

इंडियन ऑयल कॉर्पोरेशन लिमिटेड

बोंगाइगाँव रिफाइनरी

डाकघर : धालीगाँव - 783 385

जिला : चिरांग (असम)

Indian Oil Corporation Limited

Bongaigaon Refinery

P.O. : Dhaligaon, Dist. : Chirang, Assam-783385

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रिफाइनरी प्रभाग

Refineries Division

REF: IOC/BGR/HSE/ECR-DHDT/MoEF&CC/2024-25/02

Date: 30/06/25

To

The Regional Officer,
Ministry of Environment, Forest and Climate Change,
Integrated Regional Office, Guwahati,
4th Floor, House fed Building,
GS Road, Rukminigaon Guwahati-781022

Subject: 2nd Half Yearly Report for the period of (1st Oct'24 to 31st March'25) for
"Diesel Hydro Treatment Plant"

Reference: MoEF letter No. J.11011/78/2001-IA-II (I) dated 25/06/2002

Dear Sir,

With reference to above, we are enclosing the Six Monthly EC compliance Report for the period of 1st October'24 to 31st March'25 for your kind perusal.

The reports are being sent as per EIA Rules'2006 for the "Environmental Clearances" issued by MoEF&CC to Bongaigaon Refinery, (BGR) for "Diesel Hydro Treatment Plant".

Thanking you,

Yours faithfully,

(Biman Gogoi)

DGM (HSE)

O/P: 03664-25-3302

M-9435122647

Copy to:

1. Member Secretary, Pollution Control Board, Assam
Bamunimaidam, Guwahati - 781 021
2. Zonal Officer, Central Pollution Control Board
Eastern Zonal Office, 'TUM-SIR', Lower Motinagar,
Near Fire Brigade H.Q., Shillong - 793014

रजिस्टर्ड ऑफिस : जी-9, अली यावर जंग मार्ग, बान्द्रा (पूर्व) मुम्बई - 400 051

रिफाइनरी डिविजन : हेड क्वार्टर : इंडियन ऑयल भवन, स्कोप कंप्लेक्स, कोर - 2, 7, इन्स्टिट्यूशनल एरिया, लोधी रोड, नई दिल्ली - 110 003

Regd. Office : G-9, Ali Yavar Jung Marg, Bandra (East) Mumbai-400 051

Refineries Division : Head Quarter : IndianOil Bhavan, SCOPE Complex, Core-2, 7, Institutional Area, Lodhi Road, New Delhi - 110 003

Half Yearly Report for “Diesel Hydro Treatment Plant
(1st October 2024 to 31st March 2025)



Submitted by:

**Indian Oil Corporation Limited
Bongaigaon Refinery
P.O Dhaligaon, District-Chirang, Assam**

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CM (HSE)

Diesel Hydro-treatment Project

MoEF letter No. J.11011/78/2001-IA-II (I) dated 25/06/2002.
Renewal of "Environment Clearance" by MoEF on 01.05.2006
(1st October 2024 to 31st March 2025)

INDEX:

Sl. No	Conditions	Status
1.	Specific & General Conditions Compliance status of Diesel Hydro Treatment Project	Annexure- A
2.	Six monthly Stack Monitoring/ Air Quality Data	Furnished in Appendix-A1
3.	Six monthly Effluent discharged Quantity, Quality	Furnished in Appendix-A2
4.	Tree Plantation Data	Furnished in Appendix-A3
5.	Quarterly Fugitive Emission Data	Furnished in Appendix-A4
6.	Annual return of Hazardous Waste	Furnished in Appendix-A5(a)
7.	Authorization from PCBA under Hazardous Waste (Management, Handling and Transboundary Movement Rules 2008)	Furnished in Appendix-A5(b)
8.	Details of Wastewater treatment and disposal system	Furnished in Appendix-A6
9.	Quarterly Noise Survey Report.	Furnished in Appendix-A7
10.	Status of Rainwater Harvesting	Furnished in Appendix-A8
11.	Screen Shot of IOCL Website upload of report	Furnished in Appendix-A9
12.	NABL certificate of QC Lab of Bongaigaon Refinery	Furnished in Appendix-A10
13.	Employees Occupational Health Checkup Status	Furnished in Appendix-A11
14.	Flare system.	Furnished in Appendix-A12

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1.0 **ANNEXURE-A:**

Sl. No	Specific Conditions	Compliance Status
i	The company must comply with conditions and safeguards stipulated by the Ministry while granting environmental clearance to the refinery expansion project vide Ministry's OM No. J-11011/24/90-IA II (I) dated 3 rd June 1991	All conditions of the environmental clearance have been complied and verified by statutory agencies time to time. (Please Refer to compliance report of Refinery Expansion Project and other compliance report against EC granted to BGR.)
ii	A comprehensive risk assessment study for the complex must be undertaken and report submitted to the Ministry before commissioning of the Diesel hydro-treatment project.	1. Rapid Risk Analysis (RRA) was carried by M/s EIL in September'2006, and a copy of the report was also submitted to your good office vide our letter No. BRPL/ENV/MS-MAX/06-07/03 dated 08.11.2006. 2. Comprehensive Risk Assessment was conducted by M/s Chilworth Technology Pvt. Ltd. was submitted on 11.10.2010. 3. Post commissioning, fresh CRA was carried out by M/S CGC Converse Technologies in the year 2016 and M/s Environmental Technical Service Ltd. in the year 2021.
iii	The company must formulate and firm up a scheme/action plan for handling the oily sludge which is presently being disposed off into the oil sludge lagoon. The firmed up plan must be submitted to the Ministry within one year.	BGR has engaged authorized third party for processing of the oily sludge & recovery of oil from the oily sludge stored in the sludge lagoon by mechanized centrifuge processing. Melting pit facility is also available for recovering oil from oily sludge. During 1 st October 2024 to 31 st March 2025, 1525 MT of oily sludge has been processed by mechanized processing. A confined bio reactor was commissioned in July 2017 in association with IOCL R&D for bio-remediation of residual oily sludge.
iv	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EMP and risk analysis report prior to commissioning of the project.	Environmental protection measures and safeguards recommended in the EMP and in risk analysis reports are implemented & complied.
v	Company must take additional measures to mitigate the risks, including the following:	-
	a. Provision of double mechanical seal for the pumps handling H ₂ S to reduce the frequency of failure	Taken care off in design stage, installed & commissioned.
	b. Provision of adequate no. of H ₂ S detector (s) in appropriate locations of the plant for early detection of the leak, so that the release duration and hence the hazardous consequence is reduced.	Following no. of H ₂ S detectors along with HC/H ₂ detectors provided in various process units under DHDT project as on 30 th March'2023 after new addition. DHDT: (HC~35, H ₂ S~5, H ₂ ~9) HGU, DHDT CT & H ₂ Bullet:(HC~15, H ₂ S~4, CO~4, H ₂ ~11) ARU: (HC~1 & H ₂ S~6) SWSU: (HC~1 & H ₂ S~7) SRU: (H ₂ S~15, HC~3 & H ₂ ~2) DHDT-Utility Area: (H ₂ S~12, HC~8, H ₂ ~4)
	c. Provision of emergency stop button for rich amine group in the control room to stop the pump.	Taken care off in design stage, installed & commissioned.
vi	Government of Assam (Dept. of Forest and Wildlife), must prepare a contingency plan to mitigate the adverse impact of the increased human activities on the wildlife	Complied.

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<p>habitat around the refinery, mainly w.r.t. Golden Langur. Funds for implementing mitigation strategies should be provided by the company. The refinery should also arrange to provide free gas to the villagers residing within Kakoijana reserved forests as well as residents of Hapachara, Garegaon, Gorapara, Rabhapara and Chitkagaon, so that felling of trees for fuel wood is reduced. A comprehensive Action Taken Report should be submitted within one year.</p>	<p>i) Free LPG connection under 'Prime Minister's 'Ujjwala Yojana' has been provided by IOC, (M D), in the villages mentioned</p> <p>ii) BGR has planted around 3000 tree saplings in Rabhapara in Kakoijana Reserve Forest</p> <p>iii) Awareness program was also arranged by IOCL, BGR, among the adjoining villagers of Kakoijana Reserve Forest time to time.</p> <p>One such program was arranged where noted environmentalist Padma Shri Dr. Jadav Payang was present as a guest speaker.</p>
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Sl. No.	General Conditions	Compliance Status
1	The project authority must adhere to the stipulations made by Assam State Pollution Control Board and State Government.	Complied. All stipulations by the Pollution Control Board of Assam are strictly followed.
2	No expansion or modification of the plant should be carried out without prior approval of this Ministry.	EC was granted by MoEF&CC to BGR for INDMAX & BS-VI projects vide letter F. no. J11011/48/2016-IA-II (I), Dated 19 th Apr'2017. The project is implemented and commissioned with enhanced expansion of Crude processing from 2.35 to 2.7 MMTPA, other associated projects like DHDT enhanced capacity from 1.2 to 1.8 MMTPA, HGU from 25 KTPA to 30 KTPA, revamp of CRU-MSQ and SRU. All the units of the Projects are commissioned successfully.
3	Handling, manufacturing, storage and transportation of hazardous chemicals should be carried out in accordance with the Manufacturing, storage and transportation of hazardous chemicals Rules, 1989, as amended in 1991. Permission from State and Central nodal agencies in this regard must be obtained.	Complied. Quarterly compliance report with respect to "Implementation of the Integrated Guidance framework for Chemicals Safety in respect of the Isolated Storages and Industries covered under the Manufacture, Storage and Import of Hazardous Chemical Rules, 1989 in Compliance to the orders of the Hon'ble National Green Tribunal in O.A No. 60/2021 – reg. being sent to PCBA.

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4	Hazardous waste, if any, must be handled and disposed as per Hazardous waste (Management and handling) Rules, 2008. Authorization from the State Pollution Control Board in this regard must be obtained.	Complied. Authorization under Hazardous and Other Waste (Management, and Transboundary Movement) Rules 2016 obtained from PCBA and valid up to 31 st March 2027. Copy attached as Appendix A5(b).
5	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 surrounding.	Complied. Infrastructure facilities like water supply, canteen facility, and sanitation were provided during the project construction period to the workers.
6	The overall noise levels in and around the plant area should be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (daytime) and 70 dBA (nighttime).	Complied. a) Taken care of the design stage, installed & commissioned. b) Precautionary measures were taken during the construction period to control the noise level & present activities do not generate noise of high db. c) Quarterly Noise Survey is being carried out regularly to check noise level. Quarterly Noise survey report for the period of 1 st October 2024 to 31 st March, 2025 is attached as Appendix A7.
7	Occupational health Surveillance of the workers should be done on a regular basis and records maintained.	Complied. Report Attached as Appendix A11
8	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 well-equipped Laboratory exists in the complex. The Laboratory of BGR is accredited by NABL. Attached as Appendix A10
9	The funds earmarked for the environmental protection measures should be reported to this Ministry and SPCB.	Complied. Funds were made available to implement all recommendations
10	Six monthly status reports on the project vis-a-vis Implementation of environmental measures should be submitted to this Ministry (Regional Office, Shillong/ CPCB/ SPCB).	Complied. Soft copy of last six months' compliance reports was submitted. Screen shot attached as Appendix A9.
11	The project proponent should advertise in at least two local newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned informing that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with State Pollution Control Board/Committee and may also be seen at Website of the Ministry and Forests at http://envfor.nic.in The advertisement should be made within 7 days from the date of issue of the clearance letter and a copy of the same should be forwarded to Ministry's Regional Office at Shillong.	Complied.

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12	<p>The Project Authorities should inform the Regional Office as well as the Ministry the date of financial closer and final approval of the project by the concerned authorities and the date of land development work.</p> <p>Board of Directors of the Company has approved revised cost estimate of INR.1701.52 Crore. Last capitalization date is 06.06.2015. The initial capitalization date is 13.08.2011 (Original approved cost is Rs. 1431.91 crore) for this project on 28th May 2008.</p> <p>Financial closure of DHDT Project is not yet complete because of some pending issues of GTG package, which is part of DHDT Project.</p>
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Sl. No	CONDITIONS (As given in concurrence to changes in Env. Clearance dated May 1, 2006)	
i	The total SO ₂ emission level from the unit after the proposed upgradation shall not exceed 40 kg/MT of the feed.	Taken care in design stage itself.
ii	The company shall comply with the revised standards of NO _x emission.	
iii	The total effluent generation shall not exceed 7.9 m ³ /hr. The freshwater consumption shall not exceed 275 m ³ /hr.	
iv	No further modernization of project shall be carried out without prior permission of this Ministry.	<p>Complied.</p> <p>EC was granted by MoEF& CC to BGR for INDMAX & BS-VI projects vide letter F. No. J11011/48/2016-IA-II (I), Dated 19th Apr'2017.</p> <p>The project aims to enhance expansion of Crude processing from 2.35 to 2.7 MMTP, other associated projects, e.g. DHDT capacity from 1.2 to 1.8 MMTP, HGU from 25 KTPA to 30 KTPA, CRU-MSQ revamp and SDS(SRU) unit.</p> <p>All the units of the Projects are commissioned successfully.</p>
v	The company shall comply with the conditions stipulated in the clearance order of even no. dated 25 th June 2002.	Complied.
vi	<p>The company shall carry out a comprehensive risk assessment study and a copy submitted to the Ministry before commissioning of the Diesel Hydro Treatment Project.</p> <p>A comprehensive risk assessment study for the complex must be undertaken and report submitted to the Ministry before commissioning of the Diesel hydro-treatment project.</p>	<p>Complied.</p> <ol style="list-style-type: none"> 1. Rapid Risk Analysis (RRA) was carried by M/s EIL in September'2006, and a copy of the report was also submitted to your good office vide our letter No. BRPL/ENV/MS-MAX/06-07/03 dated 08.11.2006. 2. Comprehensive Risk Assessment was conducted by M/s Chilworth Technology Pvt. Ltd. was submitted on 11.10.2010. 3. Post commissioning, fresh CRA was carried out by M/S CGC Converse Technologies in the year 2016 and M/s Environmental Technical Service Ltd. in the year 2021.

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Status of Diesel Hydro-Treatment Project

(1st October 2024 to 31st March 2025)

**Environmental Clearance for Diesel Hydro-treatment Project,
MoEF's Letter No. J.1101/78/ 2001- IA- II (I) dated 25/06/2002**

Status:

Some of the important milestones towards implementing of the project:

1. Renewal of "Environment Clearance" from the Ministry of Environment & Forests:

The Ministry of Environment & Forests had conveyed its 'No Objection' to the proposed revised Diesel up gradation project at Indian Oil - Bongaigaon Refinery vide their letter No. J-1101/78 /2001- IA 11(1) dated 01.05.2006.

2. Renewal of "NOC" from State Pollution Control Board:

Pollution Control Board of Assam had renewed the NOC vide their letter No. WB/Z-II/T-1 345/2000-2001/138 Dated Guwahati, the 8th May 2006

3. Board approval for Project:

Board of Directors of IOCL has approved revised cost estimate of **Rs.1701.52** Crore (original approved cost is Rs. 1431.91 crore) for this project.

4. Fresh REIA & RRA Study:

REIA & RRA study for the project was carried out by M/s EIL, New Delhi. Final report was submitted in September 2006.

Further, HAZOP study for DHDT unit (13.12.06 to 22.12.06), Sulfur Block (15.01.07 to 24.01.07), HGU (08.10.07 to 12.10.07) and OSBL Utilities & Off sites (16.10.07 to 17.10.07) completed and reports submitted by EIL on 04.01.07, 17.02.07, 27.10.07 & 31.10.07 respectively.

Fresh HAZOP study completed by Asia Pacific Risk Management Services Pvt. Ltd in February 2014

Further, Fresh EIA & RRA for New Projects conducted in 2015-16 by M/s ABC Techno Lab Pvt. Ltd, Chennai

1. Commissioning of various units under DHDT project:

- a) All the utilities & off sites viz. LP steam, MP steam, VHP steam, Service Water, DM water, Drinking water, Nitrogen, Process Air, Inst. Air, CK, Slop, GO, FG lines commissioned
- b) H₂ unloading & Storage facility along with H₂ unloading Compressor commissioned
- c) All the Seven Feed tanks commissioned
- d) Nitrogen Plant & Flare System commissioned
- e) Hydrogen Generation Unit (HGU) commissioned in March 2011
- f) Diesel Hydro Treatment (DHDT) Unit has been commissioned in August 2011.
- g) Amine Absorption Unit & Sour Water Stripping Unit commissioned
- h) Sulfur Recovery Unit (SRU) commissioned in December 2012.
- i) Gas Turbine Generator (GTG) with Heat Recovery Steam Generator (HRSG) commissioned in May 2013.
- j) HGU Revamp (Capacity enhancement from 25 TMTA to 30 TMTA) in March 2020.
- k) DHDT capacity enhancement from 1.2 MMTA to 1.8 MMTA in March 2020.

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2.0 APPENDIX -A1

STACK MONITORING DATA: (1st October 2024 to 31st March 2025)

A. SO₂ Emission (mg/Nm³)

Stacks	Emission Std.	Observed value		
		Min	Avg.	Max
CDU-I	For Existing Refineries For F.O. = 1700 For F.G. = 50 For New Refineries For F.O. = 850 For F.G. = 50	4.12	36.3	376.06
DCU-I		9.0	19.32	32.0
CDU-II		2.92	5.21	21.20
DCU-II		0.27	5.97	45.81
CPP		0.0	10.24	27.68
HOT-1		0.12	104.58	283.75
Reformer		34.96	35.00	35.06
HOT-2		Shut Down		
Isomerization		0.06	4.73	17.85
DHDT		7.0	8.41	10.15
HGU		6.05	6.97	11.70
NEW SRU		312.0	312.0	312.0
GTG		0.01	8.28	14.38
IGHDS		2.02	6.96	129.30
NHT		6.98	7.0	7.05
INDMAX		1.99	16.26	31.09

B. NO_x Emission (mg/Nm³)

Stacks	Emission Std.	Observed value		
		Min	Avg.	Max
CDU-I	For Existing Refineries For F.O. = 450 For F.G. = 350 For New Refineries For F.O. = 350 For F.G. = 250	3.2	18.63	38.62
DCU-I		5.01	21.78	39.03
CDU-II		6.91	30.63	199.18
DCU-II		13.28	13.54	13.68
CPP		33.48	33.50	33.52
HO-1		0.81	79.84	114.62
Reformer		33.99	34.65	37.19
HO-2		Shut Down		
Isomerization		5.26	7.90	10.22
DHDT		4.39	5.66	7.25
HGU		6.72	24.77	67.22
NEW SRU		N/A		
GTG		15.99	16.02	16.31
IGHDS		17.97	38.44	76.54
NHT		NR	NR	NR
INDMAX		13.54	22.26	22.39

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C. PM Emission (mg/Nm³)

Stacks	Emission Std.	Observed value		
		Min	Avg.	Max
CDU-I	For Existing Refineries For F.O. = 100 For F.G. = 10 For New Refineries For F.O. = 50 For F.G. = 5	0.9	4.4	17.3
DCU-I		0.7	0.7	0.7
CDU-II		0.9	1.0	1.0
DCU-II		8.1	8.1	8.1
CPP		1.4	1.6	1.7
HO-1		1.6	9.1	24.7
Reformer		2.7	2.7	2.7
HO-2		Shut Down		
Isomerisation		1.3	1.3	1.3
DHDT		2.3	2.3	2.3
HGU		8.8	22.0	33.8
NEW SRU		7.4	7.4	7.4
GTG		0.2	10.0	14.0
IGHDS		0.8	0.9	0.9
NHT		7.1	8.0	8.2
INDMAX		0.0	12.7	27.0

D. CO Emission (mg/Nm³)

Stacks	Emission Std.	Observed value		
		Min	Avg.	Max
CDU-I	For Existing Refineries For F.O. = 200 For F.G. = 150 For New Refineries For F.O. = 150 For F.G. = 100	9.3	10	73.7
DCU-I		1.8	3.0	4.3
CDU-II		0	10.5	70.8
DCU-II		2.0	2.0	2.0
CPP		18.0	18.0	18.0
HO-1		14.9	18.0	157.1
Reformer		12.5	13.0	14.3
HO-2		Shut Down		
Isomerisation		12.0	15.8	20.2
DHDT		2.7	6.3	10.8
HGU		9.6	20.1	34.9
NEW SRU		29	29	29
GTG		0.8	4.8	10.7
IGHDS		2.0	3.3	6.6
NHT		18.2	20.1	22.3
INDMAX		0.0	5.2	6.3

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E. Ni + V Emission (mg/Nm³)

Stacks	Emission Std.	Observed value		
		Min	Avg.	Max
CDU-I	For F.O. = 5	BDL	BDL	BDL
DCU-I		BDL	BDL	BDL
CDU-II		BDL	BDL	BDL
DCU-II		BDL	BDL	BDL
CPP		BDL	BDL	BDL
HO-1		BDL	BDL	BDL
Reformer		BDL	BDL	BDL
HO-2		BDL	BDL	BDL
Isomerisation		Shut Down		
DHDT		BDL	BDL	BDL
HGU		BDL	BDL	BDL
NEW SRU		BDL	BDL	BDL
GTG		BDL	BDL	BDL
IGHDS		BDL	BDL	BDL
NHT		BDL	BDL	BDL
INDMAX		BDL	BDL	BDL

AMBIENT AIR QUALITY AROUND BGR COMPLEX
(1st October 2024 to 31st March 2025)

	Station	Continuous Monitoring Station	Near Tube Well No.14	Near LPG Bottling plant	Rural Health Centre	Bartola Rail Gate	Near TW No.7 in Township
1	SO₂ (Std. 50/80 µg/m³)						
	Min	0.69	18.9	16.4	21.5	20.7	16.48
	Average	1.51	23.61	21.06	27.7	25.46	20.81
	Max	7.34	28.50	25.60	34.6	31.8	26.6
	No. of observation	Continuous	53	53	53	53	53
2	NO₂ (Std. 40/80 µg/m³)						
	Min	2.59	24.6	18.8	23.4	22.5	18.5
	Average	2.60	30.8	26.2	33.8	32.9	25.3
	Max	2.61	35.1	32.3	41.0	39.4	33.2
	No. of observation	Continuous	53	53	53	53	53
3	PM-10 (Std. 60/100 µg/m³)						
	Min	24.18	70.8	68.4	65.4	70.9	46.8
	Average	31.30	80.3	79.1	84.7	83.3	61.5
	Max	50.25	89.9	87.7	96.4	92.3	86.8
	No. of observation	Continuous	53	53	53	53	53

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	Station	Continuous Monitoring Station	Near Tube Well No.14	Near LPG Bottling plant	Rural Health Centre	Bartola Rail Gate	Near TW No.7 in Township
4	PM-2.5 (Std. 40/60 $\mu\text{g}/\text{m}^3$)						
	Min	8.87	25.3	23.1	27.2	27.8	21.5
	Average	19.36	30.2	28.1	37.4	32.5	26.2
	Max	41.51	36.8	32.9	43.2	37.8	31.2
	No. of observation	Continuous	53	53	53	53	53
5	Ammonia (Std. 100/400 $\mu\text{g}/\text{m}^3$)						
	Min	0.69	27.4	20.9	27.1	28.8	21.2
	Average	1.51	33.2	29.8	38.0	35.7	29.2
	Max	7.34	42.2	38.8	48.2	45.6	38.4
	No. of observation	Continuous	53	53	53	53	53
6	Pb (Std. 0.5/1.0 $\mu\text{g}/\text{m}^3$)						
	Min		BDL	BDL	BDL	BDL	BDL
	Average		BDL	BDL	BDL	BDL	BDL
	Max		BDL	BDL	BDL	BDL	BDL
	No. of observation		53	53	53	53	53
7	Arsenic (As) (Std. 6 ng/m^3)						
	Min		BDL	BDL	BDL	BDL	BDL
	Average		BDL	BDL	BDL	BDL	BDL
	Max		BDL	BDL	BDL	BDL	BDL
	No. of observation		53	53	53	53	53
8	Ni (Std. 20 ng/m^3)						
	Min		BDL	BDL	BDL	BDL	BDL
	Average		BDL	BDL	BDL	BDL	BDL
	Max		BDL	BDL	BDL	BDL	BDL
	No. of observation		53	53	53	53	53
9	CO (Std. 2/4 mg/m^3)						
	Min	0.99	1.02	0.95	0.25	1.05	0.98
	Average	1.05	1.23	1.16	1.33	1.27	1.17
	Max	1.33	1.39	1.29	1.64	1.47	1.39
	No. of observation	Continuous	53	53	53	53	53

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	Station	Continuous Monitoring Station	Near Tube Well No.14	Near LPG Bottling plant	Rural Health Centre	Bartola Rail Gate	Near TW No.7 in Township					
10	Ozone (Std.100/180 µg/m³ for 8 hrs/1 hr)											
	Min	34.96	18.5	15.4	19.4	20.2	14.2					
	Average	35.03	23.7	21.1	27.9	25.8	20.1					
	Max	35.09	31.2	25.5	34.1	31.5	31.2					
	No. of observation	Continuous	53	53	53	53	53					
11	Benzene (Std. 5 µg/m³)											
	Min	0.55	BDL	BDL	BDL	BDL	BDL					
	Average	0.65	BDL	BDL	BDL	BDL	BDL					
	Max	0.69	BDL	BDL	BDL	BDL	BDL					
	No. of observation	Continuous	53	53	53	53	53					
12	Benzo (a) Pyrene (Std. 1 ng/m³)											
	Min		BDL	BDL	BDL	BDL	BDL					
	Average		BDL	BDL	BDL	BDL	BDL					
	Max		BDL	BDL	BDL	BDL	BDL					
	No. of observation		53	53	53	53	53					
Average of Six Stations												
Parameter	SO2	NO2	PM-10	PM-2.5	NH3	Pb	As	Ni	Benzo (a) Pyrene	CO	C6H6	O3
Unit	µg/m³					ng/m³				mg/m³	µg/m³	
NAAQ Std. 2009	50/80	40/80	60/100	40/60	100/400	0.5/1.0	Max 6	Max 20	Max 1	2/4	Max 5	100/180
Min	0.69	2.59	24.18	8.87	1.69	BDL	BDL	BDL	BDL	0.25	0.55	14.20
Average	20.03	25.28	70.03	28.95	27.94	BDL	BDL	BDL	BDL	1.20	0.65	25.58
Max	34.60	41.0	96.40	43.20	48.20	BDL	BDL	BDL	BDL	1.64	0.69	35.09

forhobi
CMCHSE)

3.0 APPENDIX-A2

Effluent Discharged (in m³/hr): (1st October 2024 to 31st March 2025)

A	Industrial Effluent, m ³ /hr	108.31
B	Domestic Effluent from BGR Township, m ³ /hr	66.69
C	Total Effluent Treated (A + B), m ³ /hr	175
D	Treated Effluent Reused, m ³ /hr	175
E	Effluent Discharged, m ³ /hr	0.00
F	m ³ of Effluent discharged for 1000 MT of Crude processed	0.00

A. Treated Effluent Quality (1st October 2024 to 31st March 2025)

Sl. No	Parameter	Std,2008	Min	Avg.	Max
1	pH value	6.0 - 8.5	6.5	7.2	8.5
2	Oil and Grease, mg/l	5.0	1.6	3.5	4.9
3	Bio-Chemical Oxygen Demand (3 Day at 27°C), mg/l	15.0	4	10.3	14.0
4	Chemical Oxygen Demand (COD), mg/l	125.0	30	64.8	117.1
5	Suspended Solids, mg/l	20.0	3.4	10.3	18.8
6	Phenolic compounds (as C ₆ H ₅ OH), mg/l	0.35	0.1	0.2	0.4
7	Sulphide (as S), mg/l	0.50	0.0	0.3	0.5
8	CN, mg/l	0.20	0	0	0
9	Ammonia as N, mg/l	15.0	1.6	2.5	3.2
10	TKN, mg/l	40.0	2.8	3.7	4.6
11	P, mg/l	3.0	0.8	0.9	1.0
12	Cr (Hexavalent), mg/l	0.10	-	BDL	-
13	Cr (Total), mg/l	2.0	-	BDL	-
14	Pb, mg/l	0.10	-	BDL	-
15	Hg, mg/l	0.01	-	BDL	-
16	Zn, mg/l	5.0	0.2	0.3	0.4
17	Ni, mg/l	1.0		BDL	
18	Cu, mg/l	1.0	0.0	0.1	0.2
19	V, mg/l	0.20	-	BDL	-
20	Benzene, mg/l	0.10	-	BDL	-
21	Benzo (a) pyrene, mg/l	0.20	-	BDL	-

for info
CM(HSE)

B. Final Outlet (From the Complex) Storm Water channel Quality
(1st October 2024 to 31st March 2025)

Sl. No.	Parameter	Std 2008	Min	Avg.	Max
1	pH value	6.0 - 8.5	7.29	7.39	7.55
2	Oil and Grease, mg/l	5.0	2.0	2.67	4.00
3	Bio-Chemical Oxygen Demand (3 Day at 27°C), mg/l	15.0	12.0	13.33	14.0
4	Chemical Oxygen Demand (COD), mg/l	125.0	60.0	72.33	80.0
5	Suspended Solids, mg/l	20.0	BDL	BDL	BDL
6	Phenolic compounds (as C ₆ H ₅ OH), mg/l	0.35	BDL	BDL	BDL
7	Sulphide (as S), mg/l	0.50	BDL	BDL	BDL
8	CN, mg/l	0.20	BDL	BDL	BDL
9	Ammonia as N, mg/l	15.0	2.40	3.10	3.90
10	TKN, mg/l	40.0	3.40	4.30	5.80
11	P, mg/l	3.0	1.0	1.10	1.30
12	Cr (Hexavalent), mg/l	0.10	-	BDL	-
13	Cr (Total), mg/l	2.0	-	BDL	-
14	Pb, mg/l	0.10	-	BDL	-
15	Hg, mg/l	0.01	-	BDL	-
16	Zn, mg/l	5.0	0.20	0.35	0.56
17	Ni, mg/l	1.0		BDL	
18	Cu, mg/l	1.0	0.05	0.14	0.24
19	V, mg/l	0.20	-	BDL	-
20	Benzene, mg/l	0.10	-	BDL	-
21	Benzo (a) pyrene, mg/l	0.20	-	BDL	-

Gadali
CM(HSE)

4.0 APPENDIX-A3: Tree Plantation (1st October 2024 to 31st March 2025)

The entire area inside BGR covered with greenery through massive plantation activities. Through massive plantation work and by giving protection to natural forest growth inside BGR premises, the entire area has become green. The entire plant area where processing plant facilities do not exist has a green cover. This helps in reduction of noise and air pollution level in one hand while on the other hand provides protection to ecological features of the area. The refinery has an excellent quality environment around its complex. Natural greenery can be seen all around the complex as well as in BGR Township in all seasons of the year. Tree Census was done by Divisional Forest Office, Chirang in the year 2012-13. As per census, 84545 numbers of plants which include trees including shrubs, ocular estimated 33000 numbers of bamboos in 1150 no. bamboo culms and trees, planted by BGR during 2003 to 2012.

To comply INDMAX & BS-VI EC conditions, BGR planted 29600 No.s of saplings in the FY 2017-18, 30,062 No.s in FY 2018-19, 14340 No.s in FY 2019-20, 25606 No.s in FY 2020-21, 1,00,000 No.s in FY 2021-22, 26710 No.s in FY 2022-23, 100630 No.s in FY-2023-24 while in FY 2024-25, BGR planted 107530 No.s of tree saplings in and around the complex.

Tree Plantation 2017-18



Birhangaon State Dispensary Plantation 10000 No. s in Aug'2017 and 5375 No. s (2nd Phase in August,2019), Sapling Planted by Miyawaki Method. Growth in March 2025.

prabali
CM(HSE)

Tree Plantation 2018-19



BGR TOWNSHIP PLANTATION, Planted Van Mahotsav 2018, Growth in March 2025.

Tree Plantation 2019-20



North Bongaigaon High School, 5250 Sapling Planted by Miyawaki Method in the month of September, 2019, Growth in March 2025.

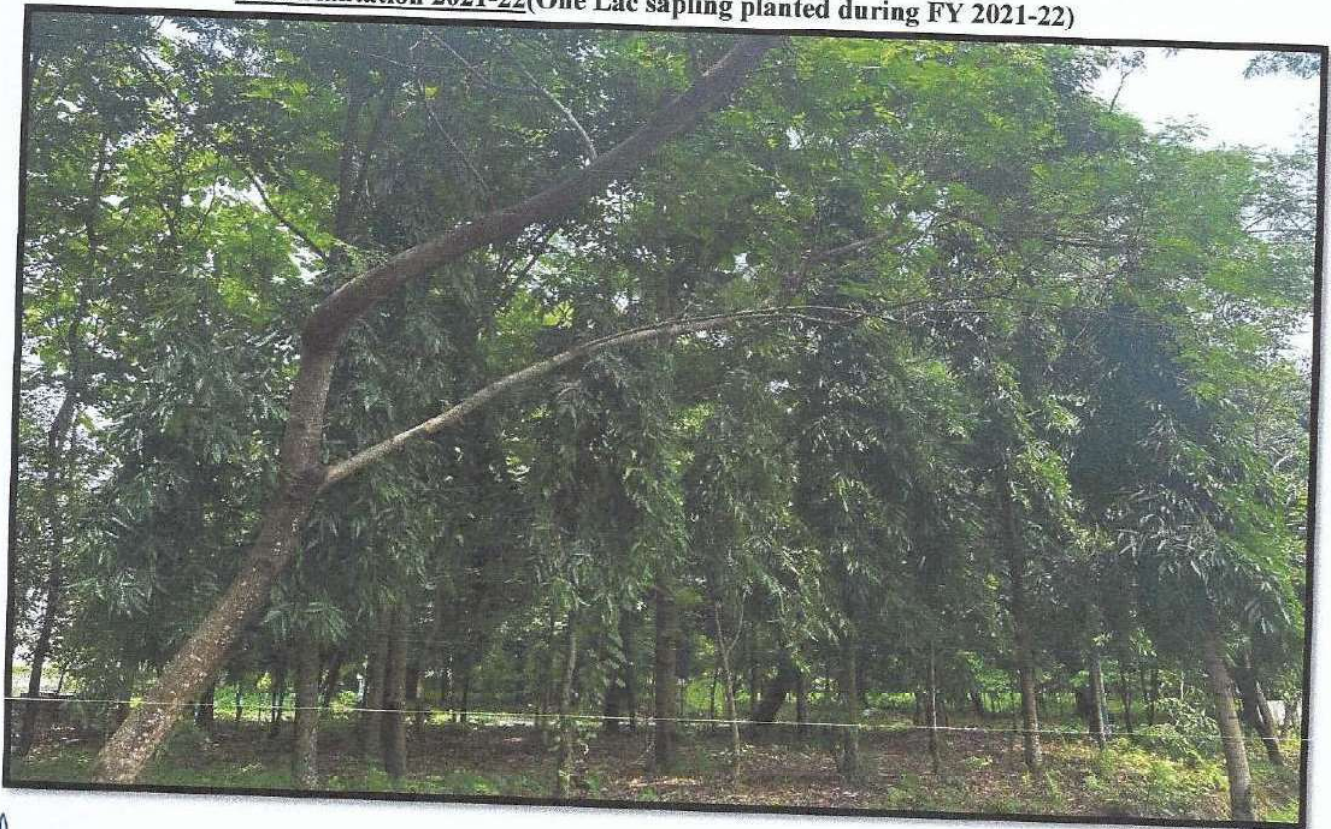
for Khali
CMCHSE/

Tree Plantation 2020-21



4810 No.s of sapling Planted in the month of August'2020 at Hatipota Brahma Mandir, Growth in March 2025.

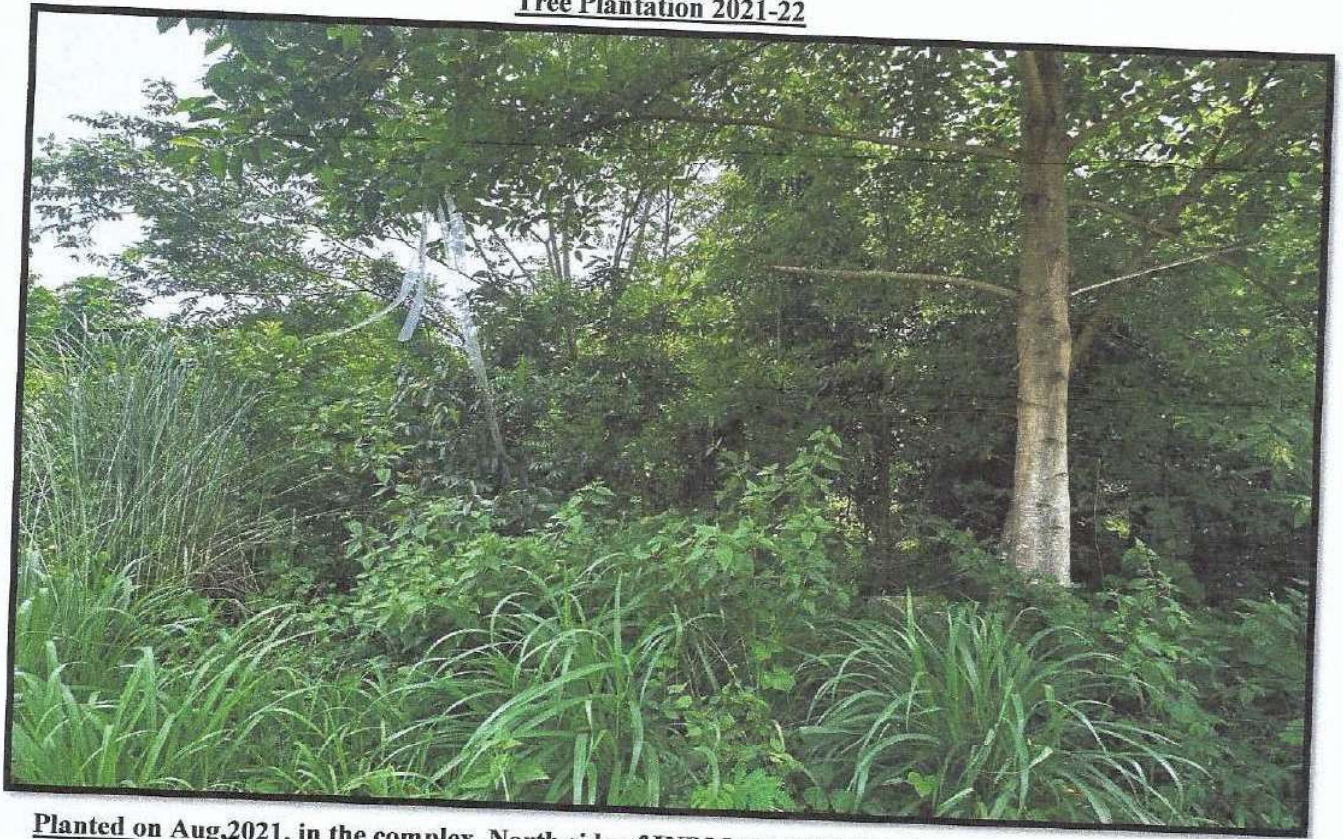
Tree Plantation 2021-22(One Lac sapling planted during FY 2021-22)



for/bali
CM(HSE)

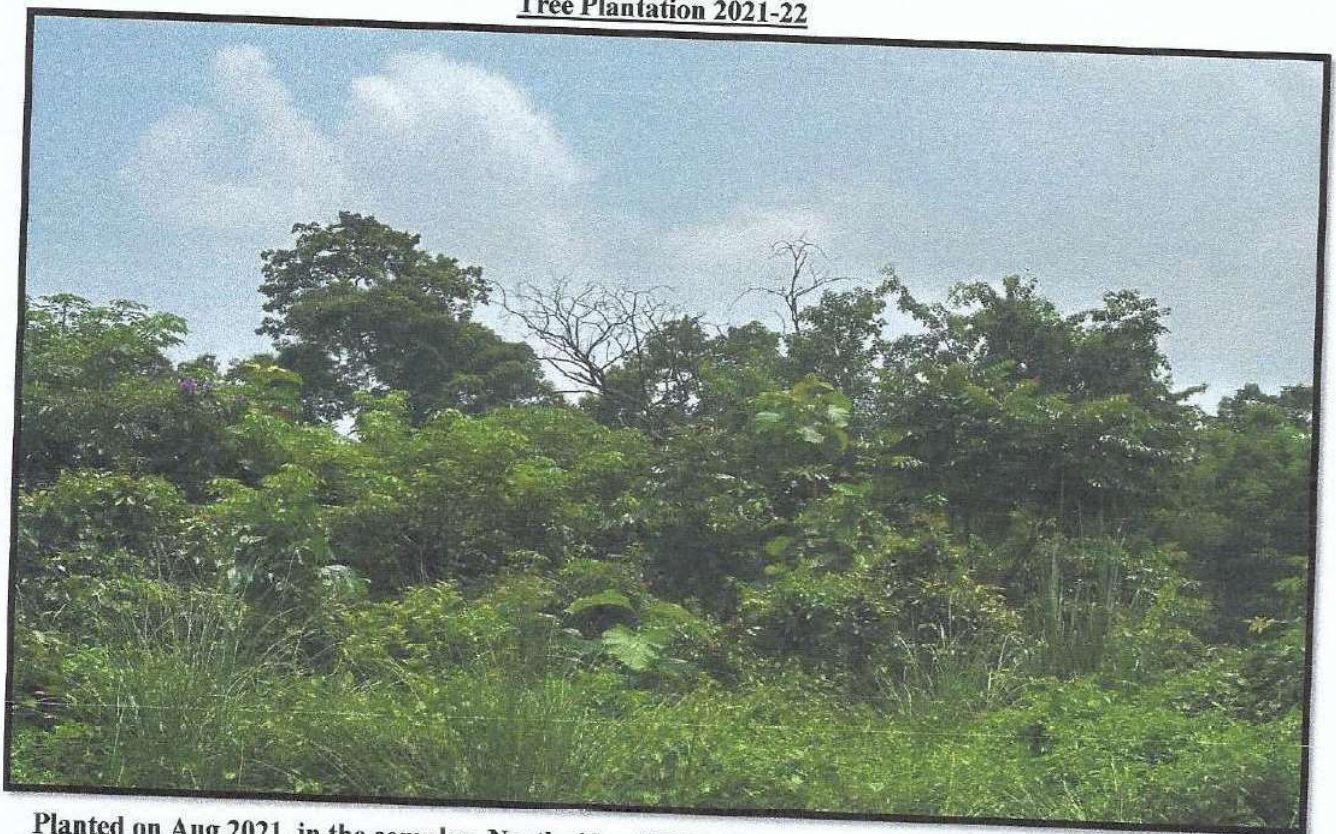
Planted on WED'2021, in BGR Township, Growth in March 2025.

Tree Plantation 2021-22



Planted on Aug.2021, in the complex, North side of INDMAX & BS-VI, Growth in March 2025.

Tree Plantation 2021-22



Planted on Aug.2021, in the complex, North side of INDMAX & BS-VI, Growth in March 2025.

Joelkali CM(HSE)

Tree Plantation 2022-23



Planted on WED'2022, in BGR Township, Growth in March 2025.

Goodhari
CM(HSE)

5.0 APPENDIX-A4: Quarterly Fugitive Emission Survey Data (LDAR)
(1stOctober 2024 to 31stMarch, 2025)



IOCL Fugitive
Emission Report Q-4



IOCL Fugitive
Emission Report Q-3

Gochhayal
CM (HSE)

इंडियन ऑयल कॉर्पोरेशन लिमिटेड

बोंगाइगॉव रिफाइनरी

डाकघर : धालीगॉव - 783 385

जिला : चिरांग (असम)

Indian Oil Corporation Limited

Bongaigaon Refinery

P.O. : Dhaligaon, Dist. : Chirang, Assam-783385

Phone : 03664-

E-mail :

Website : www.iocl.com FAX : 03664-



रिफाइनरी प्रभाग
Refineries Division

BGR/HSE/HW-RETURN/Fy 24-25/ 01

Date: 30.06.25

To

The Member Secretary,
Pollution Control Board, Assam
Bamunimaidam
Guwahati – 781021

Subject: Regarding Submission of Annual Hazardous Waste Return for Fy 2024-25 in Form-4 along with filled in Format A, B & C as per Hazardous and Other Waste (Management and Transboundary Movement) Rules'2016

Dear Sir,

Please find enclosed herewith the copy of Annual Hazardous Waste Return for Fy 2024-25 in Form-4 along with the filled in Format A,B,C as per Hazardous and Other Waste (Management and Transboundary Movement) Rules'2016 for the period from 1st April'24 to 31st March'25.

Thanking You,

Yours faithfully

(Biman Gogoi)

Dy. General Manager (HSE)

IOCL Bongaigaon Refinery

Ph- 03664 25 3302

Copy to:

1. Zonal Officer, Central Pollution Control Board,
Eastern Zonal Office, 'TUM -SIR', Lower Motinagar
Near Fire Brigade H.Q
Shillong—793014
2. The Regional Executive Engineer
Regional Laboratory cum office
Pollution Control Board, Assam
Ratnawali Heights (1st floor)
(Opposite Birjhora HS School)

रजिस्टर्ड ऑफिस : जी-9, अली यावर जंग मार्ग, बान्द्रा (पूर्व) मुम्बई - 400 051

Regd. Office : G-9, Ali Yavar Jung Marg, Bandra (East) Mumbai-400 051

Refineries Division : Head Quarter : Indian Oil Bhavan, SCOPE Complex, Core-2, 7, Institutional Area, Lodhi Road, New Delhi - 110 003

Q. CM(HSE)

6.0 APPENDIX-A5(a): Annual return of hazardous waste (2024-25)



HW Return FY
2024-25.pdf

Jack Boli
CM(HSE)

7.0 APPENDIX-A5 (b): Authorization from PCBA for Hazardous Waste (Management and Transboundary Movement) Rules 2016
No. WB/BONG/T-748/19-20/109



Pollution Control Board:: Assam
Bamunimaidam; Guwahati-21
(Department of Environment & Forests:: Government of Assam)
Phone: 0361-2652774 & 3150318; Fax: 0361-3150319
Website: www.pcbassam.org



No. WB/T-311/21-22/ 252

Dated Guwahati the 08.09. September, 2022

FORM - 2
[See Rule 6(2)]

[Grant of Authorization under the Provision of the Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016]

1. Number of Authorisation and date of issue : No. WB/T-311/21-22/ dtd. .09.2022
2. Reference of application (No. and date) : 634914
3. M/s Indian Oil Corporation Limited (IOCL), Bongaigaon Refinery, NH 31C (New NH 27), Dhaligaon, Chirang is hereby granted an authorisation based on the signed inspection report for Generation, storage and transportation of Hazardous or Other wastes or both.

DETAILS OF AUTHORISATION

Sl. No.	Category of Hazardous Waste as per the Schedules-I, II & III of these rules	Authorised mode of disposal or recycling or utilisation or co-processing, etc.	Quantity (ton/annum)	Mode of Management
1	Schedule-I, Sl.No. 4.1 : Oil sludge or emulsion	Generation, Storage & Transportation	7000 MT/Annum	Transportation to authorized actual user/Recyclers/ Disposal agencies/ reprocessing and recovery/Captive treatment through Bio-remediation as per prescribed norms
2	Schedule-I, Sl.No. 4.2: Spent catalyst	Generation, Storage & Transportation	2500 MT/Annum	Transportation to authorized actual user/Recyclers in accordance with HOWM Rules 2016
3	Schedule-I, Sl.No. 4.3: Slap Oil	Generation, Storage & Transportation	32000 MT/Annum	Captive Utilization as per prescribed norms.
4	Schedule-I, Sl.No. 5.1: Used or spent oil	Generation, Storage & Transportation	20 MT/Annum	Transportation to authorized actual user/Recyclers
5	Schedule-I, Sl.No. 33.1: Empty barrels/containers/liners contaminated with hazardous chemicals/wastes	Generation, Storage & Transportation	7000 numbers/Annum	Transportation to authorized actual user/Recyclers

4. This authorisation shall be in force in force for the period of five years up to 31.03.2027 unless otherwise revoked or withdrawn within this period.
5. The authorisation is subject to the following general and specific conditions:

A. GENERAL CONDITIONS OF AUTHORISATION:

1. The authorised person shall comply with the provisions of the Environment (Protection) Act, 1986, and the rules made there under.
2. The authorisation or its renewal shall be produced for inspection at the request of an officer authorised by the State Pollution Control Board.
3. The person authorised shall not rent, lend, sell, transfer or otherwise transport the hazardous and other wastes except what is permitted through this authorization.
4. The agencies should ensure that the barrels are decontaminated before collection in the premises of the occupier / generator equipped with adequate effluent treatment plant.
5. Any unauthorised change in personnel, equipment or working conditions as mentioned in the application by the person authorised shall constitute a breach of his authorization.
6. The person authorised shall implement Emergency Response Procedure (ERP) for which this authorisation is being granted considering all site specific possible scenarios such as spillages, leakages, fire etc. and their possible impacts and also carry out mock drill in this regard at regular interval of time
7. The person authorised shall implement Emergency Response Procedure (ERP) for which this authorisation is being granted considering all site specific possible scenarios such as spillages, leakages, fire etc. and their possible impacts and also carry out mock drill in this regard at regular interval of time

Good habits / CM (HSE)



The person authorised shall comply with the provisions outlined in the Central Pollution Control Board guidelines on "Implementing Liabilities for Environmental Damages due to Handling and Disposal of Hazardous Waste and Penalty"

9. It is the duty of the authorised person to take prior permission of the State Pollution Control Board to close down the facility.
10. The imported hazardous and other wastes shall be fully insured for transit as well as for any accidental occurrence and its clean-up operation.
11. The record of consumption and fate of the imported hazardous and other wastes shall be maintained.
12. The hazardous and other waste which gets generated during recycling or reuse or recovery or pre-processing or utilisation of imported hazardous or other wastes shall be treated and disposed of as per specific conditions of authorization.
13. The importer or exporter shall bear the cost of import or export and mitigation of damages if any.
14. An application for the renewal of an authorisation shall be made as laid down under these Rules.
15. Any other conditions for compliance as per the Guidelines issued by the Ministry of Environment, Forest and Climate Change or Central Pollution Control Board from time to time.
16. Annual return shall be filed by June 30th for the period ensuring 31st March of the year.

B. SPECIFIC CONDITIONS:

1. The unit shall maintain the records of Hazardous & Other Wastes in Form-3 under provision of Rules 6(5), 13(7), 14(6), 16(5) & 20(1).
2. The unit shall provide the Transporter with the relevant information in Form-9 regarding the hazardous nature of the wastes and measures to be taken in case of an emergency.
3. The unit shall submit Annual Returns in Form-4 to State Pollution Control Board by 30th June of every year for the preceding period April to March.
4. The unit shall prepare 6 (six) copies of the manifest in Form-10 as per Rules-19(1) for every transit of consignment of hazardous Waste under this authorization.
5. Any other conditions for compliance as per the guidelines issued by the Ministry of Environment, Forests & Climate Change, GOI New-Delhi & Central Pollution Control Board, Delhi shall be complied.
6. The unit shall submit an Environmental Statement for the financial year ending on 31st March, in Form-V of the Environment (Protection) Rules, 1986 before 30th September every year.
7. Any occupier handling hazardous or other wastes and operator of the treatment, storage and disposal facility shall ensure that the hazardous and other wastes are packaged in a manner suitable for safe handling, storage and transport as per the guidelines issued by the Central Pollution Control Board from time to time. The labelling shall be done as per Form 8.
8. The unit shall submit the report on any accident occurs at their facility immediately to the state Pollution Control Board, in Form-11 of the Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016.
9. The transport of the hazardous and other waste shall be in accordance with the provisions of Rule 18 of Hazardous & Other waste (Management & Transboundary Movement) Rules, 2016.
10. The unit shall install a display board in the prescribed format in accordance with PCBA notification vide WB/T-237/ 19-20/95 dated 17.08.2020 and regularly update the same.

(Shantanu Kr. Dutta)
Member Secretary

Memo No. WB/T-311/21-22/ 252-A

Dated Guwahati the 28th September, 2022

Copy to:

- ✓ M/S Indian Oil Corporation Limited (IOCL), Bongaigaon Refinery, NH 31C (New NH 27), Dhaligaon, Chirang (Assam) for information & necessary action.

(Shantanu Kr. Dutta)
Member Secretary

Guwahati
CM(HSE)

8.0 APPENDIX-A6: Detail of Wastewater treatment and disposal system.



ETP Description.pdf

Gandhari
CM(HSE)

9.0 APPENDIX-A7: Quarterly Noise Survey Data (1stOctober, 2024 to 31st March 2025)



IOCL Noise Report
Q-4.pdf



IOCL Noise Report
Q-3.pdf

Goekhal
CMCHSE)

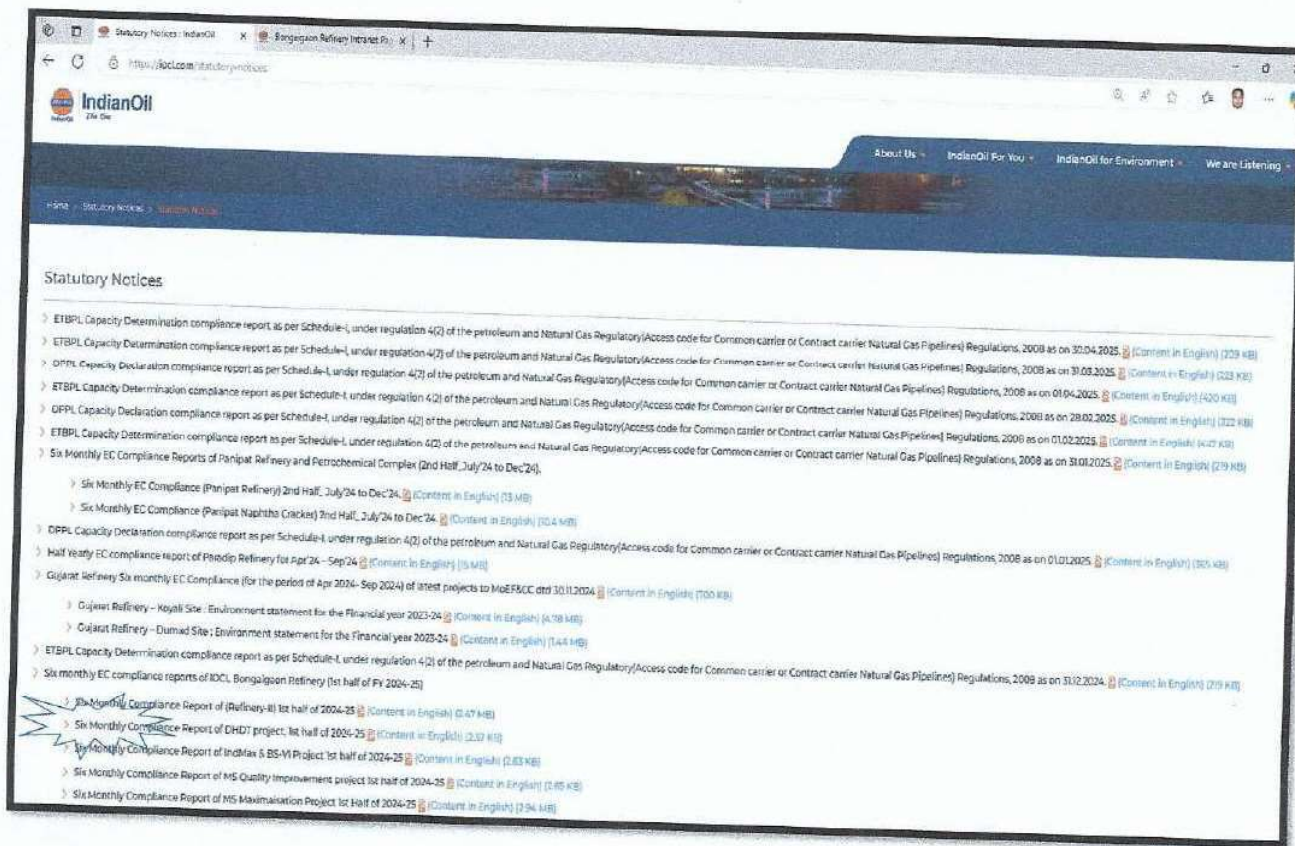
10.0 APPENDIX-A8: Rainwater Harvesting Data

Sl. No.	Name of RWH Site location	Nos. of RHW system	Area (In m ²)	Estimated approximate ground water recharge potential volume (m ³ /year) based on avg. annual rainfall MD data for the last 10 yrs
A	At Township area			
1	Manjeera GH	1	677	1956.53
2	Deosri GH	4	581	1679.09
3	Manas Guest House	2	639	1846.71
4	BGR HS School, BGR	2	1361	3933.29
5(A)	DPS Block-I (Old)	1	704	2034.56
5(A)	DPS Block-I (New)	2	808.75	2337.2875
5(B)	DPS Block-II	3	1810	5230.9
6	Champa Club (Officers Club)	2	1100	3179
7	Refinery Club cum Community Centre	3	2580	7456.2
8	Employee Union Conference Hall Building	1	275	794.75
9	CISF Office	2	825	2384.25
10	CISF Barrack	4	1050	3034.5
11	BGR Community Centre	2	650	1878.5
12	Sports complex (Football and volleyball Stadium Gallery)	2	988	2855.32
13	Rainwater Harvesting at Mandir Complex Pond	1	7125	20591.25
14	Mandir Complex	1	833	2407.37
15	Temple Complex (NEW)	1	10151	29336.39
16	Cooperative Store/Shopping Complex (Newly constructed in Oct'24)	1	210	606.9
17	BGR Hospital (Newly constructed in Oct'24)	1	736	2127.04
B	At Refinery area			
18	Admin. Block - B Plan	1	1730	4999.7
19	BGR Canteen (Ref.)	2	3134	9057.26
20	CISF Office & Scooter Shed (Ref.)	1		
21	Cycle Stand (Near time office)	1		
22	Control Room BS-VI - Plant	1	1372.5	3966.525
23	Substation BSVI - Plant	1	942	2722.38
24	Parvesh Udyan pond	1	5775	16689.75
25	Eco Park Pond including natural pond	1	20000	57800
	Total	45	66057.25	190905.5

Pathani
CM(HSE)

11.0 APPENDIX-A9: Screenshot of IOCL website wherein past reports have been uploaded

Link: <https://iocl.com/statutory-notice>



for Kabi
CM (HSE)

12.0 APPENDIX-A10: NABL certificate of QC Lab of Bongaigaon Refinery

  National Accreditation Board for
Testing and Calibration Laboratories

NABL

CERTIFICATE OF ACCREDITATION

**INDIAN OIL CORPORATION LIMITED, QC LABORATORY,
BONGAIGAON REFINERY**

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2017

**"General Requirements for the Competence of Testing &
Calibration Laboratories"**

for its facilities at

P.O. DHALIGAON, BONGAIGAON, CHIRANG, ASSAM, INDIA

in the field of

TESTING

Certificate Number: TC-6027

Issue Date: 29/04/2024 Valid Until: 28/04/2026

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the relevant requirements of NABL.
(To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Name of Legal Entity: Indian Oil Corporation Limited

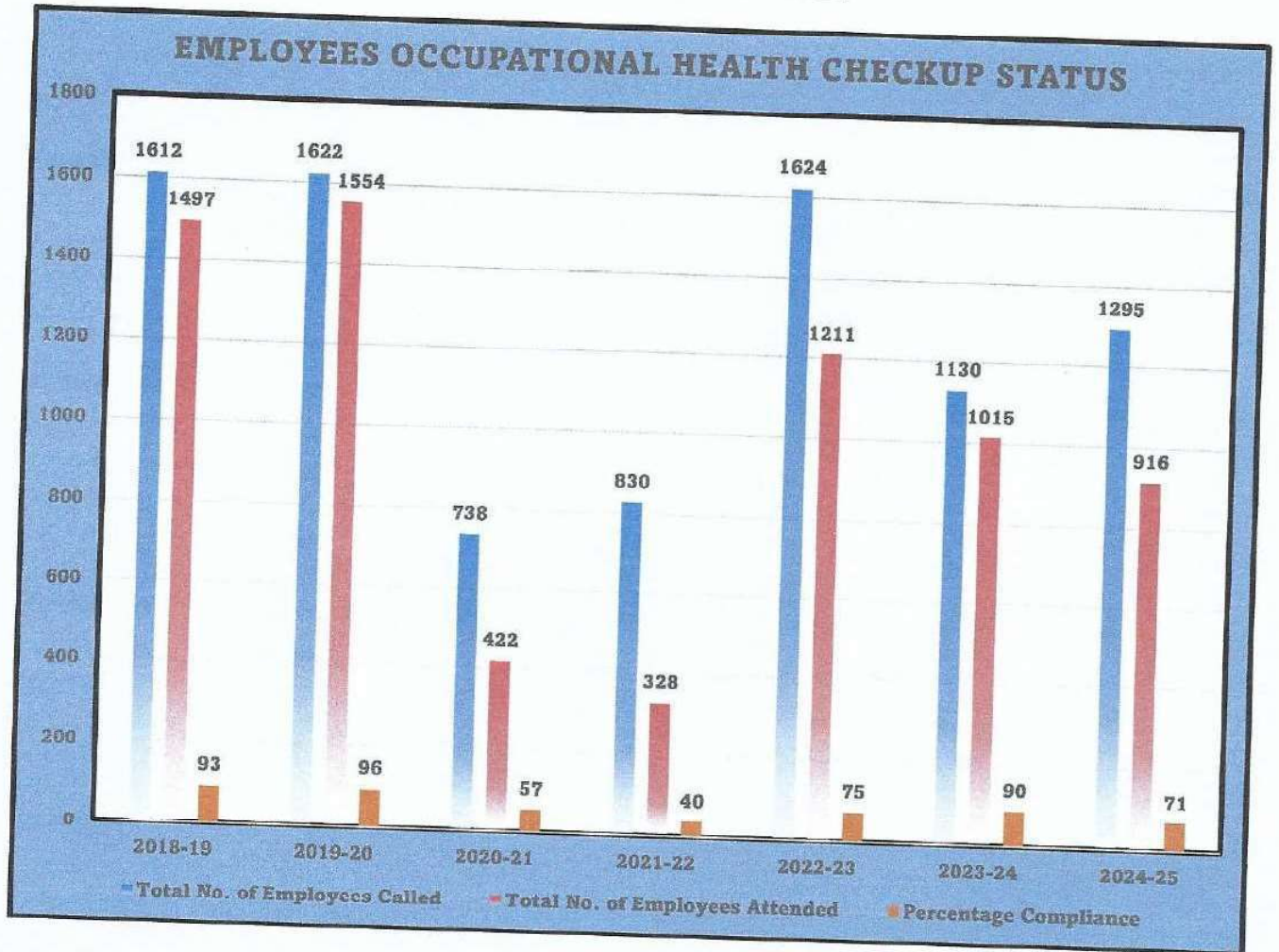
Signed for and on behalf of NABL




N. Venkateswaran
Chief Executive Officer


(CMCHSE)

13.0 APPENDIX-A11: Employees Occupational Health Checkup Status



Note: Employees Occupational Health checkup program was affected during the year 2020-2022 owing to COVID-2019 pandemic situation.

for
CM (HSE)

14.0 APPENDIX-A12: Flare System

