ऑयल इंडिया
OIL INDIA

HSE Department
Oil India Limited
Duliajan, Dibrugarh, 786602, Assam
Phone : 0374-2800542
Email: safety@oilindia.in

संदर्भ सं./Ref. No.: S&E/E/43C-1/52

दिनांक/Date: 11.01.2024

From	:	Chief General Manager (HSE) I/C
To	:	Deputy Director General of Forests (Central), Sub Office, Guwahati (under Regional Office, Shillong), 4th Floor, Housefed Building, Rukminigaon, Guwahati-781022. (**Email :** iro.guwahati-mefcc@gov.in, iro.moefcc.ghy@gmail.com)
Subject	:	Submission of Half-yearly (April 2023 to September 2023) compliance reports of the conditions stipulated in the Environment Clearance (EC) granted to Oil India Limited.

Sir,

Reference to above subject, please find enclosed herewith the Half-yearly (**April 2023 to September 2023**) compliance reports of the conditions stipulated in the Environment Clearance (EC) granted to Oil India Limited. List of the EC are tabulated below:

S.No	EC Identification No/File No.	Name of the EC proposal
1.	F. No. J-11011/413/2008-IA II (I) dated 24.01.2011	OCS Bhogpara.
2.	F. No. J-11011/1251/2007-IA II (I) dated 01.11.2011	Exploratory Drilling of 01 (One) well at Doomdooma-Pengry Area, District Tinsukia, Assam.
3.	F. No. J-11011/682/2008-IA II (I) dated 17.06.2013	Expansion of Gas field Development in Tengakhat-Naharkatia-Jorajan area and Doomdooma Pengry area, Assam by M/s Oil India Ltd.
4.	F. No. J-11011/116/2018-IA II (I) dated 07.01.2020	Onshore Oil & Gas Exploration & Development Drilling and Production in Ningru Oil & Gas Field in Districts Changlang and Namsai for Ningru PML Block (Arunachal Pradesh)
5.	F. No. J-11011/1260/2007-IA II (I) dated 09.04.2020	Onshore Oil & Gas Development Drilling and Production in Mechaki Area covering Mechaki, Mechaki Extension, Baghjan and Tinsukia Extension PMLs on District Tinsukia (Assam).
6.	F. No. J-11011/150/2016- IA II (I) dated 11.05.2020	Extension Drilling & Testing of Hydrocarbons at 7 (seven) Locations under Dibru-Saikhowa National Park Area, North-West of Baghjan PML, District Tinsukia, Assam.
7.	F. No. J-11011/1253/2007-IA II (I) dated 28.12.2020	Onshore Oil & Gas development drilling and production by M/S Oil India Ltd in Dibrugarh district under Dibrugarh, Chabua, Higrijan and Tinsukia PMLs. (Dibrugarh- Bhogpara)
8.	F. No. J-11011/375/2016-IA II (I)	Onshore Oil & Gas Development Drilling and

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	dated 28.12.2020	Production (179 wells and 9 Production Installations) in North Hapjan – Tinsukia – Dhola area under Tinsukia district, Assam.
9.	F. No. J-11011/35/2018-IA II (I) dated 26.02.2021	Onshore Oil & Gas development drilling and production by M/S Oil India Ltd. Located in Khagorijan Oil & Gas Field in Dibrugarh & Tinsukia District under Tinsukia PML, Tinsukia Extension PML and Chabua PML District: Dibrugarh, Assam
10.	F. No. J-11011/186/2016-IA II (I) dated 03.03.2021	Onshore Oil & Gas development drilling and production in Borhat-Titlagarh area, Dibrugarh, Sibsagar and Charaideo Districts under Sapkaintb, Borhat, Moran Extension and Doomdooma PMLs.
11.	EC22A002AS110311 F. No. J-11011/156/2017-IA II (I) dated 28.11.2022	Oil & Gas development drilling and production (16 exploratory, 73 developmental drilling wells and 9 Production Installations) in Moran Area under Dibrugarh, Sibsagar and Charaideo districts, Assam.
12.	EC23A002AS125690 F. No. J-11011/1254/2007-IA II (I) dated 13.01.2023	Oil & Gas development drilling and production (68 developmental drilling wells and 9 Production Installations) in Khowang Shalmari Area under Dibrugarh, Sibsagar districts, Assam.
13.	EC23A002AS188131 F.No J-11011/1257/2007- IA II (I) dated 17.04.2023	Onshore Oil & Gas development drilling and production (167 wells and 7 production Installations) in Tengakhat-Kathaloni-Dikom (TKD) under Dibrugarh district, Assam.
14.	EC23A002AS198872 F. No. J-11011/388/2016-IA II (I) dated 31.07.2023	Onshore Oil & Gas development drilling (67 wells) in Jorajan Area under Dibrugarh, Charaideo and Tinsukia districts, Assam.
15.	EC23A002AS146942 F.No. J-11011/546/2017-IA(I) dated 20.09.2023	Onshore Oil & Gas development drilling and production (294 wells and 2 Production Installations) in Naharkatiya-Deohal-Bogapani-Nagajan (NDBN) area under Dibrugarh & Tinsukia districts, Assam.

This is for your kind information please.

Thanking you.

12/01/2024

(Rajendra Singh Garhwal)
Chief General Manager (HSE) I/C
Nodal Officer (EC, FC, NBWL)
For Resident Chief Executive

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OIL INDIA

HSE Department
Oil India Limited
Duliajan, Dibrugarh, 786602, Assam
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Encl: As above

Copy:

1. Director, Monitoring Cell, MoEF, Paryavaran Bhawan, CGO Complex, Lodhi Road, New Delhi-110003.
2. Zonal Office, Central Pollution Control Board, "TUM-SIR", Lower Motinagar, Near Fire Brigade Headquarter, Shillong-793014.
3. Chairman, Assam Pollution Control Board, Bamunimaidan, Guwahati-781021, Assam.
4. Chairman, Arunachal Pradesh State Pollution Control Board, Office of the Principal Chief and Secretary (E&F) Conservator of Forests, Govt. of Arunachal Pradesh, Itanagar-791111, Arunachal Pradesh.

12/07/2024
राजेन्द्र सिंह गर्ब्याल
मुख्य महाप्रबंधक (एचएसई) - विभागाध्यक्ष
नोडल अधिकारी (ईसी/एफसी/एनबीडब्ल्यूएल)
ऑयल इंडिया लिमिटेड

STATUS OF COMPLIANCE OF EC CONDITIONS

Installation: OCS-BHOGPARA

Period: 01/04/2023-30/09/2023

EC No: No J-11011/413/2008-I A II(I) DATED 24.01.2011

Specific Condition		
Sl No.	**EC Condition**	**Compliance status/Remark**
i.	Environmental clearance is subject to obtaining prior clearance from wildlife angle including clearance from the Standing Committee of the National Board for Wildlife regarding impact of the proposed projects on the Padumani Wildlife Sanctuary (8.2 km from new BUS at Mahum), Borjhan Wildlife Sanctuary (5 km from STF) and 3 recently declared Wildlife sanctuaries (declared on 20th October, 1999) besides Dibru-Saikhowa National Park (9 km from BUS) located within 10 km. area as applicable.	Not Applicable
ii.	Grant of environmental clearance does not necessarily imply that wildlife clearance shall be granted to the project. The proposal for wildlife clearance shall be considered by the respective authorities on their merits and decision taken .The investment made in the project, if any, based on environmental clearance so granted, in anticipation of the clearance from wildlife angle shall be at the cost and risk of the project proponent and Ministry of Environmental & Forests shall not be responsible in tjis regard in any manner.	Point noted
iii.	Ambient air quality shall be monitored for PM, SO2, NOx, and non-methane hydrocarbon (NMHC). 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. Display of AAQM parameters are being done at site. Copy of report enclosed.
iv.	The stacks of adequate height shall be provided to control emissions from all the sources including Dg sets, steam generators etc. as per the regulatory requirements and emissions from stacks shall meet the MOEF/CPCB guidelines.	Complied.

Sl. No.	EC Condition	Compliance status/Remark
v.	The company shall make the arrangement for control of noise from the DG sets and meet DG set norms notified by the MoEF.	Complied.
vi.	Total ground water requirement for OCS,STF, ITF and BUS shall not exceed 128 m3/day/well and prior permission shall be obtained from the Central Ground Water authority/state Ground Water Board (CGWA/SGWB). A copy of the permission shall be submitted to the Ministry's Regional Office at Shillong. Effluent Treatment Plant (ETP) shall be installed to control oil content and other parameters as per Assam Pollution Control board (APCB) and/or Environment (Protection) Act whichever is more stringent. Treated wastewater shall be passed through multi-media filters to remove solids and clarified water shall be collected into storage tubes before pumping to disposal wells. Oily waste water shall be treated in oil separator to remove oil content in the effluent. Domestic effluent shall be treated in septic tank followed by soak pit. The treated effluent shall be monitored regularly.	Complied. Total ground water requirement for OCS does not exceed 60 m3/day. Construction of ETP at Tengakhat is in progress where the produced water will be treated to the desired level and then reused for internal purpose.
vii.	Tank bottom sludge from crude oil tanks of OCS shall be stored in secured covered impermeable concrete sludge pit located outside the proposed installation before safe disposal through approved/registered recyclers. Waste oil and used batteries shall be sold to authorized recyclers/re- processors. Secured land fill shall be as per the design approved by the CPCB and obtain authorization from the Assam SPCB. Copy of authorization shall be submitted to Ministry's Regional Office at Shillong.	Point noted. Shall be done when tank cleaning will be carried out.
viii.	Total storage capacity of the tanks shall not exceed 40,000 KL after expansion. Capacity of the each of the storage tank shall not exceed 5,000 KL. Instead of fixed roof tanks, floating roof tanks shall be provided.	Complied.
ix.	A comprehensive Oil Spill Contingency plan (OSCP) shall be prepared to handle all major, moderate and miner spill.	Complied during all the operation & maintenance activities.
x.	All the OCS shall have facilities for knocking out water from the formation fluid. The Formation	Complied

Sl. No.	EC Condition	Compliance status/Remark
	water from Electrostatic, Emulsion Treater (EET) shall be disposed to the disposal wells only after ensuring all the parameters within permissible limit of Assam PCB and / or prescribed under E(P) Act whichever is more stringent.	
xi.	Use of browser for the transportation of oil shall be stopped as soon as pipeline is installed.	Complied
xii.	M/s OIL shall prepare a remediation plan (both bio-remediation) where solid is contaminated due to spillage of oil in existing units and submit to MOEF.	In Situ & Ex-Situ Bioremediation plan is in place for any soil contamination.
xiii.	An immediate action shall be ensured to control and treat oil spill or oil sludge using suitable method. Remaining oil shall be remediated through bioremediation / phyto-remediation etc. The recyclable waste (oily sludge) and spent oil shall be disposed of to the authorized recyclers.	Emergency Response Plan to mitigate oil spillage and its control is in place and bioremediation is carried out for remaining oil. Hence complied.
xiv.	All the solid/hazardous waste including bottom sludge shall be handled as per the rules and guidelines under Manufacture, Storage and Import of Hazardous chemicals Rules, 1989 as amended in October, 1994 and January, 2000. All the oily sludge from ITF, STF, and BUS OCS shall be stored in secured land fill (SLF) as per CPCB guidelines.	Complied as per the Rules. Secured, covered, impermeable sludge storage facility is available.
xv.	Handling and disposal of hazardous wastes shall be in accordance with the Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008. Authorization from the Assam SPCB shall be obtained for collections/treatment/storage/disposal of hazardous wastes.	Complied.
xvi.	The project authorities shall patrol and inspect the pipeline regularly for detection of faults as per OISD guidelines and continuous monitoring of pipeline operations by adopting non- destructive method (S) of testing. Pearson survey and continuous potential survey shall be carried out a regular intervals to ensure the adequacy of cathodic protection system.	Complied
xvii.	The project authorities shall install SCADA system for safe operation of pipeline and leak Detection Systems (LDS). Additional sectionalizing valves in the residential area and	SCADA system has been installed at the installation to monitor the leak for safe operation of pipeline. Hence complied.

Sl. No.	EC Condition	Compliance status/Remark
	sensitive installations shall be provided to prevent the spillage of the oil in the event of pipeline failure. Intelligent pigging facility shall be provided for the entire pipeline system for internal corrosion monitoring.	
xviii.	M/S OIL shall ensure smokeless flaring in case of ground flaring. The company shall take necessary measures to prevent fire hazards, containing oil spill and soil remediation and needed. At the place of ground flaring, the overhead flaring stack with knockout drums shall be installed to minimize gaseous emissions during operation. To prevent fire and explosion at Oil and Gas facility, potential ignition sources shall be kept to a minimum and adequate separation distance between potential ignition sources and flammable materials shall be in place.	Complied. Complete combustion is ensured by adequate supply of air.
xix.	The flare system shall be designed as per good oil field practices and oil industry Safety Directorate (OISD) guidelines.	Complied.
xx.	The firefighting facilities shall be designed as per OISD-117 guidelines. For fighting prolonged fires, the company shall firm up a plan for assured water supply from nearby ground water/surface water sources.	Complied.
xxi.	Comprehensive Risk assessment and Consequence Analysis for all the activities regarding impact of the proposed project on the Secondary Tank Farm (STF), Oil Collecting Station (OCS), Intermediate Tank Farm (ITF), Browser Unloading station (BUS) and pipeline shall be carried out. Action plan to implement the recommendations shall be submitted to the ministry and proper implementation shall be ensured.	Risk analysis for the installation has been carried out internally and risk register is being maintained. Hence complied.
xxii.	Occupational health surveillance of the workers shall be carried out as per the prevailing Acts and Rules.	Already exists and implemented as per the prevailing Acts/ Regulations. Hence complied.
xxiii.	The project proponent shall also comply with the environmental protection measures and safeguards recommended in the EIA/EMP report.	Complied with the environmental protection measures and safeguards recommended in the EIA/EMP report.
xxiv.	The surface facilities shall be installed as per applicable codes and standards, international practices and applicable local regulations.	Complied. All the surface facilities are installed as per applicable codes and standards, international practices and

Sl. No.	EC Condition	Compliance status/Remark
		applicable local regulations such as API, ASTM, OISD, OMR, APCB & CPCB etc.
xxv.	The design, material of construction, assembly, inspection, testing and safety aspects of operation and maintenance of pipeline and transporting the natural gas/oil shall be governed by ASME/ANSI B 31.8/B31.4 and OISD standard 141.	Complied.
xxvi.	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	Not Applicable

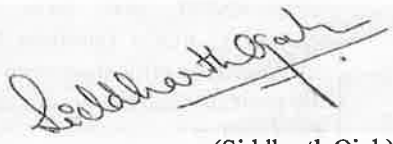
General Condition

Sl No.	EC Condition	Compliance status/Remark
i.	The project authorities must strictly adhere to the stipulations made by the Assam State Pollution Control Board (ASPCB), State Government and any other statutory authority.	Complied
ii.	No further expansion or modifications in the project shall be carried out without prior approval of the Ministry of environment & 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.	Complied
iii.	The project authorities must strictly comply with the rules and regulations under Manufacture, Storage and Import of Hazardous chemicals Rules, 2000 as amended subsequently. Prior approvals from Chief Inspectorate of Factories, Chief Controller of Explosives, Fire safety Inspectorate etc. must be obtained, wherever applicable.	Complied.

Sl. No.	EC Condition	Compliance status/Remark
iv.	The project authorities must strictly comply with the rules and regulation with regarding to handling and disposal of Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008 wherever applicable. Authorization from the State Pollution Control Board must be obtained for collections/treatment/storage/disposal of hazardous wastes.	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 generations. The ambient noise levels shall conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (daytime) and 70 dBA (night time).	Complied.
vi.	A separate Environment Management Cell equipped with full-fledged laboratory facilities must be set up to carry out the environmental management and monitoring functions.	Already exists centrally at S&E.
vii.	The project authorities shall provide adequate funds both recurring and non- recurring to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so provided shall not be diverted for any other purpose.	Complied.
viii.	The Regional Office of this Ministry/Central Pollution Control Board/ Assam State Pollution Control Board shall monitor the stipulated conditions. A six monthly compliance report and the monitored data along with statistical interpretation shall be submitted to them regularly.	Being complied.
ix.	A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad / Municipal Corporation, Urban Local Body and local NGO, if any, from whom suggestions / representations, if any, were received while processing the proposal. The clearance letter shall also be put on the web site of the company by the proponent.	Complied

Sl. No.	EC Condition	Compliance status/Remark
x.	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitoring data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the MOEF, the respective Zonal Office of CPCB and the Assam SPCB. The Criteria pollutant levels namely; SPM, RSPM, SO2, NOx, HC (Methane & Non-methane), VOCs (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.	Complied Compliance status including monitored data is regularly uploaded in company's website and sent to concerned government authorities. Monitored data is also enclosed herewith.
xi.	The Project proponent shall also submit six monthly reports on the status of the compliance of the stipulated environment conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional of MOEF, the respective Zonal Office of CPCB and the Assam SPCB. The Regional Office of this Ministry/ CPCB/ Assam SPCB shall monitor the stipulated conditions.	Complied Monitored data enclosed.
xii.	The environment statement for each financial year ending 31st march in Form-V as is mandated to be submitted by the project proponent 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 conditions and shall also be sent to the respective Regional Offices of the MOEF by e-mail.	Complied
xiii.	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 Assam SPCB and may also be seen at Website of the Ministry of Environment and Forest at http:/envfor.nic.in. This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspaper that are widely circulated in the region of which one shall be forwarded to the Regional Office.	Complied Copy of newspaper advertisement forwarded with our Compliance Status Report submitted.

Sl. No.	EC Condition	Compliance status/Remark
xiv.	Project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.	Complied Copy of newspaper advertisement forwarded with our Compliance Status Report submitted.



(Siddharth Ojah)
Dy.CEP-CA & MSO-Central Asset

Ambient Air Quality Monitoring Report

Name & Address of the Customer :	**Report No. : MSK/2023-24/1534**
"M/s OIL INDIA LIMITED",	Report Date : 25.08.2023
Duliajan, Dibrugarh, Assam-786602	Sample Description : Ambient Air
	Sample Number : MSKGL/ED/2023-24/09/00416
	Sampling Location : OCS BHOGPARA
Ref. No.:W.O. NO.- 8125981 of Contract No. 6116895	GPS Reading : N 27°51'38", E 95°42'53"

Date of Sampling	Sample Received Date	Analysis Start Date	Analysis Complete Date
19.08.2023	22.08.2023	22.08.2023	29.08.2023

Enviromental Conditions During Sampling & Transport Condition :Temperature : 30°C, Rain fall : YES

Analysis Result

Sl. No.	Test Parameter	Method	Unit	Results	CPCB Limit
1.	Particulate Matter (PM_{10})	IS : 5182 (Part-23)-2006	(µg/m3)	62.5	100
2.	Particulate Matter ($PM_{2.5}$)	IS : 5182 (Part-24)	(µg/m3)	30.9	60
3.	Sulphur Dioxide (SO_2)	IS : 5182 (Part-2)-2001	(µg/m3)	6.5	80
4.	Nitrogen Dioxide (NO_2)	IS : 5182 (Part-6)-2006	(µg/m3)	16.3	80
5.	Carbon Monoxide (CO)	IS 5182 : (Part-10) :1999	(mg/m3)	0.64	2
6.	Ozone (O_3)	IS:5182 (Part-IX)-1974 Reaffirmed-2019	(µg/m3)	<20.0	180
7.	Ammonia (NH_3)	IS 5182 (Part 25) : 2018	(µg/m3)	<10.0	400
8.	Lead (Pb)	USEPA IO-3.4	(µg/m3)	<0.01	1
9.	Nickel (Ni)	USEPA IO-3.4	(ng/m3)	<5.0	20
10.	Arsenic (As)	USEPA IO-3.4	(ng/m3)	<1.0	6
11.	Benzene (C_6H_6)	IS 5182 : (Part 11) :2006	(µg/m3)	<4.2	5
12.	Benzo(a)Pyrene (BaP)	IS 5182 : (Part 12) :2004	(ng/m3)	<0.5	1
13.	Mercury (Hg)	USEPA IO-5.0	(µg/m3)	<0.002	...
14.	Methane (Hydrocarbon)	IS 5182 : (Part 17)	ppm	1.80	...
15.	Non-methane (Hydrocarbon)	IS 5182 : (Part 17)	ppm	<0.5	...
16.	Total Hydrocarbon	IS 5182 : (Part 17)	ppm	1.80	...
17.	Volatile Organic Compounds (VOC)	IS 5182 : (PART-11):2006	(µg/m3)	<4.2	...

Limit as per CPCB notification, New Delhi, 18th Nov, 2009. for Ambient air quality

Analyzed By:

Signature :
Name : Mr. Dipankar Mazumdar
Designation. : Executive Chemist

Prepared By:

Signature :
Name : Miss Neeha Sarmah
Designation. : Office Assistant

Authorized Signatory
For Mitra S.K. Private Limited

Signature :
Name : Mr. Rajib Roy
Designation : Branch Manager

- *The results relate only to the item(s) tested.*
- *This Test Report shall not be reproduced except in full, without the permission of Mitra S.K. Private Limited.*
- *Our Lab is Approved by NABL & MOEF, Lab Address :P-48 Udayan Industrial Estate,3 Pagladanga Road Kol-700015*

Approved by
Uttam Prodhan
Suptdg. Research Scientist, R&D Dept.,
Oil India Ltd., Duliajan, Assam

ऑयल इंडिया लिमिटेड
(भारत सरकार का संस्थान) पंजीकृत कार्यालय : दुलियाजान, आसाम
Oil India Limited
(A Government of India Enterprise) Registered Office : Duliajan, Assam

CHEMICAL LABORATORY
(An ISO 9001 : 2015 Certified Laboratory)
CHEMICAL DEPARTMENT, DULIAJAN 786 602, ASSAM, INDIA
(Phone : 91-374-2800439, Fax : 91-374-2801680/2800633,
Email : chemical@oilindia.in)

For internal use only

Ref.No.: Chem/Ana/FW/1614/DJN/23 Date: 14.09.2023

Asset Manager-Central Asset
Attn.: P. Sarma, IM-Bhogpara OCS

Sub: FORMATION WATER ANALYSIS REPORT OF BHOGPARA OCS

Ref. No.:- Nil, Date:- 12.09.2023

Reference above, please find the test results of the formation water samples forwarded to us from your end for laboratory testing:

Characteristics	Unit	ET water Outlet	FWDP Outlet	Test method / Instrument used
Appearance	-	Turbid	Turbid	Visual
pH	-	7.7	7.7	Metrohm pH Meter
Salinity as NaCl	mg/l	3400	3800	Titration with silver nitrate
Carbonate as CO_3^{--}	mg/l	Nil	Nil	Titration with hydrochloric acid
Bicarbonate as HCO_3^-	mg/l	610	549	Titration with hydrochloric acid
Total dissolved solid	mg/l	4260	4290	Gravimetric method
Suspended solid	mg/l	226	280	Gravimetric method
Oil and grease	mg/l	3.4	3.8	Horiba oil content analyser
Lithium as Li^+	mg/l	1.42	1.06	Flame Photometer

Sample details :-

The above formation water samples were collected from Bhogpara OCS by Central Asset. on 12.09.2023 and received at Analytical & Environmental Laboratory on 12.09.2023.

Tested by: SB/BD

Dipjyoti Hazarika
Dy. Chief Chemist (Lab)
For GM - Chemical (Lab & P&A)
Copy: Analytical & Environmental sec. file.

CENTRAL ASSET
15 SEP
DULIAJAN

STACK GAS MONITORING REPORT

Name & Address of the Customer	Report No.	: MSK/2023-24/0483
"M/s OIL INDIA LIMITED"	Report Date	: 30.05.2023
	Nature of Sample	: Stack Emission
Duliajan, Dibrugarh, Assam-786602	Sample Mark	: **OCS BHOGPARA**
	Sample Number	: MSKGL/ED/2023-24/05/01387

Ref. No.:W.O. NO.- 8125981 of Contract No. 6116895

Date of Sampling	Sample Received Date	Analysis Start Date	Analysis Complete Date
26.04.2023	29.04.2023	29.04.2023	06.05.2023

ANALYSIS RESULT

A.	**General information about stack :**	**: CODP-1**
1.	Stack connected to	: CRUDE TANK
2.	Emission due to	: NG
3.	Material of construction of Stack	: MS
4.	Shape of Stack	: Circular
5.	Whether stack is provided with permanent platform & ladder	: Yes
6.	DG capacity	**: 157 HP**
B.	**Physical characteristics of stack :**	
1.	Height of the stack from ground level	: 2.4384 m
2.	Diameter of the stack at sampling point	: 0.1016 m
3.	Area of Stack	: 0.00810 m2
C.	**Analysis/Characteristic of stack:** 1. Fuel used : HSD	

D.	**Result of sampling & analysis of gaseous emission**	**Result**	**Limit as per CPCB**	**Method**
1.	Temperature of emission (°C)	130	...	USEPA Part 2, 25.09.1996
2.	Barometric Pressure (mm of Hg)	762.0	...	USEPA Part 2, 25.09.1996
3.	Velocity of gas (m/sec.)	17.5	...	USEPA Part 2, 25.09.1996
4.	Quantity of Gas Flow (Nm3/hr)	379	...	USEPA Part 2, 25.09.1996
5.	Concentration of Oxygen (%v/v)	13.8	...	IS:13270 :1992 Reaff, 2014
6.	Concentration of Carbon Monoxide (g/kW-hr)	0.192	**≤ 3.5**	IS:13270 :1992 Reaff, 2014
7.	Concentration of Carbon Dioxide (%v/v)	5.6	...	IS:13270 :1992 Reaff, 2014
8.	Concentration of Sulphur Dioxide (mg/Nm3)	25.1	...	USEPA-29, 25/06/1996
9.	Concentration of Nitrogen Oxide & Hydrocarbons (g/kW-hr)	0.290	**≤ 4.0**	USEPA Part-7, 12/03/1996 & USEPA 18 -25.09.1996
10.	Concentration of Lead (mg/Nm3)	<0.005	...	USEPA-29, 25/06/1996
11.	Concentration of Particulate matter (g/kW-hr)	0.121	**≤ 0.2**	USEPA Part-17, 16/08/1996

E. **Pollution control device :** Details of pollution control devices attached with the stack : Nil

Remarks:Nil

Analyzed By:

Signature :
Name : Mr. Dhrubajyoti Das
Designation. : Assistant Chemist

Prepared By:

Signature :
Name : Miss Neeha Sarmah
Designation. : Office Assistant

Authorized Signatory
For Mitra S.K. Private Limited

Signature :
Name : Mr. Rajib Roy
Designation : Branch Manager

- *The results relate only to the item(s) tested.*
- *This Test Report shall not be reproduced except in full, without the permission of Mitra S.K. Private Limited.*
- *Our Lab is Approved by NABL & MOEF, Lab Address :P-48 Udayan Industrial Estate,3 Pagladanga Road Kol-700015*

Approved by
Uttam Prodhan
Suptdg. Research Scientist, R&D Dept.,
Oil India Ltd., Duliajan, Assam

ANNEXURE - A

ENVIRONMENT MANAGEMENT CELL OF OIL INDIA LIMITED – FHQ, DULIAJAN

.No	NAME	DESIGNATION	QUALIFICATION
1.	Sri. Rupam Jyoti Sutradhar	Deputy General Manager (HSE)	B.Sc (Chemistry), M.Sc (Chemistry)
2.	Sri. Swapnanil Kakaty	Deputy Chief Engineer (HSE)	B.E (Electrical Engineering)
3.	Sri. Sachin Kumar Verma	Superintending Engineer (HSE)	B.Tech (Environmental Engineering)
4.	Sri. Akash Neel Das	Superintending Engineer (HSE)	B.E (Mechanical Engineering), PG Diploma (Fire & Safety Management), PGDM
5.	Sri. Bantupalli Sai Venkatesh	Superintending Engineer (HSE)	B.E (Civil Engineering), M.Tech (Environmental Engineering)

Annexure - B

Common Environment Management Plan for Onshore Oil & Gas Drilling Activity

Contents

1.0 INTRODUCTION:

OIL INDIA LIMITED (OIL), a Government of India Maharatna Enterprise, is currently engaged in carrying out hydrocarbon exploration and production activities mostly in its operational areas in Upper Assam, Arunachal Pradesh and Mizoram in the North Eastern part of India. OIL is also undertaking hydrocarbon exploration activities in few Indian states and few overseas countries. Oil India Limited was incorporated on 18th February 1959 to expand and develop the newly discovered oil fields of Naharkatia and Moran in the Indian North East. In 1961, it became a joint venture company between the Indian Government and Burmah Oil Company Limited, UK. In 1981, OIL became a wholly owned Government of India enterprise. Today, OIL is a premier Indian National Oil Company engaged in the business of exploration, development and production of crude oil and natural gas, transportation of crude oil and production of LPG.

Govt. of India and Assam has awarded Petroleum Mining Leases (PML) to OIL for exploration and development of oil & gas at Dibrugarh, Chabua, Tinsukia, Hugrujan, Naharkatiya Extn, Dholiya and Dumduma areas including the adjoining areas in Dibrugarh, Tinsukia and Sibsagar Districts.

2.0 Environmental Management Plan

This Environmental Management Plan and Monitoring Framework is a site-specific document for the drilling activities that have been developed to ensure that OIL can implement the project in an environmentally conscious manner and where all contractors, understand the potential environmental risks arising out of the proposed project and take appropriate actions to properly manage such risk.

This EMP will be an overview document that will guide environmental management of all aspects of OIL's activities i.e. construction and operation of drilling wells. This EMP will be backed up by more specific Environmental Action Plans, Procedures and Bridging Documents.

The EMP describes the actions to be adopted in terms of:

- National Policies and Regulations;
- Best Practices and guides; and
- Local Environmental and Social Sensitivities.

The Environment Policy of OIL is presented below.

ऑयल इंडिया लिमिटेड
Oil India Limited

ENVIRONMENT POLICY

Oil India Limited is guided by its Core purpose of "being a fastest growing energy company with global presence and providing value to all stake holders". Currently as an E&P company, OIL has a pan India presence with overseas foot prints.

In alignment with the core purpose, OIL is deeply committed to the Preservation of Environment & Ecology, Sustainable Development, Enrichment of the quality of life of Employees, Customers and the Community around its operational areas.

In pursuance of the above mentioned policy OIL is committed to:

1. Ensure an environment friendly work place in all our operations.
2. Comply with relevant Environmental Laws and Regulations in OIL's operations, prescribed by the statutory bodies..
3. Follow a systemic approach to Environmental Management Plan in order to achieve continual performance improvement.
4. Adopt technologies that conserve energy, prevent pollution, maximize recycling, reduce wastes, discharge and emissions.
5. Develop green belts and plant trees in and around OIL's operational areas in harmony with nature.
6. Protect aesthetic, cultural, social patterns and historical characteristics in and around OIL's operational areas.
7. Promote a culture among OIL employees, contractors and all the stake holders associated with OIL for shared responsibility towards environmental protection.
8. Promote and nurture a healthy, safe & productive environment in its area of operations.

(S.RATH)
DIRECTOR (OPERATIONS)

Effective Date: 25th April, 2012
Approved in the 420th Board Meeting

3.0 IMPACT ASSESSMENT

The potential impacts arising due to the construction and operation of the drilling activitiesare given below:

3.1 Air Quality: The operation of DG/GG sets, movement of vehicles and machineries during construction and drilling at drill sites will result in the generation of air pollutants viz. PM, NOx and SOx that may affect the ambient air quality temporarily. Air pollutants like particulate matter, hydrocarbons and NOx will also be generated during drilling operations.

3.2 Noise Quality: Operation of heavy machinery/equipments and vehicular movement during site preparatory and road strengthening/construction activities may result in the generation of increased noise levels. Operational phase noise impacts are anticipated from therunning of drilling rig and ancillary equipment *viz.* shale shakers, mud pumps and diesel generators, gas generators.

3.3 Soil Quality: Stripping of top soil will affect the soil fertility of the well sites temporarily. Potential adverse impacts on soil quality may also result from improper storage and handling of fuel, lubricants, drilling mud and drill cuttings.

3.4 Water Quality and Hydrogeology: All wastewater discharged from the drilling operations will be treated in the ETP and discharges will conform to CPCB standards. As the volume of water to be discharged is small, it is anticipated to cause minor increase in pollution load for specific parameters in receiving water bodies.Uncontrolled surface runoff from the drill sites may compose of waste fluids or storm water mixed with oil and grease and may pollute the surface water quality. However, the surface runoff will be treated with sedimentation tank and oil water separator at site.

3.5 Biological Environment:

The existing vegetation at the proposed drill sites, approach roads and RoU of the pipeline will be felled for site development.Noise generated from drilling operations and vehicular movement within the drill sites and approach roads may affect the reptiles, birds and mammals adversely and may result in their moving away from the project area for a temporary period. OIL will obtain Forest Clearance from MoEF&CC for drilling within the forestlands; all the conditions mentioned in the forest clearance would be complied. Surface runoff from the drill sites contaminated with sediment, may reachsurface water channels and increase the suspended solids load of the channel water. Increaseof suspended solid will increase the turbidity of river water that ultimately will adversely affect the DO level in the water. The turbid water and lower DO may affect the primary productivity of the impacted areas of the rivers. The process effluent will be adequately treated in the ETP to meet the industrial effluent discharge standards. The discharge of treated effluent is not expected to cause perceptible changes in the water quality of the receiving stream.

3.6 Socio-Economic Environment: Approximately 3 ha. land would be required for each well.Land will be purchased from local communities however; no physical displacement during land procurement is anticipated. Additionally, land will also be procured for construction of 100-200 m approach road to the drill site from existing roads. Anticipated number of families directly impacted would be limited to 2-5 nos. for each of the drill sites. The dependency of the landowner in case of generation of livelihood is limited as the land is classified as monocropped agricultural land.

OIL/its contractors would endeavour to provide maximum employment to the local people; however, certain percentage of semi-skilled and highly skilled migrant labour would be used by contractors for manning technical activities. It is anticipated that occasional conflicts would arise with the local community over the recruitment of migrant workers. Discomfort due to dust and noise to adjoining communities, influx of people are likely to occur.

The construction phase of the project is likely to generate both direct and indirect opportunities for employment. The estimated direct employment would be approximately 50 un-skilled workers during the peak construction phase that will primarily sourced from nearby areas. Indirect employment would be primarily in the supply chain as vendors, which are anticipated to be set up to support the construction.

3.7 Impact on Community Health & Safety: Community health and safety of inhabitants residing close to the proposed well sites stand to get affected from frequent heavy vehicular movements along village access roads and due to noise from drilling rig operations, movement of heavy vehicles during construction etc.

4.0 DETAIL ENVIRONMENTAL MANAGEMENT PLAN

4.1 Air Quality Management Plan

- Vehicles delivering raw materials like fine aggregates will be covered to prevent fugitive emissions.
- Sprinkling of water on earthworks, material haulage and transportation routes on a regular basis during construction and decommissioning phase of the wells.
- Flare stacks of adequate height would be provided.
- DG/GG set stacks would have adequate height, as per statutory requirements, to be able to adequately disperse exhaust gases
- Periodic monitoring of DG/GG set stack emission will be carried out in accordance with the Environmental Monitoring Plan to assess compliance with CPCB DG set exhaust standards.

4.2 Noise Management Plan

- Selection and use of low noise generating equipment with in-built engineering controls viz. mufflers, silencers, etc.
- All DG/GG sets would be provided with acoustic enclosures.
- Appropriate PPEs (e.g. ear plugs) will be used for by workers while working near high noise generating equipment.

- All vehicles utilized in transportation of raw materials and personnel will have valid Pollution under Control Certificates (PUC).
- All high noise generating equipment will be identified and subjected to periodic preventive maintenance.
- No night time operation of vehicles and construction activities will be undertaken.

4.3 Soil Quality Management Plan

- Drip trays to be used during vehicular/equipment maintenance and during re-fuelling operations.
- Spill kits will be made available at all fuel and lubricant storage areas. All spills/leaks contained, reported and cleaned up immediately.
- Dedicated paved storage area will be identified for the drilling chemicals, fuel, lubricants and oils within the drill sites.
- 1.5 mm HDPE lined pits will be considered for the disposal of unusable drilling mud cuttings and drilling wastewater etc.

4.4 Surface Water Quality Management Plan

- Levelling and grading operations will be undertaken with minimal disturbance to the existing site contours thereby maintaining the general slope and topographical profile of the site.
- During site preparation and construction, surface water run-off will be channelized through appropriately designed drainage system.
- Sediment filters and oil-water separators will be installed to intercept run-off and remove sediment before it enters water courses.
- Domestic wastewater generated from drill sites will be treated through septic tank and soak pit system and then discharged.
- Process wastewater would be treated in Effluent Treatment Plant (ETP)at drill sites.

4.5 Ground Water Quality Management Plan

- Water based mud would be used as a drilling fluid for the proposed project.
- Eco-friendly synthetic based mud if required for deeper sections, will be used after providing intimation to the Pollution Control Board;
- The drill cutting along with spent mud will be stored in HDPE lined pit.

4.6 Waste Management Plan

- Use of low toxicity chemicals for the preparation of drilling fluid.
- Management of drill cuttings, waste drilling mud, waste oil and domestic waste, wastewater in accordance with Standards for Emission or Discharge of Environmental Pollutants from Oil Drilling and Gas Extraction Industry of CPCB as modified in 2005.
- The hazardous waste (waste and used oil) will be managed in accordance with Hazardous Waste (Management, Handling & Transboundary Movement) Rules, 2016.
- The kitchen waste will be disposed in nearest municipal/village dumping site on a daily basis through approved waste handling contractors.
- The sewage generated will be treated through septic tank and soak pit system.
- Used batteries will be recycled through the vendors supplying lead acid batteries as required under the Batteries (Management & Handling) Rules, 2001.
- The drilling cuttings pit will be bunded and kept covered using tarpaulin sheets during monsoon.

4.7 Wildlife Management Plan

- Movement of heavy vehicles will be restricted at night time, especially if access roads pass though forest areas, as most of the mammals movement occurs during night;
- Noise levels at the drill siteswill be controlled through selection of low noise generating equipment and installation of sufficient engineering controls viz. mufflers, silencers etc.
- No temporary electric supply connection line from the grid will be laid for the proposed project activity. All electric requirements will be supplied from the internal DG sets.
- OIL will have to take Forest Clearance from MoEFCC for development of drill sites, access roads and laying of pipeline within forest areas.

4.8 Road Safety & Traffic Management Plan

- The condition of roads and bridges identified for movement of vehicles and drilling rig will be assessed and if required strengthened by OIL to ensure their safe movement.
- Precautions will be taken by the contractor to avoid damage to the public access routes including highways during vehicular movement.
- Traffic flows will be scheduled wherever practicable during period of increased commuter movement.

4.9 Occupation Health & Safety Management Plan

- All machines to be used in the construction will conform to the relevant Indian Standards (IS) codes, will be kept in good working order, will be regularly inspected and properly maintained as per IS provisions and to the satisfaction of the site Engineer.
- Hazardous and risky areas, installations, materials, safety measures, emergency exits, etc. shall be appropriately marked.

4.10 Management of Social issues and concerns

- People from adjoining areas especially given job preference through local contractors according to the skill sets possessed.
- Prior to the commencement of the proposed activity, a consultation program will be conducted by OIL with the target groups and local authorities. The primary objective of such consultation will be to share with the concerned villagers/stakeholders the objective of the proposed project associated impacts and their mitigation.
- OIL will give more emphasis and priority on periphery development, development of health facilities and provision for drinking water facility as per Corporate Social Responsibility (CSR) Plan.
- The drill sites would be fenced and gates would be constructed so that the children are refrained from straying into the site.

4.11 Emergency Response Plan

- Drilling rig and related equipment to be used for drilling will be conformed to international standards specified for such equipment.
- Blow-out preventers and related well control equipment shall be installed, operated, maintained and tested generally in accordance with internationally recognized standards.
- Appropriate gas and leak detection system will be made available at each of the drill sites.
- Adequate fire-fighting equipment shall be provided at each drilling site.

The environmental mitigation measures and plans are presented in form of a matrix according to the sequential flow of activities in the project life cycle. The matrix focuses on strategies to be adopted for safe guard of the environment from possible impacts resulting out of the project activities. The strategies have further been detailed out as management procedures and programmes in subsequent sections.

The EMP helps establish the linkage between the activities environmental impacts and mitigation measures and presents the monitoring framework i.e. the Environmental Performance Indicator (EPI) No. as well as the Environmental Quality Indicator (EQI).

5.0 Environment Management Matrix

S No	Activity	Ref	Aspect	Impact	Mitigation Measures	Monitoring	Timing/ Frequency	Responsible Party	Related Plans
1.	Physical Presence of drill site, rig and other machinery.	1.1	Change in visual characteristics of the area due to installation of drilling setup	Temporary change in landscape	On completion of works (in phases) all temporary structures, surplus materials and wastes will be completely removed. Only structure required for safety purposes would be retained on the bare drill site.	Site Inspection	Construction &Drilling	OIL/Contractor	Waste Management Plan
		1.2	Increase of illumination at night time due to installation of drilling setup	Temporary disturbance of the nearby villagers	Appropriate shading of lights to prevent scattering	Grievance records/ Consultation with Villagers	Construction &Drilling	OIL/Contractor	Management of social issues & concerns
		1.3	Influx of man power & immigrant labour force to nearby villages	Possibility Cultural and behavioural conflict	Preference used of local labour forces to the extent possible	Grievance records	Construction &Drilling	OIL/Contractor	Management of social issues & concerns
2.	Storage & Handling of Materials & Spoils	2.1	Emission of fugitive dust from loading & unloading operation	Temporary impact on air quality especially SPM	All loading and unloading activities to be carried out as close as possible to the storage facilities.	Site Inspection	Construction &Drilling	OIL/Contractor	Air Quality Management
		2.2	Accidental spillage of oil & chemicals	Potential contamination surface water body resulting impact on aquatic ecosystem	All spills to be reported and contained to prevent entry of spilled chemicals/fuels to any surface water body or drainage channel	Records of spills/Community Grievances	Construction &Drilling	OIL/Contractor	Surface water quality management plan, Wildlife Management Plan
				Potential impact on soil quality	All spills to be reported and remedial measures to be taken for clean-up of the spill.	Records of Spills/Site Inspection	Construction &Drilling	OIL/Contractor	Spill management plan

S No	Activity	Ref	Aspect	Impact	Mitigation Measures	Monitoring	Timing/ Frequency	Responsible Party	Related Plans
3.	Transport of Materials, Spoils and Machinery	3.1	Emission of gaseous pollutants from vehicle during transportation of materials, spoils and machinery	Temporary deterioration on air quality along transport route	All diesel-powered equipment will be regularly maintained and idling time reduced to minimise emissions; Vehicle / equipment air emissions will be controlled by good practice procedures (such as turning off equipment when not in use); Vehicle / equipment exhausts observed emitting significant black smoke in their exhausts will be serviced/ replaced	Records and Site Inspection	Construction &Drilling	OIL/Contractor	Air Quality Management plan
		3.2	Noise emission during transport of materials, spoils and machinery	Temporary deterioration in ambient noise along the transportation route	Undertake preventive maintenance of vehicles and machinery to reduce noise levels. Restriction on unnecessary use of horns by trucks and vehicle in settlement area	Site Inspection/Records of repairs	Construction &Drilling	OIL/Contractor	Noise Quality Management Plan
4.	Operation & maintenance of rig and associated machinery.	4.1	Emission of air pollutant from DG/GG sets	Temporary impact on air quality due to increase in concentration of gaseous pollutants e.g. NOx , HC	Preventive maintenance of DG sets to be undertaken as per manufacturers schedule	Site Inspection/Records of repairs	Drilling	OIL/Contractor	Air Quality Management plan
		4.2	Emission of Noise from DG/GG sets	Temporary increase of ambient as well a	All workers working near high noise generating equipment to be provided	Recording of Noise	Drilling	OIL/Contractor	Noise Quality Management Plan and

S No	Activity	Ref	Aspect	Impact	Mitigation Measures	Monitoring	Timing/ Frequency	Responsible Party	Related Plans
				work place noise level	with Personal Protective equipment Preventive maintenance of machinery to be undertaken as per manufacturers schedule Install sufficient engineering control (mufflers) to reduce noise level at source				Occupational Health & Safety Management Plan
		4.3	Emission of noise from operation of the rig	Temporary increase of ambient as well a work place noise level	All workers working near high noise generating equipment to be provided with Personal Protective equipment Preventive maintenance of machinery to be undertaken as per manufacturers schedule	Site Inspection	Drilling of Wells	OIL/Contractor	Noise Quality Management Plan and Occupational Health & Safety Management Plan
		4.4	Abstraction of ground water for project usage	Depletion of ground water resources	Optimize use of water during drilling operations	Record Keeping and Auditing	Construction &Drilling	OIL/Contractor	None
		4.5	Noise from mud pump during preparation of drilling mud	Temporary increase of ambient & work place noise level	Preventive maintenance of machinery to be undertaken as per manufacturers schedule	Recording of Noise	Drilling of Wells	OIL/Contractor	Noise Quality Management Plan and Occupational Health &Safety Management

No	Activity	Ref	Aspect	Impact	Mitigation Measures	Monitoring	Timing/ Frequency	Responsible Party	Related Plans
					All workers working near high noise generating equipment to be provided with Personal Protective equipment				Plan
		4.6	Accidental spillage of chemicals during preparation drill mud	Contamination of soil resulting loss of soil living organism	Manage spills of contaminants on soil	Records of spills	Drilling of Wells	OIL/Contractor	Spill Management plan
		4.7	Accidental spillage of chemicals during preparation drill mud	Potential impact on surface water quality and aquatic ecosystem	All spill to be contained so that it does not reach any surface water body or drainage channels	Records of spills	Drilling of Wells	OIL/Contractor	Surface water quality management plan
5.	Operation & maintenance of Vehicles	5.1	Emission of Noise from vehicles	Temporary increase of noise level in areas abutting transport route	Preventive maintenance of vehicles to be undertaken as and when required	Maintenance Records	Construction &Drilling	OIL/Contractor	Noise quality management plan
		5.2	Emission of gaseous air pollutant from vehicles	Temporary deterioration air quality in areas abutting transport routes	Preventive maintenance of vehicles to be undertaken as and when required	Site Inspection/Records of repairs	Construction &Drilling	OIL/Contractor	Air quality management plan
		5.3	Spillage of fuels & lubricants from vehicles	Contamination of soil resulting loss of soil living organism	Adopt best practices e.g. use pumps and dispensing nozzle for transfer of fuel, use of drip trays. Etc.	Site Inspections/Audits	Construction &Drilling	OIL/Contractor	Spill Management plan
				Impact on surface water quality and	The drainage system on site to be provided with Sedimentation tank and Oil-	Site Inspection/Audits	Drilling	OIL/Contractor	Surface water quality management

S No	Activity	Ref	Aspect	Impact	Mitigation Measures	Monitoring	Timing/ Frequency	Responsible Party	Related Plans
				aquatic ecosystem	water Separator to prevent contamination especially oil and grease from being carried off by runoff.				plan and Spill Management plan
6.	Casing & cementing of well	6.1	Noise from machinery during preparation of cement slurry	Temporary increase of ambient noise level	Install sufficient engineering control on equipment and machineries (like mufflers in DG sets) to reduce noise and vibration emission levels at source, carry out proper maintenance and subject them to rigid noise and vibration control procedures.	Site Inspection	Drilling of Wells	OIL/Contractor	Noise quality management plan
		6.2	Loss of drilling mud and cement slurry during casing of well	Potential contamination of ground water aquifer	Proper engineering controls during cementing operation to prevent migration of drilling mud and cement slurry into ground water aquifer	Site Inspection	Drilling of Wells	OIL/Contractor	Ground water quality management plan
7.	Temporary storage, handling & disposal of process waste	7.1	Accidental spillage of process waste (unused cement slurry, return mud & drill cuttings) at the temporary storage site	Potential for contamination of soil and ground water	Proper engineering controls for the drilling and cementing operations;	Drilling and Decommissioning Phases	Drilling and Decommissioning Phases	OIL/Contractor	Ground water quality management plan
		7.2	Surface runoff from temporary storage site of drill cuttings & unused mud into surface water bodies	Impact on surface water quality and aquatic ecosystem	All Temporary waste storage area will have proper bunds to prevent any escape of contaminated runoff Ensure that any runoff from such temporary storage area	Site Inspection and Record keeping	Drilling and Decommissioning Phases	OIL/Contractor	Surface water quality management plan and Spill Management plan

No	Activity	Ref	Aspect	Impact	Mitigation Measures	Monitoring	Timing/ Frequency	Responsible Party	Related Plans
					are channelized into ETP				
		7.3	Accidental leakage/spillage of oils and lubricants and fuel from temporary storages	Contamination of soil resulting in loss of soil living organism	Dispose process waste and domestic waste as per regulation/ best practices Dispose debris and waste in designated areas and as per plan to prevent degradation of land	Site Inspection	Construction &Drilling	OIL/Contractor	Waste Management Plan and Spill Management plan
		7.4	Accidental leakage/spillage of oils and lubricants from temporary storages	Contamination of surface water resulting in deterioration of surface water quality and adverse impact on aquatic ecosystem	All chemical and fuel storage areas will have proper bunds so that contaminated run-off cannot escape into the storm-water drainage system. The waste pits (waste water and drill cuttings) will be bounded and covered by tarpaulin sheet to prevent mixing of runoff water with waste water and leachate from waste pit and also reduce the volume of waste water.	Site Inspection	Construction &Drilling	OIL/Contractor	Waste Management Plan and Spill Management plan
		7.5	Disposal/spillage of spent oils & lubricants into environmental media	Contamination of soil resulting loss of soil living organism Contamination of surface water resulting deterioration of surface water quality and aquatic	Ensure recycling of spent oil & lubricant through authorized dealer	Site Inspection	Construction &Drilling	OIL/Contractor	Waste Management Plan and Spill Management plan

S No	Activity	Ref	Aspect	Impact	Mitigation Measures	Monitoring	Timing/ Frequency	Responsible Party	Related Plans
				ecosystem					
		7.6	Disposal of used battery & spent filters in environmental media	Potential for contamination of soil, ground water and surface water body	Ensure recycling of waste through authorized waste recycler	Site Inspection and Record Keeping	Construction &Drilling	OIL/Contractor	Waste Management Plan and Spill Management plan
		7.7	Offsite disposal of metallic, packing, scrap	Localized visual impacts		Site Inspection and Record Keeping	Construction &Drilling	OIL/Contractor	Waste Management Plan
8.	Testing & Flaring of natural gas	8.1	Emission of air pollutants from flare stack at drill site .	Temporary localized deterioration air quality (NOx, HC)	Proper engineering controls to ensure complete combustion of gas Location of Flare stack to be chosen considering the sensitive receptors adjoining the site	Engineering Designs /Site inspections	Construction & Drilling	OIL S& E Teamand Drilling team	Waste Management Plan
9.	Storage of materials (equipment, chemicals, fuel)	9.1	Accidental spillage during storage and handling of materials	Potential for contamination of soil & ground water	Impervious storage area, especially for fuel & lubricant, chemical, hazardous waste, etc.	Site Inspection	Construction &Drilling	OIL/Contractor	Spill Management plan
				Safety concerns for workers involved in handing of hazardous materials	Personal protective equipment to be provided to workers involving in handling of hazardous materials	Site Inspection	Construction &Drilling	OIL/Contractor	Health and Safety Plan

S No	Activity	Ref	Aspect	Impact	Mitigation Measures	Monitoring	Timing/ Frequency	Responsible Party	Related Plans
10.	Technical Emergencies	10.1	Probability of accidental leakage of gas/ liquid hydro-carbons due to failure of safety devices	Potential adverse impact on personnel, environment & assets	Proper engineering controls to prevent leakage of sour gases Obtain an early warning of emergency conditions so as to prevent a negative impact on personnel, the environment, and assets Safeguard personnel to prevent injuries or loss of life by either protecting personnel from the hazard and/or evacuating them from the facilities Minimize the impact of such an event on the environment and the facilities by mitigating the potential for escalation and, where possible, containing the release Develop evacuation procedures to handle emergency situations.	Site Inspection	Drilling	OIL/Contractor	Emergency Response Plan
11.	Dismantling of rig & associated machineries	11.1	Emission of noise during dismantling of rig	Temporary deterioration of ambient noise quality resulting in discomfort	All noise generating activities will be restricted during day time	Site Inspection	Well Decommissioning Phase	OIL/Contractor	Noise quality management plan
		11.2	Generation of waste during dismantling of rig	Temporary visual impacts	Storage of waste in designated areas only recyclable waste should be recycled through authorized	Site Inspection	Well Decommissioning Phase	OIL/Contractor	Waste Management Plan

S No	Activity	Ref	Aspect	Impact	Mitigation Measures	Monitoring	Timing/ Frequency	Responsible Party	Related Plans
					water recycler				
		11.3	Disposal/spillage of spent oils &lubricants into environmental media	Contamination of soil resulting loss of soil living organism Contamination of surface water resulting deterioration of surface water quality and aquatic ecosystem	Manage spills of contaminants on soil	Site Inspection and Record keeping	Well Decommissioning Phase	OIL/Contractor	Waste Management Plan
12.	Transportation of drilling facilities	12.1	Emission of gaseous air pollutant during transportation of drilling facilities	Temporary localized deterioration of air quality due to emission gaseous pollutants	Vehicle / equipment air emissions will be controlled by good practice procedures (such as turning off equipment when not in use); and Vehicle / equipment exhausts observed emitting significant black smoke in their exhausts will be serviced/ replaced	Site Inspection and Record keeping	Well Decommissioning Phase	OIL/Contractor	Air quality management plan
		12.2	Fugitive emissions due to re-entrainment of dust during transport of drilling facilities	Temporary localized deterioration of air quality due to increase in SPM levels	Approach road to be sprinkled daily with water	Site Inspection	Well Decommissioning Phase	OIL/Contractor	Air quality management plan
		12.3	Emission of noise during transport of drilling facilities	Temporary deterioration of noise quality	Restrict all noise generating operations, except drilling, to daytime	Site Inspection	Well Decommissioning Phase	OIL/Contractor	Noise quality management plan

No	Activity	Ref	Aspect	Impact	Mitigation Measures	Monitoring	Timing/ Frequency	Responsible Party	Related Plans
					Restriction on unnecessary use of horns by trucks and vehicle in settlement area				

6.0 Summary and Conclusion

The EMP has been made to assess the potential significant adverse environmental effects due to the proposed construction and drilling activities.

Mitigation measures have been proposed as part of EMP to minimize adverse environmental impacts, if any. Risk assessment includes Jet Fire and Vapour Cloud Explosion for blowout of wells. The existing Emergency Management Plan of OIL will be extended to this project, strengthened as necessary and implemented in the event of any emergency arising due to above mentioned risks.

The present impact assessment study indicates that the overall impact from the proposed project will be short to medium term, reversible, localised and are not expected to contribute significantly to the surrounding environment. Also, with the implementation of the pollution control and strengthen the existing environment management measures, these anticipated impacts due to proposed site preparation and drilling operation and decommissioning activities of the proposed project will be mitigated. Summary of impact significance without mitigation measures and with mitigation measures is presented at the table below.

Summary of Impact Significance without and with Mitigation Measures

Impact	Impact significance without mitigation measures	Impact significance with mitigation measures
Aesthetic & visual	Moderate	Minor
Land Use	Negligible	-
Soil Quality	Moderate	Minor
Air Quality	Moderate	Minor
Noise Quality	Major	Moderate
Road & Traffic	Moderate	Minor
Surface Water Quality	Moderate	Moderate
Ground water resource	Minor	Minor
Ground Water Quality	Moderate	Minor
Terrestrial Ecology	Negligible	-
	Minor	Minor
	Major	Moderate
Aquatic Ecology	Moderate	Moderate
Livelihood & Income generation	Moderate	Moderate
Conflict with local people	Moderate	Moderate
Benefit to Local Enterprises	Positive	-
Employment Generation	Positive	-
Occupational health & safety	Moderate	Minor
Community health & safety	Moderate	Minor

OIL will also ensure that the environmental performances of all the activities are monitored throughout execution of the project during site preparation, drilling and decommissioning phases. Monitoring will be carried out for ambient air quality, stack emission, noise quality, quality of treated effluents, surface and groundwater qualities, waste generated and disposed etc. and verified that they meet the prescribed standards. OIL will continue to report environmental performance and submit monitoring reports regularly to statutory authorities.

The effective management system coupled with monitoring of environmental components and efforts for continual improvements will result in satisfactory environmental performance of the proposed oil and gas drilling and development project.

THANKS YOU

Annexure - C

ऑयल इंडिया लिमिटेड
(भारत सरकार का उद्यम)
Oil India Limited
(A Government of India Enterprise)

Health Safety & Environment Department
P.O. DULIAJAN-786602,
ASSAM, INDIA
Phone : 0374-2800542
Fax : 0374-2801796
Email: safety@oilindia.in

Ref. No.: S&E/E/21(B)/940

Date: 20.09.2023

To
The Member Secretary,
Pollution Control Board, Assam,
Bamunimaidam, Guwahati- 781021.

Sub: Submission of Environmental Statement (Form-V) under Environment (Protection) Rules, 1986.

Sir,

With reference to the above subject, we are submitting herewith the Environmental Statement (Form-V) for the financial year ending 31st March, 2023 pertaining to the operations of Oil India Limited in the districts of Dibrugarh, Tinsukia, Sivsagar and Charaideo in Assam.

Thanking You,

Yours faithfully
OIL INDIA LIMITED

(Ajit Chandra Haloi)
Executive Director (HSE)
For **Resident Chief Executive**

Encl: As above.

Copy:
1. Regional Executive Engineer,
   Pollution Control Board Assam,
   Back Side of ASTC Bus Station,
   Chowkidinghee, Dibrugarh,
   PIN: 786001.

2. Executive Engineer,
   Regional Laboratory cum Office,
   Pollution Control Board Assam,
   Melachakar, Sibsagar,
   PIN: 785640.

FORM – V
(See Rule 14)
ENVIRONMENTAL STATEMENT FOR THE FINANCIAL YEAR ENDING THE 31st MARCH, 2023

PART – A

(i) **Name and address of the owner/occupier of the industry operation or process.**

OIL INDIA LIMITED
P.O. DULIAJAN
DIST. DIBRUGARH
ASSAM -786602.

Note: Environmental Statement (Form – V) is pertaining to the operations of Oil India Limited in the districts of Dibrugarh, Tinsukia, Sivasagar and Charaideo in Assam.

(ii) **Industry category:** Red - Oil and gas extraction (on-shore extraction through drilling wells)

(iii) **Production capacity – Units**

OIL's production target is fixed as per the Memorandum of Understanding (MoU) with Ministry of Petroleum and Natural Gas, Govt. of India, which varies from year to year.
Production details during F.Y. 2022-23:

- **Crude Oil:** 3.114 MMT.
- **Natural Gas:** 2809.214 MMSCM
- **LPG:** 32,100 MT.

(iv) **Year of establishment:**
OIL INDIA LTD. was formed in 1961 as a joint venture with M/S. Burma Oil Company, UK and on 14th Oct. 1981, OIL became a fully owned Govt. of India Enterprise.

(v) **Date of last Environmental Statement submitted:** 20.09.2022.

PART – B
WATER AND RAW MATERIAL CONSUMPTION

(I) Water consumption m^3/d:

S.No	Purpose	Water Consumption (m^3/ day)
1.	Process & Cooling	14473.7
2.	Domestic	16038.63
TOTAL		**30512.33**

Name of Products	Process water consumption per unit of product output	
	During F.Y. 2021-22	During F.Y. 2022-23
(1)	(2)	(3)
Hydrocarbon (Crude Oil, Natural Gas, LPG)	1.12 m^3/MT (Approx.)	1 m^3/MT (Approx.)

(II) Raw material consumption

*Name of raw materials	Name of products	Consumption of raw material per unit	
		During F.Y. 2021-22	During F.Y. 2022-23
No raw materials are used as Oil India Limited is engaged in Exploratory and development drilling activities & production of Crude Oil and Natural Gas. However, chemicals such as Bentonite are used for preparation of Water based drilling mud.			

PART – C
POLLUTION DISCHARGED TO ENVIRONMENT/UNIT OF OUTPUT

(Parameter as specified in the consent issued).

Pollutants	Quantity of Pollutants Discharged (mass/day)	Concentrations of pollutants in discharges (mass/volume)	Percentage of variation from prescribed standards with reasons
(a) Water	**NIL.** There is no discharge of pollutants from drilling locations and Production Installations. • Wastewater generated from drilling locations is treated in Effluent Treatment Plant (ETP) and reused back in the drilling operation. • The formation water generated after separation from crude oil and	• Quality of ETP treated water from the drilling locations is analyzed frequently. (Test report is enclosed as ***Annexure – I***). • Quality of Formation water is analyzed frequently (Test report enclosed as ***Annexure-***	No variation is observed. All parameters of treated effluent and Formation water are within the permissible limits.

	treatment is pumped back to the underground formation (depth greater than 1600 m) through formation water disposal wells.	***II)***	
(b) Air	No major air pollutants are emitted from Oil & Gas exploratory and development drilling and production activities except Stack Gas emissions at drilling locations and Production Installations & Flaring at Oil Collecting Stations.	Stack Gas and Ambient Air Quality (AAQ) monitoring is carried out frequently at drilling locations and Production Installations (Test report enclosed as ***Annexure- III)***	No variation is observed. All parameters of Stack Gas emissions and Ambient Air are within the permissible limits.

PART – D
HAZARDOUS WASTES

(As specified under Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016)

Hazardous Wastes	**Category of Hazardous Waste as per Schedule - I of HW Rules, 2016**	**Total Quantity generated**	
		During F.Y. 2021-22	**During F.Y. 2022-23**
a) From process	S.No. 2.2 Sludge containing Oil	9943 MT	4671.52 MT
	S.No. 5.1 Used or Spent Oil	60 KL	208 KL
	S.No. 33.1 Empty barrels/ containers/liners contaminated with hazardous chemicals/ wastes	41569 Nos.	26616 Nos.
	S.No. 33.2 Contaminated cotton rags or other cleaning materials	3.7 MT	6.19 MT
b) From pollution control facilities	S.No. 33.5 Chemical sludge from waste water treatment	2600 KL	120.84 KL

PART – E
SOLID WASTES

Solid Wastes	Total Quantity	
	During F.Y. 2021-22	During F.Y. 2022-23
(a) From process Drill Cuttings	23,000 m^3 (Approx.)	27,000 m^3 (Approx.)
(b) From pollution control facilities	NIL	
(c) (1) Quantity recycled or re-utilized within the unit. (2) Sold (3) Disposed	N/A N/A N/A	

PART – F
PLEASE SPECIFY THE CHARACTERIZATION (IN TERMS OF COMPOSITION AND QUANTUM) OF HAZARDOUS AS WELL AS SOLID WASTES AND INDICATE DISPOSAL PRACTICE ADOPTED FOR BOTH THESE CATEGORIES OF WASTES.

(I) Hazardous Wastes:

Name of the Hazardous Waste	Quantity generated during F.Y. 2022-23	Disposal Practices
a) Sludge containing Oil	4671.52 MT	Sent to Sludge Processing Plant for oil recovery followed by Bioremediation
b) Used or Spent Oil	208 KL	Stored in barrels under covered shed and sold to authorized recyclers through auction
c) Empty barrels/ containers/liners contaminated with hazardous chemicals/ wastes	26616 Nos	Sold to authorized recyclers through auction
d) Contaminated cotton rags or other cleaning materials	6.19 MT	Bioremediation
e) Chemical sludge from waste water treatment	120.84 KL	Disposed in HDPE lined pits

(I) Solid Wastes:

Name of the Solid Waste	Quantity generated during F.Y. 2022-23	Disposal Practices
a) Drill Cuttings	27,000 m^3 (Approx.)	Disposed in HDPE lined pits

PART – G

IMPACT OF THE POLLUTION ABATEMENT MEASURES TAKEN ON CONSERVATION OF NATURAL RESOURCES AND ON THE COST OF PRODUCTION

- Acoustic enclosures have been provided around all gensets to reduce noise levels.
- Recovery of drilling mud from drill cuttings by using a combination of Vertical Cutting Dryer (VCD) and a high-performance centrifuge.
- Wastewater generated from drilling locations is collected in HDPE lined pits, treated in Effluent Treatment Plant (ETP) with Reverse Osmosis unit and the treated effluent is reused back in the drilling operation.
- Formation water generated from Production Installations is treated in Effluent Treatment Plant (ETP) before disposal in the abandoned/ water disposal wells.
- Processing of oily sludge for recovery of Crude oil and further treatment of sludge through Bioremediation.
- Construction of central concrete pit for disposal of waste mud.
- Treatment of Biomedical waste through incinerator.
- Plantation of 50,000 saplings was carried out at 8 nos. of abandoned OIL well sites.

PART – H

Additional measures/investment proposal for environmental protection, abatement of pollution, prevention of pollution.

- MoU with District Administration, Tinsukia for treating the legacy waste of Tinsukia Municipality through the process of Biomining.
- Proposal for construction of Community Sewage Treatment Plant (STP) at Duliajan.
- MoU with Digboi Forest division, Assam for carrying out afforestation in 100 Ha of degraded forest area.
- MoU with IIT Guwahati to study the feasibility of using treated drill cutting as a building material.

PART – I

ANY OTHER PARTICULARS FOR IMPROVING THE QUALITY OF THE ENVIRONMENT.

****

ENVIROCON
Recognised By
Pollution Control Board, Assam

Envirocon Building, I.O.C.L (AOD) New Market
P.O.: Digboi, Dist.: Tinsukia, Assam – 786 171
Ph: 03751-264414, 9435008657, 8876028672
E-mail: envirocon@rediffmail.com

Annexure - I

ISO 9001:2015 Certified
ISO 45001:2018 Certified

Report No.: ENV/ARDS/22-23/S-07/WW-03/01
Date : 22/03/2023

Order No.: Telecon
Date :

Report Issued To : **ADITI R & D SERVICES**
Nilesh Buisness Complex, A. T. Road, Digboi, Assam

TEST RESULTS

Sample Ref. No. : ARDS/2023/S-07/1303/01 Sample Source : Rig S#7/MFT, Sonari Sample Type : ETP Treated Water (RO)
Collected On : 13-03-2023 Received On : 14-03-2023 Collected By : ETP Supervisor, ARDS

Sl. No.	Parameters	Results	Limit [G.S.R. 176(E), 02.04.1996]
1	Colour	Colourless	Colourless
2	Odour	Odourless	Odourless
3	pH value	7.16	5.5 – 9.0
4	Temperature, °C	25.6	40 °C
5	TSS, mg/l	3.9	100
6	BOD, mg/l	<1.0	30
7	COD, mg/l	18	100
8	Chlorides (as Cl), mg/l	3.6	600
9	Sulfates (as SO_4), mg/l	<1.0	1000
10	TDS, mg/l	61	2100
11	Sodium, (%)	1.6	60
12	Oil & Grease, mg/l	<4.0	10
13	Phenolic Compounds as C_6H_5OH, mg/l	<0.001	1.2
14	Cyanides , mg/l	<0.001	0.2
15	Fluorides (as F), mg/l	<0.01	1.5
16	Sulfide (as S), mg/l	<0.01	2.0
17	Chromium (Cr^{+6}), mg/l	<0.001	0.1
18	Chromium (Total) , mg/l	<0.001	1.0
19	Copper, mg/l	<0.001	0.2
20	Lead, mg/l	<0.001	0.1
21	Mercury, mg/l	<0.001	0.01
22	Nickel, mg/l	<0.001	3.0
23	Zinc, mg/l	<0.01	2.0

Analysis Protocol: IS 3025

Checked By: Mr. Pankaj Baroi, **ENVIROCON**

NOTE:
1. Results reported are valid at the time of and under the prevailing conditions of measurement.
2. Results refer only to the particular parameters tested.
3. This test report shall not be reproduced except in full, without the written permission of ENVIROCON, I.O.C.L (AOD) New Market, Digboi – 786171, Assam.

ऑयल इंडिया लिमिटेड
Oil India Limited

Annexure - II

CHEMICAL LABORATORY
(An ISO 9001 : 2015 Certified Laboratory)
CHEMICAL DEPARTMENT, DULIAJAN 786 602, ASSAM, INDIA
(Phone : 91-374-2800439, Fax : 91-374-2801680/2800633.
Email : chemical@oilindia.in)

For internal use only

Ref. No.: Chem/Ana/Misc/466/DJN/23

Date: 23.03.2023 4 MAR 2023

CGM - PSS 24/03/2023

Attn.: Prajesh Das, Dy.CE(PSS) & IM -STF

Sub: WATER SAMPLE ANALYSIS REPORT OF STF MADHUBAN

Ref.:- PSS/ STF-35/2022-23/434, Date:- 21.03.2023

Reference above, please find below the test results of the water sample forwarded to us from your end for laboratory testing.

Characteristics	Unit	Clarified water sample	Test Method/ Instrument used
pH	-	8.4	Metrohm pH meter
TSS	mg/l	56	Gravimetric method
TDS	mg/l	4100	Gravimetric method
Salinity as NaCl	mg/l	2100	Titraton with silver nitrate
Oil & Grease	mg/l	Nil	Horiba oil content analyser
Turbidity	NTU	6.02	Turbidity meter

Sample details :

The above clarified water sample was collected by PSS Department from STF Madhuban on 21.03.2023 & received at Analytical & Environmental laboratory on 21.03.2023 for necessary laboratory testing.

Note: Parameters were tested as per requirement of the customer mentioned in the memo.

Tested by :- WR/PJK/PS/NC

Pranab Jyoti Das
Suptdg. Chemist (Lab)
For DGM-Chemical (Lab)

Copy : Analytical & Environmental sec. file

Chem/Lab/Ana/Report/Water/04

Mitra S. K. Private Limited

Annexure - III

MSK TESTING • INSPECTION

STACK GAS MONITORING REPORT

Name & Address of the Customer	Report No.	: MSK/2022-23/1881
"M/s OIL INDIA LIMITED"	Report Date	: 31.01.2023
	Nature of Sample	: Stack Emission
Duliajan, Dibrugarh, Assam-786602	Sample Mark	: GCS TENGAKHAT
	Sample Number	: MSKGL/ED/2022-23/12/00398

Ref. No.:W.O. NO.- 8125981 of Contract No. 6116895

Date of Sampling	Sample Received Date	Analysis Start Date	Analysis Complete Date
14.12.2022	17.12.2022	17.12.2022	24.12.2022

ANALYSIS RESULT

A.	General information about stack :	: GB-1
1.	Stack connected to	: GAS COMORESSOR
2.	Emission due to	: NG
3.	Material of construction of Stack	: MS
4.	Shape of Stack	: Circular
5.	Whether stack is provided with permanent platform & ladder	: Yes
6.	DG capacity	: NIL
B.	Physical characteristics of stack :	
1.	Height of the stack from ground level	: 3.6576 m
2.	Diameter of the stack at sampling point	: 0.2032 m
3.	Area of Stack	: 0.03241 m2
C.	Analysis/Characteristic of stack: 1. Fuel used : NG	

D.	Result of sampling & analysis of gaseous emission	Result	Limit as per CPCB	Method
1.	Temperature of emission (°C)	187	...	USEPA Part 2, 25.09.1996
2.	Barometric Pressure (mm of Hg)	762.0	...	USEPA Part 2, 25.09.1996
3.	Velocity of gas (m/sec.)	24.4	...	USEPA Part 2, 25.09.1996
4.	Quantity of Gas Flow (Nm3/hr)	1854	...	USEPA Part 2, 25.09.1996
5.	Concentration of Oxygen (%v/v)	13.6	...	IS:13270 :1992 Reaff, 2014
6.	Concentration of Carbon Monoxide (mg/Nm3)	25.1	...	IS:13270 :1992 Reaff, 2014
7.	Concentration of Carbon Dioxide (%v/v)	5.8	...	IS:13270 :1992 Reaff, 2014
8.	Concentration of Sulphur Dioxide (mg/Nm3)	20.5	...	USEPA-29, 25/06/1996
9.	Concentration of Nitrogen Oxide (ppmv)	69.3	...	USEPA Part-6, 25/09/1996
10.	Concentration of Lead (mg/Nm3)	<0.005	...	USEPA Part-7, 12/03/1996& USEPA 18 -25.09.1996
11.	Concentration of Particulate matter (mg/Nm3)	35.9	...	USEPA Part-17, 16/08/1996
12.	Concentration of Hydrocarbons (ppm)	13.46	...	USEPA 18 - 25.09.1996

E. Pollution control device :
Details of pollution control devices attached with the stack : Nil

Remarks:Nil

Analyzed By:

Signature :
Name : Mr. Dipankar Mazumdar
Designation. : Executive Chemist

Prepared By:

Signature :
Name : Mr. Dhrubajyoti Das
Designation. : Assistant Chemist

Authorized Signatory
ForMitra S.K. Private Limited

Signature :
Name : Mr. Tajimul Haque
Designation : Branch Manager

- *The results relate only to the item(s) tested.*
- *This Test Report shall not be reproduced except in full, without the permission of Mitra S.K. Private Limited.*
- *Our Lab is Approved by NABL & MOEF, Lab Address :P-48 Udyan Industrial Estate 3 Pogiodanga Road Kol-700015*

Head Office: Shrachi Centre (5th floor), 74B, A.J.C. Bose Road, Kolkata - 700 016. West Bengal, India.
Tel. : 91 33 40143000 / 22650006 / 22650007 Fax : 91 33 22650008
Email : info@mitrask.com Website: www.mitrask.com

Approved by
Uttam Prodhan
Suptdg. Research Scientist, R&D Dept.,
Oil India Ltd., Duliajan, Assam

Mitra S. K. Private Limited

MSK TESTING • INSPECTION

Ambient Air Quality Monitoring Report

Name & Address of the Customer :	Report No. : MSK/2022-23/1463
"M/s OIL INDIA LIMITED", Duliajan, Dibrugarh, Assam-786602	Report Date : 30.12.2022 Sample Description : Ambient Air Sample Number : MSKGL/ED/2022-23/12/00252 **Sampling Location : GCS TENGAKHAT**
Ref. No.:W.O. NO.- 8125981 of Contract No. 6116895	GPS Reading : N 27°23'55", E 95°06'56"

Date of Sampling	Sample Received Date	Analysis Start Date	Analysis Complete Date
15.11.2022	18.11.2022	18.11.2022	25.11.2022

Enviromental Conditions During Sampling & Transport Condition :Temperature : 26°C, Rain fall : NO

Analysis Result

Sl. No.	Test Parameter	Method	Unit	Results	CPCB Limit
1	Particulate Matter (PM_{10})	IS : 5182 (Part-23)-2006	(µg/m3)	59.2	100
2.	Particulate Matter ($PM_{2.5}$)	IS : 5182 (Part-24)	(µg/m3)	28.1	60
3.	Sulphur Dioxide (SO_2)	IS : 5182 (Part-2)-2001	(µg/m3)	<6.0	80
4	Nitrogen Dioxide (NO_2)	IS : 5182 (Part-6)-2006	(µg/m3)	16.8	80
5	Carbon Monoxide (CO)	IS 5182 : (Part-10) :1999	(mg/m3)	0.59	2
6	Ozone (O_3)	IS:5182 (Part-IX)-1974 Reaffirmed-2019	(µg/m3)	<20.0	180
7	Ammonia (NH_3)	IS 5182 (Part 25) : 2018	(µg/m3)	<10.0	400
8.	Lead (Pb)	USEPA IO-3.4	(µg/m3)	<0.01	1
9.	Nickel (Ni)	USEPA IO-3.4	(ng/m3)	<0.5	20
10.	Arsenic (As)	USEPA IO-3.4	(ng/m3)	<1.0	6
11.	Benzene (C_6H_6)	IS 5182 : (Part 11) :2006	(µg/m3)	<4.2	5
12.	Benzo(a)Pyrene (BaP)	IS 5182 : (Part 12) :2004	(ng/m3)	<0.5	1
13.	Mercury (Hg)	USEPA IO-5.0	(µg/m3)	<0.002	...
14.	Methane (Hydrocarbon)	IS 5182 : (Part 17)	ppm	1.38	...
15.	Non-methane (Hydrocarbon)	IS 5182 : (Part 17)	ppm	<0.5	...
16	Total Hydrocarbon	IS 5182 : (Part 17)	ppm	1.38	...
17.	Volatile Organic Compounds (VOC)	IS 5182 : (PART-11):2006	(µg/m3)	<4.2	...

Limit as per CPCB notification, New Delhi, 18th Nov, 2009, for Ambient air quality

Analyzed By:

Signature :
Name : Mr. Dipankar Mazumdar
Designation. : Executive Chemist

Prepared By:

Signature :
Name : Mr. Dhrubajyoti Das
Designation. : Assistant Chemist

Authorized Signatory
For **Mitra S.K. Private Limited**

Signature :
Name : Mr. Tajmul Hoque
Designation : Branch Manager

- *The results relate only to the item(s) tested.*
- *This Test Report shall not be reproduced except in full, without the permission of Mitra S.K. Private Limited.*
- *Our Lab is Approved by NABL & MOEF, Lab Address :P-4& Udayan Industrial Estate,3 Pagladanga Road Kol-700015*

Head Office: Shrachi Centre (5th floor), 74B, A.J.C. Bose Road, Kolkata - 700 016. West Bengal, India.
Tel. : 91 33 40143000 / 22650006 / 22650007 Fax : 91 33 22650008
Email : info@mitrask.com. Website: www.mitrask.com

Approved by
Uttam Prodhan
Suptdg. Research Scientist, R&D Dept.,
Oil India Ltd., Duliajan, Assam

Annexure - D

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-311/21-22/324 Dated Guwahati the. 13th October, 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. .10.2022
2. Reference of application (No. and date) : 1292415
3. M/s OIL INDIA LIMITED, Percy Evans Road, Duliajan, Dibrugarh,Assam-786602 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. 2.2 Sludge containing oil	Generation, Storage & Transportation	4000 T/Annum	Transportation to authorized actual user/ Disposal agencies/ Captive treatment through Bio-remediation as per prescribed norms after recovery of oil.
2.	Schedule-I, Sl.No. 33.2 Contaminated cotton rags or other cleaning materials	Generation, Storage & Transportation	300 T/Annum	Transportation to authorized Disposal agencies for incineration/ Co-Processing in cement plant.
3.	Schedule-I, Sl.No. 33.1 Empty barrels/containers/liners contaminated with hazardous chemicals /wastes	Generation, Storage & Transportation	15000 Nos./Annum	Transportation to authorized actual user/Recyclers
4.	Schedule-I, Sl.No. 5.1 Used or spent oil	Generation, Storage & Transportation	500 Kl /Annum	Transportation to authorized actual user/Recyclers
5.	Schedule-I, Sl.No. 35.3 Chemical sludge from waste water treatment	Generation, Storage & Transportation	7000 T/Annum	Transportation to authorized actual user/Disposal agencies/ Co-processing in cement plant.

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
8. 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 From-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-311/21-22/3229-A

Dated Guwahati the. 13/10 Oct, 2022

Copy to:

1. M/s OIL INDIA LIMITED, Percy Evans Road, Duliajan, Dibrugarh,Assam-786602 for information & compliance of conditions

(Shantanu Kr. Dutta)
Member Secretary