The estimated project cost is Rs.8287 crores.

6. There are No National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridor etc within 10 km of the project site. Ganga River flows at a distance of 8 km in South.

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7. Total water requirement is 52104 cum/day, of which fresh water requirement of 24000 cum/day will be met from ground water through artesian wells.

Effluent of 28104 cum/day quantity will be treated in the Effluent Treatment Plant followed by Reverse Osmosis. There will be no discharge of treated/untreated waste water from the unit, and thus ensuring Zero Liquid Discharge.

Power requirement after expansion will be 139000 kVA, to be supplied by Bihar State Power transmission Company Limited. Existing unit has one DG set of 625 kVA. No additional DG set will be required.

Existing unit has six boilers of 525 TPH capacity. One more boiler of 150 TPH will be installed to cater to the proposed expansion. Multi cyclone separator/bag filter with adequate stack height will be provided with the proposed boilers to control the particulate emissions within the statutory limit of 115 mg/Nm³.

8. The project/activity is covered under category A of item 4(a) 'Petroleum refining industry', 5(e) 'Petrochemical products and petrochemical based processing', 5(c) 'Petro-chemical complexes' of the schedule to the EIA Notification, 2006 and requires appraisal/approval at central level in the Ministry.

9. The standard ToR for the project was issued by the Ministry on 16th November, 2017, and public hearing was conducted by the State Pollution Control Board on 5th October, 2018.

10. The proposal was considered by the Expert Appraisal Committee (Industry-2) in its 3rd meeting held on 11th February, 2019. The project proponent and their accredited consultant M/s Envirotech East Pvt Ltd presented the EIA/EMP report as per the ToR.

11. Based on the proposal submitted by the project proponent and recommendations of the EAC, the Ministry of Environment, Forest and Climate Change hereby accords environmental clearance to project for **expansion of Barauni Refinery from 6 MMTPA to 9 MMTPA along with polymer units by M/s Indian Oil Corporation Limited** in a total area of 3592921sqm at Barauni, District Begusarai (Bihar), for a period of one year, under the provisions of the EIA Notification, 2006, and the amendments therein, subject to compliance of the terms and conditions as under:-

(a) Third party assessment for the environmental damage, if any, and differential impacts on environmental parameters due to excess crude processing (during the periods 2009-10, 2010-11, 2012-13, 2013-14, 2015-16 & 2016-17) shall be carried out by NEERI or by any other agency of repute, in a fixed time frame and the report shall be submitted to the Ministry.

(b) Necessary permission as mandated under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, as applicable from time to time, shall be obtained from the State Pollution Control Board as required.

(c) As already committed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises.

(d) Necessary authorization required under the Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016 and Solid Waste Management Rules, 2016 shall be obtained and the provisions contained in the Rules shall be strictly adhered to.



- (e) To control source and the fugitive emissions, suitable pollution control devices shall be installed with different stacks to meet the prescribed norms and/or the NAAQS. The gaseous emissions shall be dispersed through stacks of adequate height as per CPCB/SPCB guidelines.
- (f) The National Emission Standards for Petroleum Oil Refinery issued by the Ministry vide G.S.R.186(E) dated 18th March, 2008, as amended from time to time, shall be followed.
- (g) The National Emission Standards for Petrochemical (Basic & Intermediates) issued by the Ministry vide G.S.R.820 (E) dated 9th November, 2012, as amended time to time, shall be followed.
- (h) Total fresh water requirement shall not exceed 24000 cum/day to be met from ground water through artesian wells. Necessary prior permission in this regard shall be obtained from the concerned regulatory authority.
- (i) Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.
- (j) Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm, and solvent transfer to be done through pumps.
- (k) Process organic residue and spent carbon, if any, shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF. The ash from boiler shall be sold to brick manufacturers/cement industry.
- (l) The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time. All transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act (MVA), 1989.
- (m) Regular monitoring for Volatile Organic Compounds shall be carried out at vulnerable points.
- (n) Oily sludge shall be collected for oil recovery and the residue shall be bio-remediated. The sludge shall be stored in HDPE lined pit with proper leachate collection system.
- (o) Comprehensive water audit to be conducted on annual basis and report to the concerned Regional Office of the Ministry. Outcome from the report to be implemented for conservation scheme.
- (p) Oil catchers/oil traps shall be provided at all possible locations in rain/storm water drainage system inside the factory premises.
- (q) The company shall undertake waste minimization measures as below:-
- (i) Metering and control of quantities of active ingredients to minimize waste.
 - (ii) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.
 - (iii) Use of automated filling to minimize spillage.
 - (iv) Use of Close Feed system into batch reactors.
 - (v) Venting equipment through vapour recovery system.
 - (vi) Use of high pressure hoses for equipment clearing to reduce wastewater generation.

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(r) The green belt of 5-10 m width shall be developed in more than 33% of the total project area, mainly along the plant periphery, in downward wind direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.

(s) All the commitments made to the public during public hearing/consultation shall be satisfactorily implemented.

(t) At least 0.25% of the total project cost shall be allocated for Corporate Environment Responsibility (CER) and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office.

(u) For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.

(v) The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire fighting system shall be as per the norms.

(w) Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.

(x) Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.

(y) Process safety and risk assessment studies shall be carried out using advanced models, and the mitigating measures shall be undertaken accordingly.

11.1 The grant of Environmental Clearance is further subject to compliance of other generic conditions as under:-

(i) The project authorities must strictly adhere to the stipulations made by the state Pollution Control Board (SPCB), State Government and/ or any other statutory authority.

(ii) No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change. In case of deviations or alterations in the project proposal from those submitted to this Ministry for clearance, a fresh reference shall be made to the Ministry to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.

(iii) The locations of ambient air quality monitoring stations shall be decided in consultation with the State Pollution Control Board (SPCB), ensuring that at least one stations each is installed in the upwind and downwind direction as well as where maximum ground level concentrations are anticipated.

(iv) The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No.826(E) dated 16th November, 2009 shall be complied with.



- (v) The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under the Environment (Protection) Act, 1986.
- (vi) The Company shall harvest rainwater from the roof tops of the buildings to recharge ground water, and to utilize the same for different industrial operations within the plant.
- (vii) Training shall be imparted to all employees on safety and health aspects of chemicals handling. Pre-employment and routine periodical medical examinations for all employees shall be undertaken on regular basis.
- (viii) The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, risk mitigation measures and public hearing shall be implemented.
- (ix) The company shall undertake all measures for improving socio-economic conditions of the surrounding area. CSR activities shall be undertaken by involving local villagers, administration and other stake holders. Also eco-developmental measures shall be undertaken for overall improvement of the environment.
- (x) A separate Environmental Management Cell equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.
- (xi) The company shall earmark sufficient funds towards capital cost and recurring cost per annum to implement the conditions stipulated by the Ministry of Environment, Forest and Climate Change as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so earmarked for environment management/ pollution control measures shall not be diverted for any other purpose.
- (xii) A copy of the clearance letter shall be sent by the project proponent to concerned Panchayat, Zila Parishad/Municipal Corporation, Urban local Body and the local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal.
- (xiii) The project proponent shall also submit six monthly reports on the status of compliance of the stipulated Environmental Clearance conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional Office of MoEF&CC, the respective Zonal office of CPCB and SPCB. A copy of Environmental Clearance and six monthly compliance status report shall be posted on the website of the company.
- (xiv) The environmental statement for each financial year ending 31st March in Form-V as is mandated shall be submitted to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Regional offices of MoEF&CC by e-mail.
- (xv) The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB/Committee and may also be seen at Website of the Ministry at <http://moef.nic.in>. This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the

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vernacular language of the locality concerned and a copy of the same shall be forwarded to the concerned Regional office of the Ministry.

12. The Ministry reserves the right to stipulate additional conditions, if found necessary at subsequent stages and the project proponent shall implement all the said conditions in a time bound manner. The Ministry may revoke or suspend the environmental clearance, if implementation of any of the above conditions is not found satisfactory.

13. The above conditions will be enforced, *inter-alia* under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Water Pollution) Act, 1981, the Environment (Protection) Act, 1986, the Hazardous Waste (Management, Handling and Trans-boundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991, read with subsequent amendments therein.


15/2/2019
(S. K. Srivastava)
Scientist E

Copy to:-

1. The Additional PCCF (C), Ministry of Environment, Forest and Climate Change, Regional Office, Ranchi Regional Office (ECZ), Bungalow No. A-2, Shyamali Colony, **Ranchi** - 834002 (Jharkhand)
2. The Secretary, Forests & Environment Department, Government of Bihar, 1st Floor, N.H Bhawan, Vishweshwaraiya Complex, Bailey Road, **Patna** -1 (Bihar)
3. The Member Secretary, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, **Delhi** - 32
4. The Member Secretary, Bihar State Pollution Control Board, Beltron Bhawan, 2nd Floor, Lal Bahadur Shastri Nagar, **Patna** - 800 023 (Bihar)
5. Monitoring Cell, Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, **New Delhi**
6. Guard File/Monitoring File/Record File


15/2/2019
S. K. Srivastava
Scientist E

RHUSHAN, ASHISH (भूषण, आशीष) <BHUSHANA@INDIANOIL.IN>; JHA, RAJENDRA KUMAR (झा, राजेन्द्र कुमार), CGM(TS, HS&E) <rk_jha@INDIANOIL.IN>; KAILA, AJAY (अजय कैला) <KAILAA@INDIANOIL.IN>; kvenkatesan@cpcl.co.in; <kvenkatesan@cpcl.co.in>; LAHKAR, S.B. (लाहकर, एस.बी.) <LahkarSB@INDIANOIL.IN>; MALIK BR (मलिक बी आर) <MALIKBR@INDIANOIL.IN>; pselvam@cpcl.co.in; SANYAL, ATANU (सान्याल, अतनु) <SANYALA@INDIANOIL.IN>; SARKAR SUBHAJIT (सरकार सुभजीत), CGM(TS & HS&E) <SARKARS5@INDIANOIL.IN>; SHAH HITESH (शाह हितेश) <hitesh_shah@INDIANOIL.IN>; NANDI, DILIP (दिलीप नंदी) <d_nandi@INDIANOIL.IN>; Kapoor, Sunil (कपूर, सुनील) <KAPOORS@INDIANOIL.IN>; KUMAR, SANJEEV (कुमार, संजीव) <SANJEEVK2@INDIANOIL.IN>
Subject: RE: Compliance Status of the CTO, Authorisations and prevailing EC

As per EIA rule under EP Act, we are required to submit the compliance status of prevailing EC recommendations to regional MoEF office twice in a year in June and December.

Accordingly JR had submitted the pointwise compliance status for last three EC to MoEF Bhopal on 30th November 2020.

We feel that the same report will be acceptable to RHQ HSE, otherwise it will be a duplication job and now onwards we can share the half yearly report to MoEF, with RHQ-HSE for their analysis..

RHQ –HSE is requested to confirm their acceptability of the same.

With Regards

SOUMITRA RAY CHOUDHURI
DY.General Manager (HSE)
IOCL GUJRAT REFINERY, VADODARA
Phone no. 02652237371/8371
Mobile 9433066507

From: NIYANTHA CH (नियंता सी एच)

nt: Thursday, April 15, 2021 6:26 PM

To: BHANU, S. K. (भानू एस.के.) <BHANUSK@INDIANOIL.IN>; CHITTE, P.N. (पी.एन. चित्ते) <CHITTEPN@INDIANOIL.IN>; CHOUDHURI, SOUMITRA RAY (चौधुरी सौमित्र रे), DGM(HSE) <soumitra_ray_choudhuri@indianoil.in>; DANIELRAJ I (डेनियलराज आई) <DANIELRAJI@INDIANOIL.IN>; DAS, GAUTAM CHANDRA (दास, गौतम चन्द्र) <DASGC2@INDIANOIL.IN>; JOSHI, Y. B. (जोशी, वाई. बी.) CM(H, S & E) <JOSHIYB@INDIANOIL.IN>; KUMAR DHARMENDRA (कुमार धर्मेन्द्र) <KUMARD9@indianoil.in>; KUMAR, SARVESH (कुमार, सर्वेश) <sarvesh_kumar@INDIANOIL.IN>; MAULIK, MANDAL MOU (मौलिक, मण्डल मौ) <MANDALMOU@INDIANOIL.IN>; rajasekarank@cpcl.co.in; S Neelakannan MEPS <sneelakkannan@cpcl.co.in>; SAIKIA, TRIDIB (त्रिदिब सैकिया) <tridib_saikia@INDIANOIL.IN>; VYAS RS (व्यास आर एस) <VYASRS@INDIANOIL.IN>; YADAV, A.K. (ए.के. यादव) <YADAVAK@INDIANOIL.IN>
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S.No.	Table of Content	Page No.
1	Environment Cover letter	1
2	Crude product	3
3	Catalytic reformer at Barauni Refinery of Indian Oil Corporation Environment Clearance	3-6.
4	Augmentation of Crude Processing Capacity of Barauni Refinery from 3.3 to 4.2 MMTPA of IOC.	7-8.
5	Status of Environment clearance condition(6.0MMTPA expansion of Barauni Refinery)	9-13.
6	Status of Environmental Clearance Conditions for Expansion of Barauni Refinery from 6 MMTPA to 9 MMTPA along with polymer units by M/s Indian Oil Corporation Limited at Barauni, District Begusarai (Bihar)- Environmental Clearance - reg.	15-42
7	MS/ HSD Quality Upgradation/ HS Crude Maximization Project EC Clearance Actionable Points	43-55
8	Status of Environmental Clearance Conditions for MS quality up-gradation and HSD quality up-gradation in Barauni Refinery	57-75
9	Reports	65-116

**Environmental
Monitoring
Data**

IOCL-Barauni Refinery

(Oct'2025 to Mar'2026)

Rev.

Production details (Oct'2025 to Mar'2026)			
All figures in Metric Tonnes		All figures in Metric Tonnes	
Total Crude Process	Quantity	Production	Quantity
Low sulfur	28476339.00	LPG	199900
High sulfur	328271.00	SRN	167900
Total Crude	28804610.00	EBMS	175600
		MS (Euro-VI)	633100
External Inputs		SKO	45200
SKO Interface		JET A-1 (ATF)	119900
Ethanol	33420.000	HSD (Euro-VI)	1494900
Contaminated Product	11100.000	LSHS(Premium)	94500
Naphtha Received and Processed	19600.000	RPC EX COKER-A	99200
RLNG	68500.000	Bitumen VG 40	75000
Total external input	132620.000	Bitumen VG 30	10376.662
		SULFUR	10400

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IndianOil
Barauni Refinery

Status as on 31.03.2026

Subject: Catalytic Reformer at Barauni Refinery of Indian Oil Corporation Environment clearance.

Ref: Ministry's clearance letter no J-11011/10/89-IA dated 25.07.1989

SN	ITEM	STATUS
1.	The project authority must strictly adhere to stipulations made by the State Government and the State Pollution Control Board.	• With Ref. No.ROB(A+W)-1474/20/1084 dated 05.04.2022 permission from BSPCB, under Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, available with validity till 04.04.2027. • Complied.
2.	The project authority will not increase the throughput capacity of the refinery from the existing level.	• Prior approval of ministry is always taken before carrying out any expansion or modification of the plant. • Complied
3.	The project authority must submit a rapid EIA report within 6 months and comprehensive EIA report within 18 months to this Ministry for review.	• The EIA report has already been submitted. • Complied.
4.	Gaseous emissions of Sulphur dioxides, hydrocarbons and oxides of nitrogen should not exceed the standard prescribed by the Central/ State Pollution Control Board. At no time the emission level should be beyond the stipulated standard. In the event of failure of any pollution control system adopted by the unit, the respective unit should be put out of operation immediately and should not be restarted until the control systems are rectified to achieve the desired efficiency.	• Process emissions at Barauni Refinery conform to the standards prescribed under the EPA rules. • Total SO₂ emissions from existing units at Barauni Refinery are within the stipulated limit of 815 kg/hr as per latest EC. • Complied.
5.	The project authority will recycle the effluent to the maximum extent possible either as process water or for afforestation.	• Effluent Treatment Plant (ETP) of 1000 m³/hr capacity and Biological Treatment Plant (BTP) of 1400 m³/hr capacity have been provided for treatment of effluent. • Treated effluent is completely reused in refinery operations, horticulture and eco ponds make up. • Complied.
6.	The entire quantity of liquid effluent coming out of the complex should conform to MINAS both in terms of quantity and quality	• No effluent is being discharged to river Ganga since Oct 2013 and the line going to river Ganga has been dismantled.

	before discharge into the drainage system. The process plant effluent should be discharged through pipeline/closed channel.	• The treated water quality is within MINAS. • Complied.
7.	The project authority must set up minimum of four air quality monitoring stations at different locations of the plant and in the nearby areas. The air quality will be monitored as per standard procedure. The monitoring of gaseous emissions should also include oxides of nitrogen and hydrocarbons. All the stacks of the plant must be provided with continuous automatic stack monitoring equipment and stacks emission levels must be recorded and furnished to the State Pollution Control Board once in three months and to this Ministry once in six months.	• Eight manual (four in Refinery, one in township, three in periphery villages) air quality monitoring stations have been set up. Ambient air quality is checked twice in a week. • Three continuous online air monitoring stations provided for ambient air quality monitoring covering 8 parameters viz PM 10, PM 2.5, SO₂, NO_x, CO, NH₃, Benzene and Ozone. The stations are also directly connected online with servers at CPCB and Bihar State Pollution Control Board (BSPCB). • The results are furnished to the BSPCB and the MoEF&CC (Regional office, Ranchi) at regular intervals as prescribed. • Continuous on-line stack analyzers for monitoring of SO₂, NO_x, CO & PM have been installed and connected to CPCB server for 24 nos. of stacks. • Stack emissions from all units are sampled once in two months except Sulfur Recovery Unit (which is monitored monthly basis) and results on stack emission, and work zone monitoring data are furnished to the BSPCB and MoEF&CC (Regional Office, Ranchi). • Complied.
8.	The liquid effluent quality must be assured on daily basis. At least five water quality monitoring stations must be set up in consultation with the State Pollution Control Board. This should include the monitoring of oil content in the river. If the effluent quality exceeds the standard prescribed at any time, the corresponding units of the plant which are contributing to the excessive pollutant loads shall be immediately stopped and operation must not be restarted till the quality of effluent discharged from the units are brought down to the required levels.	• Effluent quality monitoring points has been set up in consultation with BSPCB. The results are regularly furnished to the BSPCB and regional office, MoEF&CC, Ranchi. • Online effluent analyzers have been installed at the discharge of treated effluent and connected to CPCB and BSPCB server. • No effluent is being discharge to river Ganga since Oct 2013 and the line going to river Ganga has been dismantled. • Complied.
9.	The project authority will ensure that the effluent treatment plant will be commissioned and operational within the next three months.	• Effluent Treatment Plant (ETP) of 1000 m³/hr capacity and Biological Treatment Plant (BTP) of 1400 m³/hr capacity have been provided for treatment of effluent. • Complied.
10.	The project authority must submit a disaster management plan duly approved by the nodal agency of the State within a period of three months. Disaster management plan should include the worst accident scenario	• Comprehensive On-site and Off-site Disaster Management Plan exist in refinery and updated regularly as per PNGRB guidelines. • On-site & Off-site mock drills are conducted quarterly and annually respectively. The Off-site drill is conducted with involvement of District Authority. • Complied.

	and its probable consequence.	
11.	The project authority will start construction only after the approval of Chief Controller of Explosive and a copy of consent letter should be made available to the Ministry.	• The approval of Chief controller of Explosive was taken before construction. • Complied.
12.	No change in design of stacks should be made without the prior approval of the State Pollution Control Board. Alternate pollution control system and/or proper design (stacks injection system) of the stacks should be made to minimize hydrocarbon emission due to failure in the flare system in the plant.	• No change is done without prior approval of statutory bodies. • Low NOx burners are provided in furnaces to minimize hydrocarbon emission in stacks. • Complied
13.	The project authority must provide necessary infrastructure facilities to the construction worker during construction.	• The project is already under operation. The condition is not applicable at present. However, construction work for BR-9 is going on. The construction workers are from nearby village only. • Complied
14.	The project authority must take adequate measure to bring down the noise level. The protective measures taken by the project authority should be made available to this Ministry.	• Adequate noise control measures have been taken in new facilities in the project. • For personnel working in the proximity of high noise generating equipments, appropriate PPEs are used, and exposure is controlled through job rotation, education and awareness about PPEs compliance. • Six monthly monitoring report of noise level at different locations of plant are provided to MoEF&CC • Complied.
15.	The project authority will assess the impact on ground water contamination by the leachates and the remedial measures taken by the project authority should be submitted to this Ministry for review. The project authority will also monitor the quality of ground water in the nearby areas and report should be submitted to the State Pollution Control Board once in every three months and to this Ministry once in six months.	• The ground water is checked by MoEF&CC certified agency at different locations in Refinery and nearby villages. • The report is submitted to BSPCB and MoEF&CC. • Complied.
16.	The project authority must set up laboratory facilities in the existing premises for testing and analyzing gaseous emissions and water quality.	• A fully-fledged laboratory facility is available at Barauni Refinery for testing of gaseous emission and water quality. Moreover, MoEF&CC approved third party monitoring is also done. • Complied.
17.	The project authority must submit a revised green belt details for the plant and township to this Ministry within three months for approval. The green belt should be with a	• Total plot area of the refinery: 887.83 acres. • Green belt area in Refinery: 43.8 acres. • Green belt area in Refinery Township: 82.19 acres.

	minimum tree density of 1000 trees per acre.	• Total green belt area: 125.99 acres. • Since, there is no further land available for tree plantation in Refinery and township, MoU was signed with DFO, Munger and 180 hectares of green belt has been developed at Munger Forest Division. Total 1, 65,000 no. of tree has been planted. • Total Green belt area has been increased to 65% of the total project area. EC amendment for the same has been carried out. • Complied
18.	Additional area under the control of the project which is not being used for the plant utilities should be afforested and funds for this purpose should be suitably provided.	• Forestation is done at all places wherever plant utilities are not used. • Additional tree plantation also done in Refinery Township and nearby areas. • Complied
19.	A separate environmental management cell with suitably qualified people to carry out various functions related to environmental management should be set up under the control of a senior technical person who will directly report to the head of the organization.	• A separate Environment Management Cell with well-equipped dedicated pollution control laboratory exists at Barauni Refinery. • Complied.
20.	The fund provision (capital and recurring expenditure) for the environmental control measure should not be diverted for any other purpose. The implementation schedule for environmental control measure should be strictly followed.	• All facilities envisaged for environmental protection and monitoring have been provided in Barauni refinery expansion project. • In addition to one-time investment in facilities for combating pollution, separate funds are allocated and utilized for specific activities such as bio-remediation of sludge, environment monitoring and studies related to environment etc. • Complied.
Further Stipulations		
1.	The Ministry of Environment and forest or any other competent authority may stipulate any further conditions after reviewing the impact assessment report or any other report prepared by the project authority.	• Complied.
2.	The above condition will be enforced, inter-alia, under the water (Prevention and Control of Pollution) Act, 1974; the Air (Prevention and Control of Pollution) Act, 1981 and the Environment (Protection) Act, 1986.	• Complied.
3.	The Ministry reserves the right to withdraw the clearance as and when necessary in the interest of the environmental protection.	• Complied.



IndianOil
Barauni Refinery

Status as on 31.03.2026

Subject: Augmentation of Crude Processing Capacity of Barauni Refinery from 3.3 to 4.2 MMTPA of IOC.

Ref: Ministry's clearance letter no J-11011/48/95-IA-II dated 17.05.1996

SN	Point	Status
1.	The environmental aspects of the project have been examined by this Ministry and environmental clearance is accorded subject to the compliance of conditions stipulated in the clearance order dated 25th July, 1989 and 2nd Dec, 1994.	• Compliance of conditions stipulated in the clearance order dated 25th July, 1989 is attached in this report. • Complied.
2.	Action Plan for effective disposal of oily sludge should be submitted within a period of 3 months. In case of inability to utilize the sludge due to any reason, there will be provision for immediate proper disposal of the sludge by the project authorities in accordance with hazardous Wastes (Management & Handling) Rules, 1989. A compliance report should be submitted quarterly.	• HDPE lined RCC pit for storage of hazardous solid waste (Oily Sludge) is in place and mechanized skid process by M/s. LMR Pvt Ltd. has been deployed for better recovery of oil from oily sludge. • Residual oily sludge is bio-remediated. • Complied.
3.	The project proponent should not increase the through put capacity of Barauni Refinery beyond 4.2 MMTPA without prior approval from this Ministry.	• Prior approval of ministry is always taken before carrying out any expansion or modification of the plant. • Complied
4.	There will be no change in the fuel used without permission from the Ministry.	• Noted for compliance.
5.	On site and off site Emergency preparedness plans should be obtained.	• Comprehensive Emergency Disaster Management Plans exist in refinery and are updated regularly as per PNGRB guidelines. • Necessary inputs for hazardous chemicals of Barauni Refinery have been provided to district authorities for inclusion in Disaster management plan as per MSIHC rule. • On-site & Off-site mock drills are conducted quarterly and annually respectively. The Off-site drill is conducted with involvement of District Authority. • Complied.
6.	Rules for storage, handling and import of hazardous substance should be strictly adhered to.	• Handling & storage of hazardous chemicals are done in accordance with the rules. • Complied.

7.	The Ministry reverses the right to alter the conditions or withdraw clearance as and when necessary in the interest of environmental protection.	• Noted.
8.	The above conditions will be endorsed inter alia under the Water (Prevention and Control Act, 1974; the Air (Prevention and Control of Pollution) Act, 1981; and the Environmental (Protection) Act, 1986; and the Public Liability Insurance Act, 1991 with their amendments and rules.	• Noted.



IndianOil
Barauni Refinery

Status as on 31.03.2026

Subject: STATUS OF ENVIRONMENTAL CLEARANCE CONDITIONS (6.0 MMTPA EXPANSION OF BARAUNI REFINERY)

Ref: Ministry's clearance letter no J-1101/23/98-IA II (I) dated 08.03.1999

(A) Specific conditions

SN	ITEM	STATUS
1.	The gaseous emissions from the process stacks must conform to the standards prescribed under the EPA rules and/ or state pollution control board. At no time, the emission level should go beyond the prescribed standards. Specially, the total SO ₂ emissions must not go beyond 1080 kg/hr as confirmed by the company. In the event of failure of any pollution control system adopted by the units, the respective unit must be put out of operation immediately and should not be restarted until control measures are rectified to achieve desired efficiency.	• Process emissions at Barauni Refinery conform to the standards prescribed under the EPA rules • Total SO₂ emissions from existing units at Barauni Refinery are within the stipulated limit of 815 kg/hr as per latest EC. • Complied.
2.	In consultation with SPCB, the project authority must set up sufficient number of air quality monitoring stations to monitor SPM, SO ₂ , NO _x , CO & NH ₃ . Stack emissions should be monitored regularly. Data on stack emission and ambient air quality including work zone should be submitted to the ministry (Regional Office, Bhubaneswar) once in six months and SPCB once in three months along with statistical analysis.	• Eight manual (four in Refinery, one in township and three in periphery villages) air quality monitoring stations have been set up. Ambient air quality is checked twice in a week. • Three continuous online monitoring stations provided for ambient air quality monitoring covering 8 parameters viz PM 10, PM 2.5, SO₂, NO_x, CO, NH₃, Benzene and Ozone. The stations are also directly connected online with servers at CPCB and Bihar State Pollution Control Board (BSPCB). • The results are furnished to the BSPCB and the MoEF&CC (Regional office, Ranchi) at regular intervals as prescribed. • Continuous on-line stack analyzers for monitoring of SO₂, NO_x, CO & PM have been installed and connected to CPCB server for 24 nos. of stacks. • Process emissions from all units are sampled once in two months except Sulfur Recovery Unit (which is monitored monthly basis) and results on stack emission, and work zone monitoring data are furnished to the BSPCB and MoEF&CC (Regional Office, Ranchi). • Complied.

3.	Adequate effluent treatment facilities (primary, secondary & tertiary) should be provided so that liquid effluents conform to the standards prescribed under EPA rules/SPCB before discharging into river Ganga. The outfall point in the river must be approved by Bihar Pollution Control Board.	• Effluent Treatment Plant (ETP) of 1000 m³/hr capacity and Biological Treatment Plant (BTP) of 1400 m³/hr capacity have been provided for treatment of effluent. • Treated effluent is completely reused in refinery operations, horticulture and eco ponds make up. • No effluent is being discharged to river Ganga since Oct 2013 and the line going to river Ganga has been dismantled. • Complied.
4.	Adequate number of effluent quality monitoring stations must be set up in consultation with SPCB to monitor the water quality parameters as per EPA / SPCB regulations. Monitored data along with analysis should be submitted to this ministry (Regional Office, Bhubaneshwar) once in six months and SPCB once in three months.	• Effluent quality monitoring points has been set up in consultation with BSPCB. The results are regularly furnished to the BSPCB and regional office, MoEF&CC, Ranchi. • Online effluent analyzers have been installed at the discharge of treated effluent and connected to CPCB and BSPCB server. • Complied.
5.	The company must identify and implement water conservation and treated effluent recycling / reusing schemes to minimize the raw water consumption and to achieve zero-pollutant discharge to the river Ganga.	To reduce Raw water consumption, treated effluent is re-used as • Cooling tower makeup • Fire water make up • Coke cutting water • Make up water for Eco Ponds. • Horticulture of Eco park • No effluent is being discharged to river Ganga. • Complied.
6.	The hazardous solid wastes like spent catalysts must be disposed off in a secured landfill with facility for leachate collection and treating in the ETP.	• HDPE lined RCC pit for storage of hazardous solid waste (Oily Sludge) is in place and mechanized skid process by M/S LMR Pvt Ltd. has been deployed for better recovery of oil from oily sludge. • Residual oily sludge is bio-remediated. • Spent catalyst is sold to CPCB/SPCB approved authorized recycler/re-processors in accordance with Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016. • Complied.
7.	The proposed storage for LPG shall be of mounded type in order to reduce the risk level. The OISD guidelines must be strictly followed.	• 6 nos. of mounded LPG storage bullets as per OISD guidelines for storage of LPG have been provided (commissioned in 2002). • Complied.
8.	In addition to the above stipulations, the company must undertake additional afforestation and Eco-development work in the area. In this regard, the company must augment its tree plantation activities by 25 thousand trees in a phased manner. Further, the company has around 120 acres of borrow-pit area in and adjoining to the plant premises. The company must give an action plan to ecologically develop this area within 3 months.	• Spread over an area of 75 acres, Barauni Refinery has developed a beautiful Ecological Park (Eco Park) with sprawling lawns, flowers and ornamental plants, potted plants, diverse habitat of tress and the forest vegetation. The garden has more than 279 plant species under 81 families including some medicinal plants both indigenous and exotic. • Tree plantation has been done in a phased manner to develop green belt in & around refinery controlled area. • Plantation in refinery is continuing. However, existing land of refinery is getting saturated with greenery. • Since, there is no further land available for tree plantation in Refinery and township hence, an agreement has been done with Forest department on

		21.10.2021 for 1,65,000 nos. trees plantation in 180 Hectare land. EC amendment for the same has been carried out. Following developmental jobs were undertaken in and around borrow pit area in 2014-15: - To prevent inundation of nearby agricultural land / fields of farmers, a 1.0 M high Bundh has been made around borrow pit. - To minimize mosquito menace in nearby villages floating water hyacinth (Jalkumbhi) was removed nearby the newly made Bundh. - Fogging was undertaken in nearby villages (Bihat, Mahna, Papraur etc.) to control mosquito spread. - Later in 2016-17, outlet of borrow pit flowing into Jemra Nalla was blocked to stop flow of borrow pit water to Deona side and other villages as there were complaints of inundation of villages on the banks of Jemra Nalla. Bleaching powder was also provided to representatives of village Panchayats of Devna. • Complied.
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(B) General Conditions

1.	The project authority must adhere to the stipulations made by Pollution Control Board and state government.	- Stipulations being followed. • Complied.
2.	No expansion or modification of the plant should be carried out prior approval of this ministry.	- Prior approval of ministry is taken before carrying out any expansion or modification of the plant. • Complied.
3.	A green belt of adequate width and density should be provided all around the plant in consultation with the state forest department. A norm of 2500 plants/ hectare may be followed and minimum of 25% area must be covered by green belt.	- Total plot area of the refinery: 887.83 acres. - Green belt area in Refinery: 43.8 acres. - Green belt area in Refinery Township: 82.19 acres. - Total green belt area: 125.99 acres. - Since, there is no further land available for tree plantation in Refinery and township, MoU was signed with DFO, Munger and 180 hectares of green belt has been developed at Munger Forest Division. Total 1, 65,000 no. of tree has been planted. - Total Green belt area has been increased to 65% of the total project area. EC amendment for the same has been carried out. • Complied
4.	Handling, manufacturing, storage and transportation of hazardous chemicals should be carried out in accordance with The Manufacture, Storage & Import Of Hazardous Chemicals Rules, 1989, as amended in 1991. On-site and Off-site emergency preparedness plans shall be prepared adequately and permissions from state and central nodal agencies in this regard must be obtained.	- Handling & storage of hazardous chemicals are done in accordance with the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016. - Comprehensive Emergency Disaster Management Plans exist in refinery and are updated regularly as per PNGRB guidelines. - Necessary inputs for hazardous of Barauni Refinery have been provided to district authorities for inclusion in Disaster management plan as per MSIHC rule.

		- On-site & Off-site mock drills are conducted quarterly and annually respectively. The Off-site drill is conducted with involvement of District Authority. Complied.
5.	Hazardous wastes, if any, must be handled and disposed as per Hazardous Waste (Management And Handling) Rules, 1989. Authorization from State Pollution Control Board in this regard must be obtained.	- Authorization from BSPCB available with validity till 29.08.2027. - Handling & storage of hazardous wastes done in accordance with the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016. Complied.
6.	Proper housekeeping and adequate occupational health programme must be taken up.	- A fully fledged Occupational Health centre is established in the Refinery Hospital. Regular Occupational health monitoring of employees is carried out as per the program. Complied
7.	Adequate provisions for infrastructure facilities such as water supply, fuel, sanitation etc. should be ensured for construction workers during the construction phase so as to avoid felling of trees and pollution of water and the surroundings.	- The project is already under operation. The condition is not applicable at present. The construction workers were from nearby village only. Complied
8.	Occupational health surveillance of the workers should be done on a regular basis and records maintained.	- A fully fledged Occupational Health centre is established in the Refinery Hospital. Regular Occupational health monitoring of employees is carried out regularly as per the program. - Occupational health surveillance records are maintained by the refinery hospital as per the Bihar Factory Act. Complied.
9.	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA and Risk Analysis report.	- Environment protection measures suggested in the EIA/ EMP risk assessment report have been implemented Complied
10.	The project proponent should have a scheme for social upliftment in the surrounding villages with reference to contribution in road construction, education of children, festivals, health centers, sanitation facilities, drinking water supply, community awareness and employment to local people whenever and wherever possible both for technical and non-technical jobs.	Social upliftment activities under CSR are carried out on regular basis in the villages near the refinery. The major works undertaken are: ❖ Installation of hand pumps for drinking water. ❖ Repair & construction of road. ❖ Health Camps. ❖ Facilitation and renovation of school building and library etc. ❖ Women's Education and empowerment. ❖ Scholarship programs Complied.
11.	A separate environmental management cell with full fledged laboratory facilities to carry out various management and monitoring functions should be set up under the control of senior executive.	- A separate Environment Management Cell with well equipped dedicated pollution control laboratory exists at Barauni Refinery. Complied.
12.	The funds earmarked for the environmental protection measures should not be directed for any other purpose and year-wise expenditure should be reported to this	- All facilities envisaged for environmental protection and monitoring have been provided in Barauni refinery expansion project. - In addition to one time investment in facilities for

	ministry and SPCB.	combating pollution, separate funds are allocated and utilized for specific activities such as bio-remediation of sludge, environment monitoring and studies related to environment etc. • Complied.
13.	Six monthly status reports on the project vis-a-vis implementation of environmental measures should be submitted to the ministry (Regional Office, Bhubaneswar) / CPCB / SPCB).	• A six monthly compliance report and monitored data are submitted regularly. • Complied.



IndianOil
Barauni Refinery

Status as on 31.03.2026

Subject: Status of Environmental Clearance Conditions for Expansion of Barauni Refinery from 6 MMTPA to 9 MMTPA along with polymer units by M/s Indian Oil Corporation Limited at Barauni, District Begusarai (Bihar)- Environmental Clearance - reg.

Ref: Ministry's clearance letter no J-11011/15/2015 - IA-II (I) dated 15.02.2019 and 04.06.2020

SN	Point	Status
11	Terms and Conditions	
a)	Third party assessment for the environmental damage, if any, and differential impacts on environmental parameters due to excess crude processing (during the periods 2009-10, 2010-11, 2012-13, 2013-14, 2015-16, & 2016-17) shall be carried out by NEERI or by any other agency of repute, in a fixed time frame and the report shall be submitted to the ministry.	• Study has been completed by M/s NEERI Nagpur in Jan 2020 and report submitted to MoEF&CC on 30.01.2020. • As per report no adverse impact of excess crude processing is observed and same has been accepted by MoEF&CC (Ref: Minutes of the 17th meeting of the Expert Appraisal Committee (Industry-2 sector) held during 25-27 February, 2020, Agenda 17.15) • Complied
b)	Necessary permission as mandated under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, as applicable from time to time, shall be obtained from the State Pollution Control Board as required.	• With Ref. No.ROB(A+W)-1474/20/1084 dated 05.04.2022 permission from BSPCB, under Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, available with validity till 04.04.2027. • Complied
c)	As already committed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises.	• Presently no effluents discharged outside refinery. • Complied
d)	Necessary authorization required under the Hazardous and Other Wastes	• Authorization from BSPCB available with validity till 29.08.2027.

	(Management and Trans-Boundary Movement) Rules, 2016 and Solid Waste Management Rules, 2016 shall be obtained and the provisions contained in the Rules shall be strictly adhered to.	• Complied
e)	To control source and the fugitive emissions, suitable pollution control devices shall be installed with different stacks to meet the prescribed norms and/or the NAAQS. The gaseous emissions shall be dispersed through stacks of adequate height as per CPCB/SPCB guidelines.	• BELCO scrubber is installed in RFCCU for effluent scrubbing as a pollution control device. • Gaseous emission is dispersed through stacks of adequate height as per CPCB/SPCB guidelines for existing stacks and will be implemented in new units as well. • Complied
f)	The National Emission Standards for the Petroleum Oil Refinery issued by the Ministry vide G.S.R.186(E) dated 18 th March, 2008, as amended from time to time, shall be followed.	• Please refer Annexure-1 for detailed status for compliance of standards/norms for Oil Refinery Industry notified under the Environment (Protection) Rules, 1986 vide G.S.R. 186(E) dated 18th March, 2008. • Complied
g)	The National Emission Standards for Petrochemical (Basic & Intermediates) issued by the Ministry vide G.S.R.820 (E) dated 9 th November, 2012, as amended from time to time, shall be followed.	• Petrochemical units have not been constructed and compliance will be updated to include new units. • Complied
h)	Total fresh water requirement shall not exceed 24000 cum/day to be met from ground water through artesian wells. Necessary prior permission in this regard shall be obtained from the concerned regulatory authority.	• Presently, Barauni Refinery has necessary authorization from CGWA for 24000 m3/day. During, Oct 25 to Mar 26 average fresh water consumption was 19038 m3/day. • Complied
i)	Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.	• A separate storm water channel is there in the refinery which is reused for refinery operation post treatment. • Complied
j)	Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm and solvent transfer to be done through pumps.	• Hazardous chemicals have been stored in tanks, tank farm, drums etc. All class A petroleum storage tanks has been provided with Rim Seal Fire protection system. • Complied
k)	Process organic residue and spent carbon, if any, shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed of	• Spent catalyst generated in RFCC unit is sent to cement industry for re-processing/co-processing. Pet coke is sold to authorized user.

	to the TSDF. The ash from boiler shall be sold to brick manufacturers/cement industry.	• No ash is generated at Barauni Refinery. • Complied
l)	The company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time. All transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act (MVA), 1989.	• Compliance is already being done and will be expanded to include new units. • Complied
m)	Regular monitoring of Volatile Organic Compounds shall be carried out at vulnerable points.	• Monitoring of Volatile Organic Compounds is being done quarterly and will be increased to include new units. • Complied
n)	Oily sludge shall be collected for oil recovery and the residue shall be bio-remediated.	• Oily sludge is collected in 4 nos. Pits for oil recovery. Residual oily sludge is bio-remediated in Confined Space Bioreactor (CBR). • Complied
o)	Comprehensive water audit to be conducted on annual basis and report to the concerned Regional office of the Ministry. Outcome from the report to be implemented for conservation scheme.	• Water study for entire refinery has been carried out by FICCI and final report submitted in Oct`2022. Phase wise implementation of recommendations is being undertaken. • Complied
p)	Oil caters/oil traps shall be provided at all possible locations in rain/storm water drainage system inside the factory premises.	• Oil catchers have been constructed at 7 strategic locations of the refinery • Oil containment booms have also been installed at 3 nos of strategic locations in the refinery. • Oil collected/trapped by oil catcher and oil containment booms are transferred to ETP mechanically through gully suckers. • The same facility will also be provided in the new units. • Complied
q)	The company shall undertake waste minimization measures as below: - (i) Metering and control quantities of active ingredients to minimize waste. (ii) Reuse of by-products from the	All critical/important process lines have flow meters installed. All excess/byproduct gases generated are used as fuel

	process as raw materials or as raw substitutes in other processes. (iii) Use of automated filling to minimize spillage. (iv) Use of Close Feed system into batch reactors. (v) Venting equipment through vapour recovery system. (vi) Use of high-pressure hoses for equipment clearing to reduce wastewater generation.	gas. Any oil drained is routed to ETP for recovery and is reprocessed in AVUs/Coker. In OM&S Gantry, automated filling is done with process interlocks in place to avoid spillage. Batch reactors process occurs only in Coker unit. In this unit closed and automated feed system is in place. ETP has a VOC recovery system. Recovered vapour is passed through activated charcoal bed before venting. High pressure (hydrojet) is used to clean vessels, exchangers & pipelines when required. • Complied
r)	The green belt of 5-10 m width shall be developed in more than 33% of the total project area, mainly along the plant periphery, in downward wind direction and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.	• Total plot area of the refinery: 887.83 acres. • Green belt area in Refinery: 43.8 acres. • Green belt area in Refinery Township: 82.19 acres. • Total green belt area: 125.99 acres. • Since, there is no further land available for tree plantation in Refinery and township hence, an agreement has been done with Forest department on 21.10.2021 for 1,65,000 nos. trees plantation in 180 Hectare land. EC amendment for the same has been carried out. • Complied
s)	All the commitments made to the public during hearing/consultation shall be satisfactorily implemented.	• All the recommendations of public hearing have been complied. • Complied
t)	At least 0.25% of the total project cost shall be allocated for Corporate Environment Responsibility (CER) and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office.	• Detailed ESR plan attached as Annexure-2. • Being complied
u)	For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the	• DG set is not used during normal refinery operation. It is used only in case of complete power failure; hence monitoring data is not available. Stack monitoring will be done whenever DG set will be in line. • Stack height modification job completed. Acoustic

	noise pollution.	enclosure job completed. • Complied.
v)	The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Firefighting system shall be as per the norms.	• Noted for compliance. • Fire station has been established in the refinery for protection of possible fire hazards.
w)	Continuous online (24X7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.	• 24 nos. of existing stacks are installed with online analyzers connected to the servers. • All upcoming new stacks will also be provided with online analyzers. • Web camera with night vision is installed in the channel/drain to Burrow pit. • For continuous monitoring of effluent, online analyzer has been installed. • For flow meter, installation job is completed. • Complied.
x)	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	• Pre – employment medical examination of all employees are carried out before joining the organization. Routine periodical medical examination as per statutory requirement is carried out on regular basis. • Complied
y)	Process safety and risk assessment studies shall be carried out using advanced models and the mitigating measures shall be undertaken accordingly.	• For process safety and risk assessment, studies like HAZOP, QRA are carried out mandatorily before commissioning of any new process unit. Liquidation of recommendations of these studies is done in time bound manner. • Complied
11.1 Generic Conditions		
i.	The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board (SPCB), State Government and/or any other statutory authority.	• Stipulations made by the State Pollution Control Board (SPCB), State Government and any other statutory authority are being followed. • Complied.
ii.	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change. In case of deviations or	• Noted for compliance. • Prior approval of ministry would be taken before carrying out any expansion or modification of the plant if required.

	alterations in the project proposal from those submitted to the Ministry for clearance, a fresh reference shall be made to the Ministry to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.	
iii.	The locations of ambient air quality monitoring stations shall be decided in consultation with the State Pollution Control Board (SPCB), ensuring that at least one stations each is installed in the upwind and downwind direction as well as where maximum ground level concentrations are anticipated.	• Five nos. of offline ambient air quality monitoring stations (four in refinery and one in township) and three nos. of continuous ambient air quality monitoring station has been provided at strategic locations at Barauni Refinery for monitoring of ambient air quality. • 03 Nos of additional ambient air monitoring stations installed in periphery villages of Refinery. • Ambient air quality is checked twice in a week in five nos. of offline ambient air quality monitoring stations as per MoEF&CC standards 2009. Report enclosed. • Complied.
iv.	The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16 th November, 2009 shall be complied with.	• Ambient air quality is checked twice in a week in five nos. of offline ambient air quality monitoring stations as per the National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009. • Complied.
v.	The overall noise level in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under the Environment (Protection) Act, 1986.	• The ambient noise levels from existing facilities conform to the standards prescribed under standards prescribed under Environment (Protection) Act, 1986 Rules. Reports enclosed. • For personnel working in the proximity of high noise generating equipments, appropriate PPEs are used, and exposure is controlled through job rotation, education and awareness. • Adequate noise control measures shall be taken in new facilities in the project.
vi.	The company shall harvest rainwater from the roof tops of the buildings to recharge ground water and to utilize the same for different industrial operations within the plant.	• Rain water harvesting has been implemented at 21 buildings of Barauni Refinery and township in which water collected from roof top of various buildings is recharged to ground water. Total surface run-off of township is also being used for ground water

		recharge. • Storm water drain of the refinery has been routed to ETP and storm water is being reused in refinery operation after treatment along with ETP water except during heavy rainfall, when excess surface run off may have to be allowed to flow into Refinery owned pit (Burrow Pit) adjacent to refinery premise in the West. • In future rainwater harvesting for rooftops of building will be done as per requirement.
vii.	Training shall be imparted to all employees on safety and health aspects of chemicals handling. Pre-employment and routine periodical medical examinations for all employees shall be undertaken on regular basis.	• Training is continuously imparted to all employees on chemical handling. • Pre – employment medical examination of all employees are carried out before joining the organization. • Routine periodical medical examination as per statutory requirement is carried out on regular basis. • The same will be done in future also.
viii.	The company shall comply with all environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, risk mitigation measures and public hearing shall be implemented.	• Presently Environmental Monitoring of all required parameters in Refinery is carried out periodically. The existing practice shall be extended for the proposed project as per EIA/EMP report.
ix.	The company shall undertake all measures for improving socio-economic conditions of the surrounding area. CSR activities shall be undertaken by involving local villagers, administrations and other stake holders. Also, eco-developmental measures shall be undertaken for overall improvement of the environment.	• Being done based on the drawn-up schedule as part of CSR. CSR plan is finalized in consultation with mukhiyas of surrounding villages. • Being complied.
x.	A separate Environmental Management Cell equipped with full-fledged laboratory facilities shall be set up to carry out the Environment Management and Monitoring functions.	• BR has a full-fledged environment protection cell and a well-equipped dedicated pollution control laboratory. • Complied

xi.	The company shall earmark sufficient funds towards capital cost and recurring cost per annum to implement the conditions stipulated by the Ministry of Environment, Forest and Climate Changes well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so earmarked for environment management/pollution control measures shall not be diverted for any other purpose.	• In addition to one-time investment in facilities for combating pollution, separate funds are allocated for specific activities such as environment monitoring, operation and maintenance of effluent treatment plant, oil recovery from oily sludge through mechanized skid process and studies related to environment etc. • Complied.
xii.	A copy of the clearance letter shall be sent by the project proponent to concerned Panchayat, Zila Parishad/ Municipal Corporation, Urban local Body and the local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal.	• A copy of the clearance letter has been submitted to concerned Panchayat, Zila Parishad. Enclosed as Annexure-3. • Complied
xiii.	The project proponent shall also submit six monthly reports on the status of compliance of the stipulated Environmental Clearance conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional Office of MoEF&CC, the respective zonal office of CPCB and SPCB. A copy of Environmental Clearance and six-monthly compliance status report shall be posted on the website of the company.	• A six-monthly compliance report and the monitored data are submitted regularly. Will be done for this EC as well. • EC Compliance status of various projects is being hosted on https://www.iocl.com/Talktous/SNotices.aspx. Alternatively, one can reach IOCL home page at https://www.iocl.com and thereafter selecting "We're Listening" tab followed by opening "Statutory Notices". • Complied
xiv.	The environmental statement for each financial year ending 31 st March in Form-V as is mandated shall be submitted to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Regional offices of MoEF&CC by e-mail.	• Environment Statement for each financial year is submitted to Bihar State Pollution Control Board and MoEF&CC. Same is also sent to Regional Office of MoEF&CC by e-mail and hosted at the website https://www.iocl.com/Talktous/SNotices.aspx. • Complied

xv.	The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and the copies of the clearance letter are available with the SPCB/Committee and may also be seen at Website of the Ministry at http://moef.nic.in. This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the concerned Regional office of the Ministry.	• The information regarding accord of Environment clearance for the subject project has been advertised in two local newspapers. Copy enclosed as Annexure-4. • Complied.
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Annexure-1

Status and Action Plan for Compliance of Revised Emission and Effluent Standards 2008 at Barauni Refinery		
Schedule -I: Petroleum Oil Refinery		
A. Effluent Discharge		
SN	Standard	BR status and action plan
1	Treated Effluent Quality	No effluent is discharged outside refinery. Treated effluent is totally reused and its quality is maintained as per MINAS. Reports attached separately. Complied
B. Emissions		
SN	Standard	BR status and action plan
2	H₂S in Fuel Gas	H ₂ S in Fuel Gas is within limits as required under revised standards. Complied
3	SO₂ Emissions	These parameters are monitored through online stack analyzers. These analyzers are directly connected to CPCB and BSPCB servers. Emissions are under within limit. Reports attached separately. Complied
4	NO_x Emissions	
5	CO Emissions	
6	Particulate Matter (PM) Emissions	Barauni Refinery processes more low Sulphur crude in recent years. Only about 5% high sulfur crude processing takes place. As a result, internal fuel oil quality has been improved w.r.t emission of particulate matter. Further, particulate matter analyzers have been installed in all stacks of refinery and connected to CPCB server since June-16. The online analyzer data available now help us fine tuning fuel firing and optimization of gas mix amongst various furnaces and the controlling the PM parameters within the statutory limit. COMPLIED.
7	Nickel and Vanadium (Ni+V) Emissions	COMPLIED.
8	Sulphur Content in Liquid Fuel	COMPLIED.
9	Continuous Monitoring System for SO₂ & NO_x emissions	Continuous monitoring is done through online analyzers. These analyzers are directly connected to CPCB and BSPCB servers. Complied

10	Opacity of Flue Gas ex FCCU Regenerators	> RFCCU was commissioned at Barauni Refinery along with flue gas scrubbing technology supplied by M/s Belco, USA. In the Belco unit, the flue gas is scrubbed with water & diluted caustic solution (<0.5 % concentration by wt.) to remove SOx and particulate matter. PM level in flue gas is less than 30 mg/Nm ³ . High volume of condensed water vapor generated during water scrubbing of flue gas escapes through the BELCO stack as whitish plume. Opacity meter under such condition is not considered relevant as it will not be effective due to high moisture content in flue gas. > Further, PM analyzers have been installed in RFCCU stack through which particulate matter ex- RFCCU stack is monitored, which is closely akin to monitoring of opacity in flue gas. Therefore, opacity meter installation at RFCCU is not planned. > Complied.
11	Sulphur Recovery from SRU	SRU at Barauni refinery meets the revised standard. COMPLIED.
12	H₂S emissions from SRU	SRU at Barauni refinery meets the revised standard. COMPLIED.

C. Fugitive Emission

SN	Standard	BR status and action plan
13	Storage tanks with capacity between 4 to 75 m³ and TVP of more than 10 kpa	Not Applicable.
14	Storage tanks with capacity between 75 to 500 m³ and TVP of 10 to 76 kpa	Not Applicable.
15	Storage tanks with capacity of more than 500 m³ and TVP of 10 to 76 kpa	Storage tanks of Crude, MS & SRN have TVP of 10 to 76 kpa. All such tanks are IFRT or EFRT. COMPLIED.
16	Storage tanks with capacity of more than 500 m³ and TVP of more than 76 kpa	Not Applicable
17	Provision of secondary seals in floating roof tanks	All such tanks at Barauni Refinery are equipped with double seal. COMPLIED.

18	Emission control in Rail Tank Wagon/ Road Tank Truck loading for Gasoline and naphtha for VOC reduction	Barauni Refinery complies most of the revised standards for petroleum refineries as notified in Gazette of India on 18th March'08 except vapor recovery system in tank wagon/tank truck. For VOC reduction of 99.5% and emission control to 5 gm/m3 in case of Gasoline and Naphtha loading, VOC recovery system at Loading Gantry would be required. Existing gantry at Barauni refinery does not have adequate space for laying a bigger dia header all along the gantry and other equipments for vapour recovery system. It will also require the shutdown of product loading gantry for 3-4 months to install this facility. Outage of gantry for such a long period cannot be allowable in view of the chances of market dry out of the major petroleum products.
19	Equipments leak and LDAR programme	COMPLIED.
D. Emission Standards for VOC from Wastewater Collection and Treatment		
20	VOC Collection & Treatment System	VOC treatment system as a part of ETP modernization project has been installed and commissioned. COMPLIED.
Schedule -VI, Part C: Petroleum Oil Refinery		
SN	Standard	BR status and action plan
21	Quantum limit for discharge of total effluent	No effluent is discharged outside refinery. Treated effluent is totally reused.
22	Limit of quantity of effluent discharged	

Annexure-2

**Details of CER Projects of Barauni Refinery
Status as on 31.03.2026**

S.N	Activity/ Project details	Approved Amount (Rs in lacs)	Expenditure Amount (Rs in lacs)
1	Construction of Boundary Wall, Internal Road and provision of street lights in the Burrow Pit area of Barauni Refinery	1232	739.32
2	Construction of 04(Four) Nos of classrooms in Middle School Govindpur located in the vicinity of Refinery	65	62.57
3	Manure Management Project with Sudha Dairy in Technical Support by National Dairy Development Board (NDDB), Anand	113	112.50
4	Construction of 6-Bed Burn Ward in the Sadar Hospital Begusarai	386	77.52
5	Provision of Medical Grade Oxygen Cylinders with flow meter and disosable masks & pulse oxymeters for providing treatments to COVID patients by Begusarai District Administration	10	10.39
6	Establishment of 01(One) Nos of PSA based Oxygen Generation Unit of capacity 450 M3/Hour with refilling capacity at Barauni Refinery under Corporate Environmental Responsibility	991	819.53
7	Establishment of PSA based medical-grade Oxygen Generation Plant at Govt Hospital, Teghra for COVID treatment facilities under CER Initiative of Barauni Refinery	143	82.08
8	Setting up of 50-Bed Pediatric Care Unit at Sadar Hospital Begusarai and Hospital	752	390.25
9	Provision of 03 (Three) Nos of Ambulances to Sadar Hospital Begusarai under CER initiative of Barauni Refinery	224	177.36
10	Installation of electrical poles and street lights on the road from Barauni Refinery Township to Township BMP Gate areas under the CER initiative of Barauni Refinery	333	81.25
11	Development of Green Belt outside the Barauni Refinery Township premises along NH-31	397	252.40
12	Construction of Cross Drains in Keshawe Village to provide support to the villagers in order to avoid any water-logging inside the village.	614	514.70
13	Development of Gandhi Stadium in Begusarai under the CER initiative of Barauni Refinery'	240	125.81
14	Setting up of Smart Classes facilities in Rashtrakavi Ramdhari Singh Dinkar College of Engineering Begusarai under CER initiative of Barauni Refinery	31	30.70

15	Provision & Installation of Air Conditioners in different healthcare facilities (Sub-Divisional Hospital, PHC & CHC) in Begusarai District under the CER initiative of Barauni Refinery	13	7.44
16	Provision of Taekowandoo infrastructure in Begusarai	19	16.65
17	Installation of 02(Two) Nos of High Mast Light at Jhamatia Ganga Ghat in Begusarai under the Corporate Environment Responsibility (CER) initiative of Barauni Refinery	27	7.56
18	Providing Vehicle Mounted Sprinkler Machine to Begusarai Municipality under the CER initiative of Barauni Refinery	45	35.42
	Total Expenditure till date	5635	3543.49

Note: Projects as identified above are tentative only and subjected to change based on the approval from District Administration as per CER policy in due course of time.

CSR Project details for the FY2025-26		
Sl No.	Description	Expenditure (In Lacs)
1	Upgradation of aanganwadi centres with provision of Moon-shaped Desks & chairs for children at 120 Aanganwadi Centres in Begusarai District (1 Set to contain 4 Moon-shaped desks & 35 Chairs) (Request from DM Begusarai)	59.88
2	Provision of Furniture for augmenting infrastructural requirements of Aanganwadi Centres in Begusarai District (1250 Tables & 2500 Chairs)	60.81
3	Provision of Health Equipment Kits in 19 Nos of Health & Wellness Centres of Begusarai District (Request from DM Begusarai)	62.00
4	Provision of 640 Nos of Growth Monitoring devices (Mechanical Weighing Machine, Sadiometer, Infantometer) for Aanganwadi Centres in Begusarai District (Request from DM Begusarai)	62.08
5	Provision of RT-PCR Machine for Begusarai District (RT-PCR Machines: 02 Nos) / Begusarai	27.30
6	Provision of RT-PCR Machine for Khagaria District (RT-PCR Machines: 02 Nos) / Khagaria	27.30
7	Provision of Healthcare, Sanitation, Clean Drinking Water facilities & supporting Livelihood enhancement projects in Gaya Sadar assembly constituency (Bihar) under the CSR initiative of IndianOil.	163.81
8	Operation of two MMUs under Aarogyam 2.0 at Barauni Refinery	14.43
9	Providing Relief, Shelter Materials (Tarpaulin Sheets/Plastic mats) for flood victims of Begusarai District under the CSR initiative of IndianOil'	198.65
11	Construction of 07(Seven) Nos of 5-Seater Toilet Blocks in Sitamarhi District under the CSR initiative of IndianOil	40.08
12	Promoting Menstrual Hygiene and Sanitary Napkins in in targeted locations of Begusarai district.	27.75
13	IndianOil Gyanodaya Scholarship Scheme 2.0	11.97
14	Barauni Refinery Dinkar Uchch Shiksha Sahayata Yojana	15.00
15	PM Intern	0.26
17	Provision of food basket for TB Patients under 'Pradhan Mantri TB Mukh Bharat Abhiyaan (PMTBMBA)' at Begusarai District for 2024-25	16.56
18	Barauni Refinery Shri Krishna Singh Chhatravritti Yojana	39.25
		827.14

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Indochina Oil Corporation Limited

Ref No TS/HSE/2020/02/

Date 12 02 2020

To,
Municipal Commissioner
Begusarai Nagar Nigam
Begusarai, Bihar

Sub: Copy of EC received by IOCL Barauni Refinery for record

Dear Sir,

A copy of Environmental Clearance from MoEF&CC received by IOCL Barauni Refinery, via F.No. J 11011/15/2015 (A II (I)), for the project for **Expansion of Barauni Refinery from 6 MMTPA to 9 MMTPA along with polymer units** is attached for your kind perusal and record.

Therefore, you

Yours faithfully

10

(M A Choudary)

GENERAL MANAGER (TS & HSE)

End As above

Handwritten signature in red ink.



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Handwritten text in blue ink.

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Ref No TS/HSE/2020/02

Date: 12.02.2020

To
Shri Arvind Kumar Verma, IAS
District Magistrate cum Collector
Begusarai, Bihar

Sub: Copy of EC received by IOCL, Barauni Refinery for record

Dear Sir,

A copy of Environmental Clearance from MoEF&CC received by IOCL, Barauni Refinery via F No J 11011/15/2015 (A-II (I), for the project for Expansion of Barauni Refinery from 6 MMTPA to 9 MMTPA along with polymer units is attached for your kind perusal and record.

Thanking you,

Yours faithfully,

Handwritten signature in blue ink.

(M A Choudary)
GENERAL MANAGER (TS & HSE)

Enc: As above

F. No. J.1/011/15/2015-IA-II (I)
Government of India
Ministry of Environment, Forest and Climate Change
(IA Division)

Indira Paryavaran Bhawan
Jor Bagh Road, N. Delhi - 3
Dated: 15th February, 2019

To

M/s Indian Oil Corporation Limited,
Barauni Refinery,
District Begusarai (Bihar)

Sub: Expansion of Barauni Refinery from 6 MMTPA to 9 MMTPA along with polymer units by M/s Indian Oil Corporation Limited at Barauni, District Begusarai (Bihar) - Environmental Clearance - reg.

Ref: Online Proposal No. IA/BR/IND2/28027/2015 dated 2nd February, 2019.

Sir,

This has reference to your online proposal No. IA/BR/IND2/28027/2015 dated 2nd February, 2019 along with the EIA/EMP report containing public hearing proceedings for the above mentioned project.

2. The Ministry of Environment, Forest and Climate Change has examined the proposal for environmental clearance to the project for expansion of Barauni Refinery from 6 MMTPA to 9 MMTPA along with polymer units by M/s Indian Oil Corporation Limited in a total area of 3592921sqm at Barauni, District Begusarai (Bihar).

3. The details of the existing/proposed products are as under -

S. No.	Product/By-product	Existing (TMTPA)	Proposed (TMTPA)	Total (TMTPA)
1	LPG	318	169.1	487.1
2	Poly Propylene	0	203	203
3	Naphtha	83.4	35.3	118.7
4	MS (BS-VI)	1351.6	372.4	1724.0
5	Aviation Turbine Fuel	204.0	(-) 0.8	203.2
6	Superior Kerosene	370.0	0	370.0
7	HSD (BS VI)	2787.1	1833.9	4621.0
8	Fuel Oil	46.9	(-) 45.9	1.0
9	Bitumen	74.0	0	74.0
10	Carbon Black Feed Stock	0	0	0
11	Raw Pet Coke (LS)	154.0	(-) 30.0	124.0
12	Raw Pet Coke (HS)	0	184.0	184.0
13	Sulfur	21.7	34.3	56.0
14	Fuel & Loss	591	243.0	834
Total		6000	3000	9000

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लिखित 21.25 फरवरी 2019
06-06-2019 Page 1 of 7

मुख्य

ग्राम पंचायत राज सचिव

महल परमाण्विक संयंत्र

रवि शर्मा

F No J 11011/15/2015 IA-II (I)
Government of India
Ministry of Environment, Forest and Climate Change
(IA Division)

Indira Paryavaran Bhawan
Jor Bagh Road, N. Delhi - 3
Dated: 15th February, 2019

To

M/s Indian Oil Corporation Limited,
Barauni Refinery,
District Begusarai (Bihar)

Sub: Expansion of Barauni Refinery from 6 MMTPA to 9 MMTPA along with polymer units by M/s Indian Oil Corporation Limited at Barauni, District Begusarai (Bihar) - Environmental Clearance - reg.

Ref: Online Proposal No.IA/BR/IND2/28027/2015 dated 2nd February, 2019.

Sir,

This has reference to your online proposal No.IA/BR/IND2/28027/2015 dated 2nd February, 2019 along with the LIA/LMP report containing public hearing proceedings for the above mentioned project.

2. The Ministry of Environment, Forest and Climate Change has examined the proposal for environmental clearance to the project for expansion of Barauni Refinery from 6 MMTPA to 9 MMTPA along with polymer units by M/s Indian Oil Corporation Limited in a total area of 3592921sqm at Barauni, District Begusarai (Bihar).

3. The details of the existing/proposed products are as under:-

S. No.	Product/By-product	Existing (TMTPA)	Proposed (TMTPA)	Total (TMTPA)
1	LPG	318	169.1	487.1
2	Poly Propylene	0	203	203
3	Naphtha	83.4	35.3	118.7
4	MS (BS-VI)	1351.6	372.4	1724.0
5	Aviation Turbine Fuel	204.0	(-)0.8	203.2
6	Superior Kerosene	370.0	0	370.0
7	HSD (BS-VI)	2787.1	1833.9	4621.0
8	Fuel Oil	46.9	(-)45.9	1.0
9	Bitumen	74.0	0	74.0
10	Carbon Black Feed Stock	0	0	0
11	Raw Pet Coke (LS)	154.0	(-)30.0	124.0
12	Raw Pet Coke (HS)	0	184.0	184.0
13	Sulfur	21.7	34.3	56.0
14	Fuel & Loss	591	243.0	834
	Total	6000	3000	9000

संख्या 28027/15
6/4/2019
सरपंच

राज कपट्टी, पिपराही-बाराबंकी
9430015740

F. No J-11011/15/2015-IA-II (I)
Government of India
Ministry of Environment, Forest and Climate Change
(IA Division)

Indira Paryavaran Bhawan
Jor Bagh Road, N Delhi - 3
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Page 1 of 7

पुखिया
प्राप्त किया गया
28/02/2019

9924292518

F. No J-11011/15/2015-IA-II (I)
Government of India
Ministry of Environment, Forest and Climate Change
(IA Division)

Indira Paryavaran Bhawan
Jor Bagh Road, N Delhi - 3
Dated: 15th February, 2019

To

M/s Indian Oil Corporation Limited,
Barauni Refinery,
District **Begusarai** (Bihar)

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Government of India
Ministry of Environment, Forest and Climate Change
(IA Division)

Indira Paryavaran Bhawan
Jor Bagh Road, N Delhi - 3
Dated 15th February 2019

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उप-प्रमुख, माहौल विभाग
राज्य सरकार, दिल्ली
दिनांक 27.8.10/2.13 (अ.प्र. सं. 27/10/13)

F No.J-11011/15/2015-IA-II (I)
Government of India
Ministry of Environment, Forest and Climate Change
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Former CM Jagannath Mishra is also occupying 41 Kranti Maru residence.

THE HC ALSO STRUCK DOWN THE RESOLUTION OF BIHAR'S BUILDING CONSTRUCTION DEPARTMENT AS IT ALSO SUFFERED

tage such an important visit as that of the Saudi crown prince," the prime minister asked.

"We have been fighting against terrorism for the past 15 years. How will Pakistan benefit from such incidents?"

"Which law in the world allows everyone to become a judge and jury?" Questioning whether India "wants to resolve the issue through military", Khan said, "This has never been a successful measure."

With some governments to prohibit the use of funds and spaces for holding activities by the banned Students Islamic Movement of India (SIMI), allegedly involved in a number of terrorist activities in the country.

In a notification, the Union home ministry said the ban imposed on SIMI was extended for five more years under the Unlawful Activities (Prevention) Act, 1967 on January 31.

"Now, therefore, in exercise of the powers conferred by section

shall be exercised also by state governments and Union territory administrations in relation to the above said unlawful association," it said.

Section 7 is related to powers to prohibit the use of funds of an unlawful association and section 8 specifies the powers to ban the use of locations by an unlawful organisation.

The ministry said if SIMI's unlawful activities were not curbed immediately, it would

ments and escalating secessionist ideas. It listed 58 cases in which SIMI members were "involved"

The ministry said the outfit has been polluting the minds of people by creating communal disharmony, undertaking activities prejudicial to the integrity and security of India.

The Centre is also of the opinion that it is necessary to declare SIMI an unlawful association with immediate effect because of its activities, it said.

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.co.in

As per details given below, against the proceeds of the secured debts due to the issuer, less recoveries if any, the Authorized Officer has approved the following details:

Authorized Officer PNB, Surindram,

Reserve Price Sale of Money (₹ Crore)	Big Increment Amount	Date and Time of Auction
₹ 30,70,00,000/-	₹ 3,07,00,000/-	27.03.2019
₹ 3,07,00,000/-	₹ 10,00,000/-	11:00 a.m. to 03.00 p.m.
₹ 2,16,08,000/-	₹ 21,60,000/-	27.03.2019
₹ 21,60,000/-	₹ 10,00,000/-	11:00 a.m. to 03.00 p.m.
₹ 2,80,08,000/-	₹ 28,00,000/-	27.03.2019
₹ 28,00,000/-	₹ 10,00,000/-	11:00 a.m. to 03.00 p.m.



IndianOil
(REFINERIES DIVISION)
BARAUNI REFINERY
PO : Barauni Oil Refinery Dist Begusarai, 851114, Bihar.
(A GOVT OF INDIA UNDERTAKING)

NOTICE

It is to bring to kind notice of all concerned that Barauni Refinery has received clearance for Expansion of Barauni Refinery from 6 MTTPA to 9 MTTPA along with polymer units vide ministry's clearance letter no. J-1101/11/15/2015-IA(I) dated 15.02.2019*. The estimated project cost is Rs. 8287 Crore. Detailed copy of Environment clearance letter is available with BSPCB website & may also be seen at website of ministry at <http://moef.nic.in>.

*R/NOTICE/2018-2019


tribe's

**TRIBAL COOPERATIVE MARKETING DEVELOPMENT
FEDERATION OF INDIA LTD. (TRIFED)**
(Ministry of Tribal Affairs, Govt. of India)
NCUI Building, 2nd Floor, 3, SII Institutional Area,
August Kranti Marg, New Delhi-110016
Tel.: 011-26968247, 26569084, 26560117
Fax: 091-11-26866149
Email: trifed.mfddivision@gmail.com
Website: www.trifed.in

**EXPRESSION OF INTEREST FOR APPOINTMENT
OF PROJECT MANAGEMENT CONSULTANCY
(PMC) FOR TRIFOOD**

KCI ARAVALI GYPSUM AND MINERALS INDIA LIMITED
A Govt. of India Undertaking | Multi-Mineral - B-Company
Mangalagiri Refractory Minerals Pvt. Ltd., Jodhpur Postgraduate Institute,
Phone No. 0291-2544387 Website: www.fagnil.com

NOTICE INVITING TENDERS

Online e-tender under tender job at Katori Gypsum Mines located at Pondicherry & Puzos Transferred from existing mines located in different states of India. Prices are where it basis. Full details can be seen on website www.fagnil.com. Any grand award competitors will be posted on the website of the company.

MINERAL MANAGER

 **Nalanda**
UNIVERSITY
Rajgir, Dist.-Nalanda, Bihar-803116

Tender Notice No : N/NA/UN/11/2018-19/20 Dated 20th February 2019

Nalanda University is an institution of National Importance under the Ministry of External Affairs, and was established by an act of Parliament of India. It is a prestigious and international institution in East Asia with students and teachers from India and abroad. Following Tenders are invited from authorized and reputed AGENCIES:-

1. Tender for Housekeeping Services - Last date 12.03.2019
2. Tender for Horticulture Services - Last date 12.03.2019

For further details please visit www.nalanda.edu.in/tenders

BHARAT COKING COAL LIMITED
(A Subsidiary of Coal India Limited)
Ref. No: GKMA/VS/Supply/NT-1716-120423 Date: 11.02.2019
E-TENDER NOTICE
Open E-Tender invited vide GKMA/VS/Supply/NT-1716-120423 Dated 11.02.2019 for the work of "Construction of 12 Nos. Loading Stacking in IV (Bell) (2nd panel) of AKWV Colliery of Katras Area. Estimated cost Rs. 11,50,00,000. CMC. Rs. 10,00,00,000. Time of completion: 100 days.
The tender documents can be downloaded from 26.02.2019 to 12.03.2019. All prospective bidders are advised to follow website www.katrascoalenders.com for further details and to participate against the tender. Details of this tender are also available on website "eprocure.gov.in"
Area Survey Officer, Katras Area

INTER UNIVERSITY ACCE
ARUNA ASAF ALI MAR
Inter University Accelerator Centre
invites the proposals for
from Ion Beam Centre
in Universities for re
Satellite Centre of IUAC
For detailed advertise
www.iuac.res.in

पंजाब नेशनल बैंक

GENERAL SERVICES ADMIN. DIV.
SECTOR - 43.5

TENDER

Punjab National Bank invites e-tenders for the following Work:

CIVIL, FURNISHING, MODULAR WORK, LIGHT FITTINGS & BOKARD, SECTOR - 4, 85.CF
Work Rs. 52.50 lacs, EMD: 10% of Bidding Price.

Tender download is from 19.03.2019 till 22.03.2019, downloading tender documents starts from 11.03.2019 till 12.03.2019 and submission of e-tenders till 12.03.2019 till 1400hrs.

For details, visit our website www.pnb.co.in
For e-tendering/clarification shall be released only at our website www.pnb.co.in and <https://pnbidia.biz>

Date: 18.02.2019
Place: Bokaro

Bank of India BOI
Refinancing Foreign Bankings

SARFAESI Act, 2002
Whereas, The undersigned being the
Secretary and Reconstruction of Finance
Act, 2002 and in exercise of powers conferred

GOVERNMENT OF INDIA
OFFICE OF THE COMMISSIONER
CENTRAL BOARD OF SECONDARY EDUCATION, PATNA
3RD FLOOR, C.B. BUILDING (ANNEX),
BIRCHAND PATEL PATEL, PATNA-800001

C.No. 1/2017-18/CS&M/CP&B/2018 Dated: 18.02.2018

Tender Notice for Disposal of goods

Solely Tenderers are invited by the Commissioner, CGST & CX, Patna to sell old, surplus, obsolete and economically unviable items as per Annexure-1 "AS IS WHERE IS & AS FOUND" lying at present at Central Board Revenue Building (Annex), Birchand Patel Building, Patna-800001.

The detailed terms and conditions along with Annexure-1 may be obtained either from the Assistant Commissioner (Legal), Central Goods and Service Tax and Central Excise-Chairman disposal Committee, Patna; or may be downloaded from the departmental website <http://apntranchone.ibt.nic.in> or <http://cgstnib.ibt.nic.in>.

The last date for submission of the bids is **14.03.2018** at 15:00. The bids will be opened by a committee on



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निविदा नम्बर का १ का को. मुज. री. निविदा. गार. 2019 (मुजरी सी टेंडर) दिनांक 18.12.2019
 00009 (का) को. मुज. री. निविदा. गार. 2019 का प्रत्युत्तरी को और से नीचे लिखे भर्ती से मिले
 अनुसूची एवं विवरण बताने वाले निविदाकर्ता से। यथावत गत से एवं अनु. री. निविदा. गार. 2019 का प्रत्युत्तरी एवं निविदा को भर्ती से मिले।

क्र.सं.	विवरण	दिनांक
1	का. को. मुज. री. निविदा. गार. 2019 (मुजरी सी टेंडर) का प्रत्युत्तरी एवं निविदा को भर्ती से मिले।	18.12.2019
2	का. को. मुज. री. निविदा. गार. 2019 (मुजरी सी टेंडर) का प्रत्युत्तरी एवं निविदा को भर्ती से मिले।	18.12.2019
3	का. को. मुज. री. निविदा. गार. 2019 (मुजरी सी टेंडर) का प्रत्युत्तरी एवं निविदा को भर्ती से मिले।	18.12.2019
4	का. को. मुज. री. निविदा. गार. 2019 (मुजरी सी टेंडर) का प्रत्युत्तरी एवं निविदा को भर्ती से मिले।	18.12.2019
5	का. को. मुज. री. निविदा. गार. 2019 (मुजरी सी टेंडर) का प्रत्युत्तरी एवं निविदा को भर्ती से मिले।	18.12.2019
6	का. को. मुज. री. निविदा. गार. 2019 (मुजरी सी टेंडर) का प्रत्युत्तरी एवं निविदा को भर्ती से मिले।	18.12.2019

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बिहार विद्यालय परीक्षा



अर्थ

बिहार विद्यालय परीक्षा समिति
माध्यमिक परीक्षा, 2019 की संदेशिका
2019 से आरम्भ होकर दिनांक
होगी। छात्र/ छात्राओं की प्रतीक्षा
शैक्षिक प्रदर्शन की प्रतिष्ठित करने
आयोजन हेतु सरकार कुछ सरकारी
कर लाने वाली योजना को मंजूर ए
माहौल उपलब्ध कराना सरकार की
में बिहार के सभी परीक्षार्थियों
करी हुए परीक्षार्थियों अभिभावकों
समाप्त। बिहार विद्यालय परीक्षा



IndianOil
Barauni Refinery

Status as on 31.03.2026

Subject: MS / HSD Quality Upgradation / HS Crude Maximization Project EC Clearance Actionable Points

Ref: Ministry's clearance letter no J-1101/491/2007-IA II (I) dated 18.03.2008

SN	Point	Status
1.	The company shall comply with new standards/norms that are being proposed by the CPCB for petrochemical plants and refineries.	- Major facilities required for meeting treated effluent quality as per revised MoEF&CC standard has been commissioned in Mar-14. - With the commissioning of desulphurization facilities (Amine treating unit) for fuel gas from old plants in Oct 2010, Barauni refinery now meets the revised SO₂ emission standards. H₂S content in FG is also within the revised standard. - Continuous on-line stack analyzers for monitoring of SO₂, NO_x, CO & PM have been installed and connected to CPCB server for 24 nos. of stacks. - Double seal has been provided in 23 nos. of floating roof tanks. - Please refer Annexure-1 for detailed status and action plan of Barauni refinery for compliance of revised MoEF&CC standards. Complied
2.	The process emissions (SO ₂ , NO _x , HC, VOCs and Benzene) from various units shall conform to the standards prescribed by the Bihar State Pollution Control Board from time to time. At no time, the emission levels shall go beyond the stipulated standards. In the event of failure of pollution control system(s) adopted by the unit, the unit shall be immediately put out of operation and shall not be restarted until the desired efficiency has been achieved.	- Online analyzers are installed for continuous monitoring of SO_x, NO_x, CO & PM for 24 stacks. These analyzers are connected directly to CPCB and BSPCB servers for continuous emission monitoring. - Process emissions from all units are monitored once in two months except SRU (which is monitored monthly) by M/s Detox Corporation Private Limited and conform to revised MoEF&CC 2008 standards. - Total SO₂ emissions from existing units and new facilities at Barauni Refinery are within the stipulated limit of 815 kg/hr as per latest EC. Complied.

3.	Ambient air quality monitoring stations, [SPM, SO ₂ , NO _x and NMHC, Benzene] shall be set up in the Refinery complex in consultation with SPCB, based on occurrence of maximum ground level concentration and down-wind direction of wind. The monitoring network must be decided based on modeling exercise to represent short term GLCs. Continuous on-line stack monitoring equipment should be installed for measurement of SO ₂ and NO _x .	• Eight manual (four in Refinery, one in township and three in periphery villages) air quality monitoring stations have been set up. Ambient air quality is checked twice in a week as per revised MoEF&CC standards 2009. • Three continuous online monitoring stations provided for ambient air quality monitoring covering 8 parameters viz PM 10, PM 2.5, SO₂, NO_x, CO, NH₃, Benzene and Ozone. The stations are also directly connected online with servers at CPCB and Bihar State Pollution Control Board (BSPCB). • Complied. • Online analyzers are installed for continuous monitoring of SO_x, NO_x, CO & PM for 24 stacks. These analyzers are connected directly to CPCB and BSPCB servers for continuous emission monitoring. • Complied
4.	Quarterly monitoring of fugitive emissions shall be carried out as per the guidelines of CPCB by fugitive emission detectors and reports shall be submitted to the Ministry's regional office at Bhubaneswar. For control of fugitive emission all unsaturated hydro carbon will be routed to the flare system and the flare system shall be designed for smoke less burning.	• Quarterly monitoring of fugitive emission as per CPCB guidelines is carried out and report is submitted regional office, Ranchi along with compliance report on six monthly basis. • Complied • Smokeless flare system already exists at Barauni Refinery and all unsaturated hydrocarbons are routed to it. • Complied
5.	Fugitive emissions of HC from product storage tank yards etc. must be regularly monitored. Sensors for detecting HC leakage shall also be provided at strategic locations. The company shall use low Sulphur fuel to minimize SO ₂ emission.	• Quarterly monitoring of fugitive emission from tank farm area is carried out. • Complied. • Hydrocarbon detectors are installed in strategic locations in the various process units, storage tank farm, and other plausible locations. • Complied • 'Sulfur' in fuel oil conforms to the revised MoEF&CC standards 2008 (<1%Wt.). • H₂S in fuel gas conforms to the revised MoEF&CC standards 2008 (<150 mg/Nm³). • Complied
6.	The effluent after treatment and conforming to the MINAS standards shall be discharged into the river Ganga. The company shall undertake measures for water conservation and treated effluent to the extent possible shall be used for fire water make up, coke cutting water, make up water for eco pond and irrigation of Eco park etc.	To reduce Raw water consumption, treated effluent is re-used as • Cooling Tower makeup water • Fire water make up • Coke cutting water • Make up water for Eco Ponds. • Horticulture in Eco park • After ETP modernization, reuse of treated effluent in refinery operations has increased significantly resulting in "Zero Discharge of Treated Effluent into River Ganga". • Complied
7.	M/s IOCL shall investigate cause of odour problem in one of the wells as reported during the public hearing meeting held on 25.9.2007 and report submitted to the Ministry's Regional office at Bhubaneswar.	• Water samples were randomly taken from hand pumps and wells of the surrounding area of Keshawe village several times and tested by M/S PDIL. Found meeting potable water quality norms. The odor of water has been detected as a localized problem.

		• Further, in keeping with Indian Oil's motto "People before Profit", Barauni refinery lined up the M/S PDIL in 2009 for establishing the ground water quality and its movement in and around Barauni Refinery to investigate cause of odor problem in Keshawe village. PDIL submitted its report in Feb 2010 and it was concluded that <u>"no ground water from the refinery flows beyond the refinery boundary. Hence, ground water contamination from the refinery beyond boundary can be ruled out. The ground water contamination due to refinery activities in the Keshawe village is not at all possible."</u> Further it was also observed <u>"that the poor sanitation around the hand pumps in Keshawe village around BTP area and the presence of Iron in the tube well water produces synergetic impact on the odour. Similarly, the installation of septic tanks and Khatalas are responsible for poor quality w.r.t odour."</u> • Presently testing of ground water quality in nearby villages is done quarterly by MoEF&CC approved agency. Reports enclosed. • Complied.
8.	The oily sludge shall be subjected to melting pit for oil recovery and the residues shall be bio-remediated. The sludge shall be stored in the HDPE lined pit along with proper leachate collection system.	• HDPE lined RCC pit for storage of hazardous solid waste (Oily Sludge) is in place and mechanized skid process has been deployed for better recovery of oil from oily sludge in place of melting pit. • Residual oily sludge is bio-remediated. • Complied.
9.	The company shall strictly follow all the recommendation mentioned in the charter on Corporate Responsibility for Environmental Protection (CREP).	• All the recommendations mentioned in the charter on Corporate Responsibility for Environmental Protection (CREP) are strictly followed. • Please refer Annexure-2 for detailed status on CREP. • Complied.
10.	The Company shall take necessary measures to prevent fire hazards, containing oil spill and soil remediation as needed. At place of ground flaring, the overhead flaring stack with knockout drums shall be installed to minimize gaseous emissions during flaring.	• Fire protection facilities as required by OISD standards exist in refinery. • Area within the units and around having the possibility of oil spillage has been paved. • All units, tank farm area and facilities are well connected with a closed underground OWS system to prevent any oil spill. • Knockout drums exist in overhead flaring stack to minimize gaseous emissions during flaring. • Fire protection facilities as required by OISD standards have been provided in new facilities and all the area within the units' battery limits have been paved. • Complied
11.	To prevent fire and explosion at Oil and Gas facility, potential ignition sources should be kept to a minimum and adequate separation distance between potential ignition sources and flammable material shall be in place.	• Distances between various units / equipments including potential ignition sources are as per OISD standards. • OISD standards have been followed for the distances between various units / equipments including potential ignition sources in the new facilities. • Complied
12.	Occupational health surveillance of worker shall	• A full-fledged Occupational Health centre is established in

	be done on a regular basis and records maintained as per the Factory Act.	the Refinery Hospital. Occupational health monitoring of employees is carried out regularly as per the program. - Occupational health surveillance records are maintained by the refinery hospital as per the Factory Act. Complied
13.	Greenbelt shall be developed to mitigate the effect of fugitive emission all around the plant in a minimum 30% plant area in consultation with DFO as per CPCB guidelines.	- Total plot area of the refinery: 887.83 acres. - Green belt area in Refinery: 43.8 acres. - Green belt area in Refinery Township: 82.19 acres. - Total green belt area: 125.99 acres. - Since, there is no further land available for tree plantation in Refinery and township hence, an agreement has been done with Forest department on 21.10.2021 for 1,65,000 nos. trees plantation in 180 Hectare land. EC amendment for the same has been carried out. Complied
14.	Environment protection measures suggested in the EIA/ EMP risk assessment report and during the public hearing meeting shall be implemented.	- Environment protection measures suggested in the EIA/ EMP risk assessment report have been implemented / are being implemented. Public Hearing Points - Rise in Respiratory Ailments - Survey conducted by panel of doctors/paramedics from Government Hospital delegated by Civil Surgeon. No adverse effects / increase in respiratory ailments observed. - Stunted Growth of Papaya Plant - Issue referred to Rajendra Agricultural University, Pusa. In response booklet on "Technology for Growing Papayas in Bihar" received. It says, "viral disease is the major limiting factor in Papaya cultivation in all regions of Bihar and attempts are on to select papaya lines showing strong tolerance to viral diseases." - Few hands pump's water have odour in Keshawe Village - Please refer status of condition no. 7 above. - Water overflow from Borrow Pit inundating fields - Borrow pit overflow does not occur anymore. - Medical Camps to be increased in surrounding area - Medical Camps are being conducted regularly. Complied
15.	The project authorities must strictly adhere to the stipulations made by the concerned State Pollution Control Board (SPCB) and the State Government and any other statutory body.	- Stipulations being followed. Complied
16.	No further expansion or modification in the project shall be carried without prior approval of the Ministry of Environment and Forests. In case	Prior approval of ministry is always taken before carrying out any expansion or modification of the plant.

	of deviations or alternations in the project proposal from those submitted to the Ministry for clearance, a fresh reference shall be made to the Ministry.	Complied
17.	At no time, the emissions should go beyond the prescribed standards. In the event of failure of any pollution control system, the respective well site should be immediately put out of operation and should not be restarted until the desired efficiency has been achieved. Provision of adequate height of stack attached to DG sets & flare is to be done.	• There is no well site at Barauni refinery. • Stacks and flare of adequate height have been provided in Barauni refinery to control emissions. • Complied
18.	Wastewater shall be properly collected and treated so as to conform to the standards prescribed under EP Act & Rules and mentioned in the Consents provided by the relevant SPCB.	• Adequate waste water drainage and collection facilities exist in refinery. • Appropriate drainage and collection facilities have been provided in new facilities in the MSQ project and are connected with the existing drainage facilities of refinery. • Oily waste water is treated in ETP/BTP and conforms to the CPCB/SPCB standards. • Complied w.r.t MoEF&CC standards.
19.	The overall noise levels in and around the premises shall be limited within the prescribed standards (75 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 (day time) and 70 dBA (night time).	• The ambient noise levels from existing facilities conform to the standards prescribed under EPA Rules, 1989 / Noise Pollution (Regulation and control) Rules 2000. • For personnel working in the proximity of high noise generating equipments, appropriate PPEs are used, and exposure is controlled through job rotation, education and awareness. • Adequate noise control measures have been taken in new facilities in the project. • No impact has been observed on plant boundary proximity area with the new facilities in the project, and ambient noise levels from new facilities conforms to the standards prescribed under EPA Rules, 1989 / Noise Pollution (Regulation and control) Rules 2000. • Noise level measurements are carried out quarterly by MoEFF&CC certified agency. Reports enclosed. • Complied
20.	The project authorities must strictly comply with the provisions made in Manufacture, Storage and Import of Hazardous Chemicals Rules 1989 as amended in 2000 for handling of hazardous chemicals etc. Necessary approvals from Chief Controller- of Explosives must be obtained before commission of the expansion project, if required. Requisite On-site and Off-site Disaster Management Plans will be prepared and implemented.	• Provisions made in Manufacture, Storage and Import of Hazardous Chemicals Rules 1989 as amended in 2000 for handling of hazardous chemicals etc. are strictly complied in existing facilities of refinery, and same have also been strictly complied in the project. • Necessary approvals from Chief Controller- of Explosives, wherever required have been obtained before commission of the project. • Comprehensive On-site and Off-site Disaster Management Plans exist in refinery and are updated regularly as per PNGRB guidelines. • On-site & Off-site mock drills are conducted quarterly and annually respectively. The Off-site drill is conducted with involvement of District Authority. • Complied

21.	Disposal of hazardous wastes shall be as per the Hazardous Wastes (Management and Handling) Rules, 2003. Authorization from the State Pollution Control Board must be obtained for collections/ treatment/storage disposal of hazardous wastes.	- Disposal of hazardous wastes is done as per the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016. - Authorization taken from Bihar State Pollution Control Board for handing of hazardous wastes. Authorization is valid till 29.08.2027. Complied
22.	The project authorities will provide adequate funds as non-recurring and recurring expenditure to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so provided should not be diverted for any other purposes.	- Adequate funds provided to implement the conditions stipulated by MoEF&CC - In addition to one-time investment in facilities for combating pollution, separate funds are allocated for specific activities such as bio-remediation of sludge, environment monitoring, and studies related to environment etc. Complied
23.	The company shall develop rain water harvesting structures to harvest the runoff water for recharge of ground water.	- Rain water harvesting has been implemented at buildings of Barauni Refinery in which water collected from roof top of the refinery is recharged to ground water. Additionally, township surface run-off is routed to three nos. of recharge pits. Complied
24.	The stipulated conditions will be monitored by the concerned Regional Office of this Ministry /Central Pollution Control Board/State Pollution Control Board. A six-monthly compliance report and the monitored data should be submitted to them regularly. It will also be displayed on the Website of the Company.	- A six-monthly compliance report and the monitored data are submitted regularly. - EC Compliance status of various projects is being hosted on https://www.iocl.com/Talktous/SNotices.aspx. Alternatively, one can reach IOCL home page at https://www.iocl.com and thereafter selecting "We're Listening" tab followed by opening "Statutory Notices". Complied
25.	The Project Proponent should inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the State Pollution Control Board/ Committee and may also be seen at Website of the Ministry of Environment and Forests at http://www.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 concerned Regional office of this Ministry.	- Information published in Hindustan and Hindustan Times on 27th Mar 2008. Complied
26.	A separate environment management cell with full-fledged laboratory facilities to carry out various management and monitoring functions shall be set up under the control of a Senior	- Barauni Refinery has a full-fledged environment protection cell and a well-equipped dedicated pollution control laboratory. Complied

	Executive.	
27.	The project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of the project	Date of financial approval was reported to be 29th April 2008 and the project was capitalized on 31st Dec 2010. • Complied

Annexure-1

Status and Action Plan for Compliance of Revised Emission and Effluent Standards 2008 at Barauni Refinery

Status as on 31.03.2026

Schedule -I: Petroleum Oil Refinery

A. Effluent Discharge

SN	Standard	BR status and action plan
1	Treated Effluent Quality	No effluent is discharged outside refinery. Treated effluent is totally reused and its quality is maintained as per MINAS. Reports attached separately. Complied

B. Emissions

SN	Standard	BR status and action plan
2	H ₂ S in Fuel Gas	H ₂ S in Fuel Gas is within limits as required under revised standards. Complied
3	SO ₂ Emissions	These parameters are monitored through online stack analyzers. These analyzers are directly connected to CPCB and BSPCB servers. Emissions are under within limit. Reports attached separately. Complied
4	NO _x Emissions	
5	CO Emissions	
6	Particulate Matter (PM) Emissions	Barauni Refinery processes more low Sulphur crude in recent years. Only about 5% high sulfur crude processing takes place. As a result, internal fuel oil quality has been improved w.r.t emission of particulate matter. Further, particulate matter analyzers have been installed in all stacks of refinery and connected to CPCB server since June-16. The online analyzer data available now help us fine tuning fuel firing and optimization of gas mix amongst various furnaces and the controlling the PM parameters within the statutory limit. COMPLIED.
7	Nickel and Vanadium (Ni+V) Emissions	COMPLIED.
8	Sulphur Content in Liquid Fuel	COMPLIED.

9	Continuous Monitoring System for SO ₂ & NO _x emissions	Continuous monitoring is done through online analyzers. These analyzers are directly connected to CPCB and BSPCB servers. Complied
10	Opacity of Flue Gas ex FCCU Regenerators	> RFCCU was commissioned at Barauni Refinery along with flue gas scrubbing technology supplied by M/s Belco, USA. In the Belco unit, the flue gas is scrubbed with water & diluted caustic solution (<0.5 % concentration by wt.) to remove SO _x and particulate matter. PM level in flue gas is less than 30 mg/Nm ³ . High volume of condensed water vapor generated during water scrubbing of flue gas escapes through the BELCO stack as whitish plume. Opacity meter under such condition is not considered relevant as it will not be effective due to high moisture content in flue gas. > Further, PM analyzers have been installed in RFCCU stack through which particulate matter ex- RFCCU stack is monitored, which is closely akin to monitoring of opacity in flue gas. Therefore, opacity meter installation at RFCCU is not planned. > Complied.
11	Sulphur Recovery from SRU	SRU at Barauni refinery meets the revised standard. COMPLIED.
12	H ₂ S emissions from SRU	SRU at Barauni refinery meets the revised standard. COMPLIED.

C. Fugitive Emission

SN	Standard	BR status and action plan
13	Storage tanks with capacity between 4 to 75 m ³ and TVP of more than 10 kpa	Not Applicable.
14	Storage tanks with capacity between 75 to 500 m ³ and TVP of 10 to 76 kpa	Not Applicable.
15	Storage tanks with capacity of more than 500 m ³ and TVP of 10 to 76 kpa	Storage tanks of Crude, MS & SRN have TVP of 10 to 76 kpa. All such tanks are IFRT or EFRT. COMPLIED.

16	Storage tanks with capacity of more than 500 m3 and TVP of more than 76 kpa	Not Applicable
17	Provision of secondary seals in floating roof tanks	All such tanks at Barauni Refinery are equipped with double seal. COMPLIED.
18	Emission control in Rail Tank Wagon/ Road Tank Truck loading for Gasoline and naphtha for VOC reduction	Barauni Refinery complies most of the revised standards for petroleum refineries as notified in Gazette of India on 18th March'08 except vapor recovery system in tank wagon/tank truck. For VOC reduction of 99.5% and emission control to 5 gm/m3 in case of Gasoline and Naphtha loading, VOC recovery system at Loading Gantry would be required. Existing gantry at Barauni refinery does not have adequate space for laying a bigger dia header all along the gantry and other equipment for vapor recovery system. It will also require the shutdown of product loading gantry for 3-4 months to install this facility. Outage of gantry for such a long period cannot be allowable in view of the chances of market dry out of the major petroleum products.
19	Equipment's leak and LDAR programme	COMPLIED.
D. Emission Standards for VOC from Wastewater Collection and Treatment		
20	VOC Collection & Treatment System	VOC treatment system as a part of ETP modernization project has been installed and commissioned. COMPLIED.

Schedule -VI, Part C: Petroleum Oil Refinery

SN	Standard	BR status and action plan
21	Quantum limit for discharge of total effluent	No effluent is discharged outside refinery. Treated effluent is totally reused.
22	Limit of quantity of effluent discharged	

Annexure-2

CHARTER ON CORPORATE RESPONSIBILITY FOR ENVIRONMENTAL PROTECTION (CREP)

STATUS OF IMPLEMENTATION OF CREP OBLIGATIONS AT BARAUNI REFINERY as on 31.03.2026

SL. No	ACTIVITY	STATUS
	Air Pollution Management	
1.	All the refineries located in the critically polluted areas, identified by CPCB, should submit an action plan for reduction of SO ₂ emission from the present level.	• With the commissioning of desulphurization facilities (Amine Treating Unit) for fuel gas from old plants in Oct 2010, Barauni refinery now meets the revised SO₂ emission standards for all the furnaces, boilers and captive power plant including RFCCU regenerator and SRU. • The quantum of total SO₂ emissions from Barauni Refinery has further reduced by more than 150 Kg/hr after the commissioning of ATU in Oct 2010. • Complied.
2.	Future refineries should have Sulphur Recovery Unit (SRU) with minimum 99% efficiency.	• SRU with 99 % efficiency is in operation at Barauni Refinery. • Complied.
3.	For the SRUs in the existing refineries, an expert committee to be constituted to look into various aspects and suggest a road map within six months.	• Existing SRU at Barauni Refinery has 99 % efficiency. • Complied.
4.	(a) With regard to NO _x emission, the new refineries/process units should install low NO _x burners. (b) For retrofitting of low NO _x burners in existing units the same expert committee will suggest the strategies and action plan within six months.	• Low NO_x burners have been installed in all furnaces and boilers of Barauni Refinery. • Complied.
5.	The flare losses should be minimized and monitored regularly.	Following actions are in practice: • Viewing through Closed Circuit TVs installed in RSM Office & DDOS- II C/R. • Monitoring through opening / closing of C/V of Fuel gas to flare. • Fuel Gas balance on daily basis. • Flare Gas Recovery Unit has been commissioned for use of flare gas as fuel gas in furnaces/boilers. Project has been registered by

SL. No	ACTIVITY	STATUS
		UNFCCC under CDM projects on 04th May 2009. • CO₂ emissions from BR have reduced by about 6000 MT per annum after commissioning of this project. (Total CER in BR account = about 6000) • Complied.
6.	Refineries should install continuous emission monitoring system for SO _x and NO _x in major stacks.	• SO_x & NO_x are now monitored continuously in 24 nos. of stacks with SO_x/NO_x analyzers. • Complied.
7. (a)	Refineries should also monitor total HC and Benzene in the premises (particularly at loading/unloading operations and ETP). The status and action plan to be submitted within 6 months.	• HC & Benzene are monitored regularly in Tank wagon Gantries, ETP & QC lab.
7. (b)	The expert committee will also suggest an action plan, within six months for control and monitoring of hydrocarbon loss & VOC emissions, leak detection and repair (LDAR) programme and vapour recovery systems (for loading & unloading operations within refineries only)	• VOC emissions monitored through Detection instrument and LDAR Program is in place. • Complied.
Waste Water Management		
1.	Refineries will prepare action plan for conservation of water resources and maximizing reuse/recycling of treated effluent within six months. The treated effluent discharge quantity should be limited to 0.4 m ³ /per tonne (for 90% of time) except for the monsoon season.	• Treated liquid effluent is completely reused in refinery operations, horticulture, eco ponds make up, burrow pit makes up completely except in rainy season after modernization of ETP/BTP.
2.	Oil spill response facilities at coastal refineries should be in position within 3 years.	• Not applicable.
Solid Waste Management		
1.	Refineries will explore new technologies for reduction in the generation of oily sludge. Strategy and action plan for liquidation of existing sludge should be submitted within 6 months.	• Following procedures are in place for minimization of oily sludge generation: • Operation of side entry mixers in crude oil tanks. • Hot Gas oil circulation in crude oil tanks before handing over for cleaning. • For better recovered of oil from oily sludge, Mechanized skid process by M/S LMR Pvt Ltd has been deployed.

SL. No	ACTIVITY	STATUS
		• Recovery of oil is excellent (95-98%) against only 40-50% in case of oil recovery from melting pit. • Quality of oil in residual sludge is much lower (less than 10%). • Quality of final residual is very less (less than 5% of oily sludge processed). • The left over residual oily sludge is processed in CBR (Confined Space Bioremediation) developed by IOCL-R&D. • Complied.
2.	The petroleum coke having high Sulphur content should only be sold to/reused by organized industries, which have systems to control SO₂ emissions). This will be ensured by June 2003.	• RPC is being sold to reputed calciner. • Complied.



IndianOil
Barauni Refinery

Status as on 31.03.2026

Subject: Status of Environmental Clearance Conditions for MS quality up-gradation and HSD quality up-gradation in Barauni Refinery

Ref: Ministry's clearance letter no J-11011/15/2015 - IA II (I) dated 06.03.2017.

SN	Point	Status
A	Specific Conditions	
i.	M/s IOCL shall comply with standards/norms for Oil Refinery Industry notified under the Environment (Protection) Rules, 1986 vide G.S.R. 186(E) dated 18 th March, 2008.	• Please refer Annexure-1 for detailed status for compliance of standards/norms for Oil Refinery Industry notified under the Environment (Protection) Rules, 1986 vide G.S.R. 186(E) dated 18th March, 2008. • Complied.
ii.	Continuous on-line stack monitoring for SO ₂ , NO _x and CO of all the stacks shall be carried out.	• Continuous on-line stack analyzers for monitoring of SO₂, NO_x, CO & PM have been installed and connected to CPCB server for 24 nos. of stacks. • Complied.
iii.	The process emissions {SO ₂ , NO _x , HC (Methane & Non-methane)}, VOCs and Benzene from various units shall conform to the standards prescribed under the Environment (Protection) Act, 1986. At no time, the emission levels shall go beyond the stipulated standards. In the event of failure of pollution control system(s) adopted by the unit, the unit shall be immediately put out of operation and shall not be restarted until the desired efficiency of the pollution control device has been achieved.	• SO₂, NO_x, CO & PM are monitored with online SO₂, NO_x, CO and PM analyzers. • Process emissions from all units are monitored once in two months except SRU (which is monitored monthly) by MoEF&CC approved external agency M/s Detox Corporation Private Limited. Reports enclosed. • Total SO₂ emissions from existing units are less than the stipulated limit of 815 kg/hr. • Complied.
iv.	Leak Detection and Repair programme shall be prepared and implemented to control HC/VOC emissions. Focus shall be given to prevent fugitive emissions for which preventive maintenance of pumps,	• Leak detection and repair programme is already in place at Barauni Refinery and same is carried out on quarterly basis.

	valves, pipelines are required. Proper maintenance of mechanical seals of pumps and valves shall be given. A preventive maintenance schedule for each unit shall be prepared and adhered to. Fugitive emissions of HC from product storage tank yards etc. must be regularly monitored. Sensors for detecting HC leakage shall be provided at strategic locations.	• Preventive maintenance schedule for each unit is in place and same is strictly adhered to. • Monitoring of fugitive emission from tank farm area is included in Leak Detection and Repair Programme. Report enclosed. • Hydrocarbon detectors with alarm system are installed in strategic locations in the various process units, tank farm, and other plausible locations • Complied.
v.	SO ₂ emissions after expansion from the plant shall not exceed 815 kg/hr and further efforts shall be made for reduction of SO ₂ load through use of low sulphur fuel. Sulphur recovery units shall be installed for control of H ₂ S emissions. The overall sulphur recovery efficiency of Sulphur recovery unit with tail gas treating shall not be less than 99.9%.	• Total SO₂ emission from existing units at BR is less than the stipulated limit of 815 kg/hr. • SRU (Sulphur Recovery Unit) unit (without tail gas treating) consisting of 2 chains of capacity 40 MT/day of Sulphur production each is installed at Barauni Refinery. • As per norms for Oil Refinery Industry notified under the Environment (Protection) Rules, 1986 vide G.S.R. 186(E) dated 18th March, 2008, existing SRU installed in the refinery should have 98.7% sulphur recovery and Barauni Refinery complies this standard. • New SRU envisaged in upcoming project (capacity expansion) will be installed with overall sulphur recovery efficiency of min 99.9%. • Complied.
vi.	As proposed, record of sulphur balance shall be maintained at the Refinery as part of the environmental data on regular basis. The basic component of sulphur balance include sulphur input through feed (sulphur content in crude oil), sulphur output from Refinery through products, byproduct (elemental sulphur), atmospheric emissions etc.	• Sulphur balance record is being maintained as a part of Environmental data. • Complied.
vii.	Flare gas recovery system shall be installed.	• Flare gas recovery system is installed and operational in the refinery. • Complied.

viii.	Ambient air quality monitoring stations, [PM10, PM2.5, SO ₂ , NO _x , H ₂ S, mercaptan, non-methane-HC and Benzene] shall be set up in the complex in consultation with State Pollution Control Board, based on occurrence of maximum ground level concentration and down-wind direction of wind. The monitoring network must be decided based on modeling exercise to represent short term GLCs.	• Eight manual (four in Refinery, one in township and three in periphery villages) air quality monitoring stations have been set up. Ambient air quality is checked twice in a week as per revised MoEF&CC standards 2009. Report enclosed. • Three continuous online monitoring stations provided for ambient air quality monitoring covering 8 parameters viz PM 10, PM 2.5, SO₂, NO_x, CO, NH₃, Benzene and Ozone. The stations are also directly connected online with servers at CPCB and Bihar State Pollution Control Board (BSPCB). • Complied.
ix.	The total water requirement from artesian wells after expansion of proposed project shall not exceed 651 m ³ /hr and prior permission shall be obtained from the competent authority.	• Fresh water consumption during Oct-2025 to Mar-2026 was 709 m³/hr which is within limit of 1000 m³/hr. • Barauni Refinery has received NOC from CGWA on 19.06.2018 with validity till 04.06.2020. • Again, renewal of NOC received with validity till 04.06.2026. • Complied.
x.	As proposed, Industrial effluent generation shall not exceed 497 m ³ /hr after proposed expansion and treated in the integrated effluent treatment plant. The plant shall be based on Zero Liquid Discharge and as proposed RO to be installed within the plant. Treated effluent shall be recycled/reused within the factory premises. Domestic sewage shall be treated in sewage treatment plant (STP).	• Industrial effluent generation for 2025-26 is 473.08 m³/hr which is within the allowable limit of 497 m³/hr and is treated in the effluent treatment plant of the refinery. • Industrial effluent generation post project shall be maintained within 497 m³/hr. • Zero liquid discharge is being maintained at Barauni Refinery except during heavy rainfall, when excess surface run off may have to be allowed to flow into Refinery owned pit (Burrow Pit) adjacent to refinery premise in the West. • Treated effluent is being reused for following purpose in the refinery: ○ Cooling Tower makeup water ○ Fire water make up ○ Coke cutting water ○ Make up water for Eco Ponds ○ Horticulture in Eco park • Domestic sewage is treated in biological treatment plant of the refinery. • Complied.

xi.	Automatic mechanical Oil catchers/oil traps shall be provided at all possible locations in rain/storm water drainage system inside the factory premises.	• Oil catchers have been constructed at following strategic locations of the refinery: ○ West of AVU-III ○ West of RFCCU ○ South of DHDT ○ East of Coker A ○ North of Coker A ○ North west corner of Stores ○ Final drain going to Burrow Pit. • Oil containment booms have also been installed at 3 nos of strategic locations in the refinery. • Oil collected/trapped by oil catcher and oil containment booms are transferred to ETP mechanically through gully suckers. • Complied.
xii.	The oily sludge shall be subjected to melting pit for oil recovery and the residue shall be bio-remediated. The sludge shall be stored in HDPE lined pit with proper leachate collection system.	• RCC pit for storage of Oily Sludge is in place and mechanized skid process has been deployed for better recovery of oil from oily sludge in place of melting pit. Presently M/s LMR Pvt Ltd. is engaged for this job. • Residual oily sludge is bio-remediated in confined space bioremediation reactor (CBR). • Complied.
xiii.	At least 2.5% of the total cost of the project shall be earmarked towards the Enterprise Social Commitment (ESR) based on Public Hearing issues and item wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Ranchi.	• Detailed ESR plan attached as Annexure-2. • Complied.
xiv.	Green belt should be developed in 33% of the plot area to mitigate the effect of fugitive emission all around the plant in consultation with DFO as per CPCB guidelines. Thick green belt around factory premises should be ensured.	• Total plot area of the refinery: 887.83 acres. • Green belt area in Refinery: 43.8 acres. • Green belt area in Refinery Township: 82.19 acres. • Total green belt area: 125.99 acres. • Since, there is no further land available for tree plantation in Refinery and township, MoU was signed with DFO, Munger and 180 hectares of green belt has been developed at Munger Forest Division. Total 1, 65,000 no. of tree has been planted.

		• Total Green belt area has been increased to 65% of the total project area. EC amendment for the same has been carried out. Complied
B	General Conditions	
i.	The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board (SPCB), State Government and any other statutory authority.	• Stipulations made by the State Pollution Control Board (SPCB), State Government and any other statutory authority are being followed. • Complied.
ii.	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests. In case of deviations or alterations in the project proposal from those submitted to this Ministry for clearance, a fresh reference shall be made to the Ministry to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.	• Prior approval of ministry would be taken before carrying out any expansion or modification of the plant if required. • Complied.
iii.	The locations of ambient air quality monitoring stations shall be decided in consultation with the State Pollution Control Board (SPCB) and it shall be ensured that at least one station is installed in the upwind and downwind direction as well as where maximum ground level concentrations are anticipated.	• Eight manual (four in Refinery, one in township and three in periphery villages) air quality monitoring stations have been set up. Ambient air quality is checked twice in a week as per revised MoEF&CC standards 2009. Report enclosed. • Three continuous online monitoring stations provided for ambient air quality monitoring covering 8 parameters viz PM 10, PM 2.5, SO₂, NO_x, CO, NH₃, Benzene and Ozone. The stations are also directly connected online with servers at CPCB and Bihar State Pollution Control Board (BSPCB). • Complied.
iv.	The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 shall be followed.	• Ambient air quality is checked twice in a week in eight manual ambient air quality monitoring stations as per the National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009. • Complied.
v.	The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods,	• The ambient noise levels from existing facilities conform to the standards prescribed under standards

	silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under Environment (Protection) Act, 1986 Rules viz. 75 dBA (day time) and 70 dBA (night time).	prescribed under Environment (Protection) Act, 1986 Rules. • For personnel working in the proximity of high noise generating equipments, appropriate PPEs are used, and exposure is controlled through job rotation, education and awareness. • Adequate noise control measures also taken in new facilities in the project. • Noise monitoring is done quarterly by external agency. Report enclosed. • Complied.
vi.	The company shall harvest rainwater from the roof tops of the buildings and storm water drains to recharge the ground water and use the same water for the process activities of the project to conserve fresh water.	• Rain water harvesting has been implemented at 21 buildings of Barauni Refinery and township in which water collected from roof top of various buildings is recharged to ground water. Additionally, whole surface run-off of township is also diverted to 3 nos. of recharge pits. • Storm water drain of the refinery has been routed to ETP and storm water is being reused in refinery operation after treatment along with ETP water except during heavy rainfall, when excess surface run off may have to be allowed to flow into Refinery owned pit (Burrow Pit) adjacent to refinery premise in the West. • Complied.
vii.	Training shall be imparted to all employees on Safety and health aspects of chemical handling. Pre- employment and routine periodical medical examinations for all employees shall be undertaken on regular basis. Training to all employees on handling of chemical shall be imparted.	• Training is continuously imparted to all employees on chemical handling. • Pre – employment medical examination of all employees are carried out before joining the organization. • Routine periodical medical examination as per statutory requirement is carried out on regular basis. • Complied.
viii.	The company shall also comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, risk mitigation measures and public hearing relating to the project shall be implemented.	• Presently Environmental Monitoring of all required parameters in Refinery is carried out periodically. The existing practice shall be extended for the proposed project as per EIA/EMP report. • Recommendations of Quantitative Risk Analysis are being implemented along with project execution.

ix.	The company shall undertake all relevant measures for improving the socio-economic conditions of the surrounding area. CSR activities shall be undertaken by involving local villages and administration.	• Being done based on the drawn-up schedule as part of CSR. CSR plan is finalized in consultation with mukhiyas of surrounding villages. • Complied
x.	The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment.	• Being done based on the drawn-up schedule as part of CSR. • Complied
xi.	A separate Environmental Management Cell equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.	• BR has a full-fledged environment protection cell and a well-equipped dedicated pollution control laboratory established back in 1975. • Complied
xii.	The company shall earmark sufficient funds towards capital cost and recurring cost per annum to implement the conditions stipulated by the Ministry of Environment, Forest and Climate Change as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds to earmark for environment management/pollution control measures shall not be diverted for any other purpose.	• In addition to one-time investment in facilities for combating pollution, separate funds are allocated for specific activities such as environment monitoring, operation and maintenance of effluent treatment plant, oil recovery from oily sludge through mechanized skid process and studies related to environment etc. • Being complied.
xiii.	A copy of the clearance letter shall be sent by the project proponent to concerned Panchayat, ZilaParisad / Municipal Corporation, Urban local Body and the local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal.	• The instant project being environment project was exempted from public hearing. Further, no suggestions were received from Panchayat, Zila Parishad / Municipal Corporation, Urban local Body and the local NGO while processing the proposal. Nevertheless, copy of clearance has been sent to District Magistrate, Begusarai and Municipal Commissioner, Begusarai Nagar Nigam vide letter dated 22.02.2020. Attached as Annexure-3. • Complied
xiv.	The project proponent shall also submit six monthly reports on the status of compliance of the stipulated Environmental Clearance conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional Office of MoEF&CC, the respective Zonal Office of CPCB and SPCB. A copy of Environmental Clearance	• A six-monthly compliance report and the monitored data are submitted regularly. • EC Compliance status of various projects is being hosted on https://www.iocl.com/Talktous/SNotices.aspx. Alternatively, one can reach IOCL home page at https://www.iocl.com and thereafter selecting

	and six-monthly compliance status reports shall be posted on the website of the company.	"We're Listening" tab followed by opening "Statutory Notices". • Complied
xv.	The environmental statement for each financial year ending 31 st March in Form-V as its mandated shall be submitted to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Regional Offices of MoEF&CC by e-mail.	• Environment Statement for each financial year is submitted to Bihar State Pollution Control Board. Same is sent to Regional Office of MoEF&CC. • Complied
xvi.	The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB/Committee and may also be seen at Website of the Ministry at http://moef.nic.in . This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the concerned Regional Office of the Ministry.	• The information regarding accord of Environment clearance for the subject project has been advertised in two local newspapers. Copy enclosed as Annexure-4. • Complied.
xvii.	The project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of the project.	• The date of final approval of the project is 13.02.2015 and date of commencement is March 2017. • Complied.

Note- Ambient air monitoring, stack monitoring and noise monitoring reports are attached separately

Status and Action Plan for Compliance of Revised Emission and Effluent Standards 2008 at Barauni Refinery

Schedule -I: Petroleum Oil Refinery**A. Effluent Discharge**

SN	Standard	BR status and action plan
1	Treated Effluent Quality	No effluent is discharged outside refinery. Treated effluent is totally reused and its quality is maintained as per MINAS. Reports attached separately. Complied

B. Emissions

SN	Standard	BR status and action plan
2	H ₂ S in Fuel Gas	H ₂ S in Fuel Gas is within limits as required under revised standards. Complied
3	SO ₂ Emissions	These parameters are monitored through online stack analyzers. These analyzers are directly connected to CPCB and BSPCB servers. Emissions are under within limit. Reports attached separately. Complied
4	NO _x Emissions	
5	CO Emissions	

6	Particulate Matter (PM) Emissions	Barauni Refinery processes lower sulphur cruder in recent years. Only about 5% high sulfur crude processing takes place. As a result, internal fuel oil quality has been improved w.r.t emission of particulate matter. Further, particulate matter analyzers have been installed in all stacks of refinery and connected to CPCB server since June-16. The online analyzer data available now help us fine tuning fuel firing and optimization of gas mix amongst various furnaces and the controlling the PM parameters within the statutory limit. COMPLIED.
7	Nickel and Vanadium (Ni+V) Emissions	COMPLIED.
8	Sulphur Content in Liquid Fuel	COMPLIED.
9	Continuous Monitoring System for SO ₂ & NO _x emissions	Continuous monitoring is done through online analyzers. These analyzers are directly connected to CPCB and BSPCB servers. Complied
10	Opacity of Flue Gas ex FCCU Regenerators	RFCCU was commissioned at Barauni Refinery along with flue gas scrubbing technology supplied by M/s Belco, USA. In the Belco unit, the flue gas is scrubbed with water & diluted caustic solution (<0.5 % concentration by wt.) to remove SO_x and particulate matter. PM level in flue gas is less than 30 mg/Nm³. High volume of condensed water vapor generated during water scrubbing of flue gas escapes through the BELCO stack as whitish plume. Opacity meter under such condition is not considered relevant as it will not be effective due to high moisture content in flue gas. Further, PM analyzers have been installed in RFCCU stack through which particulate matter ex- RFCCU stack is monitored, which is closely akin to monitoring of opacity in flue gas. Therefore, opacity meter installation at RFCCU is not planned. Complied.
11	Sulphur Recovery from SRU	SRU at Barauni refinery meets the revised standard. COMPLIED.
12	H ₂ S emissions from SRU	SRU at Barauni refinery meets the revised standard. COMPLIED.

C. Fugitive Emission

SN	Standard	BR status and action plan
13	Storage tanks with capacity between 4 to 75 m3 and TVP of more than 10 kpa	Not Applicable.
14	Storage tanks with capacity between 75 to 500 m3 and TVP of 10 to 76 kpa	Not Applicable.
15	Storage tanks with capacity of more than 500 m3 and TVP of 10 to 76 kpa	Storage tanks of Crude, MS & SRN have TVP of 10 to 76 kpa. All such tanks are IFRT or EFRT. COMPLIED.
16	Storage tanks with capacity of more than 500 m3 and TVP of more than 76 kpa	Not Applicable
17	Provision of secondary seals in floating roof tanks	All such tanks at Barauni Refinery are equipped with double seal. COMPLIED.

18	Emission control in Rail Tank Wagon/ Road Tank Truck loading for Gasoline and naphtha for VOC reduction	Barauni Refinery complies most of the revised standards for petroleum refineries as notified in Gazette of India on 18th March'08 except vapor recovery system in tank wagon/tank truck. For VOC reduction of 99.5% and emission control to 5 gm/m ³ in case of Gasoline and Naphtha loading, VOC recovery system at Loading Gantry would be required. Existing gantry at Barauni refinery does not have adequate space for laying a bigger dia header all along the gantry and other equipments for vapour recovery system. It will also require the shutdown of product loading gantry for 3-4 months to install this facility. Outage of gantry for such a long period cannot be allowable in view of the chances of market dry out of the major petroleum products.
19	Equipments leak and LDAR programme	COMPLIED.

D. Emission Standards for VOC from Wastewater Collection and Treatment

20	VOC Collection & Treatment System	VOC treatment system as a part of ETP modernization project has been installed and commissioned. COMPLIED.
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Schedule -VI, Part C: Petroleum Oil Refinery

SN	Standard	BR status and action plan
21	Quantum limit for discharge of total effluent	No effluent is discharged outside refinery. Treated effluent is totally reused.
22	Limit of quantity of effluent discharged	

Annexure-3



रिफाइनरीज प्रभाग
Refineries Division

इंडियन ऑयल कॉर्पोरेशन लिमिटेड
बाराणी रिफाइनरी, बाराणी, बंगाल, भारत
पिन: 751114

Indian Oil Corporation Limited
Barauni Refinery, P.O. Barauni Refinery,
Dist. Begusarai, Bihar - 751114
Website: www.iocl.com
E-mail: barauri@iocl.com
Phone: 06243-240159 / 240161
Fax: 06243-240155 / 240274



ISO: 9001, 14001 & OHSAS: 18001 Certified Refinery

Ref No.: TS/HSE/2020/02/11011

Date: 22.02.2020

To,

District Magistrate,
Begusarai, Bihar

Sub: Copy of EC received by IOCL, Barauni Refinery for record

Dear Sir,

A copy of Environmental Clearance from MoEF&CC, received by IOCL, Barauni Refinery via F. No. J-11011/15/2015-IA-II (I), for the project for MS quality up gradation & HSD quality up-gradation in Barauni Refinery at District – Begusarai, Bihar by M/s IOCL, is attached for your kind perusal and record.

Thanking you,

Yours faithfully,

(S K Bhanu)

DEPUTY GENERAL MANAGER (HSE)

Encl: As above.

110
13-2-20

Barauni Refinery - To be harmonized with nature

राज्यीय कार्यालय: पी. ए. एम. जंग मारग, बंडोडा (पूर्व), मुंबई-400 051 महाराष्ट्र (भारत)
Regional Office: P. A. Am Jang Marg, Bandod (East), Mumbai-400 051 Maharashtra (India)
CIN: L23201MH1959GOL01388



रिफाइनरीज प्रभाग
Refineries Division

इंडियन ऑयल कॉर्पोरेशन लिमिटेड
न्यू २१ फ्लैटनरी, बाराक - बरौली और रिफाइनरी
बि.न. - बेगूसराय (बिहार) - ८५१ ११४

Indian Oil Corporation Limited
Barauni Refinery, P.O. - Barauni Oil Refinery,
Dist. - Begusarai, Bihar - 851 114
वेबसाइट - www.ioil.com

ई-मेल - Barauni@ioil.com / Barauni@ioil.in
फ़ोन - (06243 240159 / 240110)
फैक्स - 06243 240150 / 240278

ISO 9001, ISO 14001 & OHSAS 18001 Certified Refinery



Ref.No.: TS/HSE/2020/02/1515

Date : 27.07.2020

To,

Municipal Commissioner,
Begusarai Nagar Nigam
Begusarai, Bihar

Sub: Copy of EC received by IOCL, Barauni Refinery for record

Dear Sir,

A copy of Environmental Clearance from MOLT&CC, received by IOCL, Barauni Refinery via F. No. J-11011/15/2015-IA-II (I), for the project for MS quality up-gradation & HSD quality up-gradation in Barauni Refinery at District - Begusarai, Bihar by M/s IOCL, is attached for your kind perusal and record.

Thanking you,

Yours faithfully,


27/7/2020

(S K Bhanu)

DEPUTY GENERAL MANAGER (HSE)

Encl. As above.

Barauni Refinery - In harmony with nature

पञ्जीकृत कार्यालय : जी.९ अली यारुंग मंग, बावला (फैक्स), मुम्बई 400 051, महाराष्ट्र (भारत)
Regd. Office : G-9, Ali Yavar Jung Marg, Bandra (Fax), Mumbai-400 051, Maharashtra (India)
CIN - L 23201 MH 1959 GOI 011388

अगमकुआं थाना क्षेत्र के छोटी पहाड़ी स्थित गोदाम से खाद्य सुरक्षा विभाग ने 230 ट

मिलावटी सरसों तेल के धंधे का

अवैध कारोबार

पटना सिरी | हिन्दुस्तान प्रतिनिधि

छात्र मुश्किल विधान में आगबकु आ घाना
 क्षेत्र के छोटी पहाड़ी समकाल पेटुल पोर के
 पास स्थित गोदाम में छात्रद्वारा कर
 मिलावटी सरसों तेल के थपे का भंडारोह
 किया है। टीन में पौक्रे में सरसों तेल के
 नमूने जखत कर लिए हैं। जिसमें जारर के
 लिए लैभ भेजा जा रहा है। अधिकतम
 अपराध ईकाई के इन्फेक्टर देवनागरिया
 पासवान ने बताया कि एक बड़े तैलन में
 छह हजार लीटर पॉय ऑयल जखत किया
 गया है। गौरतलब है कि बर्तों 21 फरवरी
 की तीन हजार टीन मिलावटी सरसों
 तैल जखत किया गया था।

गुप्त सूचना के आधार पर खाद्य सुरक्षा की टीम ने पुलिस के साथ मिलकर मंगलवार को दोपहर दोघाम में छापा मारा। जहाँ बड़े पैमाने पर सरसों का तेल का निर्माण और पैकिंग किया जा रहा था। टीम को सूचना मिली थी कि कारखाने में पौम ऑयल, रंग और एंटीसेप्टिक के मिश्रण से सरसों तेल तैयार किया जा रहा है। कारखाने में छापेमारी से आसपास के

मचा हडकंप

- खाद्य सुरक्षा विभाग में मारा छाप, जांच के लिए तैब भेजा तेल का नमूना
- बड़े पैमाने पर मोदाम में किया जा रहा था सरसो तेल का निर्माण और पैकिंग
- अदृश्य रूप से मिलावट करने वालों में मछी भफरा-तफरी

06 हजार लीटर पॉज ऑयल एक बड़े कैलेन से जला

150 खाली कंटेनर व मिलावट
के सामान बराबर



मिलावटी तेल से
स्वास्थ्य को
नुकसान

- किडनी और लीवर को खराब कर देता है
- गॉल ब्लेडर कैसर का खनरा बढ़ जाता है
- नर्व सिस्टम को नुकसान पहुंचाता है
- पाचन तंत्र में खराबी से भूख खत्म हो जाती है

गुलजारबाग में मिला पॉम ऑयल

छोटी पहाड़ी स्थित कारखाने में मिले सुराग के आधार पर अजय कुमार के गलतारबाग स्थित गोदाम में देर शाम छापेमारी की गई। जहां से

पर बुद्ध ने सबसे ऊपर पेशानी मुद्रा
 में जिस व अक्षर को न जाने काल
 अपने को बोध कहते हैं शक्य के
 संनमस्ते के लिए यह वक्र के
 मिला। इस मुद्रा में सैकड़ों प्रेरणा तक
 वरुण के मूर्ति को प्रकट
 ब्रह्म के मूर्ति को प्रकट
 अक्षर को प्रकट

स्वतन्त्र लोगों ने बताया कि
अन्तर्गत नाम क्षेत्र के बहुतांश
स्थित बेगिन पर कर रैंड दूट जाने से
सर्वकार की देखावट सड़क पक्का है। वहीं
छात्रों के नाम क्षेत्र के मुहूर्तों पर
अपने-अपने पत्रिका स्थित बेगिन मिल
कर आ की प्रकाश से एक पत्र है। इस
पत्र पर एक की भी दूट जाने से
सर्वकार पर कर रैंड

किन्-किन् इसकी से रहा जलसंयंत्र :
 दोनो कोरिंग से टन होने से 40 हजार से
 अधिक की आकरी **पैर की** जमी के लिए
 हासकान रहे। **नरेंद्र** बबु आनंद
 कालीकुमार, आनंदनंद, **हाथी**
 बचन, बाबूदास, चंदनकिरी, सुलतान
 आदिकी नरेंद्रनंद कालीकुमार, आनंदनंद

गुरहदटा, कोटगस्त पुलिस चौकी,
चौहदटा में दो दर्जन मोठाल्लों के
लोग पानी के लिए परेशान रहे।

मोबाइल नहीं ठगते अधिकारी : समस्या को लेकर जनसंघ के उपाध्यक्ष राजेश कुमार बनन करने की कोशिश की गई। लेकिन मोबाइल रिसिप नहीं किया गया। स्थानीय निवासियों धनचंद पटेल ने बताया कि जब आर्यज्योतिषी बंगला होने की सूचना मिली तो ही विभाग को पता चला। बावजूद समस्या को जल्द जनसंघ के अध्यक्ष उपाध्यक्ष के द्वारा को दुरुस्त करने में मदद मिली लेकिन मोबाइल रिसिप कनिष्ठ ने बताया कि गलत जानकारी के कारण को दोहराया गया है।

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समस्या। इस दौरान आर ओबी के नीचे
अवैध रूप से सलाह रहे दुकानों को जय
निगमकर्मियों ने हटाने का प्रयास किया तो
दुकानदारों ने इन्क्यू होकर विरोध करना
शुरू कर दिया। अतिक्रमणकारियों ने
21 सै जमाना के लिए पर बसली को।

इंडियन ऑयल
 इंडियन ऑयल लिमिटेड
 इंडियन ऑयल लिमिटेड
आम सूचना

नवीन संविधान को सुविधा किया जाता
कि ईमेल 08032017 के मसौदा
संविधान पर सहाय - J-110117-1
2015 - 1A II (1) के द्वारा बनी
विधानसभा को भारत में प्रथम बार
एक संविधान संस्था के रूप में
परिगणित किया गया है। इस संविधान संस्था
में नई है। यह संविधान संस्था
में विचार करने प्रमुख विचार
में संविधान है। इस संविधान
संस्था <http://moef.nic.in>
में दिया जा सकता है।

[illegible]

1045 (1990) 1045

સાધારણ સ્વરૂપે એક દાસ

**Environmental
Monitoring
Data**

IOCL-Barauni Refinery

(Oct'2025 to Mar'2026)

Detox Corporation Pvt. Ltd.

Analysis Results For the Month of October -2025

Parameters	RPM (<10)	RPM (<2.5)	SO ₂	NO ₂	NH ₃	Pb	CO *	CO **			Ozone *	Ozone **				HC	Benzene	H ₂ S	Benzo(a) pyrene	Arsenic	Nickel	Mercaptan
Unit	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	mg/m ³	mg/m ³	mg/m ³	mg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	ppm	µg/m ³	µg/m ³	ng/m ³	ng/m ³	ng/m ³	ppb
Norms	100	60	80	80	400	1	4	2	2	180	100	100	100	100	100	NS	5	NS	1	6	20	NS
Name of Location	-	-	-	-	-	-	1 Hour	S-1	S-2	S-3	Avg.	1 Hour	S-1	S-2	S-3	Avg.	(µg/m ³)	(µg/m ³)	(ng/m ³)	(ng/m ³)	(ng/m ³)	(ppb)
TIME OFFICE	69.6	34.8	15.1	18.3	21.3	0.3	1.2	1.3	1.2	1.3	1.2	24.9	25.7	27.1	25.3	26.1	BDL	BDL	BDL	BDL	BDL	22.3
CRU CONTROL ROOM	71.6	31.8	16.4	17.1	19.4	0.3	1.2	0.9	1.2	1	1	24.8	26.4	25.8	26	26	BDL	BDL	BDL	BDL	BDL	24.4
LPG SUB STATION NO. 16	69.8	35.4	13.6	16.8	16.9	0.3	1	1	1.1	1.2	1.1	25.9	23.8	24.3	25.8	24.6	BDL	BDL	BDL	BDL	BDL	25.2
BTP	74.4	32.4	17.8	19.7	18.7	0.3	1.2	1.2	1.3	1.3	1.2	21.7	25.3	25.1	25.7	25.4	BDL	BDL	BDL	BDL	BDL	27.5
OVERALL AVERAGE (Refinery)	71.3	33.6	15.7	18	19.1	0.3	1.13	1.1	1.2	1.2	1.2	24.33	25.3	25.6	25.7	25.5	BDL	BDL	BDL	BDL	BDL	24.9
BR REFINERY TOWNSHIP	61.9	28.7	17.2	15.8	19.9	0.2	0.3	0.4	0.4	0.4	0.4	27.1	23.8	21.8	24.4	23.4	BDL	BDL	BDL	BDL	BDL	23.6
BHAT VILLAGE	57.8	25	12	14.8	13.6	0.2	0.3	0.2	0.3	0.3	0.3	27.4	30	29.2	29.1	29.4	BDL	BDL	BDL	BDL	BDL	18.6
BINODPUR VILLAGE	60.1	27.2	12.9	15.6	16.3	0.2	0.3	0.3	0.3	0.3	0.3	25	26	26.3	27.7	26.7	BDL	BDL	BDL	BDL	BDL	23.3
RACHIAHI VILLAGE	58.6	29.1	14.2	16.7	22	0.2	0.3	0.3	0.3	0.3	0.3	23.2	26.7	23.9	26	25.5	BDL	BDL	BDL	BDL	BDL	18.9
AVERAGE(OUT SIDE OF REFINARY)	59.58	27.5	14.08	15.69	17.94	0.2	0.27	0.32	0.31	0.31	0.31	25.67	26.64	25.3	26.81	26.25	BDL	BDL	BDL	BDL	BDL	21.09

BDL - Below Detection Limit; Avg. - Average; NS- Not Specified

(**Each monitoring day, divided into three shifts of 8 hourly sampling, with each day monitoring commencing from Shift-I, thereby completing the 24-hourly schedule on the subsequent days with Shift-III.

(**Each monitoring day, divided into three shifts of 8 hourly sampling, with each day monitoring commencing from Shift-I, thereby completing the 24-hourly schedule on the subsequent days with Shift-III.

Norms- As per national Ambient Air Quality Standards

RPM (<10),RPM (<2.5),SO₂,NO₂,NH₃,CO, Ozone and H₂S has been analysed at site lab

S-1 (Shift-1) :6 A.M. - 14 P.M.

S-2 (Shift-2) : 14 P.M. - 22 P.M.

S-3 (Shift-3) : 22 A.M. - 6 A.M.

Analysis Results For the Month of November -2025

Parameters	RPM (<10)	RPM (<2.5)	SO ₂	NO ₂	NH ₃	Pb	CO *	CO **				Ozone *	Ozone **				HC	Benzene	H ₂ S	Benzo(a) pyrene	Arsenic	Nickel	Mercaptan
Unit	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	mg/m ³	mg/m ³	mg/m ³	mg/m ³	mg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	ppm	µg/m ³	µg/m ³	ng/m ³	ng/m ³	ng/m ³	ppb
Norms	100	60	80	80	400	1	4	1 Hour	S-1	S-2	S-3	Avg.	1 Hour	S-1	S-2	S-3	NS	5	NS	1	6	20	NS
Name of Location	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TIME OFFICE	71.3	35.1	14.5	18.8	21.1	0.3	1.1	1.3	1.3	1.2	1.3	1.2	24.7	25.7	27	26	26.2	BDL	BDL	BDL	BDL	BDL	22.9
CRU CONTROL ROOM	68.4	33.5	15.4	20.8	22.3	0.3	1.2	1	1	1.2	1	1.1	24.8	26.2	26.1	25.8	26.1	BDL	BDL	BDL	BDL	BDL	24.1
LPG SUB STATION NO.16	70.1	34.1	12.6	18.6	16.6	0.3	1.1	1.1	1.1	1.1	1.2	1.2	26.5	24.7	24.7	26.5	25.3	BDL	BDL	BDL	BDL	BDL	24.4
BTP	72.4	31	14	21	17.5	0.3	1.2	1.1	1.1	1.3	1.2	1.2	21.6	25.1	25.9	25.7	25.6	BDL	BDL	BDL	BDL	BDL	27.2
OVERALL AVERAGE (Refinery)	70.5	33.4	14.1	19.8	19.4	0.3	1.16	1.1	1.2	1.2	1.2	1.2	24.4	25.4	25.9	26	25.8	BDL	BDL	BDL	BDL	BDL	24.7
BR REFINERY TOWNSHIP	59.9	28.4	15.4	15.6	18.9	0.2	0.3	0.4	0.4	0.4	0.4	0.4	26.2	24.1	24.7	24.1	24.3	BDL	BDL	BDL	BDL	BDL	23.7
BIHAT VILLAGE	57.5	25	12.4	15.1	13.3	0.1	0.3	0.2	0.3	0.3	0.3	0.3	27.6	30.1	30	29.4	29.9	BDL	BDL	BDL	BDL	BDL	18.7
BINODPUR VILLAGE	59.5	26.8	13.1	15.6	16.1	0.2	0.3	0.3	0.3	0.3	0.3	0.3	24.8	25.8	26.4	27.3	26.5	BDL	BDL	BDL	BDL	BDL	23
RACHIAHI VILLAGE	58.9	28.6	13.8	16.3	22.5	0.2	0.3	0.3	0.3	0.3	0.3	0.3	22.9	26.6	23.7	25.9	25.4	BDL	BDL	BDL	BDL	BDL	19.5
VERAGE(OUT SIDE OF REFINARY)	58.94	27.19	13.66	15.66	17.69	0.2	0.27	0.32	0.31	0.31	0.31	0.31	25.38	26.65	26.21	26.69	26.52	BDL	BDL	BDL	BDL	BDL	21.22

BDL - Below Detection Limit; Avg. - Average; NS- Not Specified

(**Each monitoring day, divided into three shifts of 8 hourly sampling, with each day monitoring commencing from Shift-I, thereby completing the 24-hourly schedule on the subsequent days with Shift-III.

(**Each monitoring day, divided into three shifts of 8 hourly sampling, with each day monitoring commencing from Shift-I, thereby completing the 24-hourly schedule on the subsequent days with Shift-III.

Norms- As per national Ambient Air Quality Standards

RPM (<10),RPM (<2.5),SO₂,NO₂,NH₃,CO, Ozone and H₂S has been analysed at site lab

S-1 (Shift -1) : 6 A.M. - 14 P.M.

S-2 (Shift -2) : 14 P.M. - 22 P.M.

S-3 (Shift-3) : 22 A.M. - 6 A.M.

Analysis Results For the Month of December -2025

Parameters	RPM (<10)	RPM (<2.5)	SO ₂	NO ₂	NH ₃	Pb	CO *	CO **				Ozone *	Ozone **				HC	Benzene	H ₂ S	Benzo(a) pyrene	Arsenic	Nickel	Mercaptan
Unit	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	mg/m ³	S-1	S-2	S-3	Avg.	1 Hour	S-1	S-2	S-3	Avg.	ppm	µg/m ³	µg/m ³	ng/m ³	ng/m ³	ng/m ³	ppb
Norms	100	60	80	80	400	1	4	1 Hour	1.2	1.2	1.3	180	26.6	27	26.6	100	NS	5	NS	1	6	20	NS
Name of Location	-	-	-	-	-	-	1 Hour	S-1	S-2	S-3	Avg.	1 Hour	S-1	S-2	S-3	Avg.	(ppm)	(µg/m ³)	(µg/m ³)	(ng/m ³)	(ng/m ³)	(ng/m ³)	(ppb)
TIME OFFICE	90.7	49.1	18.8	32.8	18	0.3	1.1	1.3	1.2	1.3	1.3	25.5	26.6	27	26.1	26.6	BDL	BDL	BDL	BDL	BDL	BDL	23.3
CRU CONTROL ROOM	70.3	32.8	16.6	24.3	18.3	0.3	1.2	1.1	1.2	1.1	1.2	26	27.5	27.1	26.5	26.8	BDL	BDL	BDL	BDL	BDL	BDL	25.7
LPG SUB STATION NO. 16	91.9	51.2	18.6	29.8	20	0.3	1.3	1.3	1.4	1.3	1.3	26.7	25.3	22.4	27.6	25.1	BDL	BDL	BDL	BDL	BDL	BDL	24.7
BTP	72.9	33.6	15.4	22.2	19.2	0.3	1.2	1.2	1.3	1.3	1.2	23.4	26.8	27	27.6	27.1	BDL	BDL	BDL	BDL	BDL	BDL	28.2
OVERALL AVERAGE (Refinery)	81.4	41.7	17.3	27.3	18.9	0.3	1.21	1.2	1.3	1.2	1.2	25.41	26.6	25.9	26.9	26.4	BDL	BDL	BDL	BDL	BDL	BDL	25.5
BR REFINERY TOWNSHIP	57	30.8	18.3	17	19.9	0.2	0.3	0.4	0.4	0.4	0.4	26.2	23.9	25	24.5	24.4	BDL	BDL	BDL	BDL	BDL	BDL	24
BIHAT VILLAGE	58.2	26.3	13.6	15.7	14.6	0.2	0.3	0.2	0.3	0.3	0.3	26.8	31.2	29.9	31.1	30.6	BDL	BDL	BDL	BDL	BDL	BDL	18.4
BINODPUR VILLAGE	60.1	28	15.9	15.2	16.7	0.2	0.3	0.3	0.3	0.3	0.3	25.6	27	26.4	27.1	26.8	BDL	BDL	BDL	BDL	BDL	BDL	22.9
RACHIAHI VILLAGE	59.6	27.2	14.6	21.2	15.6	0.3	0.3	0.3	0.3	0.3	0.3	23.8	27.6	24.2	25.2	25.6	BDL	BDL	BDL	BDL	BDL	BDL	21
VERAGE(OUT SIDE OF REFINARY)	58.72	28.08	15.58	17.28	16.67	0.22	0.29	0.31	0.31	0.31	0.31	25.57	27.42	26.38	26.97	26.87	BDL	BDL	BDL	BDL	BDL	BDL	21.59

BDL - Below Detection Limit; Avg. - Average; NS- Not Specified

(**Each monitoring day, divided into three shifts of 8 hourly sampling, with each day monitoring commencing from Shift-I, thereby completing the 24-hourly schedule on the subsequent days with Shift-III.

(**Each monitoring day, divided into three shifts of 8 hourly sampling, with each day monitoring commencing from Shift-I, thereby completing the 24-hourly schedule on the subsequent days with Shift-III.

Norms- As per national Ambient Air Quality Standards

RPM (<10),RPM (<2.5),SO₂,NO₂,NH₃,CO, Ozone and H₂S has been analysed at site lab

S-1 (Shift -1) :6 A.M. - 14 P.M.

S-2 (Shift -2) : 14 P.M. - 22 P.M.

S-3 (Shift-3) : 22 A.M. - 6 A.M.

Analysis Results For the Month of January -2026

Parameters	RPM (<10)	RPM (<2.5)	SO ₂	NO ₂	NH ₃	Pb	CO *	CO **				Ozone *	Ozone **				HC	Benzene	H ₂ S	Benzo(a) pyrene	Arsenic	Nickel	Mercaptan
Unit	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	mg/m ³	mg/m ³				µg/m ³	µg/m ³				ppm	µg/m ³	µg/m ³	ng/m ³	ng/m ³	ng/m ³	ppb
Norms	100	60	80	80	400	1	4	2				180	100				NS	5	NS	1	6	20	NS
Name of Location							1 Hour	S-1	S-2	S-3	Avg.	1 Hour	S-1	S-2	S-3	Avg.	(ppm)	(µg/m ³)	(µg/m ³)	(ng/m ³)	(ng/m ³)	(ng/m ³)	(ppb)
TIME OFFICE	81.1	35.3	13.7	20.8	19.9	0.3	1	1.3	1.2	1.3	1.3	25	26.1	28.1	26.4	26.9	BDL	BDL	BDL	BDL	BDL	BDL	22.4
CRU CONTROL ROOM	91.8	43.2	15.1	22.4	17.3	0.3	1.2	1.3	1.2	1.1	1.2	24	25.7	25.7	24.5	25.3	BDL	BDL	BDL	BDL	BDL	BDL	23.5
LPG SUB STATION NO. 16	92.2	32.7	13.9	22.6	16.6	0.3	1.2	1.2	1.1	1.3	1.2	26.4	24.7	24.1	25.6	24.8	BDL	BDL	BDL	BDL	BDL	BDL	23.9
BTP	92.6	34.8	14.3	22.1	15.7	0.3	1.3	1.2	1.3	1.4	1.3	22.6	25.6	27.1	26.1	26.3	BDL	BDL	BDL	BDL	BDL	BDL	25.6
OVERALL AVERAGE (Refinery)	89.4	36.5	14.3	22	17.4	0.3	1.19	1.2	1.2	1.3	1.2	24.48	25.5	26.3	25.7	25.8	BDL	BDL	BDL	BDL	BDL	BDL	23.9
BR REFINERY TOWNSHIP	59.7	29.2	13.8	21.8	14.9	0.2	0.3	0.4	0.3	0.4	0.4	26.6	24.1	25.5	25.2	24.9	BDL	BDL	BDL	BDL	BDL	BDL	25
BHAT VILLAGE	80.1	30.2	13.7	21.8	14	0.2	0.2	0.2	0.3	0.3	0.3	28	30.5	30.9	30.8	30.7	BDL	BDL	BDL	BDL	BDL	BDL	20.3
BINODPUR VILLAGE	82.4	32.1	15.3	23.4	14.3	0.2	0.3	0.3	0.3	0.3	0.3	25.6	26.2	25.6	27.4	26.4	BDL	BDL	BDL	BDL	BDL	BDL	22.4
RACHIAHI VILLAGE	74.6	28.8	14.4	19.3	20.3	0.3	0.2	0.3	3.7	0.3	1.4	24.3	27.4	25	27.7	26.7	BDL	BDL	BDL	BDL	BDL	BDL	19.9
AVERAGE(OUT SIDE OF REFINAR	74.19	30.08	14.31	21.58	15.89	0.23	0.27	0.31	1.16	0.31	0.59	26.13	27.03	26.74	27.77	27.18	BDL	BDL	BDL	BDL	BDL	BDL	21.88

BDL - Below Detection Limit; Avg. - Average; NS- Not Specified

(**Each monitoring day, divided into three shifts of 8 hourly sampling, with each day monitoring commencing from Shift-I, thereby completing the 24-hourly schedule on the subsequent days with Shift-III.

(**Each monitoring day, divided into three shifts of 8 hourly sampling, with each day monitoring commencing from Shift-I, thereby completing the 24-hourly schedule on the subsequent days with Shift-III.

Norms- As per national Ambient Air Quality Standards

RPM (<10),RPM (<2.5),SO₂,NO₂,NH₃,CO, Ozone and H₂S has been analysed at site lab

S-1 (Shift -1) : 6 A.M. - 14 P.M.

S-2 (Shift -2) : 14 P.M. - 22 P.M.

S-3 (Shift-3) : 22 A.M. - 6 A.M.

Detox Corporation Pvt. Ltd.

Analysis Results For the Month of February -2026

Parameters	RPM (<10)	RPM (<2.5)	SO ₂	NO ₂	NH ₃	Pb	CO *	CO **			Ozone *	Ozone **				HC	Benzene	H ₂ S	Benzo(a) pyrene	Arsenic	Nickel	Mercaptan
Unit	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	mg/m ³	mg/m ³	mg/m ³	mg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	ppm	µg/m ³	µg/m ³	ng/m ³	ng/m ³	ng/m ³	ppb
Norms	100	60	80	80	400	1	4	2	2	180	100	NS	5	NS	NS	NS	5	NS	1	6	20	NS
Name of Location	-	-	-	-	-	-	1 Hour	S-1	S-2	S-3	Avg.	1 Hour	S-1	S-2	S-3	Avg.	(µg/m ³)	(µg/m ³)	(ng/m ³)	(ng/m ³)	(ng/m ³)	(ppb)
TIME OFFICE	86	37	16.3	28.1	18.6	0.3	1.3	18	1.2	1.3	6.8	26.7	26.8	29	27.8	27.9	BDL	BDL	BDL	BDL	BDL	21.6
CRU CONTROL ROOM	90.6	47.5	16.8	22.1	18.5	0.3	1.2	19.3	16.7	16.1	17.4	24.6	26.5	372.3	25.2	141.3	BDL	BDL	BDL	BDL	BDL	22.9
LPG SUB STATION NO. 16	91.9	36.4	15.3	27.3	15.9	0.3	1.4	1.3	1.1	1.1	1.2	26.3	24.8	24.2	26.2	25.1	BDL	BDL	BDL	BDL	BDL	23.7
BTP	93.5	41.9	13.6	24.6	15.3	0.3	1.3	1.1	1.3	1.4	1.3	22.5	26.6	27.5	26.3	26.8	BDL	BDL	BDL	BDL	BDL	24.9
OVERALL AVERAGE (Refinery)	90.5	40.7	15.5	25.5	17.1	0.3	1.26	9.9	5.1	5	6.7	25.04	26.2	113.3	26.4	55.3	BDL	BDL	BDL	BDL	BDL	23.3
BR REFINERY TOWNSHIP	77.8	37.9	15.4	24.6	14.8	0.2	0.3	0.4	0.4	0.4	0.4	27.4	25.4	29.4	25.9	26.9	BDL	BDL	BDL	BDL	BDL	23.7
BIMAT VILLAGE	83.1	30.8	16.5	26.4	15.4	0.2	0.3	0.3	0.3	0.3	0.3	29.8	31.9	30.2	30.8	31	BDL	BDL	BDL	BDL	BDL	21.4
BINODPUR VILLAGE	84	32.4	16.8	25.3	15.4	0.2	0.3	0.3	4.4	0.3	1.6	26.6	27.9	26.8	29.9	28.2	BDL	BDL	BDL	BDL	BDL	22.2
RACHIAHI VILLAGE	81.9	30.6	17.9	28.5	15	0.3	0.3	0.3	0.3	0.3	0.3	25	28.3	25.2	28.3	27.3	BDL	BDL	BDL	BDL	BDL	22
AVERAGE(OUT SIDE OF REFINARY)	81.69	32.91	16.63	26.19	15.13	0.25	0.29	0.33	1.33	0.33	0.66	27.19	28.39	27.91	28.73	28.34	BDL	BDL	BDL	BDL	BDL	22.33

BDL - Below Detection Limit; Avg. - Average; NS- Not Specified

(** Each monitoring day, divided into three shifts of 8 hourly sampling, with each day monitoring commencing from Shift-I, thereby completing the 24-hourly schedule on the subsequent days with Shift-III.

(*** Each monitoring day, divided into three shifts of 8 hourly sampling, with each day monitoring commencing from Shift-I, thereby completing the 24-hourly schedule on the subsequent days with Shift-III.

Norms- As per national Ambient Air Quality Standards

RPM (<10), RPM (<2.5), SO₂, NO₂, NH₃, CO, Ozone and H₂S has been analysed at site lab

S-1 (Shift -1) : 6 A.M. - 14 P.M.

S-2 (Shift -2) : 14 P.M. - 22 P.M.

S-3 (Shift-3) : 22 A.M. - 6 A.M.

Detox Corporation Pvt. Ltd.

Analysis Results For the Month of March -2026

Parameters	RPM (<10)	RPM (<2.5)	SO ₂	NO ₂	NH ₃	Pb	CO *	CO **				Ozone *	Ozone **				HC	Benzene	H ₂ S	Benzo(a) pyrene	Arsenic	Nickel	Mercaptan
Unit	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	mg/m ³	mg/m ³	mg/m ³	mg/m ³	mg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	ppm	µg/m ³	µg/m ³	ng/m ³	ng/m ³	ng/m ³	ppb
Norms	100	60	80	80	400	1	4	2	2	180	100	NS	5	NS	1	6	20	NS	NS	1	6	20	NS
Name of Location	-	-	-	-	-	-	1 Hour	S-1	S-2	S-3	Avg.	1 Hour	S-1	S-2	S-3	Avg.	(ppm)	(µg/m ³)	(µg/m ³)	(ng/m ³)	(ng/m ³)	(ng/m ³)	(ppb)
TIME OFFICE	91.4	37.2	15.7	26.9	19.9	0.3	1.3	1.3	1.2	16.2	6.2	27.9	28.4	30.2	29.2	29.3	BDL	BDL	BDL	BDL	BDL	BDL	21.6
CRU CONTROL ROOM	93	46.4	17.6	24	16.2	0.3	1.3	1.3	1.3	1.4	1.3	25.8	27.5	27.2	26.7	27.2	BDL	BDL	BDL	BDL	BDL	BDL	23.7
LPG SUB STATION NO. 16	93.8	35.6	15.4	28	14.9	0.3	1.5	1.4	1.3	1.4	1.4	28.8	25.8	25.5	27.5	26.3	BDL	BDL	BDL	BDL	BDL	BDL	24.3
BTP	93.1	43.1	13.7	27.3	14.9	0.3	1.3	1.3	1.4	1.3	1.3	22.8	28.6	27.5	26.9	27.7	BDL	BDL	BDL	BDL	BDL	BDL	23.2
OVERALL AVERAGE (Refinery)	92.8	40.6	15.6	26.6	16.5	0.3	1.34	1.3	1.3	5.1	2.6	26.32	27.6	27.6	27.6	27.6	BDL	BDL	BDL	BDL	BDL	BDL	23.2
BR REFINERY TOWNSHIP	78.7	39.7	16.3	27.7	14.4	0.2	0.3	0.4	0.4	0.4	0.4	28.8	25.7	30.7	25.6	27.3	BDL	BDL	BDL	BDL	BDL	BDL	24.3
BIHAT VILLAGE	86.7	32.2	16.1	27.4	13.2	0.2	0.3	0.3	0.4	0.4	0.3	31.1	33.7	32.2	33.5	33.1	BDL	BDL	BDL	BDL	BDL	BDL	22.4
BINODPUR VILLAGE	85.7	33.6	14.9	28.3	14.9	0.3	0.3	0.3	0.3	0.3	0.3	26.8	29.3	28	32.4	29.9	BDL	BDL	BDL	BDL	BDL	BDL	23.7
RACHIAHI VILLAGE	88.3	31	16.1	27.7	16.1	0.3	0.3	0.3	3.7	0.3	1.5	26.5	30.3	26.4	29.7	28.8	BDL	BDL	BDL	BDL	BDL	BDL	22.5
AVERAGE(OUT SIDE OF REFINARY)	84.83	34.11	15.86	27.78	14.67	0.26	0.29	0.33	1.18	0.36	0.62	28.31	29.77	29.34	30.31	29.81	BDL	BDL	BDL	BDL	BDL	BDL	23.23

BDL - Below Detection Limit; Avg. - Average; NS- Not Specified

(**Each monitoring day, divided into three shifts of 8 hourly sampling, with each day monitoring commencing from Shift-I, thereby completing the 24-hourly schedule on the subsequent days with Shift-III.

(**Each monitoring day, divided into three shifts of 8 hourly sampling, with each day monitoring commencing from Shift-I, thereby completing the 24-hourly schedule on the subsequent days with Shift-III.

Norms- As per national Ambient Air Quality Standards

RPM (<10),RPM (<2.5),SO₂,NO₂,NH₃,CO, Ozone and H₂S has been analysed at site lab

S-1 (Shift -1) : 6 A.M. - 14 P.M.

S-2 (Shift -2) : 14 P.M. - 22 P.M.

S-3 (Shift-3) : 22 A.M. - 6 A.M.

DETOX CORPORATION PVT.LTD.- LAB DIVISION

Analysis Results for the Month of March-2026

Company Name			IOCL-Barauni Refinery	
Sample Type			Water	Water
Sample Quantity			10 L	10 L
Date of Sampling			14.03.2026	14.03.2026
Analysis Period			18.03.2026 to 25.03.2026	18.03.2026 to 25.03.2026
SL. No.	PARAMETER	UNIT	Location	
			Drinking Water: (M & I Building)	Drinking Water: (TOWNSHIP : Co-operative)
1	Temperature	°C	25.8	25.9
2	Colour	Hazen	BDL(<5.00)	BDL(<5.00)
3	Odour	-	Agreeable	Agreeable
4	Taste	-	Agreeable	Agreeable
5	pH	-	7.24	7.12
6	Turbidity	NTU	BDL(<1.0)	BDL(<1.0)
7	Conductivity	µs/cm	694	648
8	Total Dissolve Solid - TDS	mg/L	418	389
9	Total Suspended Solids (TSS)	mg/L	BDL(<4.0)	BDL(<4.0)
10	Oil and Grease	mg/L	BDL(<4.0)	BDL(<4.0)
11	Dissolved Oxygen	mg/L	5.2	5.4
12	Total Hardness	mg/L	158	166
13	Calcium Hardness (as CaCO ₃)	mg/L	118	120
14	Magnesium Hardness (as CaCO ₃)	mg/L	40	46
15	M-Alkalinity (as CaCO ₃)	mg/L	186	182
16	COD	mg/L	BDL(<2.0)	BDL(<2.0)
17	BOD (3 days at 27°C)	mg/L	BDL(<2.0)	BDL(<2.0)
18	Chloride (as Cl ⁻)	mg/L	40.99	36.99
19	Nitrate (as NO ₃)	mg/L	0.97	1.02
20	Total Silica (as SiO ₂)	mg/L	0.12	0.14
21	Phosphate (as PO ₄ ³⁻)	mg/L	0.15	0.15
22	Sulphate (as SO ₄ ²⁻)	mg/L	15.2	13.8
23	Sulphides (as S)	mg/L	BDL(<0.03)	BDL(<0.03)
24	Ammonical Nitrogen (as NH ₃ -N)	mg/L	BDL(<1.0)	BDL(<1.0)
25	Total Kjeldahl Nitrogen TKN (as NH ₃ -N)	mg/L	BDL(<1.0)	BDL(<1.0)
26	Fluoride (as F ⁻)	mg/L	BDL(<0.05)	BDL(<0.05)
27	Iron (as Fe)	mg/L	BDL(<0.01)	BDL(<0.01)
28	Sodium (as Na)	mg/L	7.32	6.28
29	Potassium (as K)	mg/L	3.7	3.68
30	Manganese (as Mn)	mg/L	BDL(<0.01)	BDL(<0.01)
31	Lead (as Pb)	mg/L	BDL(<0.006)	BDL(<0.006)
32	Phenolic compounds (as C ₆ H ₅ OH)	mg/L	BDL(<0.001)	BDL(<0.001)
33	Nickel (as Ni)	mg/L	BDL(<0.008)	BDL(<0.008)
34	Arsenic (as As)	mg/L	BDL(<0.003)	BDL(<0.003)
35	Zinc (as Zn)	mg/L	BDL(<0.021)	BDL(<0.021)
36	Mercury (as Hg)	mg/L	BDL(<0.001)	BDL(<0.001)
37	Cadmium (as Cd)	mg/L	BDL(<0.003)	BDL(<0.003)
38	Selenium (as Se)	mg/L	BDL(<0.004)	BDL(<0.004)
39	Cyanide (as CN ⁻)	mg/L	BDL(<0.03)	BDL(<0.03)
40	Hexavalent Chromium (as Cr ⁶⁺)	mg/L	BDL(<0.03)	BDL(<0.03)
41	Total Chromium (as Cr)	mg/L	BDL(<0.008)	BDL(<0.008)
42	Copper (as Cu)	mg/L	BDL(<0.004)	BDL(<0.004)
43	Vanadium (as V)	mg/L	BDL(<0.09)	BDL(<0.09)
44	Phosphorous (as P)	mg/L	0.16	0.15
45	Benzen	mg/L	ND	ND
46	Benzo(a)pyrene	mg/L	ND	ND
47	Alumnium (as Al)	mg/L	BDL(<0.007)	BDL(<0.007)
48	Free Residual Chlorine as FRC	mg/L	BDL(<0.1)	BDL(<0.1)
49	Pesticides	µg/L	ND	ND
50	Polychlorinated Biphenyls	mg/L	ND	ND
51	PAH	mg/L	ND	ND
52	Tri-halomethanes	mg/L	ND	ND
53	Total coliform	MPN/100 ml	Absent	Absent
54	E. Coli	MPN/100 ml	Absent	Absent

BDL =Below Detection Limit

DETOX CORPORATION PVT.LTD.- LAB DIVISION				
Analysis Results for the Month of February-2026				
Company Name		IOCL-Barauni Refinery		
Sample Type		Water	Water	
Sample Quantity		10 L	10 L	
Date of Sampling		14.02.2026	14.02.2026	
Analysis Period		18.02.2026 to 25.02.2026	18.02.2026 to 25.02.2026	
SL. No.	PARAMETER	UNIT	Location	
			Drinking Water: (Plant- QC Lab)	Drinking Water: (Township: Kendriya Vidyalaya)
1	Temperature	°C	25.8	25.9
2	Colour	Hazen	BDL(<5.00)	BDL(<5.00)
3	Odour	-	Agreeable	Agreeable
4	Taste	-	Agreeable	Agreeable
5	pH	-	7.2	7.1
6	Turbidity	NTU	BDL(<1.0)	BDL(<1.0)
7	Conductivity	µs/cm	696	640
8	Total Dissolve Solid - TDS	mg/L	420	385
9	Total Suspended Solids (TSS)	mg/L	BDL(<4.0)	BDL(<4.0)
10	Oil and Grease	mg/L	BDL(<4.0)	BDL(<4.0)
11	Dissolved Oxygen	mg/L	5.4	5.5
12	Total Hardness	mg/L	160	168
13	Calcium Hardness (as CaCO ₃)	mg/L	120	122
14	Magnesium Hardness (as CaCO ₃)	mg/L	40	46
15	M-Alkalinity (as CaCO ₃)	mg/L	188	180
16	COD	mg/L	BDL(<2.0)	BDL(<2.0)
17	BOD (3 days at 27°C)	mg/L	BDL(<2.0)	BDL(<2.0)
18	Chloride (as Cl ⁻)	mg/L	42.99	38.99
19	Nitrate (as NO ₃)	mg/L	0.96	1
20	Total Silica (as SiO ₂)	mg/L	0.16	0.16
21	Phosphate (as PO ₄ ³⁻)	mg/L	0.16	0.15
22	Sulphate (as SO ₄ ²⁻)	mg/L	15.1	13.8
23	Sulphides (as S)	mg/L	BDL(<0.03)	BDL(<0.03)
24	Ammonical Nitrogen (as NH ₃ -N)	mg/L	BDL(<1.0)	BDL(<1.0)
25	Total Kjeldahl Nitrogen TKN (as NH ₃ -N)	mg/L	BDL(<1.0)	BDL(<1.0)
26	Fluoride (as F ⁻)	mg/L	BDL(<0.05)	BDL(<0.05)
27	Iron (as Fe)	mg/L	BDL(<0.01)	BDL(<0.01)
28	Sodium (as Na)	mg/L	7.2	6.2
29	Potassium (as K)	mg/L	3.8	3.8
30	Manganese (as Mn)	mg/L	BDL(<0.01)	BDL(<0.01)
31	Lead (as Pb)	mg/L	BDL(<0.006)	BDL(<0.006)
32	Phenolic compounds (as C ₆ H ₅ OH)	mg/L	BDL(<0.001)	BDL(<0.001)
33	Nickel (as Ni)	mg/L	BDL(<0.008)	BDL(<0.008)
34	Arsenic (as As)	mg/L	BDL(<0.003)	BDL(<0.003)
35	Zinc (as Zn)	mg/L	BDL(<0.021)	BDL(<0.021)
36	Mercury (as Hg)	mg/L	BDL(<0.001)	BDL(<0.001)
37	Cadmium (as Cd)	mg/L	BDL(<0.003)	BDL(<0.003)
38	Selenium (as Se)	mg/L	BDL(<0.004)	BDL(<0.004)
39	Cyanide (as CN ⁻)	mg/L	BDL(<0.03)	BDL(<0.03)
40	Hexavalent Chromium (as Cr ⁶⁺)	mg/L	BDL(<0.03)	BDL(<0.03)
41	Total Chromium (as Cr)	mg/L	BDL(<0.008)	BDL(<0.008)
42	Copper (as Cu)	mg/L	BDL(<0.004)	BDL(<0.004)
43	Vanadium (as V)	mg/L	BDL(<0.09)	BDL(<0.09)
44	Phosphorous (as P)	mg/L	0.18	0.16
45	Benzen	mg/L	ND	ND
46	Benzo(a)pyrene	mg/L	ND	ND
47	Aluminium (as Al)	mg/L	BDL(<0.007)	BDL(<0.007)
48	Free Residual Chlorine as FRC	mg/L	BDL(<0.1)	BDL(<0.1)
49	Pesticides	µg/L	ND	ND
50	Polychlorinated Biphenyls	mg/L	ND	ND
51	PAH	mg/L	ND	ND
52	Tri-halomethanes	mg/L	ND	ND
53	Total coliform	MPN/100 ml	Absent	Absent
54	E. Coli	MPN/100 ml	Absent	Absent

BDL =Below Detection Limit

DETOX CORPORATION PVT.LTD.- LAB DIVISION				
Analysis Results for the Month of January-2026				
Company Name		IOCL-Barauni Refinery		
Sample Type		Water	Water	
Sample Quantity		10 L	10 L	
Date of Sampling		16.01.2026	16.01.2026	
Analysis Period		20.01.2026 to 28.01.2026	20.01.2026 to 28.01.2026	
SL. No.	PARAMETER	UNIT	Location	
			Drinking Water: (Plant-OM&S Building)	Drinking Water: (Township: BR DAV School)
1	Temperature	°C	25.4	25.6
2	Colour	Hazen	BDL(<5.00)	BDL(<5.00)
3	Odour	-	Agreeable	Agreeable
4	Taste	-	Agreeable	Agreeable
5	pH	-	7.1	6.97
6	Turbidity	NTU	BDL(<1.0)	BDL(<1.0)
7	Conductivity	µs/cm	693	638
8	Total Dissolve Solid - TDS	mg/L	417	384
9	Total Suspended Solids (TSS)	mg/L	BDL(<4.0)	BDL(<4.0)
10	Oil and Grease	mg/L	BDL(<4.0)	BDL(<4.0)
11	Dissolved Oxygen	mg/L	5.3	5.4
12	Total Hardness	mg/L	165	176
13	Calcium Hardness (as CaCO ₃)	mg/L	125	122
14	Magnesium Hardness (as CaCO ₃)	mg/L	40	54
15	M-Alkalinity (as CaCO ₃)	mg/L	190	184
16	COD	mg/L	BDL(<2.0)	BDL(<2.0)
17	BOD (3 days at 27°C)	mg/L	BDL(<2.0)	BDL(<2.0)
18	Chloride (as Cl ⁻)	mg/L	44.5	36
19	Nitrate (as NO ₃)	mg/L	0.95	1.04
20	Total Silica (as SiO ₂)	mg/L	0.15	0.14
21	Phosphate (as PO ₄ ³⁻)	mg/L	0.17	0.14
22	Sulphate (as SO ₄ ²⁻)	mg/L	14.8	13.4
23	Sulphides (as S)	mg/L	BDL(<0.03)	BDL(<0.03)
24	Ammonical Nitrogen (as NH ₃ -N)	mg/L	BDL(<1.0)	BDL(<1.0)
25	Total Kjeldahl Nitrogen TKN (as N)	mg/L	BDL(<1.0)	BDL(<1.0)
26	Fluoride (as F ⁻)	mg/L	BDL(<0.05)	BDL(<0.05)
27	Iron (as Fe)	mg/L	BDL(<0.01)	BDL(<0.01)
28	Sodium (as Na)	mg/L	7.13	6.22
29	Potassium (as K)	mg/L	3.6	3.6
30	Manganese (as Mn)	mg/L	BDL(<0.01)	BDL(<0.01)
31	Lead (as Pb)	mg/L	BDL(<0.006)	BDL(<0.006)
32	Phenolic compounds (as C ₆ H ₅ OH)	mg/L	BDL(<0.001)	BDL(<0.001)
33	Nickel (as Ni)	mg/L	BDL(<0.008)	BDL(<0.008)
34	Arsenic (as As)	mg/L	BDL(<0.003)	BDL(<0.003)
35	Zinc (as Zn)	mg/L	BDL(<0.021)	BDL(<0.021)
36	Mercury (as Hg)	mg/L	BDL(<0.001)	BDL(<0.001)
37	Cadmium (as Cd)	mg/L	BDL(<0.003)	BDL(<0.003)
38	Selenium (as Se)	mg/L	BDL(<0.004)	BDL(<0.004)
39	Cyanide (as CN ⁻)	mg/L	BDL(<0.03)	BDL(<0.03)
40	Hexavalent Chromium (as Cr ⁶⁺)	mg/L	BDL(<0.03)	BDL(<0.03)
41	Total Chromium (as Cr)	mg/L	BDL(<0.008)	BDL(<0.008)
42	Copper (as Cu)	mg/L	BDL(<0.004)	BDL(<0.004)
43	Vanadium (as V)	mg/L	BDL(<0.09)	BDL(<0.09)
44	Phosphorous (as P)	mg/L	0.16	0.16
45	Benzen	mg/L	ND	ND
46	Benzo(a)pyrene	mg/L	ND	ND
47	Aluminium (as Al)	mg/L	BDL(<0.007)	BDL(<0.007)
48	Free Residual Chlorine as FRC	mg/L	BDL(<0.1)	BDL(<0.1)
49	Pesticides	µg/L	ND	ND
50	Polychlorinated Biphenyls	mg/L	ND	ND
51	PAH	mg/L	ND	ND
52	Tri-halomethanes	mg/L	ND	ND
53	Total coliform	MPN/100 ml	Absent	Absent
54	E. Coli	MPN/100 ml	Absent	Absent

BDL =Below Detection Limit

DETOX CORPORATION PVT.LTD.- LAB DIVISION				
Analysis Results for the Month of December-2025				
Company Name		IOCL-Barauni Refinery		
Sample Type		Water	Water	
Sample Quantity		10 L	10 L	
Date of Sampling		13.12.2025	13.12.2025	
Analysis Period		17.12.2025 to 26.12.2025	17.12.2025 to 26.12.2025	
SL. No.	PARAMETER	UNIT	Location	
			Drinking Water: (Plant-RSM Buidling)	Drinking Water: (Township: Anupurnamesh)
1	Temperature	°C	25.5	25.7
2	Colour	Hazen	BDL(<5.00)	BDL(<5.00)
3	Odour	-	Agreeable	Agreeable
4	Taste	-	Agreeable	Agreeable
5	pH	-	7.11	6.94
6	Turbidity	NTU	BDL(<1.0)	BDL(<1.0)
7	Conductivity	µs/cm	692	635
8	Total Dissolve Solid - TDS	mg/L	416	382
9	Total Suspended Solids (TSS)	mg/L	BDL(<4.0)	BDL(<4.0)
10	Oil and Grease	mg/L	BDL(<4.0)	BDL(<4.0)
11	Dissolved Oxygen	mg/L	5.4	5.3
12	Total Hardness	mg/L	164	174
13	Calcium Hardness (as CaCO ₃)	mg/L	124	120
14	Magnesium Hardness (as CaCO ₃)	mg/L	40	54
15	M-Alkalinity (as CaCO ₃)	mg/L	180	182
16	COD	mg/L	BDL(<2.0)	BDL(<2.0)
17	BOD (3 days at 27°C)	mg/L	BDL(<2.0)	BDL(<2.0)
18	Chloride (as Cl ⁻)	mg/L	44.49	35.99
19	Nitrate (as NO ₃)	mg/L	0.94	1.02
20	Total Silica (as SiO ₂)	mg/L	0.14	0.12
21	Phosphate (as PO ₄ ³⁻)	mg/L	0.15	0.13
22	Sulphate (as SO ₄ ²⁻)	mg/L	14.7	13.2
23	Sulphides (as S)	mg/L	BDL(<0.03)	BDL(<0.03)
24	Ammonical Nitrogen (as NH ₃ -N)	mg/L	BDL(<1.0)	BDL(<1.0)
25	Total Kjeldahl Nitrogen TKN (as N)	mg/L	BDL(<1.0)	BDL(<1.0)
26	Fluoride (as F ⁻)	mg/L	BDL(<0.05)	BDL(<0.05)
27	Iron (as Fe)	mg/L	BDL(<0.01)	BDL(<0.01)
28	Sodium (as Na)	mg/L	7.11	5.9
29	Potassium (as K)	mg/L	3.5	3.4
30	Manganese (as Mn)	mg/L	BDL(<0.01)	BDL(<0.01)
31	Lead (as Pb)	mg/L	BDL(<0.006)	BDL(<0.006)
32	Phenolic compounds (as C ₆ H ₅ OH)	mg/L	BDL(<0.001)	BDL(<0.001)
33	Nickel (as Ni)	mg/L	BDL(<0.008)	BDL(<0.008)
34	Arsenic (as As)	mg/L	BDL(<0.003)	BDL(<0.003)
35	Zinc (as Zn)	mg/L	BDL(<0.021)	BDL(<0.021)
36	Mercury (as Hg)	mg/L	BDL(<0.001)	BDL(<0.001)
37	Cadmium (as Cd)	mg/L	BDL(<0.003)	BDL(<0.003)
38	Selenium (as Se)	mg/L	BDL(<0.004)	BDL(<0.004)
39	Cyanide (as CN ⁻)	mg/L	BDL(<0.03)	BDL(<0.03)
40	Hexavalent Chromium (as Cr ⁶⁺)	mg/L	BDL(<0.03)	BDL(<0.03)
41	Total Chromium (as Cr)	mg/L	BDL(<0.008)	BDL(<0.008)
42	Copper (as Cu)	mg/L	BDL(<0.004)	BDL(<0.004)
43	Vanadium (as V)	mg/L	BDL(<0.09)	BDL(<0.09)
44	Phosphorous (as P)	mg/L	0.15	0.14
45	Benzen	mg/L	ND	ND
46	Benzo(a)pyrene	mg/L	ND	ND
47	Aluminium (as Al)	mg/L	BDL(<0.007)	BDL(<0.007)
48	Free Residual Chlorine as FRC	mg/L	BDL(<0.1)	BDL(<0.1)
49	Pesticides	µg/L	ND	ND
50	Polychlorinated Biphenyls	mg/L	ND	ND
51	PAH	mg/L	ND	ND
52	Tri-halomethanes	mg/L	ND	ND
53	Total coliform	MPN/100 m	Absent	Absent
54	E. Coli	MPN/100 m	Absent	Absent
BDL =Below Detection Limit				

DETOX CORPORATION PVT.LTD.- LAB DIVISION				
Analysis Results for the Month of November-2025				
Company Name		IOCL-Barauni Refinery		
Sample Type		Water	Water	
Sample Quantity		10 L	10 L	
Date of Sampling		18.11.2025	18.11.2025	
Analysis Period		19.11.2025 to 28.11.2025	19.11.2025 to 28.11.2025	
SL. No.	PARAMETER	UNIT	Location	
			Drinking Water: (Admin building)	Drinking Water: (Chinar Mess)
1	Temperature	°C	25.7	25.9
2	Colour	Hazen	BDL(<5.00)	BDL(<5.00)
3	Odour	-	Agreeable	Agreeable
4	Taste	-	Agreeable	Agreeable
5	pH	-	7.1	6.92
6	Turbidity	NTU	BDL(<1.0)	BDL(<1.0)
7	Conductivity	µs/cm	690	630
8	Total Dissolve Solid - TDS	mg/L	414	378
9	Total Suspended Solids (TSS)	mg/L	BDL(<4.0)	BDL(<4.0)
10	Oil and Grease	mg/L	BDL(<4.0)	BDL(<4.0)
11	Dissolved Oxygen	mg/L	5.3	5.2
12	Total Hardness	mg/L	162	172
13	Calcium Hardness (as CaCO ₃)	mg/L	122	118
14	Magnesium Hardness (as CaCO ₃)	mg/L	40	54
15	M-Alkalinity (as CaCO ₃)	mg/L	182	180
16	COD	mg/L	BDL(<2.0)	BDL(<2.0)
17	BOD (3 days at 27°C)	mg/L	BDL(<2.0)	BDL(<2.0)
18	Chloride (as Cl ⁻)	mg/L	44.6	36
19	Nitrate (as NO ₃)	mg/L	0.92	1.01
20	Total Silica (as SiO ₂)	mg/L	0.12	0.14
21	Phosphate (as PO ₄ ³⁻)	mg/L	0.14	0.12
22	Sulphate (as SO ₄ ²⁻)	mg/L	14.8	13
23	Sulphides (as S)	mg/L	BDL(<0.03)	BDL(<0.03)
24	Ammonical Nitrogen (as NH ₃ -N)	mg/L	BDL(<1.0)	BDL(<1.0)
25	Total Kjeldahl Nitrogen TKN (as N)	mg/L	BDL(<1.0)	BDL(<1.0)
26	Fluoride (as F ⁻)	mg/L	BDL(<0.05)	BDL(<0.05)
27	Iron (as Fe)	mg/L	BDL(<0.01)	BDL(<0.01)
28	Sodium (as Na)	mg/L	7.1	5.8
29	Potassium (as K)	mg/L	3.6	3.3
30	Manganese (as Mn)	mg/L	BDL(<0.01)	BDL(<0.01)
31	Lead (as Pb)	mg/L	BDL(<0.006)	BDL(<0.006)
32	Phenolic compounds (as C ₆ H ₅ OH)	mg/L	BDL(<0.001)	BDL(<0.001)
33	Nickel (as Ni)	mg/L	BDL(<0.008)	BDL(<0.008)
34	Arsenic (as As)	mg/L	BDL(<0.003)	BDL(<0.003)
35	Zinc (as Zn)	mg/L	BDL(<0.021)	BDL(<0.021)
36	Mercury (as Hg)	mg/L	BDL(<0.001)	BDL(<0.001)
37	Cadmium (as Cd)	mg/L	BDL(<0.003)	BDL(<0.003)
38	Selenium (as Se)	mg/L	BDL(<0.004)	BDL(<0.004)
39	Cyanide (as CN ⁻)	mg/L	BDL(<0.03)	BDL(<0.03)
40	Hexavalent Chromium (as Cr ⁶⁺)	mg/L	BDL(<0.03)	BDL(<0.03)
41	Total Chromium (as Cr)	mg/L	BDL(<0.008)	BDL(<0.008)
42	Copper (as Cu)	mg/L	BDL(<0.004)	BDL(<0.004)
43	Vanadium (as V)	mg/L	BDL(<0.09)	BDL(<0.09)
44	Phosphorous (as P)	mg/L	0.14	0.13
45	Benzen	mg/L	ND	ND
46	Benzo(a)pyrene	mg/L	ND	ND
47	Aluminium (as Al)	mg/L	BDL(<0.007)	BDL(<0.007)
48	Free Residual Chlorine as FRC	mg/L	BDL(<0.1)	BDL(<0.1)
49	Pesticides	µg/L	ND	ND
50	Polychlorinated Biphenyls	mg/L	ND	ND
51	PAH	mg/L	ND	ND
52	Tri-halomethanes	mg/L	ND	ND
53	Total coliform	MPN/100 ml	Absent	Absent
54	E. Coli	MPN/100 ml	Absent	Absent

BDL =Below Detection Limit

DETOX CORPORATION PVT.LTD.- LAB DIVISION				
Analysis Results for the Month of September-2025				
Company Name		IOCL-Barauni Refinery		
Sample Type		Water	Water	
Sample Quantity		10 L	10 L	
Date of Sampling		23.10.2025	23.10.2025	
Analysis Period		25.10.2025 to 31.10.2025	25.10.2025 to 31.10.2025	
SL. No.	PARAMETER	UNIT	Location	
			Drinking Water: (Admin building)	Drinking Water: (Chinar Mess)
1	Temperature	°C	25.6	25.8
2	Colour	Hazen	BDL(<5.00)	BDL(<5.00)
3	Odour	-	Agreeable	Agreeable
4	Taste	-	Agreeable	Agreeable
5	pH	-	7	6.9
6	Turbidity	NTU	BDL(<1.0)	BDL(<1.0)
7	Conductivity	µs/cm	689	620
8	Total Dissolve Solid - TDS	mg/L	412	369
9	Total Suspended Solids (TSS)	mg/L	BDL(<4.0)	BDL(<4.0)
10	Oil and Grease	mg/L	BDL(<4.0)	BDL(<4.0)
11	Dissolved Oxygen	mg/L	5.2	5.1
12	Total Hardness	mg/L	160	170
13	Calcium Hardness (as CaCO ₃)	mg/L	120	116
14	Magnesium Hardness (as CaCO ₃)	mg/L	40	54
15	M-Alkalinity (as CaCO ₃)	mg/L	180	184
16	COD	mg/L	BDL(<2.0)	BDL(<2.0)
17	BOD (3 days at 27°C)	mg/L	BDL(<2.0)	BDL(<2.0)
18	Chloride (as Cl ⁻)	mg/L	44.5	35
19	Nitrate (as NO ₃)	mg/L	0.9	1
20	Total Silica (as SiO ₂)	mg/L	0.11	0.12
21	Phosphate (as PO ₄ ³⁻)	mg/L	0.12	0.1
22	Sulphate (as SO ₄ ²⁻)	mg/L	14.6	12
23	Sulphides (as S)	mg/L	BDL(<0.03)	BDL(<0.03)
24	Ammonical Nitrogen (as NH ₃ -N)	mg/L	BDL(<1.0)	BDL(<1.0)
25	Total Kjeldahl Nitrogen TKN (as N)	mg/L	BDL(<1.0)	BDL(<1.0)
26	Fluoride (as F ⁻)	mg/L	BDL(<0.05)	BDL(<0.05)
27	Iron (as Fe)	mg/L	BDL(<0.01)	BDL(<0.01)
28	Sodium (as Na)	mg/L	7	5.6
29	Potassium (as K)	mg/L	3.5	3
30	Manganese (as Mn)	mg/L	BDL(<0.01)	BDL(<0.01)
31	Lead (as Pb)	mg/L	BDL(<0.006)	BDL(<0.006)
32	Phenolic compounds (as C ₆ H ₅ OH)	mg/L	BDL(<0.001)	BDL(<0.001)
33	Nickel (as Ni)	mg/L	BDL(<0.008)	BDL(<0.008)
34	Arsenic (as As)	mg/L	BDL(<0.003)	BDL(<0.003)
35	Zinc (as Zn)	mg/L	BDL(<0.021)	BDL(<0.021)
36	Mercury (as Hg)	mg/L	BDL(<0.001)	BDL(<0.001)
37	Cadmium (as Cd)	mg/L	BDL(<0.003)	BDL(<0.003)
38	Selenium (as Se)	mg/L	BDL(<0.004)	BDL(<0.004)
39	Cyanide (as CN ⁻)	mg/L	BDL(<0.03)	BDL(<0.03)
40	Hexavalent Chromium (as Cr ⁶⁺)	mg/L	BDL(<0.03)	BDL(<0.03)
41	Total Chromium (as Cr)	mg/L	BDL(<0.008)	BDL(<0.008)
42	Copper (as Cu)	mg/L	BDL(<0.004)	BDL(<0.004)
43	Vanadium (as V)	mg/L	BDL(<0.09)	BDL(<0.09)
44	Phosphorous (as P)	mg/L	0.12	0.1
45	Benzen	mg/L	ND	ND
46	Benzo(a)pyrene	mg/L	ND	ND
47	Aluminium (as Al)	mg/L	BDL(<0.007)	BDL(<0.007)
48	Free Residual Chlorine as FRC	mg/L	BDL(<0.1)	BDL(<0.1)
49	Pesticides	µg/L	ND	ND
50	Polychlorinated Biphenyls	mg/L	ND	ND
51	PAH	mg/L	ND	ND
52	Tri-halomethanes	mg/L	ND	ND
53	Total coliform	MPN/100 ml	Absent	Absent
54	E. Coli	MPN/100 ml	Absent	Absent

BDL =Below Detection Limit

Analysis Results for the Month of February 2026												
IOCL - Baruni Refinery												
Company Name	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water
Sample Type	10 L	10 L	10 L	10 L	10 L	10 L	10 L	10 L	10 L	10 L	10 L	10 L
Sample Quantity	14.02.2026	14.02.2026	14.02.2026	14.02.2026	14.02.2026	14.02.2026	14.02.2026	14.02.2026	14.02.2026	14.02.2026	14.02.2026	14.02.2026
Date of Sampling	18.02.2026 to	18.02.2026 to	18.02.2026 to	18.02.2026 to	18.02.2026 to	18.02.2026 to	18.02.2026 to	18.02.2026 to	18.02.2026 to	18.02.2026 to	18.02.2026 to	18.02.2026 to
Analysis Period	27.02.2026	27.02.2026	27.02.2026	27.02.2026	27.02.2026	27.02.2026	27.02.2026	27.02.2026	27.02.2026	27.02.2026	27.02.2026	27.02.2026
SL. No.	PARAMETER	UNIT	Location									
			Ground Water- Nr Keshawa IBGW01-01	Ground Water- Nr Harpur Village IBGW01-02	Ground Water- Nr Masidpur Village IBGW01-03	Ground Water- Nr papour Village IBGW01-04	Ground Water- Nr Bhat Village IBGW01-05	Ground Water- Nr masina Village IBGW01-06	Ground Water- Nr Rachiyahi Village IBGW01-07	Ground Water- Nr BHPPL hand Pump IBGW01-08	Ground Water- Nr Nurpur Village IBGW01-09	Ground Water- Nr Govindpur Village IBGW01-10
1	Temperature	°C	25.6	25.8	25.8	25.2	25.2	25.2	25.2	25.3	25.0	25.0
2	Colour	Hazen	BDL(<5.00)	BDL(<5.00)	BDL(<5.00)	BDL(<5.00)	BDL(<5.00)	BDL(<5.00)	BDL(<5.00)	BDL(<5.00)	BDL(<5.00)	BDL(<5.00)
3	Odour	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
4	Taste	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
5	pH	-	7.16	7.26	7.27	7.28	7.70	8.10	7.60	7.40	7.72	7.40
6	Turbidity	NTU	BDL(<1.0)	BDL(<1.0)	BDL(<1.0)	BDL(<1.0)	BDL(<1.0)	BDL(<1.0)	BDL(<1.0)	BDL(<1.0)	BDL(<1.0)	BDL(<1.0)
7	Conductivity	µS/cm	440.0	478.0	430.0	560.0	590.0	572.0	566.0	500.0	590.0	540.0
8	Total Hardness (as CaCO ₃)	mg/L	280.0	290.0	278.0	280.0	270.0	282.0	300.0	290.0	310.0	282.0
9	Calcium Hardness (as CaCO ₃)	mg/L	168.0	170.0	158.0	172.0	165.0	160.0	184.0	158.0	156.0	168.0
10	Magnesium Hardness (as CaCO ₃)	mg/L	112.0	120.0	120.0	108.0	105.0	122.0	116.0	132.0	154.0	114.0
11	M-Alkalinity (as CaCO ₃)	mg/L	78.0	88.0	98.0	100.0	110.0	124.0	138.0	112.0	120.0	138.0
12	BDL (3 days at 27°C)	mg/L	BDL(<2.0)	BDL(<2.0)	BDL(<2.0)	BDL(<2.0)	BDL(<2.0)	BDL(<2.0)	BDL(<2.0)	BDL(<2.0)	BDL(<2.0)	BDL(<2.0)
13	GOO	mg/L	BDL(<2.0)	BDL(<2.0)	BDL(<2.0)	BDL(<2.0)	BDL(<2.0)	BDL(<2.0)	BDL(<2.0)	BDL(<2.0)	BDL(<2.0)	BDL(<2.0)
14	Ammonical Nitrogen (as NH ₃ -N)	mg/L	BDL(<1.0)	BDL(<1.0)	BDL(<1.0)	BDL(<1.0)	BDL(<1.0)	BDL(<1.0)	BDL(<1.0)	BDL(<1.0)	BDL(<1.0)	BDL(<1.0)
15	Total Kjeldahl Nitrogen (as NH ₃ -N)	mg/L	BDL(<1.0)	BDL(<1.0)	BDL(<1.0)	BDL(<1.0)	BDL(<1.0)	BDL(<1.0)	BDL(<1.0)	BDL(<1.0)	BDL(<1.0)	BDL(<1.0)
16	Sulphides (as S)	mg/L	BDL(<0.03)	BDL(<0.03)	BDL(<0.03)	BDL(<0.03)	BDL(<0.03)	BDL(<0.03)	BDL(<0.03)	BDL(<0.03)	BDL(<0.03)	BDL(<0.03)
17	Sodium (as Na)	mg/L	16.0	12.0	11.9	10.2	9.0	11.2	12.8	11.6	11.6	10.5
18	Potassium (as K)	mg/L	3.00	3.2	2.80	3.60	4.10	3.90	3.20	3.00	3.20	3.10
19	Total Dissolved Solids (TDS)	mg/L	264.0	286.8	252.0	336.0	354.0	343.2	339.6	300.0	354.0	324.0
20	Total Suspended Solids (TSS)	mg/L	BDL(<4.0)	BDL(<4.0)	BDL(<4.0)	BDL(<4.0)	BDL(<4.0)	BDL(<4.0)	BDL(<4.0)	BDL(<4.0)	BDL(<4.0)	BDL(<4.0)
21	Oil & Grease	mg/L	BDL(<4.0)	BDL(<4.0)	BDL(<4.0)	BDL(<4.0)	BDL(<4.0)	BDL(<4.0)	BDL(<4.0)	BDL(<4.0)	BDL(<4.0)	BDL(<4.0)
22	Dissolved Oxygen	mg/L	6.5	6.2	7.2	7.2	6.8	9.2	8.7	8.1	9.2	9.6
23	Chloride (as Cl ⁻)	mg/L	64.99	51.90	42.99	62.99	90.90	82.99	80.10	90.80	80.88	84.88
24	Nitrate (as NO ₃ ⁻)	mg/L	1.90	1.20	1.26	1.18	1.26	2.40	2.30	2.10	2.40	1.80
25	Sulphate (as SO ₄ ²⁻)	mg/L	34.60	47.60	48.60	48.60	56.00	48.90	58.90	72.80	60.10	78.20
26	Total Silica (as SiO ₂)	mg/L	0.30	0.41	0.45	0.58	0.48	0.56	0.52	0.46	0.72	0.67
27	Phosphate (as PO ₄ ³⁻)	mg/L	0.48	0.40	0.42	0.36	0.48	0.34	0.42	0.34	0.68	0.52
28	Fluoride (as F ⁻)	mg/L	BDL(<0.05)	BDL(<0.05)	BDL(<0.05)	BDL(<0.05)	BDL(<0.05)	BDL(<0.05)	BDL(<0.05)	BDL(<0.05)	BDL(<0.05)	BDL(<0.05)
29	Iron (as Fe)	mg/L	0.11	0.32	0.30	0.36	0.24	0.28	0.24	0.40	0.72	0.36
30	Lead (as Pb)	mg/L	BDL(<0.006)	BDL(<0.006)	BDL(<0.006)	BDL(<0.006)	BDL(<0.006)	BDL(<0.006)	BDL(<0.006)	BDL(<0.006)	BDL(<0.006)	BDL(<0.006)
31	Phenolic compounds (as C ₆ H ₅ OH)	mg/L	BDL(<0.001)	BDL(<0.001)	BDL(<0.001)	BDL(<0.001)	BDL(<0.001)	BDL(<0.001)	BDL(<0.001)	BDL(<0.001)	BDL(<0.001)	BDL(<0.001)
32	Nickel (as Ni)	mg/L	BDL(<0.008)	BDL(<0.008)	BDL(<0.008)	BDL(<0.008)	BDL(<0.008)	BDL(<0.008)	BDL(<0.008)	BDL(<0.008)	BDL(<0.008)	BDL(<0.008)
33	Arsenic (as As)	mg/L	BDL(<0.003)	BDL(<0.003)	BDL(<0.003)	BDL(<0.003)	BDL(<0.003)	BDL(<0.003)	BDL(<0.003)	BDL(<0.003)	BDL(<0.003)	BDL(<0.003)
34	Zinc (as Zn)	mg/L	BDL(<0.021)	BDL(<0.021)	BDL(<0.021)	BDL(<0.021)	BDL(<0.021)	BDL(<0.021)	BDL(<0.021)	BDL(<0.021)	BDL(<0.021)	BDL(<0.021)
35	Mercury (as Hg)	mg/L	BDL(<0.001)	BDL(<0.001)	BDL(<0.001)	BDL(<0.001)	BDL(<0.001)	BDL(<0.001)	BDL(<0.001)	BDL(<0.001)	BDL(<0.001)	BDL(<0.001)
36	Cadmium (as Cd)	mg/L	BDL(<0.003)	BDL(<0.003)	BDL(<0.003)	BDL(<0.003)	BDL(<0.003)	BDL(<0.003)	BDL(<0.003)	BDL(<0.003)	BDL(<0.003)	BDL(<0.003)
37	Selenium (as Se)	mg/L	BDL(<0.004)	BDL(<0.004)	BDL(<0.004)	BDL(<0.004)	BDL(<0.004)	BDL(<0.004)	BDL(<0.004)	BDL(<0.004)	BDL(<0.004)	BDL(<0.004)
38	Cyanide (as CN ⁻)	mg/L	BDL(<0.03)	BDL(<0.03)	BDL(<0.03)	BDL(<0.03)	BDL(<0.03)	BDL(<0.03)	BDL(<0.03)	BDL(<0.03)	BDL(<0.03)	BDL(<0.03)
39	Hexavalent Chromium (as Cr ⁶⁺)	mg/L	BDL(<0.03)	BDL(<0.03)	BDL(<0.03)	BDL(<0.03)	BDL(<0.03)	BDL(<0.03)	BDL(<0.03)	BDL(<0.03)	BDL(<0.03)	BDL(<0.03)
40	Total Chromium (as Cr)	mg/L	BDL(<0.008)	BDL(<0.008)	BDL(<0.008)	BDL(<0.008)	BDL(<0.008)	BDL(<0.008)	BDL(<0.008)	BDL(<0.008)	BDL(<0.008)	BDL(<0.008)
41	Copper (as Cu)	mg/L	BDL(<0.004)	BDL(<0.004)	BDL(<0.004)	BDL(<0.004)	BDL(<0.004)	BDL(<0.004)	BDL(<0.004)	BDL(<0.004)	BDL(<0.004)	BDL(<0.004)
42	Vanadium (as V)	mg/L	BDL(<0.009)	BDL(<0.009)	BDL(<0.009)	BDL(<0.009)	BDL(<0.009)	BDL(<0.009)	BDL(<0.009)	BDL(<0.009)	BDL(<0.009)	BDL(<0.009)
43	Phosphorous (as P)	mg/L	0.20	0.14	0.12	0.12	0.18	0.14	0.22	0.22	0.16	0.18
44	Benzen	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
45	Benzo(a)pyrene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
46	Aluminium as Al	mg/L	BDL(<0.007)	BDL(<0.007)	BDL(<0.007)	BDL(<0.007)	BDL(<0.007)	BDL(<0.007)	BDL(<0.007)	BDL(<0.007)	BDL(<0.007)	BDL(<0.007)
47	Free Residual Chlorine as FRC	mg/L	BDL(<0.1)	BDL(<0.1)	BDL(<0.1)	BDL(<0.1)	BDL(<0.1)	BDL(<0.1)	BDL(<0.1)	BDL(<0.1)	BDL(<0.1)	BDL(<0.1)
48	Manganese as (Mn)	mg/L	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)
49	Pesticides	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
50	Polychlorinated Biphenyls	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
51	PAH	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
52	Tri-halogenethanes	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
53	Total conform	MPN/100 ml	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent
54	E. Coli	MPN/100 ml	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent
BDL - Below Quantification Limit												

IOCL - BARAUNI REFINERY									
DETOX CORPORATION PVT. LTD.									
METEOROLOGICAL OBSERVATIONS AT BR COMPLEX									
LOCATION: TIME OFFICE									
(RECORDED ON THE DAYS OF AAQM)									
(MONTH: OCTOBER, 2025)									
Date of Monitoring	Temperature		Atmospheric		Relative		Wind Speed	predominant	Rainfall
	(DEG C)		Pressure		Humidity		Speed	Wind Direction	(mm)
			(mm Hg)		(%)		(Km/h)	(FROM)	
	MAX	MIN	MAX	MIN	MAX	MIN			
03.10.2025	33.5	20.2	758.3	748.2	63.2	52.1	5.6	SW	1.2
06.10.2025	36.2	21.3	758.2	749.2	61.2	54.2	11.2	WWE	2.3
09.10.2025	32.2	22.3	752.3	746.2	64.5	58.2	12.25	SSW	1.8
13.10.2025	34.1	23.3	755.6	750.2	65.3	55.1	11.3	NE	2.5
16.10.2025	35.6	24.2	758.2	749.3	64.2	56.3	10.8	NNE	3.1
21.10.2025	35.2	21.6	760.2	748.1	67.2	57.1	8.6	SE	5.6
24.10.2025	33.2	23.5	758.2	750.2	62.1	58.6	9.3	SSW	3.6
28.10.2025	36.2	26.1	750.2	749.6	66.3	54.2	11.3	NW	2.1
31.10.2025	33.2	26.3	756.2	751.2	64.2	57.2	13.2	ESE	0

IOCL - BARAUNI REFINERY									
DETOX CORPORATION PVT. LTD.									
METEOROLOGICAL OBSERVATIONS AT BR COMPLEX									
LOCATION: TIME OFFICE									
(RECORDED ON THE DAYS OF AAQM)									
(MONTH: NOVEMBER, 2025)									
Date of Monitoring	Temperature		Atmospheric		Relative		Wind Speed	predominar	Rainfall
	(DEG C)		Pressure		Humidity		Speed	ind Directi	(mm)
			(mm Hg)		(%)		(Km/h)	(FROM)	
	MAX	MIN	MAX	MIN	MAX	MIN			
03.10.2025	33.5	20.2	758.3	748.2	63.2	52.1	5.6	SW	1.2
06.10.2025	36.2	21.3	758.2	749.2	61.2	54.2	11.2	WWE	2.3
09.10.2025	32.2	22.3	752.3	746.2	64.5	58.2	12.25	SSW	1.8
13.10.2025	34.1	23.3	755.6	750.2	65.3	55.1	11.3	NE	2.5
16.10.2025	35.6	24.2	758.2	749.3	64.2	56.3	10.8	NNE	3.1
21.10.2025	35.2	21.6	760.2	748.1	67.2	57.1	8.6	SE	5.6
24.10.2025	33.2	23.5	758.2	750.2	62.1	58.6	9.3	SSW	3.6
28.10.2025	36.2	26.1	750.2	749.6	66.3	54.2	11.3	NW	2.1
31.10.2025	33.2	26.3	756.2	751.2	64.2	57.2	13.2	ESE	0

LOCATION: TIME OFFICE									
(RECORDED ON THE DAYS OF AAQM)									
(MONTH: DECEMBER, 2025)									
Date of Monitoring	Temperature		Atmospheric		Relative		Wind Speed	predominant	Rainfall
	(DEG C)		Pressure		Humidity		Speed	Wind Directi	
			(mm Hg)		(%)		(Km/h)	(FROM)	
	MAX	MIN	MAX	MIN	MAX	MIN			
03.12.2025	26	13	759.3	749.3	66.5	51.3	8.4	NW	0.0
04.12.2025	26	12	757.3	748.3	60.2	53.6	10.5	NW	0.0
08.12.2025	25.5	11.0	751.25	746.3	65.8	57.9	11.1	NW	0.0
11.12.2025	24	13	754.3	746.3	66.3	54.6	6.4	W	0.0
15.12.2025	24.4	10.6	759.3	750.3	65.2	55.2	7.2	NNW	0.0
18.12.2025	24	11	759.32	749.6	68.9	56.3	8.7	NW	0.0
22.12.2025	24	10	760.2	751.2	63.32	59.6	11.3	NW	0.0
26.12.2025	23	10	751.2	750.1	67.3	53.6	10.5	W	0.0
29.12.2025	23	9	752.3	743.6	68.2	52.3	11.4	NNE	0.0

(MONTH: JANUARY, 2026)									
Date of Monitoring	Temperature		Atmospheric		Relative		Wind Speed	redominar	Rainfall
	(DEG C)		Pressure		Humidity		Speed	ind Directi	(mm)
			(mm Hg)		(%)		(Km/h)	(FROM)	
	MAX	MIN	MAX	MIN	MAX	MIN			
01.01.2026	32.25	21.2	759.2	748.3	64.3	53.2	4.2	SW	0
05.01.2026	35.6	22.3	755.3	748.3	62.5	55.6	10.3	WWE	0
08.01.2026	31.25	20.2	754.2	745.32	65.3	57.2	11.2	SSW	0
12.01.2026	36.32	21.25	756.3	748.3	66.6	54.2	12.3	NE	0
15.01.2026	34.25	25.3	759.3	750.2	65.2	55.2	10.2	NNE	0
19.01.2026	36.32	20.36	759.2	747.3	66.32	56.8	7.6	SE	0
22.01.2026	32.36	23.36	754.2	751.2	63.2	59.3	8.6	SSW	0
27.01.2026	35.89	25.4	754.2	746.3	65.2	53.2	10.3	NW	0
30.01.2026	34.56	26.2	758.5	751.2	67.3	51.2	9.3	NW	0

(RECORDED ON THE DAYS OF AAQM)									
(MONTH: FEBRUARY, 2026)									
Date of Monitoring	Temperature		Atmospheric		Relative		Wind Speed	predominant	Rainfall
	(DEG C)		Pressure		Humidity		Speed	Wind Direction	(mm)
			(mm Hg)		(%)		(Km/h)	(FROM)	
	MAX	MIN	MAX	MIN	MAX	MIN			
02.02.2026	34.25	22.5	760	749.3	65.5	52.6	6.3	SW	0
05.02.2026	36.32	23.36	758.3	750.1	63.5	54.8	8.2	WWE	0
09.02.2026	32.36	21.5	756.2	748.2	66.3	58.6	10.2	SSW	0
12.02.2026	37.25	22.33	756.3	749.5	67.5	55.2	11.2	NE	0
16.02.2026	35.62	26.4	760.1	752.2	64.2	56.6	9.8	NNE	0
19.02.2026	38.32	21.23	758.3	748.2	67.5	57.9	5.3	SE	0
23.02.2026	33.26	24.62	755.4	749.5	64.2	60.2	9.5	SSW	0
26.02.2026	36.32	26.36	758.2	751.4	66.3	54.2	12.25	NW	0

IOCL - BARAUNI REFINERY									
DETOX CORPORATION PVT. LTD.									
METEOROLOGICAL OBSERVATIONS AT BR COMPLEX									
LOCATION: TIME OFFICE									
(RECORDED ON THE DAYS OF AAQM)									
(MONTH: MARCH, 2026)									
Date of Monitoring	Temperature		Atmospheric		Relative		Wind Speed	predominar	Rainfall
	(DEG C)		Pressure		Humidity		Speed	ind Directi	
			(mm Hg)		(%)		(Km/h)	(FROM)	
	MAX	MIN	MAX	MIN	MAX	MIN			
02.03.2026	35.23	23.22	761	748.6	66.8	53.6	5.6	SW	0
05.03.2026	37.56	24.65	757.2	749.6	64.2	55.2	7.2	WWE	0
09.03.2026	33.26	22.3	756	750.2	67.2	59.1	11.2	SSW	0
12.03.2026	38.95	23.62	760.2	751.3	68.2	56.2	12.5	NE	0
16.03.2026	36.45	27.6	765.1	753.2	65.1	58.1	10.6	NNE	0
19.03.2026	39.23	22.31	760.3	749.3	68.2	58.3	7.3	SE	0
23.03.2026	34.24	25.31	759.3	753.2	65.2	61.2	10.8	SSW	0
26.03.2026	38.74	23.12	758.4	755.1	66.1	56.4	10.2	SSW	0
30.3.2026	37.12	27.86	761.7	758.4	67.5	55.7	11.8	NW	0

Detox Corporation Pvt. Ltd.
Analysis Result for the Month of February-2026
TABLE - 1: Field and DCS Control Room
Company Name:- IOCL Barauni Refinery
Sample Type: Noise

S.No	Locations	DAY				NIGHT		DATE OF MONITORING
		Min dB(A)	Max dB(A)	Leq dB(A)	Min dB(A)	Max dB(A)	Leq dB(A)	
1	AVU-I-1- FIELD CONTROL ROOM	49.23	69.3	62.3	39.2	57.23	49.2	02.02.2026
2	AVU-II-1- FIELD CONTROL ROOM	51.25	70.2	63.3	41.25	61.25	54.3	02.02.2026
3	AVU-III-1- FIELD CONTROL ROOM	56.3	68.3	65.4	43.63	53.26	53.2	02.02.2026
4	AVU-I, II/ COKER DDCS CONTROL ROOM	48.3	70.2	64.2	42.5	56.3	52.7	02.02.2026
5	AVU- III/ COKER DDCS CONTROL ROOM	50.2	71.3	63.5	39.6	63.7	51.2	02.02.2026
6	COKER-A FIELD CONTROL ROOM	51.6	69.3	62.8	38.6	64.6	55.7	05.02.2026
7	COKER-B FIELD CONTROL ROOM	43.2	62.3	62.6	41.6	46.4	45.0	05.02.2026
8	CRU FIELD CONTROL ROOM	49.3	61.3	60.2	37.9	61.3	54.2	05.02.2026
9	BXP CONTROL ROOM	50.2	70.3	62.9	35.3	63.7	51.3	05.02.2026
10	RFCCU FIELD CONTROL ROOM	47.6	56.4	55.0	37.3	68.3	57.2	05.02.2026
11	DHDT FIELD CONTROL ROOM	49.2	64.3	60.4	41.3	61.3	55.6	06.02.2026
12	HGU-1 FIELD CONTROL ROOM	48.2	65.4	57.2	43.2	59.7	53.2	06.02.2026
13	HGU-2 FIELD CONTROL ROOM	42.3	68.3	48.2	41.3	57.3	54.3	06.02.2026
14	SRU FIELD CONTROL ROOM	49.6	69.4	61.2	43.3	61.3	55.6	06.02.2026
15	MSQ CONTROL ROOM	46.3	70.3	56.3	41.7	63.4	53.2	07.02.2026
16	OM & S CONTROL ROOM	48.2	71.6	59.3	43.3	58.3	58.2	07.02.2026
17	CRUDE OIL STATION	47.2	69.4	56.3	47.3	69.5	59.6	07.02.2026
18	FINISHED PRODUCT CONTROL ROOM	53.2	65.3	66.3	43.3	65.4	57.2	09.02.2026
19	LPG CONTROL ROOM	49.3	63.3	62.3	44.3	61.2	52.7	09.02.2026
20	ETP FIELD CONTROL ROOM	51.2	71.3	60.2	45.7	66.4	57.9	09.02.2026
21	UTILITY CONTROL ROOM	50.5	70.3	63.9	46.3	61.6	54.3	09.02.2026
22	OLD DM PLANT CONTROL ROOM	51.6	70.9	61.3	43.3	63.3	56.3	09.02.2026
23	TPS-CONTROL ROOM	53.3	71.3	62.3	41.7	64.6	55.9	09.02.2026
24	TPS FIELD CONTROL ROOM	52.6	70.3	60.2	43.9	61.5	56.3	09.02.2026
25	BOILER 6 CONTROL ROOM	50.2	69.3	61.2	47.7	66.6	56.3	09.02.2026
26	RO DM PLANT CONTROL ROOM	48.6	71.3	60.2	46.3	63.3	57.2	12.02.2026
27	BXP DM PLANT CONTROL ROOM	49.3	69.3	69.1	43.3	61.6	58.3	12.02.2026
28	INSIDE THE MECHANICAL WORKSHOP	50.3	68.3	59.3	38.0	64.9	59.4	12.02.2026
29	QUALITY CONTROL LABORATORY	49.7	65.3	53.6	36.3	69.3	54.1	12.02.2026
30	M & I BUILDING	55.3	64.3	60.5	41.7	60.3	54.3	12.02.2026
31	CENTRAL STORES	53.4	65.3	58.7	43.3	58.3	53.3	12.02.2026
32	FIRE STATION	58.7	66.4	59.6	38.7	56.4	51.7	12.02.2026
33	FIRE WATER PUMP HOUSE	55.3	67.3	62.3	43.3	59.7	54.3	12.02.2026
34	INSTRUMENTATION BUILDING	53.3	68.3	60.5	40.4	53.2	49.3	13.02.2026
35	ELECTRICAL PLANNING BUILDING	54.3	70.3	60.3	41.7	62.6	52.4	13.02.2026
36	MSQ CONTROL ROOM	50.3	71.2	62.4	39.3	57.3	51.5	14.02.2026
37	NHT CCR FIELD CONTROL ROOM	48.6	69.3	60.5	41.3	53.2	49.3	14.02.2026
38	NEW PRIMEG+FIELD CONTROL ROOM	49.3	69.3	60.2	44.6	64.3	57.3	14.02.2026

S.No.	Locations	DAY				NIGHT				DATE OF MONITORING
		Min dB(A)	Max dB(A)	Leq dB(A)	Min dB(A)	Max dB(A)	Leq dB(A)	Min dB(A)	Max dB(A)	
1	AVU-I NEAR FURNANCE F-02	58.6	80.3	63.3	52.4	69.3	63.2	52.4	69.3	16.02.2026
2	AVU-I NEAR FURNANCE F-03	53.5	79.4	70.3	52.4	59.4	62.4	52.4	59.4	16.02.2026
3	AVU-II NEAR FURNANCE F-02	56.3	76.3	70.3	50.3	68.4	63.1	50.3	68.4	16.02.2026
4	AVU-II NEAR FURNANCE F-03	60.3	79.3	71.3	50.3	70.3	60.3	50.3	70.3	16.02.2026
5	AVU-III NEAR FURNANCE F-01	57.2	80.3	68.3	53.5	66.3	62.3	53.5	66.3	16.02.2026
6	AVU-III NEAR FURNANCE F-02	58.3	71.2	69.3	51.3	62.4	58.3	51.3	62.4	16.02.2026
7	AVU-III NEAR FURNANCE F-03	63.3	87.7	73.3	49.3	61.3	59.4	49.3	61.3	16.02.2026
8	COKE-A PUMP NEAR P-06 A/B	59.2	83.2	73.3	50.3	66.3	59.3	50.3	66.3	18.02.2026
9	COKE-A NEAR FURNANCE	56.3	81.3	69.3	52.3	63.3	63.3	52.3	63.3	18.02.2026
10	LRU COMPRESSOR 1st FLOOR PLATFORM	58.2	83.6	71.3	53.3	62.3	62.4	53.3	62.3	18.02.2026
11	LRU COMPRESSOR GROUND FLOOR	55.3	85.4	74.2	69.4	69.3	64.4	69.4	69.3	18.02.2026
12	LRU SUCTION KOD BESIDE COMPRESSOR (08-P-013 A/B)	56.89	76.32	68.32	54.26	69.35	62.4	54.26	69.35	18.02.2026
13	LRU BOTTOM FRACTIONATORS PUMP (07-P-008 A/B)	64.2	89.1	73.3	50.2	58.3	59.3	50.2	58.3	19.02.2026
14	COKE-B REACTOR FEED PUMP	45.23	46.25	49.32	37.26	46.25	41.26	37.26	46.25	19.02.2026
15	COKE-B FURNANCE GROUND FLOOR	38.65	42.25	42.32	36.32	43.32	41.32	36.32	43.32	19.02.2026
16	COKE-B FURNANCE FIRST FLOOR	39.22	47.56	41.62	30.26	47.25	42.36	30.26	47.25	19.02.2026
17	COKE-B OLD PUMP	36.32	48.25	39.32	35.62	45.35	40.325	35.62	45.35	19.02.2026
18	CRU RECYCLE GAS COMPRESSOR	62.3	75.2	67.3	57.7	69.3	62.4	57.7	69.3	20.02.2026
19	RECCU COMPRESSOR HOUSE	58.3	80.3	70.3	63.3	69.4	62.4	63.3	69.4	20.02.2026
20	HGU 01 COMPRESSOR HOUSE	59.3	81.3	71.2	53.6	70.3	64.3	53.6	70.3	20.02.2026
21	DHDT COMPRESSOR HOUSE	60.2	75.6	69.3	59.3	71.3	64.3	59.3	71.3	20.02.2026
22	BXP AIR COMPRESSOR HOUSE	53.3	79.3	72.1	60.2	64.4	63.4	60.2	64.4	20.02.2026
23	MSQ COMPRESSOR HOUSE	59.4	76.4	68.1	54.7	69.4	64.3	54.7	69.4	20.02.2026
24	FIRE PUMP HOUSE Sector-7	60.3	83.3	69.2	52.1	63.3	62.5	52.1	63.3	20.02.2026
25	TPS AIR COMPRESSOR- INSIDE	53.3	80.3	64.4	51.3	60.3	64.4	51.3	60.3	20.02.2026
26	TPS AIR COMPRESSOR- OUTSIDE	61.3	78.7	70.3	58.7	63.3	63.4	58.7	63.3	20.02.2026
27	TPS NEAR BOILER 1	64.3	79.3	71.4	50.3	65.3	60.3	50.3	65.3	21.02.2026
28	GT-1	65.2	81.4	70.7	63.3	68.3	64.4	63.3	68.3	21.02.2026
29	GT-2	64.3	73.3	68.3	59.4	68.7	70.3	59.4	68.7	21.02.2026
30	MSQ NITROGEN PLANT	60.3	88.3	72.2	60.2	75.7	67.3	60.2	75.7	21.02.2026
31	OLD NITROGEN PLANT	57.7	82.4	69.4	62.4	64.3	67.5	62.4	64.3	21.02.2026
32	FLUE GAS RECOVERY COMPRESSOR	60.3	82.4	70.3	53.1	70.3	62.4	53.1	70.3	21.02.2026
33	RUP PUMP HOUSE	61.2	69.3	71.3	58.7	58.3	58.3	58.7	58.3	21.02.2026
34	NEW AERATOR AIR BLOWER	62.3	80.4	69.7	59.5	68.3	64.4	59.5	68.3	21.02.2026
35	OLD AERATOR AIR BLOWER	61.2	79.3	68.3	59.4	63.3	62.4	59.4	63.3	21.02.2026
36	NEW PRIMEG+COMPRESSOR HOUSE	66.7	88.7	74.3	53.4	68.4	63.4	53.4	68.4	21.02.2026
37	NHT CCR COMPRESSOR HOUSE	61.9	85.3	72.7	48.4	69.4	59.7	48.4	69.4	24.02.2026
38	NHT CCR SOUTH -WEST CORNER	60.2	74.7	69.2	60.3	64.3	63.3	60.3	64.3	24.02.2026
39	NEAR NHT CCR EYE WASH SHOWER NO.79	55.3	76.3	65.3	48.7	67.3	58.4	48.7	67.3	24.02.2026
40	NEW PRIMEG+FEED PUMP 904-PM-09	59.7	80.3	67.3	53.6	70.3	60.4	53.6	70.3	24.02.2026

Detox Corporation Pvt. Ltd.
Analysis Result for the Month of February-2026
TABLE - 3: BOUNDARY OF THE REFINERY AREA
Company Name:- IOCL Barauni Refinery
Sample Type: Noise

S.No.	Locations	DAY			NIGHT			DATE OF MONITORING
		Min dB(A)	Max dB(A)	Leq dB(A)	Min dB(A)	Max dB(A)	Leq dB(A)	
1	GATE NO.1	53.3	80.2	68.3	50.3	70.3	61.3	25.02.2026
2	BIO-TREATMENT PLANT GATE	51.2	70.1	61.3	47.4	68.3	60.3	25.02.2026
3	BIO-TREATMENT CONTROL ROOM	50.7	71.3	63.3	42.4	74.7	61.3	25.02.2026
4	OIL INDIA GATE (NEAR GOVINDPUR VILLAGE)	38.7	73.3	60.3	43.3	70.2	61.6	25.02.2026
5	GATE NO.10	40.3	69.7	71.3	41.7	69.4	58.3	27.02.2026
6	RFCCU SITE CLOSE TO THE BOUNDARY	42.4	79.1	59.3	43.2	59.7	52.4	27.02.2026
7	SRU SITE CLOSE TO THE BOUNDARY INSIDE PLANT	45.3	80.3	62.4	42.1	69.3	64.3	27.02.2026
8	SRU SITE CLOSE TO THE BOUNDARY OUT SIDE PLANT	42.7	69.7	59.7	48.7	60.3	70.3	27.02.2026
9	CISF COLONY	41.2	68.3	59.2	41.3	64.3	51.7	28.02.2026
10	NEAR BORROW PIT	40.3	75.3	60.3	40.8	65.3	53.3	28.02.2026
11	NEAR IOCL PETROL PUMP	40.3	80.3	63.5	37.7	63.3	50.9	28.02.2026

Detox Corporation Pvt. Ltd.
Analysis Result for the Month of November-2025
TABLE - 1: Field and DCS Control Room
Company Name:- IOCL Barauni Refinery
Sample Type: Noise

S.No	Locations	DAY				NIGHT				DATE OF MONITORING
		Min dB(A)	Max dB(A)	Leq dB(A)	Min dB(A)	Max dB(A)	Leq dB(A)	Min dB(A)	Leq dB(A)	
1	AVU-I- FIELD CONTROL ROOM	48.2	68.3	61.2	38.2	56.33	48.6	38.2	56.33	08.11.2025
2	AVU-II- FIELD CONTROL ROOM	50.2	71.25	65.3	40.2	60.2	53.2	40.2	60.2	08.11.2025
3	AVU-III- FIELD CONTROL ROOM	56.3	68.23	65.3	42.3	52.25	52.4	42.3	52.25	08.11.2025
4	AVU-1, II/ COKER DDCS CONTROL ROOM	47.3	69.2	63.2	41.3	55.2	51.3	41.3	55.2	08.11.2025
5	AVU- III/ COKER DDCS CONTROL ROOM	49.3	70.2	62.3	38.2	62.3	50.3	38.2	62.3	08.11.2025
6	COKER-A FIELD CONTROL ROOM	50.2	68.3	61.2	37.2	63.2	54.4	37.2	63.2	10.11.2025
7	COKER-B FIELD CONTROL ROOM	42.3	55.25	50.3	40.2	45.3	43.3	40.2	45.3	10.11.2025
8	CRU FIELD CONTROL ROOM	48.2	60.3	68.2	36.2	60.3	53.6	36.2	60.3	10.11.2025
9	BXP CONTROL ROOM	49.1	71.3	60.2	34.2	62.3	50.3	34.2	62.3	10.11.2025
10	RFCCU FIELD CONTROL ROOM	46.5	53.3	54.3	36.3	67.3	56.3	36.3	67.3	10.11.2025
11	DHDT FIELD CONTROL ROOM	48.3	63.3	60.2	40.2	60.2	54.3	40.2	60.2	10.11.2025
12	HGU-1 FIELD CONTROL ROOM	47.2	63.3	57.2	42.3	58.3	52.4	42.3	58.3	10.11.2025
13	HGU-2 FIELD CONTROL ROOM	41.4	45.3	48.2	40.2	56.3	53.3	40.2	56.3	10.11.2025
14	SRU FIELD CONTROL ROOM	48.3	62.4	61.2	42.3	60.2	54.7	42.3	60.2	12.11.2025
15	MSQ CONTROL ROOM	45.4	62.4	56.3	40.2	62.3	52.4	40.2	62.3	12.11.2025
16	OM & S CONTROL ROOM	47.2	68.7	59.3	42.4	57.8	57.7	42.4	57.8	12.11.2025
17	CRUDE OIL STATION	46.3	71.3	56.3	46.4	68.3	58.3	46.4	68.3	12.11.2025
18	FINISHED PRODUCT CONTROL ROOM	52.3	70.3	66.3	42.3	64.2	56.4	42.3	64.2	12.11.2025
19	LPG CONTROL ROOM	48.3	68.3	62.3	43.2	60.2	51.4	43.2	60.2	13.11.2025
20	ETP FIELD CONTROL ROOM	50.2	72.4	60.2	43.2	65.3	56.3	43.2	65.3	13.11.2025
21	UTILITY CONTROL ROOM	49.2	65.4	62.5	44.2	60.2	56.4	44.2	60.2	13.11.2025
22	OLD DM PLANT CONTROL ROOM	50.3	67.3	60.3	42.3	60.4	55.3	42.3	60.4	13.11.2025
23	TPS-CONTROL ROOM	52.3	71.3	62.3	40.3	63.3	54.2	40.3	63.3	13.11.2025
24	TPS FIELD CONTROL ROOM	51.3	72.3	60.2	42.3	60.3	55.0	42.3	60.3	13.11.2025
25	BOILER 6 CONTROL ROOM	49.2	68.3	61.2	46.3	65.3	55.3	46.3	65.3	13.11.2025
26	RO DM PLANT CONTROL ROOM	45.3	70.3	59.4	45.3	62.3	55.5	45.3	62.3	13.11.2025
27	BXP DM PLANT CONTROL ROOM	48.3	71.3	58.3	42.4	60.2	56.3	42.4	60.2	13.11.2025
28	INSIDE THE MECHANICAL WORKSHOP	46.4	68.3	60.2	36.3	63.3	56.3	36.3	63.3	14.11.2025
29	QUALITY CONTROL LABORATORY	43.2	72.3	62.1	35.4	68.3	53.3	35.4	68.3	14.11.2025
30	M & I BUILDING	49.6	65.4	59.7	40.2	59.4	53.3	40.2	59.4	14.11.2025
31	CENTRAL STORES	45.5	64.8	57.6	42.3	56.3	52.7	42.3	56.3	14.11.2025
32	FIRE STATION	45.9	71.6	58.5	37.5	55.3	50.2	37.5	55.3	14.11.2025
33	FIRE WATER PUMP HOUSE	50.2	66.1	61.7	42.3	57.6	53.4	42.3	57.6	14.11.2025
34	INSTRUMENTATION BUILDING	51.2	64.6	59.3	39.6	53.4	47.7	39.6	53.4	15.11.2025
35	ELECTRICAL PLANNING BUILDING	53.2	69.8	59.7	40.2	62.4	51.4	40.2	62.4	15.11.2025
36	MSQ CONTROL ROOM	40.4	70.2	61.4	38.2	56.4	50.3	38.2	56.4	15.11.2025
37	NHT CCR FIELD CONTROL ROOM	43.3	70.2	59.2	40.3	52.3	48.3	40.3	52.3	15.11.2025
38	NEW PRIMEG+FIELD CONTROL ROOM	42.3	68.2	58.8	43.3	63.4	56.3	43.3	63.4	15.11.2025

Detox Corporation Pvt. Ltd.
Analysis Result for the Month of November-2025
TABLE - 2: HIGHLY NOISE AREA
Company Name:- IOCL Barauni Refinery
sample Type: Noise

S.No.	Locations	DAY			NIGHT			DATE OF MONITORING
		Min dB(A)	Max dB(A)	Leq dB(A)	Min dB(A)	Max dB(A)	Leq dB(A)	
1	AVU-I NEAR FURNANCE F-02	58.6	79.2	70.3	51.3	68.7	62.6	15.11.2025
2	AVU-I NEAR FURNANCE F-03	54.3	78.3	69.3	52.4	59.4	63.3	15.11.2025
3	AVU-II NEAR FURNANCE F-02	55.3	75.7	71.4	50.3	68.4	64.3	15.11.2025
4	AVU-II NEAR FURNANCE F-03	59.3	80.2	72.4	51.7	69.4	61.3	15.11.2025
5	AVU-III NEAR FURNANCE F-01	56.3	79.2	69.3	53.5	68.4	63.3	15.11.2025
6	AVU-III NEAR FURNANCE F-02	57.2	73.2	69.3	51.3	62.4	59.4	15.11.2025
7	AVU-III NEAR FURNANCE F-03	61.3	86.2	74.7	50.2	61.3	58.3	15.11.2025
8	COKE-A PUMP NEAR P-06 A/B	60.3	83.2	74.7	50.3	65.3	60.3	15.11.2025
9	COKE-A NEAR FURNANCE	57.7	80.3	70.3	52.3	63.3	61.3	15.11.2025
10	LRU COMPRESSOR 1st FLOOR PLATFORM	56.4	84.3	75.4	69.4	68.7	64.4	17.11.2025
11	LRU COMPRESSOR GROUND FLOOR	56.4	84.3	75.4	69.4	68.7	64.4	17.11.2025
12	LRU SUCTION KOD BESIDE COMPRESSOR (08-P-013 A/B)	55.25	75.65	69.32	53.25	69.35	62.4	17.11.2025
13	LRU BOTTOM FRACTIONATORS PUMP (07-P-008 A/B)	63.0	88.3	74.3	50.2	58.3	58.3	17.11.2025
14	COKE - B REACTOR FEED PUMP	44.65	45.25	48.25	31.26	45.35	40.25	18.11.2025
15	COKE-B FURNACE GROUND FLOOR	37.32	43.65	43.25	36.32	43.32	41.32	18.11.2025
16	COKE-B FURNACE FIRST FLOOR	38.65	46.32	42.36	30.26	47.25	42.36	18.11.2025
17	COKE - B OLD PUMP	35.62	46.25	40.36	34.65	45.35	39.65	18.11.2025
18	CRU RECYCLE GAS COMPRESSOR	61.3	74.3	68.3	57.7	68.4	62.4	19.11.2025
19	RFCCU COMPRESSOR HOUSE	57.7	79.3	71.3	53.3	69.4	62.4	19.11.2025
20	HGU 01 COMPRESSOR HOUSE	58.7	79.3	72.4	53.6	69.4	63.4	19.11.2025
21	DHDT COMPRESSOR HOUSE	59.3	74.7	70.4	59.3	71.3	64.3	20.11.2025
22	BXP AIR COMPRESSOR HOUSE	62.4	78.3	73.4	59.4	64.4	63.4	20.11.2025
23	MSQ COMPRESSOR HOUSE	58.7	75.3	69.3	54.7	69.4	63.4	20.11.2025
24	FIRE PUMP HOUSE Sector-7	59.3	82.4	70.3	52.1	68.5	62.5	20.11.2025
25	TPS AIR COMPRESSOR- INSIDE	51.3	79.3	63.3	53.3	60.3	64.4	20.11.2025
26	TPS AIR COMPRESSOR- OUTSIDE	62.4	76.3	70.3	58.7	63.3	63.3	20.11.2025
27	TPS NEAR BOILER 1	63.3	76.3	71.4	50.3	65.3	59.4	20.11.2025
28	GT-1	64.4	80.2	70.7	62.5	63.3	64.4	20.11.2025
29	GT-2	63.3	72.4	69.4	59.4	68.7	64.4	20.11.2025
30	MSQ NITROGEN PLANT	59.3	84.4	73.3	60.2	75.7	68.4	21.11.2025
31	OLD NITROGEN PLANT	56.3	81.2	69.4	62.4	71.3	68.4	21.11.2025
32	FLUE GAS RECOVERY COMPRESSOR	59.3	82.4	70.3	52.4	70.3	62.4	21.11.2025
33	RUP PUMP HOUSE	60.3	69.3	70.7	58.7	58.3	58.3	21.11.2025
34	NEW AERATOR AIR BLOWER	63.3	80.4	70.6	59.5	68.3	64.4	21.11.2025
35	OLD AERATOR AIR BLOWER	60.3	79.3	68.3	59.4	62.4	61.3	21.11.2025
36	NEW PRIMEG+COMPRESSOR HOUSE	65.3	85.3	74.3	51.3	68.4	62.4	22.11.2025
37	NHT CCR COMPRESSOR HOUSE	62.4	82.4	72.7	48.4	69.4	58.3	22.11.2025
38	NHT CCR SOUTH -WEST CORNER	58.3	74.7	68.7	60.3	64.3	62.4	22.11.2025
39	NEAR NHT CCR EYE WASH SHOWER NO.79	54.6	76.3	65.3	50.3	67.3	58.4	22.11.2025
40	NEW PRIMEG+FEED PUMP 904-PM-09	58.3	80.3	69.4	53.6	70.3	61.3	22.11.2025

Detox Corporation Pvt. Ltd.
Analysis Result for the Month of November-2025
TABLE - 3: BOUNDARY OF THE REFINERY AREA
 Company Name:- IOCL Barauni Refinery
 Sample Type: Noise

S.No.	Locations	DAY			NIGHT			DATE OF MONITORING
		Min dB(A)	Max dB(A)	Leq dB(A)	Min dB(A)	Max dB(A)	Leq dB(A)	
1	GATE NO.1	51.3	79.6	67.3	49.3	70.3	60.3	24.11.2025
2	BIO-TREATMENT PLANT GATE	50.3	69.5	60.3	46.3	68.3	59.3	24.11.2025
3	BIO-TREATMENT CONTROL ROOM	49.3	70.3	60.3	41.4	71.3	60.3	24.11.2025
4	OIL INDIA GATE (NEAR GOVINDPUR VILLAGE)	37.3	71.4	59.3	42.4	69.3	60.3	24.11.2025
5	GATE NO.10	39.4	70.3	70.3	40.3	68.2	57.7	27.11.2025
6	RFCCU SITE CLOSE TO THE BOUNDARY	41.3	80.3	60.3	42.4	60.3	51.4	27.11.2025
7	SRU SITE CLOSE TO THE BOUNDARY INSIDE PLANT	43.3	81.3	61.3	41.3	68.3	60.3	27.11.2025
8	SRU SITE CLOSE TO THE BOUNDARY OUT SIDE PLANT	43.3	70.5	58.2	47.3	59.3	69.3	29.11.2025
9	CISF COLONY	40.3	69.3	58.3	40.3	65.3	50.3	29.11.2025
10	NEAR BORROW PIT	41.3	76.4	59.3	39.3	63.3	51.4	29.11.2025
11	NEAR IOCL PETROL PUMP	39.7	80.3	61.6	36.3	61.3	49.3	29.11.2025

STACK EMISSIONS MONITORING
TABLE 1.0 : SO2 EMISSIONS (Conc.)

Sr.No	Source Name	Fuel (% of Gas Firing)	Limit	Oct'25	Nov'25	Dec'25	Jan'26	Feb'26	Mar'26
			Conc. (mg/Nm3)	Actual (mg/Nm3)	Actual (mg/Nm3)	Actual (mg/Nm3)	Actual (mg/Nm3)	Actual (mg/Nm3)	Actual (mg/Nm3)
1	AVU - I	40	1036	-	-	-	489.931	489.93	-
2	AVU - II	40	1036	-	-	-	478.6759	478.68	-
3	AVU - III	60	706	-	-	-	338.0524	338.05	-
4	CRU	85	295	-	-	-	197.25	197.25	-
5	NSU	85	295	189.14	189.14	189.14	-	-	188.64
6	COKER - A	80	377	134.32	134.32	134.32	-	-	208.89
7	COKER - B	80	377	-	-	-	-	-	-
TPS Combined Stack									
8	BOILER - I	23		-	-	-	-	594.17	-
8.1	DUCT -A	23	1317	-	-	-	-	-	-
8.2	DUCT - B	23	1317	-	-	-	-	-	-
9	BOILER - II			571.12	571.12	571.12	-	-	-
9.1	DUCT -A	23	1317	-	-	-	-	-	-
9.2	DUCT - B	23	1317	-	-	-	-	-	-
10	BOILER - III	23		578.22	578.22	578.22	584.12	-	-
10.1	DUCT -A	23	1317	-	-	-	-	-	-
10.2	DUCT - B	23	1317	-	-	-	-	-	-
11	BOILER - IV	23		-	-	-	-	-	-
11.1	DUCT -A	23	1317	-	-	-	-	-	-
11.2	DUCT - B	23	1317	-	-	-	-	-	-
12	BOILER - V	23		665.81	665.81	665.81	621.12	-	592.98
12.1	DUCT -A	23	1317	-	-	-	-	-	-
12.2	DUCT - B	23	1317	-	-	-	-	-	-
New Units									
13	RFCCU	NA	1700	693.21	693.21	693.21	700.18	-	700.18
14	HGU-1	75	739	-	-	-	-	416.15	-
15	DHDT	100	50	-	-	-	-	33.77	-
16	GT - I	NA	1700	-	-	-	-	621.12	-
17	GT - II	NA	1700	-	-	-	-	783.19	-
18	SRU	NA	NA	424.15	424.15	424.15	389.59	389.59	389.59
19	NHDT,801	100	50	32.72	32.72	32.72	32.72	-	32.72
20	PRIME G , 803	100	50	32.81	32.81	32.81	32.81	-	32.81
21	BOILER-6	23	665	-	-	-	-	345.81	-
22	HGU -2	85	235	-	-	-	-	-	-
23	New PRIME G	100	50	38.4	38.4	38.4	35.71	-	35.71
24	New NHT/CCRU	100	50	35.12	35.12	35.12	35.71	-	35.71
25	INDJET 930	NA	-	35.82	35.82	35.82	36.8	-	36.8

STACK EMISSIONS MONITORING
TABLE 1.0 : NO_x EMISSIONS (Conc.)

Sr.No	Source Name	Fuel (% of Gas Firing)	Limit	Oct'25	Nov'25	Dec'25	Jan'26	Feb'26	Mar'26
			Conc. (mg/Nm3)	Actual (mg/Nm3)	Actual (mg/Nm3)	Actual (mg/Nm3)	Actual (mg/Nm3)	Actual (mg/Nm3)	Actual (mg/Nm3)
1	AVU - I	40	410	-	-	225.27	-	285.92	-
2	AVU - II	40	410	-	-	242.6	-	207.94	-
3	AVU - III	60	390	-	-	268.59	-	174.15	-
4	CRU	85	365	-	-	159.43	-	187.31	-
5	NSU	85	365	225.94	207.87	-	244.02	-	244.02
6	COKER - A	80	370	189.79	225.94	-	271.13	-	271.13
7	COKER - B	80	370	-	-	-	-	-	-
TPS Combined Stack									
8	BOILER - I	23	-	-	-	-	-	225.94	-
8.1	DUCT - A	23	427	-	-	-	-	-	-
8.2	DUCT - B	23	427	-	-	-	-	-	-
9	BOILER - II	-	-	271.13	280.17	-	-	-	-
9.1	DUCT - A	23	427	-	-	-	-	-	-
9.2	DUCT - B	23	427	-	-	-	-	-	-
10	BOILER - III	23	-	225.94	207.87	-	289.21	-	-
10.1	DUCT - A	23	427	-	-	-	-	-	-
10.2	DUCT - B	23	427	-	-	-	-	-	-
11	BOILER - IV	23	-	-	243.51	-	-	-	-
11.1	DUCT - A	23	427	-	-	-	-	-	-
11.2	DUCT - B	23	427	-	-	-	-	-	-
12	BOILER - V	23	-	210.07	226.87	-	277.29	-	188.89
12.1	DUCT - A	23	427	-	-	-	-	-	-
12.2	DUCT - B	23	427	-	-	-	-	-	-
New Units									
13	RFCCU	NA	450	260.9	243.51	-	304.39	-	304.39
14	HGU-1	75	392	-	-	302.49	-	260.48	-
15	DHDT	100	350	-	-	168.05	-	168.05	-
16	GT - I	NA	450	-	-	226.87	-	277.29	-
17	GT - II	NA	450	-	-	218.47	-	218.47	-
18	SRU	NA	350	160.66	141.76	141.76	122.86	122.86	122.86
19	NHDT,801	100	250	170.66	170.66	-	170.66	-	170.66
20	PRIME G , 803	100	250	167.93	167.93	-	167.93	-	167.93
21	BOILER-6	23	327	-	-	179.12	-	195.91	-
22	HGU -2	85	273	-	-	-	-	-	-
23	New PRIME G	100	250	138.6	138.6	-	138.6	-	138.6
24	New NHT/CCRU	100	250	153.91	153.91	-	153.91	-	153.91
25	INDJET 930	NA	-	101.06	101.06	-	101.06	-	101.06

STACK EMISSIONS MONITORING **TABLE 1.0 : CO EMISSIONS (Conc.)**

Sr.No	Source Name	Fuel (% of Gas Firing)	Limit	Oct'25	Nov'25	Dec'25	Jan'26	Feb'26	Mar'26
			Conc. (mg/Nm3)	Actual (mg/Nm3)	Actual (mg/Nm3)	Actual (mg/Nm3)	Actual (mg/Nm3)	Actual (mg/Nm3)	Actual (mg/Nm3)
1	AVU - I	40	180	-	-	13.9	-	17.4	-
2	AVU - II	40	180	-	-	10.7	-	18.9	-
3	AVU - III	60	170	-	-	11.7	-	25	-
4	CRU	85	157	-	-	12.9	-	18.2	-
5	NSU	85	157	16.8	15.2	-	15.5	-	18.7
6	COKER - A	80	160	14.1	12.8	-	21.3	-	16.4
7	COKER - B	80	160	-	-	-	-	-	-
TPS Combined Stack									
8	BOILER - I	23		-	-	-	-	18.1	-
8.1	DUCT - A	23	188	-	-	-	-	-	-
8.2	DUCT - B	23	188	-	-	-	-	-	-
9	BOILER - II			15.8	12.9	-	-	-	-
9.1	DUCT - A	23	188	-	-	-	-	-	-
9.2	DUCT - B	23	188	-	-	-	-	-	-
10	BOILER - III	23		17.5	18.6	-	20	-	-
10.1	DUCT - A	23	188	-	-	-	-	-	-
10.2	DUCT - B	23	188	-	-	-	-	-	-
11	BOILER - IV	23		-	16.8	-	-	-	-
11.1	DUCT - A	23	188	-	-	-	-	-	-
11.2	DUCT - B	23	188	-	-	-	-	-	-
12	BOILER - V	23		17.5	16.8	-	17.5	-	16.63
12.1	DUCT - A	23	188	-	-	-	-	-	-
12.2	DUCT - B	23	188	-	-	-	-	-	-
New Units									
13	RFCCU	NA	400	19.82	17.6	-	19.82	-	-
14	HGU-1	75	171	-	-	18.62	-	20.85	-
15	DHDT	100	150	-	-	14.11	-	22.68	-
16	GT - I	NA	200	-	-	11.74	-	22	-
17	GT - II	NA	200	-	-	15.19	-	23.6	-
18	SRU	NA	150	25.49	24.4	20.99	25.34	25.83	23.38
19	NHDT,801	100	100	25.83	24.8	-	24.86	-	23.44
20	PRIME G , 803	100	100	21.08	20.22	-	21.08	-	27.14
21	BOILER-6	23	138	-	-	21.09	-	22.05	-
22	HGU -2	85	112	-	-	-	-	-	-
23	New PRIME G	100	100	21.31	19.72	-	21.31	-	-
24	New NHT/CCRU	100	100	17.64	14.03	-	14.03	-	-
25	INDJET 930	NA	-	16.04	15.14	-	18.2	-	-

STACK EMISSIONS MONITORING
TABLE 1.0 : PM EMISSIONS (Conc.)

Sr.No	Source Name	Fuel (% of Gas Firing)	Limit	Oct'25	Nov'25	Dec'25	Jan'26	Feb'26	Mar'26
			Conc. (mg/Nm3)	Actual (mg/Nm3)	Actual (mg/Nm3)	Actual (mg/Nm3)	Actual (mg/Nm3)	Actual (mg/Nm3)	Actual (mg/Nm3)
1	AVU - I	40	64	-	-	47.34	-	50.09	-
2	AVU - II	40	64	-	-	55.23	-	55.23	-
3	AVU - III	60	46	-	-	38.31	-	38.31	-
4	CRU	85	23	-	-	17.46	-	14.02	-
5	NSU	85	23	18.36	17.1	-	15.9	-	15.9
6	COKER - A	80	28	12.13	18.32	-	23.01	-	23.01
7	COKER - B	80	28	-	-	-	-	-	-
TPS Combined Stack									
8	BOILER - I	23		-	-	-	-	55.3	-
8.1	DUCT - A	23	79	-	-	-	-	-	-
8.2	DUCT - B	23	79	-	-	-	-	-	-
9	BOILER - II			47.32	45.66	-	-	-	-
9.1	DUCT - A	23	79	-	-	-	-	-	-
9.2	DUCT - B	23	79	-	-	-	-	-	-
10	BOILER - III	23		48.3	48.3	-	42.66	-	-
10.1	DUCT - A	23	79	-	-	-	-	-	-
10.2	DUCT - B	23	79	-	-	-	-	-	-
11	BOILER - IV	23		-	69.32	-	-	-	-
11.1	DUCT - A	23	79	-	-	-	-	-	-
11.2	DUCT - B	23	79	-	-	-	-	-	-
12	BOILER - V	23		58.65	54.52	-	49.66	-	58.23
12.1	DUCT - A	23	79	-	-	-	-	-	-
12.2	DUCT - B	23	79	-	-	-	-	-	-
New Units									
13	RFCCU	NA	100	55.86	69.32	-	68.65	-	68.65
14	HGU-1	75	48	-	-	39.76	-	36.13	-
15	DHDT	100	10	-	-	7.34	-	7.34	-
16	GT - I	NA	100	-	-	54.52	-	67.49	-
17	GT - II	NA	100	-	-	71.2	-	71.2	-
18	SRU	NA	NA	20.27	25.34	25.34	23.78	23.78	23.78
19	NHDT,801	100	5	3.26	2.96	-	2.36	-	2.36
20	PRIME G , 803	100	5	2.81	2.81	-	2.81	-	2.81
21	BOILER-6	23	40	-	-	32.88	-	32.56	-
22	HGU -2	85	15	-	-	-	-	-	-
23	New PRIME G	100	5	3.66	3.66	-	3.07	-	3.07
24	New NHT/CCRU	100	5	4.02	4.02	-	3.99	-	3.99
25	INDJET 930	NA	-	3.85	3.85	-	3.81	-	3.81

STACK EMISSIONS MONITORING
TABLE 1.0 : Ni+Vi EMISSIONS (Conc.)

Sr.No	Source Name	Fuel (% of Gas Firing)	Limit	Oct'25	Nov'25	Dec'25	Jan'26	Feb'26	Mar'26
			Conc. (mg/Nm3)	Actual (mg/Nm3)	Actual (mg/Nm3)	Actual (mg/Nm3)	Actual (mg/Nm3)	Actual (mg/Nm3)	Actual (mg/Nm3)
1	AVU - I	40	5	-	-	BDL	-	BDL	-
2	AVU - II	40	5	-	-	BDL	-	BDL	-
3	AVU - III	60	5	-	-	BDL	-	BDL	-
4	CRU	85	5	-	-	BDL	-	BDL	-
5	NSU	85	5	BDL	BDL	-	BDL	-	BDL
6	COKER - A	80	5	BDL	BDL	-	BDL	-	BDL
7	COKER - B	80	5	-	-	-	-	-	-
TPS Combined Stack									
8	BOILER - I	23	-	-	-	-	-	BDL	-
8.1	DUCT -A	23	5	-	-	-	-	-	-
8.2	DUCT - B	23	5	-	-	-	-	-	-
9	BOILER - II	-	-	BDL	BDL	-	-	-	-
9.1	DUCT -A	23	5	-	-	-	-	-	-
9.2	DUCT - B	23	5	-	-	-	-	-	-
10	BOILER - III	23	-	BDL	BDL	-	BDL	-	-
10.1	DUCT -A	23	5	-	-	-	-	-	-
10.2	DUCT - B	23	5	-	-	-	-	-	-
11	BOILER - IV	23	-	-	BDL	-	-	-	-
11.1	DUCT -A	23	5	-	-	-	-	-	-
11.2	DUCT - B	23	5	-	-	-	-	-	-
12	BOILER - V	23	-	BDL	BDL	-	BDL	-	BDL
12.1	DUCT -A	23	5	-	-	-	-	-	-
12.2	DUCT - B	23	5	-	-	-	-	-	-
New Units									
13	RFCCU	NA	5	BDL	BDL	-	BDL	-	BDL
14	HGU-1	75	5	-	-	BDL	-	BDL	-
15	DHDT	100	5	-	-	BDL	-	BDL	-
16	GT - I	NA	5	-	-	BDL	-	BDL	-
17	GT - II	NA	5	-	-	BDL	-	BDL	-
18	SRU	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL
19	NHDT,801	100	5	BDL	BDL	-	BDL	-	BDL
20	PRIME G , 803	100	5	BDL	BDL	-	BDL	-	BDL
21	BOILER-6	23	5	-	-	BDL	-	BDL	-
22	HGU -2	85	5	-	-	-	-	-	-
23	New PRIME G	100	5	BDL	BDL	-	BDL	-	BDL
24	New NHT/CCRJ	100	5	BDL	BDL	-	BDL	-	BDL
25	INDJET 930	NA	-	BDL	BDL	-	BDL	-	BDL

Detox Corporation Pvt Ltd				
Analysis Results for the Month of January ,2026				
Company Name		IOCL-Barauni Refinery		
Sample Type		Work Area Environment Monitoring		
Sr. No	Location	Date of sampling	Parameters	
			HC(ppm)	Benzene(ppm)
1	Eastern Side of Gantry -1	10.01.2026	20.2	2.2
2	Middle Side of Gantry - 6	10.01.2026	23.3	3.2
3	Western Side of Gantry -12	10.01.2026	29.65	2.30
4	LPG Bulk Loading Area	13.01.2026	22.30	1.25
5	RFCCU - Near CO incinerator	13.01.2026	18.3	2.9
6	ETP Guard Basins	13.01.2026	24.6	3.3
7	API Oil Separators East Side	17.01.2026	23.36	5.6
8	API Oil Separators West Side	17.01.2026	21.25	4.25
9	Pollution Control Lab	21.01.2026	26.56	2.3
10	Shift Lab	21.01.2026	0.89	0.99
11	CRU	21.01.2026	2.21	1.56
12	MSQ	21.01.2026	3.2	0.89
13	COKER-A	21.01.2026	2.1	0.35
Note: All parametrs has been Analysed at Site Lab				
BQL=Below Quantification Limit				

Detox Corporation Pvt Ltd

Analysis Results for the Month of January -2026

Company Name			IOCL-Barauni Refinery	
Sample Type			Work Area Environment Monitoring	
Sr. No	Parameters	Location	Date of sampling	Values in µg/m3 & CO in ppm
1	SO ₂	RFCCU - Near CO incinerator	23.01.2026	10.25
2	H ₂ S	RFCCU - Near CO incinerator	23.01.2026	4.25
3	CO	RFCCU - Near CO incinerator	23.01.2026	7.3
4	SO ₂	SRU: Near Amine Regenerator	24.01.2026	50.25
5	SO ₂	ARU: Near Amine Regenerator	27.01.2026	20.25
6	H ₂ S	SRU: Near Amine Regenerator	24.01.2026	18.65
7	H ₂ S	ARU: Near Amine Regenerator	27.01.2026	3.26
8	SO ₂	DHDT: Near Heater	28.01.2026	25.3
9	SO ₂	HGU 1: Near Reformer Stack	28.01.2026	10.25
10	H ₂ S	DHDT: Near Heater	28.01.2026	0.89
11	H ₂ S	HGU 1: Near Reformer Stack	28.01.2026	0.3
12	H ₂ S	ETP: Near Spent Caustic Sump	31.01.2026	2.9
13	H ₂ S	AVU-1: Near Hot Well	31.01.2026	2.66
14	H ₂ S	AVU-2: Near Hot Well	31.01.2026	0.85
15	H ₂ S	AVU-3: Near Hot Well	31.01.2026	0.76
16	H ₂ S	SRU: Near Sour Water Stripper	24.01.2026	2.65
17	H ₂ S	ETP: Near Effluent Sump	31.01.2026	0.20
18	SO ₂	HGU 2: Near Reformer Stack	29.01.2026	0.45
19	H ₂ S	HGU 2: Near Reformer Stack	29.01.2026	0.3

Note: All parametrs has been Analysed at Site Lab

BQL=Below Quantification Limit

Detox Corporation Pvt Ltd**Analysis Results for the Month of October ,2025****Company Name****IOCL-Barauni Refinery****Sample Type****Work Area Environment Monitoring****Sr. No****Location****Date of sampling****Parameters****HC(ppm)****Benzene(ppm)**

1

Eastern Side of Gantry -1

03.10.2025

20.3

4.1

2

Middle Side of Gantry - 6

03.10.2025

22.3

5.6

3

Western Side of Gantry -12

03.10.2025

29.65

4.20

4

LPG Bulk Loading Area

04.10.2025

24.12

3.22

5

RFCCU - Near CO incinerator

04.10.2025

18.3

3.7

6

ETP Guard Basins

04.10.2025

26.4

2.1

7

API Oil Separators East Side

04.10.2025

25.45

8.2

8

API Oil Separators West Side

04.10.2025

23.25

6.32

9

Pollution Control Lab

07.10.2025

28.65

2.6

10

Shift Lab

07.10.2025

0.98

0.89

11

CRU

07.10.2025

3.2

1.25

12

MSQ

07.10.2025

5.6

0.56

13

COKER-A

07.10.2025

3.8

0.32

Note: All parametrs has been Analysed at Site Lab**BQL=Below Quantification Limit**

115

Detox Corporation Pvt Ltd

Analysis Results for the Month of October -2025

Company Name			IOCL-Barauni Refinery	
Sample Type			Work Area Environment Monitoring	
Sr. No	Parameters	Location	Date of sampling	Values in µg/m3 & CO in ppm
1	SO ₂	RFCCU - Near CO incinerator	08.10.2025	12.1
2	H ₂ S	RFCCU - Near CO incinerator	08.10.2025	5.5
3	CO	RFCCU - Near CO incinerator	08.10.2025	9.4
4	SO ₂	SRU: Near Amine Regenerator	24.10.2025	69.3
5	SO ₂	ARU: Near Amine Regenerator	24.10.2025	20.25
6	H ₂ S	SRU: Near Amine Regenerator	24.10.2025	19.36
7	H ₂ S	ARU: Near Amine Regenerator	24.10.2025	3.5
8	SO ₂	DHDT: Near Heater	25.10.2025	25.2
9	SO ₂	HGU 1: Near Reformer Stack	25.10.2025	12.4
10	H ₂ S	DHDT: Near Heater	25.10.2025	0.8
11	H ₂ S	HGU 1: Near Reformer Stack	25.10.2025	0.39
12	H ₂ S	ETP: Near Spent Caustic Sump	28.10.2025	3.8
13	H ₂ S	AVU-1: Near Hot Well	29.10.2025	2.89
14	H ₂ S	AVU-2: Near Hot Well	29.10.2025	0.55
15	H ₂ S	AVU-3: Near Hot Well	29.10.2025	0.75
16	H ₂ S	SRU: Near Sour Water Stripper	30.10.2025	2.65
17	H ₂ S	ETP: Near Effluent Sump	30.10.2025	0.42
18	SO ₂	HGU 2: Near Reformer Stack	28.10.2025	0.62
19	H ₂ S	HGU 2: Near Reformer Stack	28.10.2025	0.39

Note: All parametrs has been Analysed at Site Lab

BQL= Below Quantification Limit