Prepared By- Amit Kumar

Checked By- P. Giridharan

Environmental Monitoring Data IOCL-Barauni Refinery

(Apr'2025 to Sep'2025)

Production details (Apr'2025 to Sep'2025)			
All figures in Metric Tonnes		**All figures in Metric Tonnes**	
Total Crude Processed	**Quantity**	**Production**	**Quantity**
Low sulfur	2828333.80	LPG	167780.10
High sulfur	251453.70	SRN	179673.10
Total Crude	3079787.50	EBMS	164968.60
		MS (Euro-VI)	618885.30
External Inputs		SKO	45474.18
SKO Interface	8230.50	JET A-1 (ATF)	119900.00
Ethanol	36323.43	HSD (Euro-VI)	1440363.00
DHDT feed	26595.00		
Contaminated Product	15.57	LSHS(Premium)	64110.52
Naphtha Received and Processed	10007.27	RPC EX COKER-A	84818.22
RLNG	66235.00	Bitumen VG 40	75000.00
Total external input	147406.77	Bitumen VG 30	10376.66
		Reformate	10697.23
		DHDT Feed	104645.60
		Bitumen VG30	30500.00
		Bitumen VG 40	12900.00
		CBFS	24552.49
		SULFUR	**5700.00**

IndianOil
Barauni Refinery

Status as on 30.09.2025

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
i	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.**
ii	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**
iii	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.**
iv	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 SO_2 emissions from existing units at Barauni Refinery are within the stipulated limit of 815 kg/hr as per latest EC. • **Complied.**

v	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.**
vi	The entire quantity of liquid effluent coming out of the complex should conform to MINAS both in terms of quantity and quality before discharge into the drainage system. The process plant effluent should be discharged through pipeline/closed channel.	• No effluent is being discharged to river Ganga since Oct 2013 and the line going to river Ganga has been dismantled. • The treated water quality is within MINAS. • **Complied.**
vii	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 par 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, NOx, 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 SO_2, NOx, 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.**
viii	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.**

ix	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.**
x	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 and its probable consequence.	• 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.**
xi	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.**
xii	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**
xiii	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**
xiv	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.**
xv	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	• 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.**

	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.	
xvi	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.**
xvii	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 minimum tree density of 1000 trees per acre.	• 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**
xviii	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**
xix	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.**
xx	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.**

Status as on 30.09.2025

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	Item	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 interalia 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.

Status as on 30.09.2025

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
i	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 SO_2 emissions from existing units at Barauni Refinery are within the stipulated limit of 815 kg/hr as per latest EC. • **Complied.**
ii	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, Bhubaneshwar) 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, NOx, 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 SO_2, NOx, CO & PM have been installed and connected to CPCB server for 25 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.**
iii	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.**
iv	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.**
v	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.**
vi	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-processers in accordance with Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016. • **Complied.**

vii	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.**
viii	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: a) To prevent inundation of nearby agricultural land / fields of farmers, a 1.0 M high Bundh has been made around borrow pit. b) To minimize mosquito menace in nearby villages floating water hyacinth (JalKumbhi) was removed nearby the newly made Bundh. c) Fogging was undertaken in nearby villages (Bihat, Mahna, Papraur etc.) to control mosquito spread. d) 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.**

(B) General Conditions

i	The project authority must adhere to the stipulations made by Pollution Control Board and state government.	• Stipulations being followed. • **Complied.**
ii	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.**
iii	A green belt of adequate width and density should be provided all around the plant in	• Total plot area of the refinery: 887.83 acres. • Green belt area in Refinery: 43.8 acres.

	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.	• 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**
iv	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.**
v	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.**
vi	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**
vii	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**
viii	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.**
ix	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**
x	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.**
xi	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.**
xii	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 ministry and SPCB.	• 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.**
xiii	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 30.09.2025

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

Specific Condition

SN	0Point	Status
i	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 SO_2 emission standards. H_2S content in FG is also within the revised standard. • Continuous on-line stack analyzers for monitoring of SO_2, NOx, CO & PM have been installed and connected to CPCB server for 25 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**
ii	The process emissions (SO_2, NOx, 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 SOx, NOx, 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 SO_2 emissions from existing units and new facilities at Barauni Refinery are within the stipulated limit of 815 kg/hr as per latest EC. • **Complied.**

iii	Ambient air quality monitoring stations, [SPM, SO_2, NOx 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 modelling exercise to represent short term GLCs Continuous on-line stack monitoring equipment should be installed for measurement of SO_2 and NOx.	• 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, NOx, 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 SOx, NOx, CO & PM for 24 stacks. These analyzers are connected directly to CPCB and BSPCB servers for continuous emission monitoring. • **Complied**
iv	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 to 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**
v	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.). • H_2S in fuel gas conforms to the revised MoEF&CC standards 2008 (<150 mg/Nm3). • **Complied**

vi	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**
vii	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 "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." Further it was also observed "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 Khatals are responsible for poor quality w.r.t odour." • Presently testing of ground water quality in nearby villages is done quarterly by MoEF&CC approved agency. Reports enclosed. • **Complied.**
viii	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.**
xi	The company shall strictly follow all the recommendation mentioned in the charter on	• 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.

	Corporate Responsibility for Environmental Protection (CREP).	• **Complied.**
x	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**
xi	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**
xii	Occupational health surveillance of worker shall be done on a regular basis and records maintained as per the Factory Act.	• A full-fledged Occupational Health centre is established in 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**
xiii	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**
xiv	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**
General Conditions		
i	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 statuary body.	• Stipulations being followed. **Complied**
ii	No further expansion or modification in the project shall be carried without prior approval of the Ministry of Environment and Forests. In case 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.	• Prior approval of ministry is always taken before carrying out any expansion or modification of the plant. **Complied**
iii	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**
iv	Wastewater shall be properly collected and treated so as to conform to the standards prescribed under	• 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

	EP Act & Rules and mentioned in the Consents provided by the relevant SPCB.	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.**
v	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**
vi	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**
vii	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**
viii	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	• 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,

	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.	environment monitoring, and studies related to environment etc. • **Complied**
ix	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 21 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**
x	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**
xi	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**
xii	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 Executive.	• Barauni Refinery has a full-fledged environment protection cell and a well-equipped dedicated pollution control laboratory. • **Complied**
xiii	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 30.09.2021

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_2S in Fuel Gas**	H_2S 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 SOx 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_2S 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 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 31.03.2024

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 SO_2 emission standards for all the furnaces, boilers and captive power plant including RFCCU regenerator and SRU. • The quantum of total SO_2 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.**

SL. No	ACTIVITY	STATUS
4.	a) With regard to NOx emission, the new refineries/process units should install low NOx burners. (b) For retrofitting of low NOx burners in existing units the same expert committee will suggest the strategies and action plan within six months.	• Low NOx 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 & DDCS- 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 UNFCC 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.	• SOx & NOx are now monitored continuously in 25 nos. of stacks with SOx/NOx analyzers. • **Complied.**

SL. No	ACTIVITY	STATUS
7. (a) 7. (b)	Refineries should also monitor total HC and Benzene in the premises (particularly at loading/un-loading operations and ETP). The status and action plan to be submitted within 6 months. 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)	• HC & Benzene are monitored regularly in Tank wagon Gantries, ETP & QC lab. • 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 m3/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	• Following procedures are in place for minimization of oily sludge generation:

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 SO_2 emissions). This will be ensured by June 2003.	• RPC is being sold to reputed calciner. • **Complied.**

IndianOil
Barauni Refinery

Status as on 30.09.2025

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	2Point	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 18th 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, NOx and CO of all the sacks shall be carried out.	• Continuous on-line stack analyzers for monitoring of SO_2, NOx, CO & PM have been installed and connected to CPCB server for 25 nos. of stacks. • **Complied.**
iii.	The process emissions {SO2, NOx, 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.	• SO_2, NOx, CO & PM are monitored with online SO_2, NOx, 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 SO_2 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, valves, pipelines are required. Proper maintenance of mechanical seals of	• Leak detection and repair programme is already in place at Barauni Refinery and same is carried out on quarterly basis. • Preventive maintenance schedule for each unit is in place and same is strictly adhered to.

	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.	• 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.	SO2 emissions after expansion from the plant shall not exceed 815 kg/hr and further efforts shall be made for reduction of SO2 load through use of low sulphur fuel. Sulphur recovery units shall be installed for control of H2S emissions. The overall sulphur recovery efficiency of Sulphur recovery unit with tail gas treating shall not be less than 99.9%.	• Total SO_2 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. SO2, NOx, H2S, 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 deiced 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, NOx, 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 Apr-2025 to Sep-2025 was 877.5 m3/hr which is within limit of 1000 m3/hr. • Barauni Refinery has received NOC from CGWA on 21.04.2025 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 2024-25 is 492.38 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 m^3/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:* o **Cooling Tower makeup water** o **Fire water make up** o **Coke cutting water** o **Make up water for Eco Ponds** o **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: o **West of AVU-III** o **West of RFCCU** o **South of DHDT** o **East of Coker A** o **North of Coker A** o **North west corner of Stores** o **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 hectres of green belt has been developed at Munger Forest Division. Total 1, 65,000 no. of tree has been planted. • Total Geen 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 stations 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, NOx, 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, 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).	• The ambient noise levels from existing facilities conform to the standards prescribed under standards 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	• 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

	the process activities of the project to conserve fresh water.	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	• 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

	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.	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 and six-monthly compliance status reports shall be posted 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**
xv.	The environmental statement for each financial year ending 31st 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	• The information regarding accord of Environment clearance for the subject project has been advertised in two local newspapers. Copy enclosed as **Annexure-4.** • **Complied.**

	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.	
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

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	**H_2S in Fuel Gas**	H_2S 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**	Continuous monitoring is done through online analyzers. These analyzers are directly connected to CPCB and BSPCB servers. **Complied**

	System for SO_2 & NO_x emissions	
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/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_2S 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 31.10.2025

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	Construction of Health & Wellness Centre in Maniappa, Matihani, Begusarai	55	13.75
19	Construction of Boundary Wall of Red Cross Society in Maniappa, Matihani, Begusarai	43	10.66
	Total Expenditure till date	**5688**	**3532.48**

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.	**Name of Project**	**Expenditure (Rs Lacs) (01.04.2025 to 31.10.2025)**
1	Gyanodaya Scholarship Scheme	3.96
2	Barauni Refinery Shri Krishna Singh Chhatravritti Yojana	19.25
3	Food basket for TB Patients under PMTBMBA	16.56
4	PM intern Yojana	0.18
	Total Expenditure	**39.95**

Annexure-3

इंडियन ऑयल कॉर्पोरेशन लिमिटेड

Indian Oil Corporation Limited

रिफाइनरीज़ प्रभाग

Refineries Division

Ref No : TS/HSE/2020/02/

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 vide 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

Barauni Refinery

Ref No TS/HSE/2020/027 Date 22.02.2020

To,

Municipal Commisioner,
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-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

Barauni Refinery

Annexure-4

Copy of advertisement regarding receipt of Environment Clearance in two local newspapers

HINDUSTAN TIMES, PATNA
WEDNESDAY, MAY 17, 2017

Triple talaq a matter of faith for 1,400 yrs: Sibal

IN COURT Likens divorce law to belief about Ram's birthplace

Bhadra Sinha

NEW DELHI: The All India Muslim Personal Law Board (AIMPLB) on Tuesday defended triple talaq in the Supreme Court, saying it was being practised for 1,400 years and was a matter of faith just like Ram Lalla's birthplace.

The board brought up the long pending dispute over building a temple to Lord Ram in Ayodhya, which Hindus believe is his birthplace, before a five-judge constitution bench which is hearing petitions demanding scrapping of the controversial divorce practice.

Several Muslim women have told the court the custom was biased and against gender justice.

"Triple talaq is not a question of equity and good conscience but of faith. Can't bring constitutional morality into it," board's lawyer and senior Congress leader Kapil Sibal said.

He also said while Hindu laws protected all customs "in Muslim law they say customs violate Constitution".

In a Hindu majority state, Muslims, who were a minority, should be protected.

Several Muslim women have told the court the custom was biased and against gender justice. The Centre backs the petitioners, saying the practice was unconstitutional and against equality.

• Kapil Sibal

Sharia was personal law and not subject to fundamental rights, Sibal said about the Islamic legal and moral code.

"Triple talaq is there since 637. Who are we to say that this is un-Islamic. Muslims are practicing it for last 1,400 years. It is a matter of faith. Hence, there was no question of constitutional morality and equity," Sibal said.

"If I have faith that Lord Ram was born at Ayodhya, then it's a matter of faith and there is no question of constitutional morality."

Sibal told the multi-faith bench led by Chief Justice JS Khehar that the source of triple talaq could be found in Hadith and that it came into being after the time of Prophet Muhammad.

The Centre told the court, which is holding day to day hearing in the case, on Monday it would bring a matrimony law for Muslims to fill a legal vacuum should it strike down triple talaq.

SHARIA WAS PERSONAL LAW AND NOT SUBJECT TO FUNDAMENTAL RIGHTS, SIBAL SAID ABOUT THE ISLAMIC LEGAL AND MORAL CODE

Triple talaq is the lone controversial way Sunni Muslim men in India can get a divorce. It allows a man to end a marriage by uttering the word talaq thrice in quick succession.

Attorney general Mukul Rohatgi said it wasn't the court's job to interpret the Quran and it should consider the constitutional validity of triple talaq and not restrict itself to examining whether the custom was fundamental to practicing the faith.

If the government brings in a new law it could mean the start of a process to overhaul Muslim personal laws in India that are now guided by a 1937 Sharia code. India has separate sets of personal laws for each religion governing marriage, divorce, succession, adoption and maintenance.

The country's top law officer disagreed with the court that the government should first address whether triple talaq was "essential to religion or not", saying the it was not an ecclesiastical court.

(With agency inputs)

Victim kin allege death in custody, block NH 30

Mukesh K Mishra

PATNA: ... Highway (NH) 30 near the bypass ... of traffic for many hours on Tuesday. They also damaged window panes of several vehicles and raised slogans against the police, demanding immediate arrest of the ... killing.

The deceased, Chote Lal Bind ..., had died during treatment at Patna Medical College Hospital (PMCH) on Monday. However, his family alleged that Bind was killed in police custody.

Bind was arrested from Begampur area under Bypass police station on charge of consuming liquor on May 11.

Laxmania Devi, wife of Bind, alleged that her husband was murdered in police custody. "There were no injury marks on his body when he was arrested by the Bypass police on May 11. But, when we saw his body on Monday, it wore injury marks on his face, which proved that he was tortured and killed in police custody during interrogation," she said.

The road blockade was lifted after senior police officers reached there and assured to take action against the guilty policemen.

Station house officer (SHO) of Bypass police station, Rajendra Prasad said the cause of the death would be known only after getting the postmortem report.

The SHO, however, said Bind died in course of treatment at the PMCH on Monday.

from page one

Housing

tary, cabinet secretariat, Brijesh Mehrotra said there was a short... economically weaker sections in the country.

Under the policy, state agencies engaged in construction of houses and development of plots, including BSHB, urban local bodies and planning authorities, would have to allocate 50% of the plots and houses for EWS and LIG sections in all projects involving 4000 square metres of land and more.

"Of the total allocation, 50% will be earmarked for EWS and ...

from page one

I-T raids

Yadav is the deputy chief minister of Bihar.

Union minister Ravi Shankar Prasad had alleged that these transactions were a case of 'quid pro quo' as they dated to the period when Lalu Prasad was the railway minister, and dared Bihar chief minister Nitish Kumar to take action against him. He had claimed one such land deal involving Lalu and his family members was in Bijwasan in Delhi.

Reacting sharply, the Bihar ...

... setback to the powerful regional satrap who was disqualified from Parliament and banned from contesting elections after he was convicted of corruption in 2013 in one of the biggest scams in Bihar.

However, shortly after Lalu's tweet, RJD spokesperson Manoj Jha appeared to have launched a damage control exercise, saying the reference to "new alliance partners" was an allusion to how the BJP had picked up the income-tax department and CBI as its partners to harass political rivals.

"We say, I-T and CBI have now become BJP's new alliance part-...

Nitish

when he broke his silence over the alleged acquisition of assets worth Rs 1,000 crore by RJD chief Lalu Prasad and his family, through shell companies at throwaway prices.

The matter related to the company affairs department and the Centre was competent to initiate action, if there was documentary evidence to warrant an inquiry, he had said in the presence of Prasad's son and deputy CM Tejashwi Prasad Yadav after the conclusion of his weekly Lok Samvad programme.

maintenance for five years.

The six districts are Vaishali, Muzaffarpur, Sitamarhi, Sheohar, East Champaran and West Champaran.

... said the company had almost completed its task. "Work on only six roads remains to be completed. Under the prevailing law and order condition, it will be difficult for us to continue our work," he said. Meanwhile, an NHPC official said the two engineers had some dispute with a local contractor over payment against the work done.

अगमकुआं थाना क्षेत्र के छोटी पहाड़ी स्थित गोदाम से खाद्य सुरक्षा विभाग ने 230 [illegible]

मिलावटी सरसों तेल के धंधे का [illegible]

अवैध कारोबार

पटना सिटी | हिन्दुस्तान प्रतिनिधि

खाद्य सुरक्षा विभाग ने अगमकुआं थाना क्षेत्र के छोटी पहाड़ी [illegible] पास स्थित गोदाम में छापेमारी कर मिलावटी सरसों तेल के धंधे का भंडाफोड़ किया है। [illegible] सरसों तेल के नमूने [illegible] जांच के लिए [illegible] है। आर्थिक अपराध इकाई के [illegible] पासवान ने बताया कि [illegible] छह हजार लीटर पाम ऑयल जब्त किया गया है। [illegible] मिलावटी सरसों तेल [illegible] किया गया था।

[illegible] सूचना के आधार पर खाद्य सुरक्षा की टीम ने पुलिस के साथ मिलकर मंगलवार की दोपहर गोदाम में छापा मारा। जहां बड़े पैमाने पर सरसों का तेल का निर्माण और पैकिंग किया जा रहा था। टीम को सूचना मिली थी कि कारखाने में पाम ऑयल, रंग और [illegible] के मिश्रण से सरसों तेल तैयार किया जा रहा है। कारखाने में छापेमारी से आसपास के [illegible] हड़कंप मच गया। छापेमारी टीम में खाद्य सुरक्षा पदाधिकारी सुदामा चौधरी, [illegible] कश्यप, आर्थिक अपराध इकाई के इंस्पेक्टर देवनारायण पासवान, दीपक प्रकाश, अरविंद कुमार राय शामिल थे।

टीम का कहना है कि मिलावट की सूचना पर छापेमारी कर नमूना की जांच [illegible]

मचा हड़कंप

- खाद्य सुरक्षा विभाग ने मारा छापा, जांच के लिए भेजा तेल का नमूना
- बड़े पैमाने पर गोदाम में किया जा रहा था सरसों तेल का निर्माण और पैकिंग
- अवैध रूप से मिलावट करने वालों में मची अफरा-तफरी

06 हजार लीटर पॉम ऑयल एक बड़े टैंकर से जब्त

150 खाली कटेनर व मिलावट के सामान बरामद

मिलावटी तेल से स्वास्थ्य को नुकसान

- किडनी और लीवर को खराब कर देता है
- गॉल ब्लाडर कैंसर का खतरा 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 गुलजारबाग स्थित गोदाम में देर शाम छापेमारी की गई। जहां से [illegible]

[illegible] इस दौरान [illegible] अवैध [illegible] दुकानदारों ने [illegible] 21 सौ जुर्माना के तौर पर वसूला की।

[illegible] पर जुटे रहे। सबसे ज्यादा परेशानी सुबह में ऑफिस व अन्य काम पर जाने वाले लोगों को हुई। वहीं कुछ इलाकों के लोग स्नानादि के लिए गंगा घाट का सहारा लिया। इधर सुबह से लेकर दोपहर तक कई इलाकों में महिलाओं को तसला-बाल्टी लिए पानी की जुगाड़ के लिए भटकना पड़ा।

स्थानीय लोगों ने बताया कि आलमगंज थाना क्षेत्र के बबुआगंज स्थित बोरिंग पंप का रॉड टूट जाने से शनिवार की दोपहर से ठप पड़ा है। वहीं खाजेकलां थाना क्षेत्र के गुरुगोविंद सिंह अस्पताल परिसर स्थित बोरिंग पंप [illegible] की शाम से ठप पड़ा है। इस [illegible] पंप का भी रॉड टूट जाने से जलापूर्ति बंद रही।

किन-किन इलाकों में रहा जलसंकट : दोनों बोरिंग पंप ठप होने से 40 हजार से अधिक की आबादी पीने की पानी के लिए हलकान रही। नौजान, बबुआगंज, [illegible] आलमगंज, [illegible] [illegible]

गुरहट्टा, कोठासल पुलिस चौकी [illegible] के लोग पानी के लिए परेशान रहे।

मोबाइल नहीं उठाते अधिकारी : समस्या को लेकर जलपर्षद के [illegible] से लगातार बात करने की कोशिश की गई। लेकिन मोबाइल रिसिव नहीं किया गया। स्थानीय निवासी धनंजय मेहता ने बताया कि बबुआगंज बोरिंग खराब होने की सूचना रविवार को ही विभाग को दी थी। बावजूद मंगलवार की शाम जलपर्षद के कर्मी ठप पड़े बोरिंग को दुरुस्त करने पहुंचे। मैकेनिकल टीम कर्मियों ने बताया कि रात तक दोनों बोरिंग पंप को हर हाल में चालू कर दिया जाएगा।

क्या है स्थिति : सिटी अंचल के 20 वार्डों के 90 फीसदी लोगों को जलापूर्ति पर ही निर्भर रहना पड़ता है। लेकिन क्षेत्र के 80 फीसदी बोरिंग पंप की स्थिति काफी जर्जर है। 60 के दशक में बिछे जलापूर्ति पाइप का व्यास कम होने व जर्जर होने से कई इलाकों में पहुंच भी नहीं पाती है। जलापूर्ति पाइप नहीं बिछने से [illegible]

IndianOil

Barauni Refinery

Status as on 30.09.2025

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	Item	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 (Management and Trans-Boundary Movement) Rules, 2016 and Solid Waste Management Rules, 2016 shall be	• Authorization from BSPCB available with validity till 29.08.2027. • **Complied**

	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.	• 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 18th 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 9th 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, Apr 25 to Sep 25 average fresh water consumption was 21060 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 to the TSDF. The ash from boiler shall be sold to brick manufacturers/cement industry.	• Spent catalyst generated in RFCC unit is sent to cement industry for re-processing/co-processing. Pet coke is sold to authorized user. • 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 process as raw materials or as raw substitutes in other processes. (iii) Use of automated filling to minimize spillage.	All critical/important process lines have flow meters installed. All excess/byproduct gases generated are used as fuel 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.

	(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.	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 CER 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 noise pollution.	• 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 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 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.	• **Noted for compliance.** • Prior approval of ministry would be taken before carrying out any expansion or modification of the plant if required.
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	• 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

	upwind and downwind direction as well as where maximum ground level concentrations are anticipated.	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 16th 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	• Training is continuously imparted to all employees on chemical handling.

	examinations for all employees shall be undertaken on regular basis.	• 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 stack 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 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.	• 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.**

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	**H_2S in Fuel Gas**	H_2S 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 SOx 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_2S 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-3

Ref No: IS/HSE/2020/02[illegible] Date: 12.02.2020

To,
Municipal Commissioner
Begusarai Nagar Nigam
Begusarai, Bihar

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

[illegible] No. J-11011/15/2015-IA II (I) [illegible] Expansion of Baraunl Refinery from 6 MMTPA to 9 MMTPA along with polymer units [illegible]

Yours faithfully,

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

Ref No: [illegible]

Date: 12.02.2020

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

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

Ref: EC No. J-11011/19/2015-IA II (I) dated [illegible] Expansion of Barauni Refinery from 6 MMTPA to 9 MMTPA along with polymer units

Yours faithfully,

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

F. No. [illegible]/2015-IA-[illegible]
Government of India
Ministry of Environment, Forest and Climate Change
IA Division

Indira Paryavaran Bhawan
Jor Bagh Road, New Delhi
Dated [illegible] 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 [illegible]sqm 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	[illegible]	[illegible]
3	Naphtha	[illegible]	[illegible]	[illegible]
4	MS (BS VI)	1351.6	372.4	1724.0
5	Aviation Turbine Fuel	104.0	[illegible]	[illegible]
6	Superior Kerosene	[illegible]	0	[illegible]
7	HSD (BS VI)	2787.1	1833.9	4621.0
8	Fuel Oil	[illegible]	[illegible]	[illegible]
9	Bitumen	[illegible]	0	[illegible]
10	Carbon Black Feed Stock	0	0	0
11	Raw Pet Coke (LS)	154.0	[illegible]	[illegible]
12	Raw Pet Coke (HS)	0	184.0	184.0
13	Sulfur	[illegible]	[illegible]	[illegible]
14	Fuel & Loss	[illegible]	[illegible]	[illegible]
	Total	6000	3000	9000

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 <u>Begusarai</u> (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 3[illegible]9292.1sqm 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	-10.8	203.2
6	Superior Kerosene	370.0	0	370.0
7	HSD (BS-VI)	2788.1	1833.9	4621.9
8	Fuel Oil	46.3	-45.9	[illegible]
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

सरपंच

F. No.J-11011/15/2015-IA-I (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 3502921sqm 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	200	200
3	Naphtha	53.4	65.3	118.7
4	MS (BS VI)	1351.6	372.4	1724.0
5	Aviation Turbine Fuel	204.0	63.8	267.2
6	Superior Kerosene	370.0	0	370.0
7	HSD (BS VI)	2787.1	1833.9	4621.0
8	Fuel Oil	46.5	- 45.5	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	154.0	154.0
13	Sulfur	21.7	34.3	56.0
14	Fuel & Loss	59.7	243.0	834
	Total	6000	3000	9000

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**

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 3792921 sqm 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	561	243.0	834
	Total	**6000**	**3000**	**9000**

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
Distt: 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	69.8	203.2
6	Superior Kerosene	370.6	0	373.6
7	HSD, BS VI	2787.1	1833.9	4621.3
8	Fuel Oil	46.2	(-) 45.9	0.3
9	Bitumen	74.2	0	74.2
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

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 3,59,921 sqm 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	200	200
3	Naphtha	83.4	35.3	[illegible]
4	MS (BS VI)	1351.6	372.4	1724.0
5	Aviation Turbine Fuel	[illegible]	[illegible]	[illegible]
6	Superior Kerosene	370.0	0	370.0
7	HSD (BS VI)	2787.1	1833.9	4621.0
8	Fuel Oil	46.5	-45.5	1.0
9	Bitumen	74.0	0	74.0
10	Carbon Black Feed Stock	0	0	0
11	Raw Pet Coke (LS)	54.0	70.0	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

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 3692921sqm 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	204.9	[illegible]	213.2
6	Superior kerosene	472.0	0	472.0
7	HSD (BS-VI)	2787.1	1833.9	4621.0
8	Fuel Oil	46.9	[illegible]	1.0
9	Bitumen	74.0	0	74.1
10	Carbon Black Feed Stock	0	0	0
11	Raw Pet Coke (LS)	154.0	[illegible]	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

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 3592.21sqm 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	88	292.2
6	Superior Kerosene	370.0	0	370.0
7	HSD (BS VI)	2787.1	1833.9	4621.0
8	Fuel Oil	46.9	145.9	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	531	243.0	774
	Total	6000	3000	9000

Page 1 of 7

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:

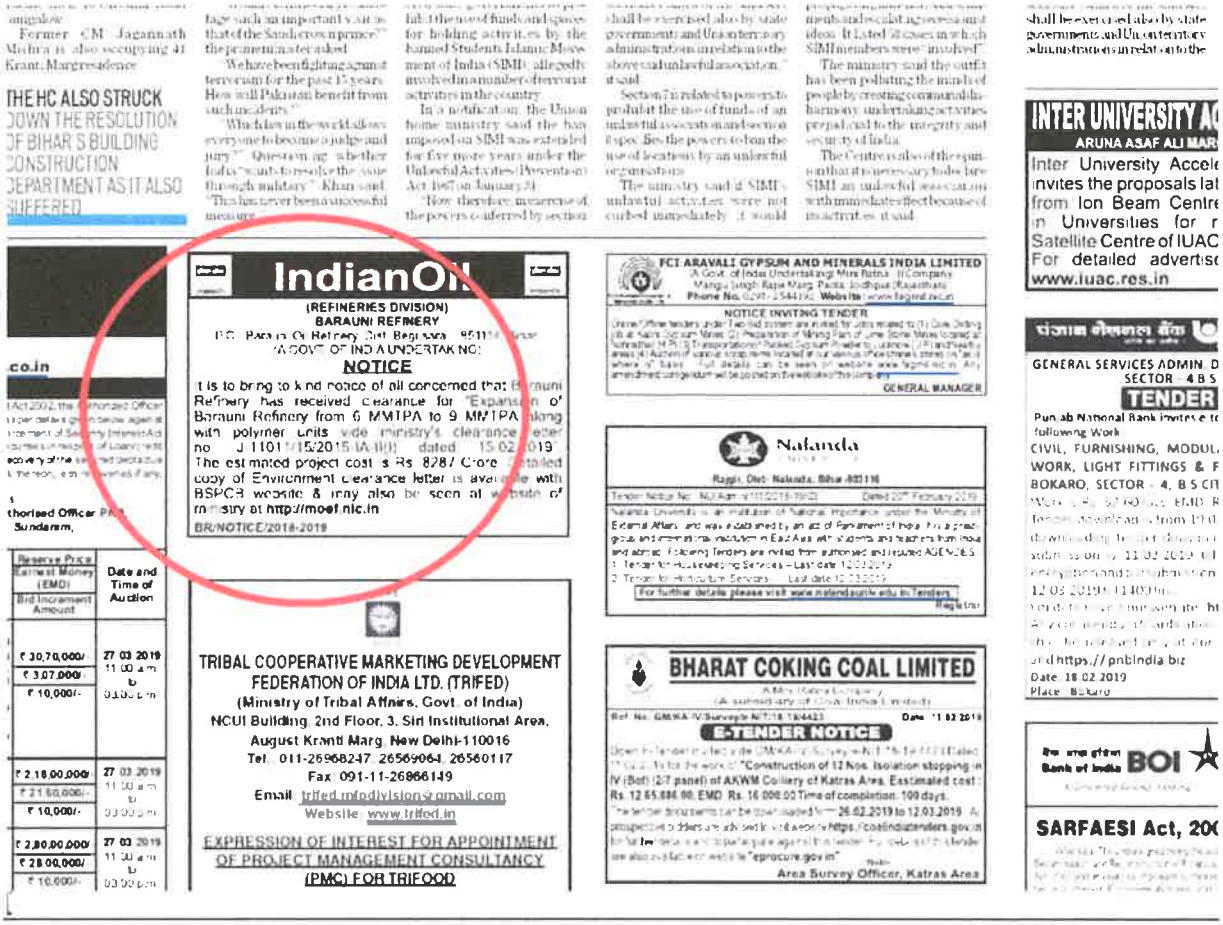
S. No.	Product/By-product	Existing (TMTPA)	Proposed (TMTPA)	Total (TMTPA)
1	LPG	318	169.1	487.1
2	Poly Propylene	0	203	203
3	Naphtha	83.4	35.3	118.7
4	MS (BS VI)	1351.6	372.4	1724.0
5	Aviation Turbine Fuel	204.0	(-)0.8	203.2
6	Superior Kerosene	370.0	0	370.0
7	HSD (BS VI)	2787.1	1833.9	4621.0
8	Fuel 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**

Page 1 of 7

Annexure-4

Copy of advertisement regarding receipt of Environment Clearance in two local newspapers

Hindustan Times Page no.6 Patna Edition dated 20.02.2019



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

IndianOil

(REFINERIES DIVISION)
BARAUNI REFINERY

NOTICE

It is to bring to kind notice of all concerned that Barauni Refinery has received clearance for "Expansion of Barauni Refinery from 6 MMTPA to 9 MMTPA along with polymer units vide ministry's clearance letter no J-11011/15/2015-IA-II(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

BR/NOTICE/2018-2019

FCI ARAVALI GYPSUM AND MINERALS INDIA LIMITED

NOTICE INVITING TENDER

GENERAL MANAGER

Nalanda

BHARAT COKING COAL LIMITED

E-TENDER NOTICE

Area Survey Officer, Katras Area

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ARUNA ASAF ALI MAR

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in Universities for r
Satellite Centre of IUAC
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www.iuac.res.in

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SECTOR - 4 B S

TENDER

Punjab National Bank invites e to
following Work
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WORK, LIGHT FITTINGS & F
BOKARO, SECTOR - 4, B S CIT

Date 18.02.2019
Place Bokaro

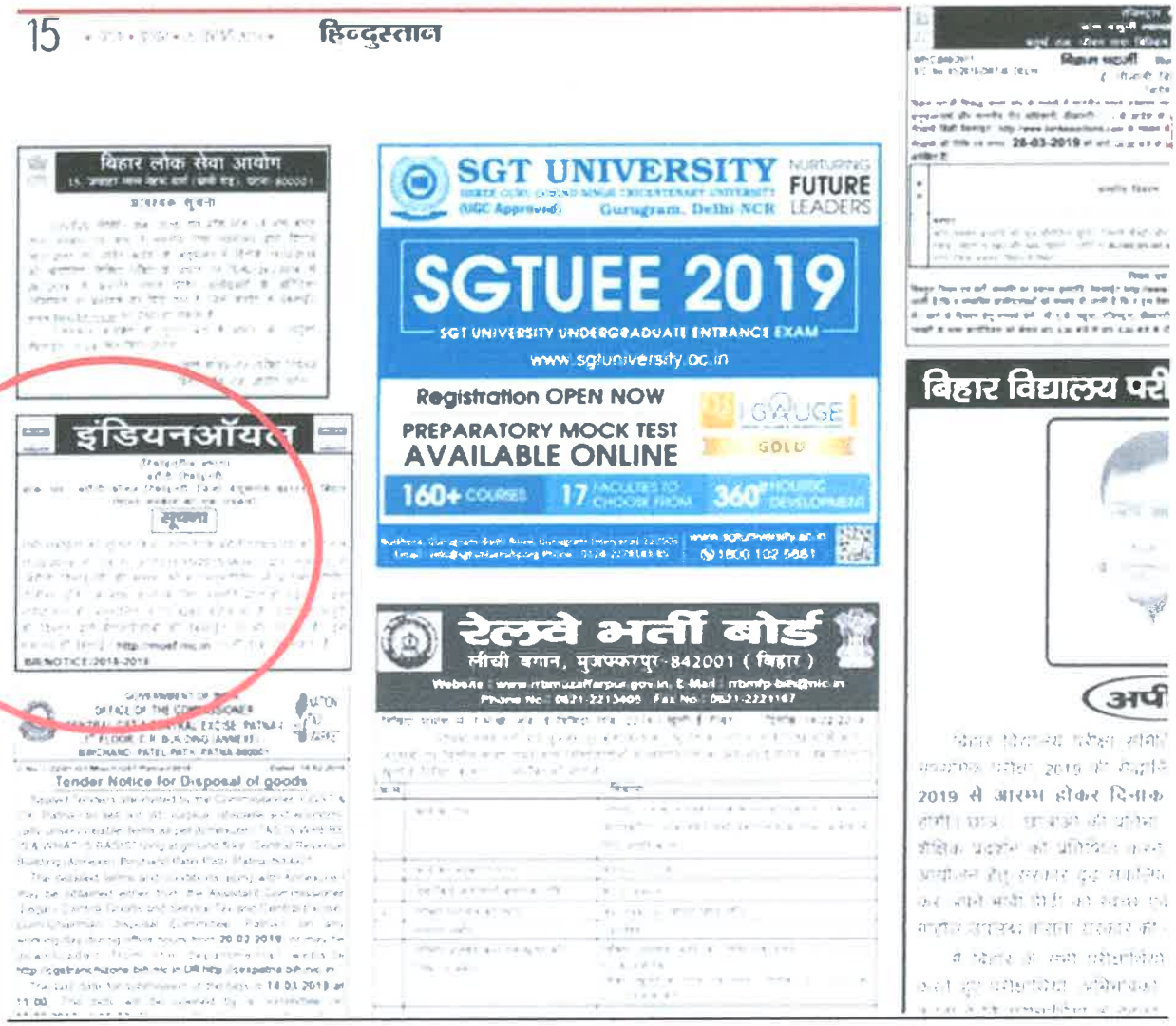
BOI

SARFAESI Act, 20

TRIBAL COOPERATIVE MARKETING DEVELOPMENT FEDERATION OF INDIA LTD. (TRIFED)
(Ministry of Tribal Affairs, Govt. of India)
NCUI Building, 2nd Floor, 3, Sri Institutional Area,
August Kranti Marg, New Delhi-110016
Tel: 011-26968247, 26569064, 26560117
Fax: 091-11-26866149
Email: trifed.mfpdivision@gmail.com
Website: www.trifed.in

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

Hindustan (hindi) dated 20.02.2019



DETOX CORPORATION PVT.LTD.- LAB DIVISION

Analysis Results for the Month of April-2025

Company Name			IOCL-Barauni Refinery	
Sample Type			Water	Water
Sample Quantity			10 L	10 L
Date of Sampling			12.04.2025	12.04.2025
Analysis Period			16.04.2025 to 24.04.2025	16.04.2025 to 24.04.2025
SL. No.	PARAMETER	UNIT	Location Drinking Water: (Project Building)	Drinking Water Nr. B 71
1	Temperature	°C	25.6	25.7
2	Colour	Hazen	BDL(<5.00)	BDL(<5.00)
3	Odour	-	Agreeable	Agreeable
4	Taste	-	Agreeable	Agreeable
5	pH	-	6.56	6.70
6	Turbidity	NTU	BDL(<1.0)	BDL(<1.0)
7	Conductivity	µs/cm	650.0	596.0
8	Total Dissolve Solid - TDS	mg/L	390.0	360.0
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	5.6	4.8
12	Total Hardness	mg/L	220.0	176.0
13	Calcium Hardness (as $CaCO_3$)	mg/L	130.0	100.0
14	Magnesium Hardness (as CaCO3)	mg/L	90.0	76.0
15	M-Alkalinity (as $CaCO_3$)	mg/L	236.0	220.0
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	40.2	36.8
19	Nitrate (as NO_3)	mg/L	1.32	1.35
20	Total Silica (as SiO_2)	mg/L	0.20	0.18
21	Phosphate (as PO_4^{3-})	mg/L	0.32	0.31
22	Sulphate (as SO_4^{2-})	mg/L	12.6	11.30
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	6.20	5.1
29	Potassium (as K)	mg/L	3.2	3.1
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 compunds (as C_6H_5OH)	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	0.20	0.18
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 Resdiaul 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

Analysed By: Chandani,Vipul,Nikhil, Jenil **Approved By: Sejal Patel**

DETOX CORPORATION PVT.LTD.- LAB DIVISION

Analysis Results for the Month of May-2025

Company Name			**IOCL-Barauni Refinery**	
Sample Type			Water	Water
Sample Quantity			10 L	10 L
Date of Sampling			10.05.2025	10.05.2025
Analysis Period			16.05.2025 to 23.05.2025	16.05.2025 to 23.05.2025
SL. No.	**PARAMETER**	**UNIT**	**Location**	
			Drinking Water: (Project Building)	**Drinking Water Nr. B 71**
1	Temperature	°C	25.7	25.6
2	Colour	Hazen	BDL(<5.00)	BDL(<5.00)
3	Odour	-	Agreeable	Agreeable
4	Taste	-	Agreeable	Agreeable
5	pH	-	6.7	6.5
6	Turbidity	NTU	BDL(<1.0)	BDL(<1.0)
7	Conductivity	µs/cm	650	596
8	Total Dissolve Solid - TDS	mg/L	410	380
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	4.9
12	Total Hardness	mg/L	210	180
13	Calcium Hardness (as $CaCO_3$)	mg/L	132	106
14	Magnesium Hardness (as CaCO3)	mg/L	78	74
15	M-Alkalinity (as $CaCO_3$)	mg/L	228	210
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	40.6	37.2
19	Nitrate (as NO_3)	mg/L	1.28	1.3
20	Total Silica (as SiO_2)	mg/L	0.18	0.16
21	Phosphate (as PO^{3-})	mg/L	0.3	0.28
22	Sulphate (as SO^{2-})	mg/L	13.8	11.9
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	6.8	5.8
29	Potassium (as K)	mg/L	3.6	3.2
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 compunds (as C_6H_5OH)	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 Resdlaul 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

Analysed By: Chandani,Vipul,Nikhil, Jenil **Approved By: Sejal Patel**

DETOX CORPORATION PVT.LTD.- LAB DIVISION				
Analysis Results for the Month of June-2025				
Company Name			IOCL-Barauni Refinery	
Sample Type			Water	Water
Sample Quantity			10 L	10 L
Date of Sampling			13.06.2025	13.06.2025
Analysis Period			17.06.2025 to 24.06.2025	17.06.2025 to 24.06.2025
SL. No.	PARAMETER	UNIT	Location	
			Drinking Water: (Electrical Workshop)	Drinking Water(F3-12)
1	Temperature	°C	25.8	25.5
2	Colour	Hazen	BDL(<5.00)	BDL(<5.00)
3	Odour	-	Agreeable	Agreeable
4	Taste	-	Agreeable	Agreeable
5	pH	-	6.82	6.66
6	Turbidity	NTU	BDL(<1.0)	BDL(<1.0)
7	Conductivity	µs/cm	662	606
8	Total Dissolve Solid - TDS	mg/L	398	370
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	4.8
12	Total Hardness	mg/L	180	170
13	Calcium Hardness (as $CaCO_3$)	mg/L	120	102
14	Magnesium Hardness (as CaCO3)	mg/L	60	68
15	M-Alkalinity (as $CaCO_3$)	mg/L	190	188
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	38.9	35.8
19	Nitrate (as NO_3)	mg/L	1.2	1.22
20	Total Silica (as SiO_2)	mg/L	0.16	0.14
21	Phosphate (as PO_4^{3-})	mg/L	0.28	0.24
22	Sulphate (as SO_4^{2-})	mg/L	14.9	12.01
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-	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	6.5	5.5
29	Potassium (as K)	mg/L	3.8	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 compunds (as C_6H_5OH)	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	0.12
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 Resdiaul 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

Analysed By: Chandani,Vipul,Nikhil, Jenil **Approved By: Sejal Patel**

DETOX CORPORATION PVT.LTD.- LAB DIVISION

Analysis Results for the Month of July-2025

Company Name			**IOCL-Barauni Refinery**		
Sample Type			Water	Water	Water
Sample Quantity			10 L	10 L	10 L
Date of Sampling			12.07.2025	12.07.2025	12.07.2025
Analysis Period			17.07.2025 to 24.07.2025	17.07.2025 to 24.07.2025	17.07.2025 to 24.07.2025
SL. No.	**PARAMETER**	**UNIT**	**Location**		
			Drinking Water: (C.R.U))	**Drinking Water: (AVU III)**	**Drinking Water(E2-Z7)**
1	Temperature	°C	25.7	25.4	25.6
2	Colour	Hazen	BDL(<5.00)	BDL(<5.00)	BDL(<5.00)
3	Odour	-	Agreeable	Agreeable	Agreeable
4	Taste	-	Agreeable	Agreeable	Agreeable
5	pH	-	6.9	6.7	6.72
6	Turbidity	NTU	BDL(<1.0)	BDL(<1.0)	BDL(<1.0)
7	Conductivity	µs/cm	670	610	622
8	Total Dissolve Solid - TDS	mg/L	380	350	361
9	Total Suspended Solids (TSS)	mg/L	BDL(<4.0)	BDL(<4.0)	BDL(<4.0)
10	*Oil and Grease*	*mg/L*	*BDL(<4.0)*	*BDL(<4.0)*	*BDL(<4.0)*
11	Dissolved Oxygen	mg/L	5.1	4.8	4.9
12	Total Hardness	mg/L	160	172	168
13	Calcium Hardness (as $CaCO_3$)	mg/L	116	110	110
14	Magnesium Hardness (as $CaCO3$)	mg/L	44	62	58
15	M-Alkalinity (as $CaCO_3$)	mg/L	180	186	182
16	COD	mg/L	BDL(<2.0)	BDL(<2.0)	BDL(<2.0)
17	BOD (3 days at 27°C)	mg/L	BDL(<2.0)	BDL(<2.0)	BDL(<2.0)
18	Chloride (as Cl^-)	mg/L	37.8	34.6	35.8
19	Nitrate (as NO_3)	mg/L	1.1	1.22	1.18
20	Total Silica (as SiO_2)	mg/L	0.14	0.15	0.16
21	Phosphate (as PO_4^{3-})	mg/L	0.22	0.18	0.16
22	Sulphate (as SO_4^{2-})	mg/L	14.5	12.1	10.9
23	Sulphides (as S)	mg/L	BDL(<0.03)	BDL(<0.03)	BDL(<0.03)
24	Ammonical Nitrogen (as NH_3-N)	mg/L	BDL(<1.0)	BDL(<1.0)	BDL(<1.0)
25	Total Kjeldahl Nitrogen TKN (as NH_3-	mg/L	BDL(<1.0)	BDL(<1.0)	BDL(<1.0)
26	Fluoride (as F^-)	mg/L	BDL(<0.05)	BDL(<0.05)	BDL(<0.05)
27	Iron (as Fe)	mg/L	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)
28	Sodium (as Na)	mg/L	6.8	5.1	4.9
29	Potassium (as K)	mg/L	3.6	3	2.8
30	Manganese (as Mn)	mg/L	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)
31	Lead (as Pb)	mg/L	BDL(<0.006)	BDL(<0.006)	BDL(<0.006)
32	Phenolic compunds (as C_6H_5OH)	mg/L	BDL(<0.001)	BDL(<0.001)	BDL(<0.001)
33	Nickel (as Ni)	mg/L	BDL(<0.008)	BDL(<0.008)	BDL(<0.008)
34	Arsenic (as As)	mg/L	BDL(<0.003)	BDL(<0.003)	BDL(<0.003)
35	Zinc (as Zn)	mg/L	BDL(<0.021)	BDL(<0.021)	BDL(<0.021)
36	Mercury (as Hg)	mg/L	BDL(<0.001)	BDL(<0.001)	BDL(<0.001)
37	Cadmium (as Cd)	mg/L	BDL(<0.003)	BDL(<0.003)	BDL(<0.003)
38	Selenium (as Se)	mg/L	BDL(<0.004)	BDL(<0.004)	BDL(<0.004)
39	Cyanide (as CN^-)	mg/L	BDL(<0.03)	BDL(<0.03)	BDL(<0.03)
40	Hexavalent Chromium (as Cr^{6+})	mg/L	BDL(<0.03)	BDL(<0.03)	BDL(<0.03)
41	Total Chromium (as Cr)	mg/L	BDL(<0.008)	BDL(<0.008)	BDL(<0.008)
42	Copper (as Cu)	mg/L	BDL(<0.004)	BDL(<0.004)	BDL(<0.004)
43	Vanadium (as V)	mg/L	BDL(<0.09)	BDL(<0.09)	BDL(<0.09)
44	Phosphorous (as P)	mg/L	0.15	0.11	0.13
45	Benzen	mg/L	ND	ND	ND
46	Benzo(a)pyrene	mg/L	ND	ND	ND
47	Alumnium (as Al)	mg/L	BDL(<0.007)	BDL(<0.007)	BDL(<0.007)
48	Free Resdiaul Chlorine as FRC	mg/L	BDL(<0.1)	BDL(<0.1)	BDL(<0.1)
49	Pesticides	µg/L	ND	ND	ND
50	Polychlorinated Biphenyls	mg/L	ND	ND	ND
51	PAH	mg/L	ND	ND	ND
52	Tri-halomethanes	mg/L	ND	ND	ND
53	Total coliform	MPN/100 ml	Absent	Absent	Absent
54	*E. Coli*	MPN/100 ml	Absent	Absent	Absent

BDL =Below Detection Limit

Analysed By: Chandani,Vipul,Nikhil,Jenil **Approved By: Sejal Patel**

DETOX CORPORATION PVT.LTD.- LAB DIVISION				
Analysis Results for the Month of August-2025				
Company Name			IOCL-Barauni Refinery	
Sample Type			Water	Water
Sample Quantity			10 L	10 L
Date of Sampling			12.08.2025	12.08.2025
Analysis Period			18.08.2025 to 26.08.2025	18.08.2025 to 26.08.2025
SL. No.	PARAMETER	UNIT	Location	
			Drinking Water: (MSQ Control Room)	Drinking Water: (CF-165)
1	Temperature	°C	25.6	25.5
2	Colour		BDL(<5.00)	BDL(<5.00)
3	Odour	-	Agreeable	Agreeable
4	Taste	-	Agreeable	Agreeable
5	pH	-	6.92	6.76
6	Turbidity		BDL(<1.0)	BDL(<1.0)
7	Conductivity		675	620
8	Total Dissolve Solid - TDS		405	372
9	Total Suspended Solids (TSS)		BDL(<4.0)	BDL(<4.0)
10	Oil and Grease		BDL(<4.0)	BDL(<4.0)
11	Dissolved Oxygen		5.2	5
12	Total Hardness		168	178
13	Calcium Hardness (as $CaCO_3$)		120	104
14	Magnesium Hardness (as CaCO3)		48	74
15	M-Alkalinity (as $CaCO_3$)		186	190
16	COD		BDL(<2.0)	BDL(<2.0)
17	BOD (3 days at 27°C)		BDL(<2.0)	BDL(<2.0)
18	Chloride (as Cl^-)		42.6	35.8
19	Nitrate (as NO_3)		1.02	1.2
20	Total Silica (as SiO_2)		0.12	0.14
21	Phosphate (as PO_4^{3-})		0.2	0.16
22	Sulphate (as SO_4^{2-})		15.6	12.8
23	Sulphides (as S)		BDL(<0.03)	BDL(<0.03)
24	Ammonical Nitrogen (as NH_3-N)		BDL(<1.0)	BDL(<1.0)
25	Total Kjeldahl Nitrogen TKN (as NH_3-N		BDL(<1.0)	BDL(<1.0)
26	Fluoride (as F^-)		BDL(<0.05)	BDL(<0.05)
27	Iron (as Fe)		BDL(<0.01)	BDL(<0.01)
28	Sodium (as Na)		7	5.8
29	Potassium (as K)		3.4	3
30	Manganese (as Mn)		BDL(<0.01)	BDL(<0.01)
31	Lead (as Pb)		BDL(<0.006)	BDL(<0.006)
32	Phenolic compunds (as C_6H_5OH)		BDL(<0.001)	BDL(<0.001)
33	Nickel (as Ni)		BDL(<0.008)	BDL(<0.008)
34	Arsenic (as As)		BDL(<0.003)	BDL(<0.003)
35	Zinc (as Zn)		BDL(<0.021)	BDL(<0.021)
36	Mercury (as Hg)		BDL(<0.001)	BDL(<0.001)
37	Cadmium (as Cd)		BDL(<0.003)	BDL(<0.003)
38	Selenium (as Se)		BDL(<0.004)	BDL(<0.004)
39	Cyanide (as CN^-)		BDL(<0.03)	BDL(<0.03)
40	Hexavalent Chromium (as Cr^{6+})		BDL(<0.03)	BDL(<0.03)
41	Total Chromium (as Cr)		BDL(<0.008)	BDL(<0.008)
42	Copper (as Cu)		BDL(<0.004)	BDL(<0.004)
43	Vanadium (as V)		BDL(<0.09)	BDL(<0.09)
44	*Phosphorous (as P)*		*0.16*	*0.12*
45	Benzen		ND	ND
46	Benzo(a)pyrene		ND	ND
47	Alumnium (as Al)		BDL(<0.007)	BDL(<0.007)
48	Free Resdiaul Chlorine as FRC		BDL(<0.1)	BDL(<0.1)
49	Pesticides		ND	ND
50	Polychlorinated Biphenyls		ND	ND
51	PAH		ND	ND
52	Tri-halomethanes		ND	ND
53	Total coliform		Absent	Absent
54	E. Coli		Absent	Absent

BDL =Below Detection Limit

Analysed By: Chandani,Vipul,Nikhil, Jenil **Approved By: Sejal Patel**

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			23.09.2025	23.09.2025
Analysis Period			26.09.2025 to 06.10.2025	26.09.2025 to 06.10.2025
SL. No.	PARAMETER	UNIT	Location	
			Drinking Water: (Canteen)	Drinking Water: (Township-Gu
1	Temperature	°C	25.7	26
2	Colour	Hazen	BDL(<5.00)	BDL(<5.00)
3	Odour	-	Agreeable	Agreeable
4	Taste	-	Agreeable	Agreeable
5	pH	-	6.8	6.7
6	Turbidity	NTU	BDL(<1.0)	BDL(<1.0)
7	Conductivity	µs/cm	690	610
8	Total Dissolve Solid - TDS	mg/L	410	370
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	5
12	Total Hardness	mg/L	170	180
13	Calcium Hardness (as CaCO3)	mg/L	124	110
14	Magnesium Hardness (as CaCO3)	mg/L	46	70
15	M-Alkallnity (as CaCO3)	mg/L	188	182
16	COD	mg/L	BDL(<2.0)	BDL(<2.0)
17	BOD (3 days at 27oC)	mg/L	BDL(<2.0)	BDL(<2.0)
18	Chloride (as Cl-)	mg/L	43.4	34.4
19	Nitrate (as NO3)	mg/L	1	1.1
20	Total Silica (as SiO2)	mg/L	0.12	0.12
21	3- Phosphate (as PO4)	mg/L	0.16	0.14
22	2- Sulphate (as SO4)	mg/L	14.8	12.1
23	Sulphides (as S)	mg/L	BDL(<0.03)	BDL(<0.03)
24	Ammonical Nitrogen (as NH3-N)	mg/L	BDL(<1.0)	BDL(<1.0)
25	Total Kjeldahl Nitrogen TKN (as NH3-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	6.8	5.4
29	Potassium (as K)	mg/L	3.6	2.8
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 compunds (as C6H5OH)	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 Cr6+)	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	0.1
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 Resdlaul 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	Trl-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

Analysed By-Chanmdani, Vipul, Nikhil, Jenil

Approved By- Sejal P

Detox Corporation Pvt Ltd

Analysis Results for the Month of April ,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	08.04.2025	22.5	4.8
2	Middle Side of Gantry - 6	08.04.2025	24.5	7.4
3	Western Side of Gantry -12	08.04.2025	31.20	4.52
4	LPG Bulk Loading Area	09.04.2024	26.12	3.88
5	RFCCU - Near CO incinerator	09.04.2024	20.2	4.6
6	ETP Guard Basins	09.04.2024	26.5	3.0
7	API Oil Separators East Side	15.04.2024	25.15	7.6
8	API Oil Separators West Side	15.04.2024	25.1	7.05
9	Pollution Control Lab	15.04.2024	30.2	3.2
10	Shift Lab	18.04.2024	0.89	0.65
11	CRU	18.04.2024	4.9	1.45
12	MSQ	18.04.2024	5.2	0.49
13	COKER-A	18.04.2024	4.8	0.38

Note: All parametrs has been Analysed at Site Lab

BQL=Below Quantification Limit

Analysed By	Approved By
Chandani,Vipul,Nikhil, Jenil	Sejal Patel

Detox Corporation Pvt Ltd

Analysis Results for the Month of April -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	22.04.2025	14.2
2	H_2S	RFCCU - Near CO incinerator	22.04.2025	6.8
3	CO	RFCCU - Near CO incinerator	22.04.2025	11.2
4	SO_2	SRU: Near Amine Regenerator	25.04.2025	71.2
5	SO_2	ARU: Near Amine Regenerator	25.04.2025	22.15
6	H_2S	SRU: Near Amine Regenerator	25.04.2025	21.3
7	H_2S	ARU: Near Amine Regenerator	25.04.2025	4.8
8	SO_2	DHDT: Near Heater	26.04.2025	25.62
9	SO_2	HGU 1: Near Reformer Stack	26.04.2025	10.25
10	H_2S	DHDT: Near Heater	26.04.2025	0.35
11	H_2S	HGU 1: Near Reformer Stack	26.04.2025	0.37
12	H2S	ETP: Near Spent Caustic Sump	29.04.2025	3.3
13	H2S	AVU-1: Near Hot Well	29.04.202	2.19
14	H2S	AVU-2: Near Hot Well	30.04.2025	0.62
15	H2S	AVU-3: Near Hot Well	30.04.2025	0.89
16	H2S	SRU: Near Sour Water Stripper	30.04.2025	3.6
17	H2S	ETP: Near Effluent Sump	30.04.2025	0.31
18	SO_2	HGU 2: Near Reformer Stack	29.04.2025	0.54
19	H_2S	HGU 2: Near Reformer Stack	29.04.2025	0.33

Note: All parametrs has been Analysed at Site Lab

BQL=Below Quantification Limit

Analysed By	Approved By
Chandani,Vipul,Nikhil, Jenil	Sejal Patel

Detox Corporation Pvt. Ltd.
Analysis Result for the Month of August-2025

TABLE - 1: Field and DCS Control Room Company Name:- IOCL Barauni Refinary
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- FIELD CONTROL ROOM	49.7	69.7	60.6	37.8	55.4	47.3	02.08.2025
2	AVU-II- FIELD CONTROL ROOM	51.8	70.5	66.4	39.4	59.7	52.4	02.08.2025
3	AVU-III- FIELD CONTROL ROOM	57.9	69.9	64.7	41.3	36.2	41.3	02.08.2025
4	AVU-I, II/ COKER DDCS CONTROL ROOM	48.9	70.7	64.6	42.1	54.8	50.4	02.08.2025
5	AVU- III/ COKER DDCS CONTROL ROOM	50.1	71.3	61.3	37.6	61.7	51.7	02.08.2025
6	COKER-A FIELD CONTROL ROOM	49.0	69.7	60.6	36.8	62.8	53.2	02.08.2025
7	COKER-B FIELD CONTROL ROOM	41.1	48.9	44.8	39.4	44.2	42.6	04.08.2025
8	CRU FIELD CONTROL ROOM	47.9	59.8	56.9	35.7	59.4	52.4	04.08.2025
9	BXP CONTROL ROOM	49.1	70.4	59.5	33.4	61.7	49.4	05.08.2025
10	RFCCU FIELD CONTROL ROOM	46.5	54.5	53.6	38.6	66.3	55.0	05.08.2025
11	DHDT FIELD CONTROL ROOM	49.8	64.8	59.7	39.8	59.4	53.2	05.08.2025
12	HGU-1 FIELD CONTROL ROOM	46.5	64.5	58.4	41.3	57.6	51.4	06.08.2025
13	HGU-2 FIELD CONTROL ROOM	40.3	46.8	47.9	39.4	55.1	52.4	06.08.2025
14	SRU FIELD CONTROL ROOM	46.7	63.6	60.3	41.7	59.8	53.6	06.08.2025
15	MSQ CONTROL ROOM	44.4	61.3	55.7	39.3	61.9	51.3	06.08.2025
16	OM & S CONTROL ROOM	45.8	67.5	60.4	41.7	56.7	56.3	08.08.2025
17	CRUDE OIL STATION	45.4	70.6	57.8	45.9	67.5	57.3	08.08.2025
18	FINISHED PRODUCT CONTROL ROOM	51.2	69.3	65.6	41.4	63.1	54.3	08.08.2025
19	LPG CONTROL ROOM	42.4	69.7	61.2	41.2	59.4	50.3	08.08.2025
20	ETP FIELD CONTROL ROOM	49.5	71.4	59.4	42.7	64.5	54.3	09.08.2025
21	UTILITY CONTROL ROOM	45.6	64.8	61.1	43.2	59.4	55.4	09.08.2025
22	OLD DM PLANT CONTROL ROOM	49.7	66.6	59.3	41.9	59.7	54.2	09.08.2025
23	TPS-CONTROL ROOM	51.1	71.5	61.7	39.5	61.5	53.3	09.08.2025
24	TPS FIELD CONTROL ROOM	46.8	70.3	59.4	41.3	59.4	53.6	09.08.2025
25	BOILER 6 CONTROL ROOM	47.3	67.8	62.3	46.8	64.1	54.3	09.08.2025
26	RO DM PLANT CONTROL ROOM	44.4	69.3	58.5	44.3	61.8	54.2	11.08.2025
27	BXP DM PLANT CONTROL ROOM	42.6	70.4	57.8	41.9	59.4	55.3	11.08.2025
28	INSIDE THE MECHANICAL WORKSHOP	45.1	67.9	59.6	35.5	63.9	55.0	11.08.2025
29	QUALITY CONTROL LABORATORY	42.3	70.7	61.4	34.6	63.8	52.4	11.08.2025
30	M & I BUILDING	49.6	65.5	59.7	39.8	57.4	52.6	12.08.2025
31	CENTRAL STORES	45.5	64.8	56.9	41.4	55.8	51.6	12.08.2025
32	FIRE STATION	45.9	71.6	58.5	36.6	54.9	49.3	12.08.2025
33	FIRE WATER PUMP HOUSE	49.7	66.1	61.7	41.9	56.7	50.3	12.08.2025
34	INSTRUMENTATION BUILDING	50.5	64.6	59.3	38.4	52.8	46.3	13.08.2025
35	ELECTRICAL PLANNING BUILDING	41.5	69.8	59.7	39.4	61.7	52.2	13.08.2025
36	MSQ CONTROL ROOM	39.9	69.6	61.4	36.8	55.6	49.7	13.08.2025
37	NHT CCR FIELD CONTROL ROOM	42.4	71.4	58.2	39.7	51.7	47.3	13.08.2025
38	NEW PRIMEG+FIELD CONTROL ROOM	41.7	66.6	58.8	43.5	61.9	54.2	13.08.2025
Analysed By: Chandani,Vipul,Nikhil, Jenil							Approved By: Sejal Patel	

Detox Corporation Pvt. Ltd.

Analysis Result for the Month of August-2025

TABLE - 2: HIGHLY NOISE AREA

Company Name:- IOCL
Barauni
Refinary
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	59.3	80.2	71.2	52.5	69.6	63.5	14.08.2025
2	AVU-I NEAR FURNANCE F-03	55.6	80.3	70.6	53.6	70.4	64.5	14.08.2025
3	AVU-II NEAR FURNANCE F-02	56.3	84.9	72.3	51.2	69.3	63.3	14.08.2025
4	AVU-II NEAR FURNANCE F-03	60.2	80.2	73.2	52.9	68.9	62.5	14.08.2025
5	AVU-III NEAR FURNANCE F-01	57.3	80.6	68.9	54.2	67.1	64.5	14.08.2025
6	AVU-III NEAR FURNANCE F-02	58.2	83.6	70.4	52.3	63.2	60.3	14.08.2025
7	AVU-III NEAR FURNANCE F-03	62.3	85.5	75.6	51.6	62.5	59.3	14.08.2025
8	COKER-A PUMP NEAR P-06 A/B	61.2	84.1	75.9	51.9	66.3	61.3	16.08.2025
9	COKER-A NEAR FURNANCE	58.3	81.3	71.2	53.2	64.5	62.5	16.08.2025
10	LRU COMPRESSOR 1st FLOOR PLATFORM	57.1	83.7	73.5	54.8	63.2	63.3	16.08.2025
11	LRU COMPRESSOR GROUND FLOOR	57.3	83.6	74.6	60.2	69.2	65.3	16.08.2025
12	LRU SUCTION KOD BESIDE COMPRESSOR (08-P-013 A/B	57.3	76.21	68.3	54.89	68.25	63.6	16.08.2025
13	LRU BOTTOM FRACTIONATORS PUMP (07-P-008 A/B)	63.2	87.7	75.3	51.6	59.3	59.5	16.08.2025
14	COKER -B REACTOR FEED PUMP	45.2	46.32	47.6	32.5	45	40.25	20.08.2025
15	COKER-B FURNACE GROUND FLOOR	38.3	42.3	42.3	37.6	44.5	42.36	20.08.2025
16	COKER-B FURNACE FIRST FLOOR	39.2	45.21	43.6	31.2	48.25	43.25	20.08.2025
17	COKER -B OLD PUMP	34.6	44.2	40.9	35.6	44.25	40.98	20.08.2025
18	CRU RECYCLE GAS COMPRESSOR	62.5	75.6	69.7	58.6	66.3	63.5	21.08.2025
19	RFCCU COMPRESSOR HOUSE	58.3	80.3	71.4	54.7	68.9	63.6	21.08.2025
20	HGU 01 COMPRESSOR HOUSE	59.3	80.3	71.6	54.9	70.2	64.6	21.08.2025
21	DHDT COMPRESSOR HOUSE	60.2	75.6	70.3	58.7	73.3	65.3	21.08.2025
22	BXP AIR COMPRESSOR HOUSE	63.2	79.3	73.6	60.3	65.0	64.6	21.08.2025
23	MSQ COMPRESSOR HOUSE	59.4	76.2	70.6	55.3	68.3	64.3	22.08.2025
24	FIRE PUMP HOUSE Sector-7	60.1	83.1	71.6	53.3	69.5	63.3	22.08.2025
25	TPS AIR COMPRESSOR- INSIDE	52.6	78.7	64.3	54.3	69.5	65.3	22.08.2025
26	TPS AIR COMPRESSOR- OUTSIDE	63.2	77.6	71.0	59.7	64.3	64.3	22.08.2025
27	TPS NEAR BOILER 1	64.2	78.9	72.7	51.3	65.3	60.3	22.08.2025
28	GT-1	65.0	81.4	71.6	63.3	66.4	65.4	23.08.2025
29	GT-2	63.2	83.3	70.3	60.4	69.3	68.3	23.08.2025
30	MSQ NITROGEN PLANT	60.3	84.7	74.6	61.3	74.3	69.3	23.08.2025
31	OLD NITROGEN PLANT	55.2	82.3	70.3	63.7	73.4	69.2	23.08.2025
32	FLUE GAS RECOVERY COMPRESSOR	58.3	83.3	71.3	53.7	71.9	63.3	26.08.2025
33	RUP PUMP HOUSE	61.2	70.2	71.0	59.0	57.3	59.2	26.08.2025
34	NEW AERATOR AIR BLOWER	62.4	81.2	71.3	60.2	69.3	65.3	26.08.2025
35	OLD AERATOR AIR BLOWER	59.7	79.4	69.5	58.5	63.5	62.5	26.08.2025
36	NEW PRIMEG+COMPRESSOR HOUSE	66.3	84.6	75.7	53.2	69.6	63.5	27.08.2025
37	NHT CCR COMPRESSOR HOUSE	63.6	81.3	73.3	46.7	68.4	59.4	27.08.2025
38	NHT CCR SOUTH -WEST CORNER	59.4	75.3	67.8	59.7	64.3	63.3	27.08.2025
39	NEAR NHT CCR EYE WASH SHOWER NO.79	55.2	78.9	65.5	51.7	68.3	69.2	27.08.2025
40	NEW PRIMEG+FEED PUMP 904-PM-09	57.3	81.3	70.2	52.5	71.3	62.5	27.08.2025
Analysed By: Chandani,Vipul,Nikhil, Jenil		Approved By: Sejal Patel						

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

S.No.	Locations	DAY			NIGHT			DATE OF MONITORNG
		Min dB(A)	Max dB(A)	Leq dB(A)	Min dB(A)	Max dB(A)	Leq dB(A)	
1	GATE NO.1	52.5	80.3	68.5	48.3	70.3	61.6	28.08.2025
2	BIO-TREATMENT PLANT GATE	52.6	70.3	61.3	46.6	66.4	58.3	28.08.2025
3	BIO-TREATMENT CONTROL ROOM	48.3	71.2	61.5	41.3	70.3	59.4	28.08.2025
4	OIL INDIA GATE (NEAR GOVINDPUR VILLAGE)	37.3	72.2	59.3	41.3	70.3	59.6	28.08.2025
5	GATE NO.10	38.0	71.3	57.6	39.3	69.2	56.4	29.08.2025
6	RFCCU SITE CLOSE TO THE BOUNDARY	41.3	81.5	61.3	41.3	59.4	52.3	29.08.2025
7	SRU SITE CLOSE TO THE BOUNDARY INSIDE PLANT	42.3	81.3	62.3	40.3	69.3	59.6	29.08.2025
8	SRU SITE CLOSE TO THE BOUNDARY OUT SIDE PLANT	43.3	71.3	59.5	46.3	68.6	68.5	29.08.2025
9	CISF COLONY	41.2	70.3	57.5	38.2	65.5	51.3	30.08.2025
10	NEAR BORROW PIT	42.3	78.2	60.2	37.3	64.3	52.6	30.08.2025
11	NEAR IOCL PETROL PUMP	40.4	81.3	62.5	35.2	62.5	50.2	30.08.2025
Analysed By: Chandani,Vipul,Nikhil, Jenil		Approved By: Sejal Patel						

Detox Corporation Pvt. Ltd.
Analysis Results For the Month of April -2025

Parameters	RPM (<10)	RPM (<2.5)	SO_2	NO_2	NH_3	Pb	CO *	CO **				Ozone *	Ozone **				HC	Benzene	H_2S	Benzo(a) pyrene	Arsenic	Nickel	Mercaptan
Unit	µg/m	µg/m	µg/m	µg/m	µg/m	µg/m	mg/m3	mg/m³				µg/m3	µg/m³				ppm	µg/m	µg/m	ng/m³	ng/m	ng/m³	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/m³)	(µg/m³)	(ng/m³)	(ng/m³)	(ng/m³)	(ppb)
TIME OFFICE	73.1	37.6	12.1	15.8	19.1	0.3	1.0	1.1	0.9	1.0	1.0	22.9	24.1	25.1	22.8	24.0	BQL	BQL	BQL	BQL	BQL	BQL	23.0
CRU CONTROL ROOM	74.2	35.2	13.8	15.6	16.8	0.3	1.0	0.9	1.1	1.0	1.0	25.8	25.6	23.0	23.8	24.1	BQL	BQL	BQL	BQL	BQL	BQL	24.2
LPG SUB STATION NO. 16	72.9	34.2	12.6	17.3	18.4	0.3	1.1	1.0	1.0	1.0	1.0	25.0	23.2	23.9	23.5	23.5	BQL	BQL	BQL	BQL	BQL	BQL	24.9
BTP	75.4	35.3	13.0	15.7	17.5	0.3	1.1	1.1	1.0	1.2	1.1	21.8	24.4	25.4	23.7	24.5	BQL	BQL	BQL	BQL	BQL	BQL	23.6
OVERALL AVERAGE(Refinery)	73.9	35.6	12.9	16.1	17.9	0.3	1.05	1.0	1.0	1.0	1.0	23.86	24.3	24.4	23.4	24.0	BQL	BQL	BQL	BQL	BQL	BQL	23.9
BR REFINERY TOWNSHIP	64.0	28.6	12.0	14.2	14.2	0.1	0.3	0.4	2.3	0.3	1.0	25.6	20.1	21.0	24.2	21.8	BQL	BQL	BQL	BQL	BQL	BQL	19.7
BIHAT VILLAGE	60.2	26.8	9.9	12.6	14.3	0.1	0.3	0.2	0.2	0.3	0.2	27.0	26.1	26.5	26.8	26.5	BQL	BQL	BQL	BQL	BQL	BQL	17.8
BINODPUR VILLAGE	60.3	23.6	9.2	15.0	14.8	0.1	0.3	0.3	0.3	0.2	0.3	22.0	23.9	24.9	25.1	24.7	BQL	BQL	BQL	BQL	BQL	BQL	46.0
RACHIAHI VILLAGE	59.3	25.0	9.8	14.0	14.9	0.1	0.3	0.3	0.3	0.3	0.3	23.1	23.9	21.8	25.7	23.8	BQL	BQL	BQL	BQL	BQL	BQL	19.3
AVERAGE(OUT SIDE OF REFINARY)	60.97	25.97	10.22	13.93	14.56	0.13	0.27	0.29	0.77	0.29	0.45	24.43	23.52	23.55	25.48	24.18	BQL	BQL	BQL	BQL	BQL	BQL	25.69

BQL - Below Quantification Limit; Avg. - Average; NS- Not Specified 31.03.2025

(**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),SO_2,NO_2,NH_3,CO, Ozone and H_2S 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.

Analysed By
Chandani,Vipul,Nikhil, Jenil

Approved By
Sejal Patel

Detox Corporation Pvt. Ltd.
Analysis Results For the Month of May -2025

Parameters	RPM (<10)	RPM (<2.5)	SO2	NO2	NH3	Pb	CO *	CO **				Ozone *	Ozone **				HC	Benzene	H2S	Benzo(a) pyrene	Arsenic	Nickel	Mercapta
Unit	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	mg/m3	mg/m3				µg/m3	µg/m3				ppm	µg/m3	µg/m3	ng/m3	ng/m3	ng/m3	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/m3)	(µg/m3)	(ng/m3)	(ng/m3)	(ng/m3)	(ppb)
TIME OFFICE	72.6	37.2	13.1	16.6	19.9	0.3	1.1	1.1	0.9	1.1	1	23.6	24.9	25.9	23.8	24.8	BDL	BDL	BDL	BDL	BDL	BDL	23.2
CRU CONTROL ROOM	72.9	35.2	14.1	16.4	16.9	0.3	1	0.8	1.1	1	1	25.7	26.2	23.8	23.7	24.6	BDL	BDL	BDL	BDL	BDL	BDL	23.7
LPG SUB STATION NO. 16	71.9	33.4	13.1	17.2	19	0.3	1.1	1	1	1	1	25.2	23.4	24	22.9	23.4	BDL	BDL	BDL	BDL	BDL	BDL	24.3
BTP	75.2	34.3	13	15.4	16.9	0.3	1.1	1.1	1	1.2	1.1	21.8	24.6	25	23.2	24.3	BDL	BDL	BDL	BDL	BDL	BDL	23.7
OVERALL AVERAGE (Refinery)	73.1	35.1	13.3	16.4	18.2	0.3	1.05	1	1	1.1	1	24.07	24.8	24.7	23.4	24.3	BDL	BDL	BDL	BDL	BDL	BDL	23.7
BR REFINERY TOWNSHIP	63	27.7	12.4	14.6	14.1	0.1	0.3	0.4	0.3	0.4	0.4	25.8	20.1	21.2	23.3	21.5	BDL	BDL	BDL	BDL	BDL	BDL	20.8
BIHAT VILLAGE	59.3	25.4	10.2	13	14.3	0.1	0.3	0.2	0.3	0.3	0.3	27.2	26.5	27.2	27.7	27.2	BDL	BDL	BDL	BDL	BDL	BDL	18.4
BINODPUR VILLAGE	60.1	23.7	10	14.7	15.2	0.1	0.3	0.3	0.3	0.3	0.3	22.7	24.5	25	25.5	25	BDL	BDL	BDL	BDL	BDL	BDL	22.8
RACHIAHI VILLAGE	58.3	25.2	10.4	14.4	15.2	0.2	0.3	0.3	0.3	0.3	0.3	22.9	24.2	22.5	26.4	24.4	BDL	BDL	BDL	BDL	BDL	BDL	19.5
AVERAGE(OUT SIDE OF REFINARY)	60.19	25.5	10.78	14.17	14.72	0.15	0.28	0.29	0.29	0.29	0.29	24.64	23.82	23.98	25.72	24.51	BDL	BDL	BDL	BDL	BDL	BDL	20.36

BDL - Below Detection Limit; Avg. - Average; NS- Not Specified 31.03.2025
(**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

Analysed By
Chandani,Vipul,Nikhil, Jenil

Approved By
Sejal Patel

Detox Corporation Pvt. Ltd.
Analysis Results For the Month of June -2025

Parameters	RPM (<10)	RPM (<2.5)	SO_2	NO_2	NH_3	Pb	CO *	CO **				Ozone *	Ozone **				HC	Benzene	H_2S	Benzo(a) pyrene	Arsenic	Nickel	Mercapta
Unit	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	mg/m3	mg/m³				µg/m3	µg/m³				ppm	µg/m³	µg/m³	ng/m³	ng/m³	ng/m³	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/m³)	(µg/m³)	(ng/m³)	(ng/m³)	(ng/m³)	(ppb)
TIME OFFICE	71.9	36.8	13.9	16.9	19.7	0.3	1.1	1.1	0.9	2.2	1.4	24	24.8	26.1	24.1	25	BDL	BDL	BDL	BDL	BDL	BDL	23.7
CRU CONTROL ROOM	72.8	35.3	14.1	17	17	0.3	1	0.9	1.1	1	1	26.1	26.4	24.5	24.2	25	BDL	BDL	BDL	BDL	BDL	BDL	23.7
LPG SUB STATION NO. 16	71.9	34.3	12.6	17.9	19.3	0.3	1.1	1	1	1	1	26.3	24.5	24.6	23.4	24.2	BDL	BDL	BDL	BDL	BDL	BDL	24
BTP	74.8	34.9	14.8	16.2	17.3	0.3	1.1	1.1	1	1.2	1.1	22.1	24.9	25.7	23.5	24.7	BDL	BDL	BDL	BDL	BDL	BDL	24.2
OVERALL AVERAGE (Refinery)	**72.8**	**35.3**	**13.8**	**17**	**18.3**	**0.3**	**1.08**	**1**	**1**	**1.3**	**1.1**	**24.62**	**25.2**	**25.2**	**23.8**	**24.7**	**BDL**	**BDL**	**BDL**	**BDL**	**BDL**	**BDL**	**23.9**
BR REFINERY TOWNSHIP	62.9	28.1	14	15.1	15.6	0.1	0.3	0.4	0.3	0.4	0.4	26.2	20.8	21.6	23.4	21.9	BDL	BDL	BDL	BDL	BDL	BDL	20.2
BIHAT VILLAGE	58.7	25.3	10.9	13.1	14.8	0.1	0.3	0.2	0.3	0.3	0.3	26.3	27	27.9	28.6	27.8	BDL	BDL	BDL	BDL	BDL	BDL	18.2
BINODPUR VILLAGE	60.2	24.1	11	15.8	14.9	0.1	0.3	0.3	0.3	3.8	1.4	22.8	23.7	25.2	27	25.3	BDL	BDL	BDL	BDL	BDL	BDL	23.2
RACHIAHI VILLAGE	58.7	26.1	11.8	14.9	15.3	0.2	0.2	0.3	0.3	0.3	0.3	23.4	24.2	23.5	27.4	25	BDL	BDL	BDL	BDL	BDL	BDL	20.6
AVERAGE(OUT SIDE OF REFINARY)	**60.11**	**25.92**	**11.92**	**14.72**	**15.14**	**0.15**	**0.26**	**0.3**	**0.29**	**1.17**	**0.59**	**24.65**	**23.93**	**24.53**	**26.62**	**25.03**	**BDL**	**BDL**	**BDL**	**BDL**	**BDL**	**BDL**	**20.54**

BDL - Below Detection Limit; Avg. - Average; NS- Not Specified 31.03.2025

(**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 H_2S has been analysed at site lab

Analysed By
Chandani,Vipul,Nikhil, Jenil

Approved By
Sejal Patel

Detox Corporation Pvt. Ltd.
Analysis Results For the Month of July -2025

Parameters	RPM (<10)	RPM (<2.5)	SO_2	NO_2	NH_3	Pb	CO *	CO **				Ozone *	Ozone **				HC	Benzene	H_2S	Benzo(a) pyrene	Arsenic	Nickel	Mercapta
Unit	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	mg/m3	mg/m³				µg/m3	µg/m³				ppm	µg/m³	µg/m³	ng/m³	ng/m³	ng/m³	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/m³)	(µg/m³)	(ng/m³)	(ng/m³)	(ng/m³)	(ppb)
TIME OFFICE	72.2	35.9	16.3	16.3	21.3	0.3	1	1.2	1.1	1.2	1.1	23.9	24.1	26.3	23.9	24.7	BDL	BDL	BDL	BDL	BDL	BDL	23.5
CRU CONTROL ROOM	73.3	31.6	15.3	18.2	17.1	0.3	1.1	0.9	1.1	1	1	25.9	27.1	25.8	25	26	BDL	BDL	BDL	BDL	BDL	BDL	24.6
LPG SUB STATION NO. 16	72.5	35	12.7	17	19.8	0.3	1	1	1.1	1.1	1	26.3	24.6	25	25.6	25.1	BDL	BDL	BDL	BDL	BDL	BDL	25.7
BTP	77.9	34.3	16.1	15.9	18.9	0.3	1.1	1.1	1	1.2	1.1	22.2	25.4	25.4	26.7	25.8	BDL	BDL	BDL	BDL	BDL	BDL	27.1
OVERALL AVERAGE (Refinery)	**74**	**34.2**	**15.1**	**16.9**	**19.3**	**0.3**	**1.06**	**1.1**	**1.1**	**1.1**	**1.1**	**24.56**	**25.3**	**25.6**	**25.3**	**25.4**	**BDL**	**BDL**	**BDL**	**BDL**	**BDL**	**BDL**	**25.2**
BR REFINERY TOWNSHIP	61.6	29.6	13.5	16.8	16.1	0.2	0.2	0.4	0.3	0.4	0.4	26.6	23.6	22.5	24.5	23.5	BDL	BDL	BDL	BDL	BDL	BDL	22.8
BIHAT VILLAGE	59	25.1	11.2	13.2	14.8	0.1	0.3	0.2	0.3	0.3	0.3	26.2	26.2	27.3	29.2	27.6	BDL	BDL	BDL	BDL	BDL	BDL	19.1
BINODPUR VILLAGE	60	26.5	12.4	16.2	16.2	0.2	0.2	0.3	0.3	0.3	0.3	23.8	25.2	23.9	28	25.7	BDL	BDL	BDL	BDL	BDL	BDL	23.3
RACHIAHI VILLAGE	58.2	27.4	12.9	15.3	16.9	0.2	3.7	0.3	0.3	0.3	0.3	21.5	25.6	23	26.4	25	BDL	BDL	BDL	BDL	BDL	BDL	20
VERAGE(OUT SIDE OF REFINARY	**59.71**	**27.16**	**12.5**	**15.38**	**16**	**0.16**	**1.1**	**0.3**	**0.29**	**0.3**	**0.3**	**24.5**	**25.17**	**24.16**	**27.01**	**25.45**	**BDL**	**BDL**	**BDL**	**BDL**	**BDL**	**BDL**	**21.29**

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 H_2S has been analysed at site lab

Analysed By
Chandani,Vipul,Nikhil, Jenil

Approved By
Sejal Patel

Detox Corporation Pvt. Ltd.
Analysis Results For the Month of August -2025

Paramet	RPM (<10)	RPM (<2.5)	SO_2	NO_2	NH_3	Pb	CO *	CO **				Ozone *	Ozone **				HC	Benzene	H_2S	Benzo(a) pyrene	Arsenic	Nickel	Mercapta
Unit	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	mg/m3	mg/m³				µg/m3	µg/m³				ppm	µg/m³	µg/m³	ng/m³	ng/m³	ng/m³	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/m³)	(µg/m³)	(ng/m³)	(ng/m³)	(ng/m³)	(ppb)
TIME OFFICE	73.1	35.5	15.6	17.9	21.3	0.3	1.1	1.3	1.1	1.2	1.2	25	24.4	26.1	24.1	24.9	BDL	BDL	BDL	BDL	BDL	BDL	23.8
ONTROL	71.4	31.9	14.8	17.4	18.5	0.3	1.1	0.9	1.1	1	1	25.2	26.5	25.9	25.4	26	BDL	BDL	BDL	BDL	BDL	BDL	24.3
STATIO	73	36.1	13.6	15.1	18	0.3	1	1	1.1	13.3	5.1	26.2	24.9	25	26.2	25.4	BDL	BDL	BDL	BDL	BDL	BDL	24.1
BTP	77	33.6	16.3	15.9	16.3	0.3	1.1	1.1	1	1.1	1.1	20.7	25.4	25.8	25.8	25.7	BDL	BDL	BDL	BDL	BDL	BDL	27.3
VALL AVE (Refinery)	73.6	34.3	15.1	16.6	18.5	0.3	1.09	1.1	1.1	4.2	2.1	24.25	25.3	25.7	25.4	25.5	BDL	BDL	BDL	BDL	BDL	BDL	24.9
BR REFINERY TOWNSHIP	60.9	28.9	14.1	15.8	18.3	0.2	0.3	0.4	0.4	0.4	0.4	26.6	23.3	22.6	24.7	23.5	BDL	BDL	BDL	BDL	BDL	BDL	22.9
BIHAT VILLAGE	56.8	25.5	11.1	12.6	13.8	0.1	0.2	0.2	0.3	0.2	0.2	26.4	28	29.1	29	28.7	BDL	BDL	BDL	BDL	BDL	BDL	17.9
BINODPUR VILLAGE	58.6	26.1	11.4	16.1	15.3	0.2	0.2	0.3	0.3	0.3	0.3	24.2	24.6	25	27.1	25.6	BDL	BDL	BDL	BDL	BDL	BDL	23.9
RACHIAHI VILLAGE	57.9	28.1	14.3	14.6	18	4.4	0.3	0.3	0.3	0.3	0.3	22.3	25.9	22.4	25.3	24.6	BDL	BDL	BDL	BDL	BDL	BDL	19.9
T SIDE O	58.53	27.16	12.72	14.78	16.31	1.21	0.25	0.31	0.3	0.3	0.3	24.88	25.45	24.79	26.55	25.6	BDL	BDL	BDL	BDL	BDL	BDL	21.13

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 Qualy Standards

RPM (<10),RPM (<2.5),SO2,NO2,NH3,CO, Ozone and H_2S has been analysed at site lab

Analysed By
Chandani, Vipul, Nikhil, Jenil

Approved By
Sejal Patel

Detox Corporation Pvt. Ltd.
Analysis Results For the Month of August -2025

Parameters	RPM (<10)	RPM (<2.5)	SO_2	NO_2	NH_3	Pb	CO *	CO **				Ozone *	Ozone **				HC	Benzene	H_2S	Benzo(a) pyrene	Arsenic	Nickel	Mercapta
Unit	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	mg/m3	mg/m³				µg/m3	µg/m³				ppm	µg/m³	µg/m³	ng/m³	ng/m³	ng/m³	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/m³)	(µg/m³)	(ng/m³)	(ng/m³)	(ng/m³)	(ppb)
TIME OFFICE	70.9	35.1	16.4	18.1	21.3	0.3	1.1	1.3	1.1	1.2	1.2	25.3	24.8	26.6	24.7	25.4	BDL	BDL	BDL	BDL	BDL	BDL	23.1
CRU CONTROL ROOM	74.2	30.6	14.3	17.2	19.4	0.3	1.2	0.9	1.2	1	1	25.2	25.7	25.6	26	25.8	BDL	BDL	BDL	BDL	BDL	BDL	24.2
LPG SUB STATION NO. 16	70.6	35.6	13	15.6	18.6	0.3	1	1.1	1.2	1.2	1.1	26.2	24.1	24.7	26.1	25	BDL	BDL	BDL	BDL	BDL	BDL	25
BTP	74.9	33.2	17.9	18.8	18.4	0.3	1.2	1.1	1.3	1.2	1.2	21.6	25.7	26.1	25.8	25.9	BDL	BDL	BDL	BDL	BDL	BDL	27.6
OVERALL AVERAGE (Refinery)	72.6	33.6	15.4	17.4	19.4	0.3	1.13	1.1	1.2	1.2	1.1	24.6	25.1	25.7	25.7	25.5	BDL	BDL	BDL	BDL	BDL	BDL	25
BR REFINERY TOWNSHIP	60.1	28.7	15.3	15	18.8	0.2	0.3	0.4	0.4	0.4	0.4	26.7	24	21.8	24.4	23.4	BDL	BDL	BDL	BDL	BDL	BDL	23.4
BIHAT VILLAGE	57.3	25.7	11.9	13.4	13.7	0.1	0.3	0.2	0.3	0.3	0.3	27.2	29.1	28.6	28.7	28.8	BDL	BDL	BDL	BDL	BDL	BDL	18
BINODPUR VILLAGE	59.3	26.9	11.6	14.4	15.3	0.2	0.3	0.3	0.3	0.3	0.3	24.9	25.3	26.4	27.3	26.3	BDL	BDL	BDL	BDL	BDL	BDL	24.5
RACHIAHI VILLAGE	57.9	28.6	14.7	16	22.3	0.2	0.3	0.3	0.3	0.3	0.3	23.5	26.7	23.6	25.8	25.4	BDL	BDL	BDL	BDL	BDL	BDL	297.8
AVERAGE(OUT SIDE OF REFINARY)	58.67	27.44	13.36	14.72	17.53	0.18	0.27	0.31	0.3	0.31	0.31	25.58	26.3	25.09	26.56	25.99	BDL	BDL	BDL	BDL	BDL	BDL	90.92

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 H_2S has been analysed at site lab

Analysed By
Chandani,Vipul,Nikhil, Jenil

Approved By
Sejal Patel

IOCL - BARAUNI REFINERY

DETOX CORPORATION PVT. LTD.

METEOROLOGICAL OBSERVATIONS AT BR COMPLEX

LOCATION: TIME OFFICE

(RECORDED ON THE DAYS OF AAQM)

(MONTH: APRIL, 2025)

Date of Monitoring	Temperature (DEG C)		Atmospheric Pressure (mm Hg)		Relative Humidity (%)		Wind Speed Speed (Km/h)	Predominant Wind Direction (FROM)	Rainfall (mm)
	MAX	MIN	MAX	MIN	MAX	MIN			
01.04.2025	33.5	21.2	755.5	751.2	66.5	57.4	8.2	SE	0.0
04.04.2025	32.5	22.3	753.6	748.8	61.2	58.1	10.3	SSW	0.0
07.04.2025	34.5	20.3	754.2	749.5	60.2	59.5	11.2	SSE	0.0
10.04.2025	33.2	23.5	755.2	750.2	65.2	59.3	6.58	SE	0.0
15.04.2025	31.2	21.5	753.2	751.2	64.5	58.6	11.3	SSE	0.0
18.04.2025	32.5	20.3	755.9	749.5	65.3	57.3	10.2	SE	0.0
21.04.2025	34.1	23.5	754.2	751.3	64.3	57.3	7.45	SSW	0.0
24.04.2025	35.2	22.5	757.8	752.3	62.5	56.2	11.2	ESE	0.0
28.04.2025	33.2	23.8	755.8	750.1	62.3	54.3	12.5	SSW	0

Analysed By- Chandani,Vipul,Nikhil, Jenil | **Checked By- Sejal Patel**

DETOX CORPORATION PVT.LTD.- LAB DIVISION

Analysis Results for the Month of June 2025

Company Name			IOCL-Barauni Refinery									
Sample Type			Water	Water	Water	Water	Water	Water	Water	Water	Water	Water
Sample Quantity			10 L	10 L	10 L	10 L	10 L	10 L	10 L	10 L	10 L	10 L
Date of Sampling			16.06.2025	16.06.2025	16.06.2025	16.06.2025	16.06.2025	16.06.2025	16.06.2025	16.06.2025	16.06.2025	16.06.2025
Analysis Period			17.06.2025 to 25.06.2025	17.06.2025 to 25.06.2025	17.06.2025 to 25.06.2025	17.06.2025 to 25.06.2025	17.06.2025 to 25.06.2025	17.06.2025 to 25.06.2025	17.06.2025 to 25.06.2025	17.06.2025 to 25.06.2025	17.06.2025 to 25.06.2025	17.06.2025 to 25.06.2025
SL. No.	PARAMETER	UNIT	Location									
			Ground Water Vill- (Govindpur)	Ground Water Vill- (Keshawe)	Ground Water Vill- (Raichiahi)	Ground Water Vill- (Mahana)	Ground Water Vill- (Nurpur)	Ground Water Vill- (Papraur)	Ground Water Vill -(Masadpur)	Ground Water Vill-(Harpur)	Ground Water Nr- Hand pump (BHPL)	Ground Water Vill- (Bihat)
		Lab ID :	IBGW01-01	IBGW01-02	IBGW01-03	IBGW01-04	IBGW01-05	IBGW01-06	IBGW01-07	IBGW01-08	IBGW01-09	IBGW01-10
1	Temperature	°C	25.6	25.8	25.1	25.6	25.0	25.5	25.2	25.6	25.7	25.1
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	7.20	7.24	7.20	7.72	7.78	7.50	7.32	7.72	7.36
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	480.0	420.0	560.0	590.0	568.0	562.0	510.0	592.0	540.0
8	Total Hardness (as $CaCO_3$)	mg/L	310.0	296.0	306.0	296.0	282.0	290.0	322.0	298.0	340.0	290.0
9	Calcium Hardness (as $CaCO_3$)	mg/L	176.0	180.0	168.0	188.0	180.0	176.0	188.0	172.0	168.0	176.0
10	Magnesium Hardness (as CaCO3)	mg/L	134.0	116.0	138.0	108.0	102.0	114.0	134.0	126.0	172.0	114.0
11	M-Alkallnity (as $CaCO_3$)	mg/L	82.0	92.0	106.0	105.0	110.0	120.0	128.0	114.0	120.0	138.0
12	BOD (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	COD	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 TKN (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	10.0	12.0	10.2	9.8	10.8	11.9	16.8	11.0	10.0
18	Potassium (as K)	mg/L	2.80	3.5	3.00	3.60	4.80	3.90	3.60	4.10	4.00	3.80
19	Total Dissolved Solids (TDS)	mg/L	272.80	297.6	260.40	347.20	365.80	352.16	348.44	316.20	367.04	334.80
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 and 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	6.1	5.8	7.2	6.8	6.6	8.0	7.8	7.6	8.8	9.0
23	Chloride (as Cl^-)	mg/L	66.60	54.98	41.20	58.80	88.57	78.90	80.52	86.60	84.50	78.90
24	Nitrate (as NO_3)	mg/L	1.80	1.10	1.20	1.10	1.22	2.30	2.40	2.10	2.50	1.50

Analysed By- Chandani,Vipul,Nikhil, Jenil | **Approved By- Sejal Patel**