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-1/1243

दिनांक/Date: 30.11.2024

| | | |
|---|---|---|
| **From** | : | Executive Director (HSE & ESG) - Officiating |
| **To** | : | Deputy Director General of Forests (Central),<br>Sub Office, Guwahati (under Regional Office, Shillong),<br>4th Floor, Housefed Building, Rukminigaon,<br>Guwahati-781022.<br>(**Email :** iro.guwahati-mefcc@gov.in, iro.moefcc.ghy@gmail.com) |
| **Subject** | : | Submission of Half-yearly (April 2024 to September 2024) 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 2024 to September 2024**) 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) dated 28.12.2020 | Onshore Oil & Gas Development Drilling and Production (179 wells and 9 Production Installations) in North Hapjan – Tinsukia – |

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**HSE Department**
Oil India Limited
Duliajan, Dibrugarh, 786602, Assam
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| | | |
|---|---|---|
| | | 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 Sapkaint, Borhat, Moran Extension and Doomdooma PMLs. |
| 11. | EC22A002AS110311<br>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<br>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<br>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<br>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<br>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.

Yours faithfully,
For **Oil India Limited**

30/11/2024

(Raj Kishore Singh)
ED (HSE & ESG) - Officiating
**Nodal Officer (EC, FC, NBWL)**
**For Resident Chief Executive**

ऑयल इंडिया
OIL INDIA

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

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.

- **Name of the Project**: Onshore Oil & Gas Development Drilling and Production in Mechaki Area Covering Mechaki, Mechaki Extension, Baghjan and Tinsukia Extension PMLs in District Tinsukia (Assam) by M/s Oil India Limited.
- **Clearance L. No and date:** J-11011/1260/2007-IA-II (I) Dated 09th April, 2020.
- **Period of Compliance Report:** April 2024 to September 2024.

| Sl. No. | Specific Condition | Compliance status |
|---|---|---|
| 1 | The environmental clearance is a subject to obtaining prior clearance from the wildlife angle, including clearance from the Standing Committee of the National Board for Wildlife, as applicable. Grant of environmental clearance does not necessarily imply that Wildlife Clearance. Grant of environmental clearance does not necessarily imply that wildlife clearance shall be granted to the project and that their proposals for Wildlife Clearance will be considered by the respective authorities on their merits and decision taken. | **Complied**<br>No drilling activity is carried out within the deemed ESZ of any National Park/ Wildlife Sanctuary. |
| 2 | As committed no drilling shall be carried out in the forest areas. | **Complied**<br>Stage – II Forest Clearance for the Loc. MKE was obtained on 19.07.2022. |
| 3 | No pipelines or its part shall be laid in the Forest Land/National Park without prior permission/approval from the Competent Authority. | **Complied.**<br>No pipeline is laid in the Forest land/ National Park. |
| 4 | Necessary permission as mandated under the water (prevention and Control of pollution), Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, as applicable from time to time, shall be obtained from the State Pollution Control Board. | **Complied**<br>Consent To Establish (CTE) and Consent To Operate (CTO) were obtained before commencement of Drilling activity. |
| 5 | To control source and fugitive emissions, suitable pollution control devices shall be installed to meet the prescribed norms and /or the NAAQS. The gaseous emission shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines. | **Complied**<br>Adequate Stack height was provided in DG sets as per CPCB guidelines. Stack Gas monitoring report of Loc. MKE is enclosed as **Annexure – I.** |
| 6 | Necessary authorization required under the Hazardous and other wastes (Management and trans-Boundary Movement) Rules, 2016, solid Waste Management Rules, 2016 shall be obtained and the provisions contained in the Rules shall be strictly adhered to. | **Complied**<br>Hazardous Waste Authorization was obtained from Pollution Control Board, Assam vide No. WB/T-311/21-22/329 dated 13.10.2022. |
| 7 | Ambient air quality shall be monitored near the closest human settlements as per the National | **Complied**<br>Ambient Air Quality is being |

| | | |
|---|---|---|
| | Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 for $PM_{10}$, $PM_{2.5}$, $SO_2$, $NO_X$, CO, $CH_4$, HC, Non-methane HC etc. | monitored as per NAAQS, 2009. Ambient Air Quality monitoring report of Loc. MKE is enclosed as **Annexure – II**. |
| 8 | During exploration, production, storage and handling, the fugitive emissions of methane, if any, shall be monitored using Infra-red camera/ appropriate technology. | **Complied**<br>Portable Multi- gas detector & Explosimeter are used to detect fugitive emissions of Methane (if any). |
| 9 | The project proponent also to ensure trapping/storing of the $CO_2$ generated, if any, using the process and handling. | **Will be Complied**<br>$CO_2$ generated (if any) will be trapped/stored. |
| 10 | Approach road shall be made pucca to minimize generation of suspended dust. | **Complied**<br>Approach road to the drilling locations and Production Installations are made pucca to minimize generation of suspended dust. |
| 11 | The company shall make all arrangements for control of noise from the drilling activity. Acoustic enclosures shall be provided for the DG sets along with the adequate stack height as per CPCB guidelines. | **Complied**<br>Regular maintenance of equipment/ machinery is being carried out to minimize noise generation. DG sets are provided with acoustic enclosures and adequate Stack Height as per CPCB guidelines. |
| 12 | Total fresh water requirement shall not exceed 40 cum/day/well proposed to be met through tanks. Mobile ETP shall be installed to treat the waste water and efforts shall be made for gradual reduction in daily intake of water (to reduce fresh water foot print) by suitable mechanism or by putting RO facility in place coupled with onsite mobile ETP. Size of the waste shall be equal to the hole volume+ volume of drill cutting and volume of discarded mud if any. Two feet free board may be left to accommodate rain water. There shall be separate storm water channel and rain water shall not be allowed to mix with waste water. Alternatively, if possible pit less drilling be practiced instead of above. | **Complied**<br>Total freshwater water consumption is within the permitted limit. Groundwater abstraction by Oil India Ltd for drilling activities are exempted from obtaining NOC from Central Ground Water Authority (CGWA) as per the Public Note dated 01.08.2023. Copy of the same is enclosed as **Annexure – E.**<br>Mobile ETP coupled with RO is installed to treat effluent generated from drilling location. Storm water is not allowed to mix with wastewater. Test report of the ETP treated effluent from Loc. MKE is enclosed as **Annexure – III.** |
| 13 | The company shall construct the garland drain all around the drilling site to prevent runoff of any oil containing waste into the nearby water bodies. Separate drainage system shall be | **Complied**<br>Garland drains are constructed around the drilling location to prevent runoff any oil containing |

| | | |
|---|---|---|
| | created for oil contaminated and non-oil contaminated. Effluent shall be properly treated and wastewater shall conform to CPCB standards. | waste into the nearby water bodies. Separate drainage system is created for oil contaminated and non- oil contaminated. |
| 14 | Drill cuttings separated from drilling fluid shall be adequately washed and disposed in HDPE lined pit. Waste mud shall be tested for hazardous contaminants and disposed according to HWMH Rules, 2016. No effluent/ drilling mud/ drill cutting shall comply with the guidelines for disposal of solid waste; drill cutting and drilling fluids for onshore drilling operation notified vide GSR.546 (E) dated 30th August, 2005. | **Complied**<br>Drill cuttings separated from drilling fluid are adequately washed and disposed in HDPE lined pit. No effluent/ drilling mud is discharged/disposed off into nearby surface water bodies. Test report of Mercury (Hg) and Cadmium (Cd) content in Barite used in the preparation of Drilling Fluid is enclosed as **Annexure – IV**. Toxicity test report of waste drilling mud is enclosed as **Annexure – V.** |
| 15 | Oil spillage prevention and mitigation scheme shall be prepared. In case of oil spillage/ contamination, action plan shall be prepared to clean the site by adopting proven technology. The recycles waste (oily sludge) and spent oil shall be disposed of to the authorized recyclers. | **Complied**<br>In case of Oil spillage/ contamination, action will be taken as per the Oil spill contingency plan prepared by OIL. Recyclable waste (oily sludge) and spent oil is being sent to Pollution Control Board, Assam authorized recyclers. |
| 16 | The Company shall take necessary measures to prevent fire hazards, containing oil spill and soil remediation as needed. Possibility of using ground flare shall be explored. At the place of ground flaring, the overhead flaring stack with knockout drums shall be installed to minimize gaseous emissions during operation. | **Complied**<br>Fixed firefighting system is installed at drilling locations and in case of any oil spillage, necessary remediation actions will be taken as per the Oil Spill Contingency Plan. |
| 17 | Blow Out Preventer system shall be installed to prevent well Blowout during drilling operations. | **Complied**<br>Blow Out Preventer (BOP) system is installed to prevent blowouts during drilling operations. |
| 18 | Emergency Response Plan shall be based on the guideline prepared by OSID, DGMS and Govt. of India. | **Complied**<br>OIL has site specific Emergency plan and contingency plan and Disaster management plan (DMP) based on relevant and realistic emergency scenarios. |
| 19 | After completion of drilling process, suitable measures shall be taken for well plugging and secured enclosures, and drilling site shall be restored to the original condition. In case of the hydrocarbon not found economically viable, a | **Will be complied**<br><br>On completion of the drilling activity, plugging of abandoned wells will be carried out as per the |

| | | |
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| | full abandonment plan shall be implemented for the drilling site in accordance with the applicable Indian Petroleum Regulations. | OIL's Well Abandonment, Site Restoration and Reclamation policy. |
| 20 | All the commitments made to the public during public consultation/ hearing shall be satisfactory implemented. | **Being Complied** |
| 21 | At least Rs. 5 crore shall be allocated for corporate Environment Responsibility (CER) and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office. | **Being Complied** |
| 22 | Occupational health surveillance of the workers shall be carried out as per the prevailing acts and Rules. | **Complied**<br>Occupational Health Surveillance of workers i.e., PME engaged in drilling operation is being carried out. Records of the same are enclosed as **Annexure – VI**. |
| 23 | Company shall prepare operating manual in respect of all activities, which would cover all safety & environment related issues and measures to be taken for protection. One set of environmental manual shall be made available at the drilling site/ project site. Awareness shall be created at each level of the management. All the schedules and results of environmental monitoring shall be available at the project site office. Remote monitoring of site should be done. | **Complied**<br>SOPs for all the operations covering safety and environment related issues are prepared. OIL has prepared Environmental manual which is made available at the drilling location. Copy of the same is enclosed **Annexure – B**. Also, all the environmental monitoring reports related to ambient air quality, Stack Gas monitoring, ETP effluent, Noise level will be maintained at the drilling location. |

Mitra S. K. Private Limited

MSK TESTING • INSPECTION

# STACK GAS MONITORING REPORT

| Name & Address of the Customer | Report No. | : MSK/2024-25/00630 |
|---|---|---|
| "M/s OIL INDIA LIMITED" | Report Date | : 02.07.2024 |
| | Nature of Sample | : Stack Emission |
| Duliajan, Dibrugarh, Assam-786602 | Sample Mark | : **MKE RIG CH 5(DURING DRILLING)** |
| | Sample Number | : MSKGL/ED/2024-25/06/01532 |
| | Instrument ID | : 135-H-19 |

Ref. No.:W.O. NO.- 8129283 of Contract No. 6119277

| Date of Sampling | Sample Received Date | Analysis Start Date | Analysis Complete Date |
|---|---|---|---|
| 30.05.2024 | 02.06.2024 | 02.06.2024 | 09.06.2024 |

## ANALYSIS RESULT

| | | | | |
|---|---|---|---|---|
| **A.** | **General information about stack :** | **: RIG ENGINE-1 (SL NO-IGZ05205)** | | |
| 1. | Stack connected to | : RIG | | |
| 2. | Emission due to | : HSD | | |
| 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 | **: 1200 KVA** | | |
| **B.** | **Physical characteristics of stack :** | | | |
| 1. | Height of the stack from ground level | : 8.5344 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) | 184 | ... | USEPA Part 2, 25.09.1996 |
| 2. | Barometric Pressure (mm of Hg) | 762 | ... | USEPA Part 2, 25.09.1996 |
| 3. | Velocity of gas (m/sec.) | 20.01 | ... | 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) | 13.6 | ... | IS:13270 :1992 Reaff, 2014 |
| 6. | Concentration of Carbon Monoxide (mg/Nm3) | 27.9 | **150** | IS:13270 :1992 Reaff, 2014 |
| 7. | Concentration of Carbon Dioxide (%v/v) | 5.2 | ... | IS:13270 :1992 Reaff, 2014 |
| 8. | Concentration of Sulphur Dioxide (mg/Nm3) | 28.6 | ... | USEPA-29, 25/06/1996 |
| 9. | Concentration of Nitrogen Oxide (ppmv) | 75.6 | **360** | USEPA Part-6, 25/09/1996 |
| 10. | Concentration of Lead (mg/Nm3) | <0.005 | ... | USEPA-29, 25/06/1996 |
| 11. | Concentration of Particulate matter (mg/Nm3) | 44.6 | **75** | USEPA Part-17, 16/08/1996 |
| 12. | Concentration of Hydrocarbons (ppm) | <0.0003 | **100** | 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 : Hiramoni Rajbongshi
Designation. : Office Assistant

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

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

- *The results relate only to the item(s) tested.*
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- *Our Lab is Approved by NABL & MOEF, Lab Address :P-48 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

# STACK GAS MONITORING REPORT

| Name & Address of the Customer | Report No. | : MSK/2024-25/00631 |
|---|---|---|
| "M/s OIL INDIA LIMITED" | Report Date | : 02.07.2024 |
| | Nature of Sample | : Stack Emission |
| Duliajan, Dibrugarh, Assam-786602 | Sample Mark | : **MKE RIG CH 5(DURING DRILLING)** |
| | Sample Number | : MSKGL/ED/2024-25/06/01533 |
| | Instrument ID | : 135-H-19 |

Ref. No.:W.O. NO.- 8129283 of Contract No. 6119277

| Date of Sampling | Sample Received Date | Analysis Start Date | Analysis Complete Date |
|---|---|---|---|
| 30.05.2024 | 02.06.2024 | 02.06.2024 | 09.06.2024 |

## ANALYSIS RESULT

| | | |
|---|---|---|
| **A.** | **General information about stack :** | **: RIG ENGINE-2 (SL NO-IGZ05813)** |
| 1. | Stack connected to | : RIG |
| 2. | Emission due to | : HSD |
| 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 | **: 1200 KVA** |
| **B.** | **Physical characteristics of stack :** | |
| 1. | Height of the stack from ground level | : 8.5344 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) | 198 | ... | USEPA Part 2, 25.09.1996 |
| 2. | Barometric Pressure (mm of Hg) | 762 | ... | USEPA Part 2, 25.09.1996 |
| 3. | Velocity of gas (m/sec.) | 19.91 | ... | USEPA Part 2, 25.09.1996 |
| 4. | Quantity of Gas Flow (Nm3/hr) | 366 | ... | USEPA Part 2, 25.09.1996 |
| 5. | Concentration of Oxygen (%v/v) | 13.2 | ... | IS:13270 :1992 Reaff, 2014 |
| 6. | Concentration of Carbon Monoxide (mg/Nm3) | 28.1 | **150** | 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) | 29.1 | ... | USEPA-29, 25/06/1996 |
| 9. | Concentration of Nitrogen Oxide (ppmv) | 74.2 | **360** | USEPA Part-6, 25/09/1996 |
| 10. | Concentration of Lead (mg/Nm3) | <0.005 | ... | USEPA-29, 25/06/1996 |
| 11. | Concentration of Particulate matter (mg/Nm3) | 45.2 | **75** | USEPA Part-17, 16/08/1996 |
| 12. | Concentration of Hydrocarbons (ppm) | <0.0003 | **100** | 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 : Hiramoni Rajbongshi
Designation. : Office Assistant

**Authorized Signatory**
**Mitra S.K. Private Limited**
Signature
Name : Mr. Rajib Roy
Designation : Branch Manager

- *The results relate only to the item(s) tested.*
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- *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

# STACK GAS MONITORING REPORT

| Name & Address of the Customer | | Report No. | : MSK/2024-25/00632 |
|---|---|---|---|
| "M/s OIL INDIA LIMITED" | | Report Date | : 02.07.2024 |
| | | Nature of Sample | : Stack Emission |
| Duliajan, Dibrugarh, Assam-786602 | | Sample Mark | : **MKE RIG CH 5(DURING DRILLING)** |
| | | *Sample Number* | : *MSKGL/ED/2024-25/06/01534* |
| | | Instrument ID | : 135-H-19 |
| Ref. No.:W.O. NO.- 8129283 of Contract No. 6119277 | | | |
| Date of Sampling | Sample Received Date | Analysis Start Date | Analysis Complete Date |
| 30.05.2024 | 02.06.2024 | 02.06.2024 | 09.06.2024 |

## ANALYSIS RESULT

| A. | General information about stack : | : **RIG ENGINE-3 (SL NO-IGZ05819)** |
|---|---|---|
| 1. | Stack connected to | : RIG |
| 2. | Emission due to | : HSD |
| 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 | : **1200 KVA** |
| **B.** | **Physical characteristics of stack :** | |
| 1. | Height of the stack from ground level | : 8.5344 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) | 212 | ... | USEPA Part 2, 25.09.1996 |
| 2. | Barometric Pressure (mm of Hg) | 762 | ... | USEPA Part 2, 25.09.1996 |
| 3. | Velocity of gas (m/sec.) | 21.09 | ... | USEPA Part 2, 25.09.1996 |
| 4. | Quantity of Gas Flow (Nm3/hr) | 376 | ... | USEPA Part 2, 25.09.1996 |
| 5. | Concentration of Oxygen (%v/v) | 13.4 | ... | IS:13270 :1992 Reaff, 2014 |
| 6. | *Concentration of Carbon Monoxide (mg/Nm3)* | *28.6* | **150** | *IS:13270 :1992 Reaff, 2014* |
| 7. | Concentration of Carbon Dioxide (%v/v) | 5.4 | ... | IS:13270 :1992 Reaff, 2014 |
| 8. | Concentration of Sulphur Dioxide (mg/Nm3) | 28.1 | ... | USEPA-29, 25/06/1996 |
| 9. | Concentration of Nitrogen Oxide (ppmv) | 75.4 | **360** | USEPA Part-6, 25/09/1996 |
| 10. | Concentration of Lead (mg/Nm3) | <0.005 | ... | USEPA-29, 25/06/1996 |
| 11. | Concentration of Particulate matter (mg/Nm3) | 46.3 | **75** | USEPA Part-17, 16/08/1996 |
| 12. | Concentration of Hydrocarbons (ppm) | <0.0003 | **100** | 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 : Hiramoni Rajbongshi
Designation. : Office Assistant

**Authorized Signatory**
**Mitra S.K. Private Limited**
Signature :
Name : Mr. Rajib Roy
Designation : Branch Manager

- *The results relate only to the item(s) tested.*
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- *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

# STACK GAS MONITORING REPORT

| Name & Address of the Customer | Report No. | : MSK/2024-25/00633 |
|---|---|---|
| "M/s OIL INDIA LIMITED" | Report Date | : 02.07.2024 |
| | Nature of Sample | : Stack Emission |
| Duliajan, Dibrugarh, Assam-786602 | *Sample Mark* | : ***MKE RIG CH 5(DURING DRILLING)*** |
| | Sample Number | : MSKGL/ED/2024-25/06/01535 |
| | Instrument ID | : 135-H-19 |

Ref. No.:W.O. NO.- 8129283 of Contract No. 6119277

| Date of Sampling | Sample Received Date | Analysis Start Date | Analysis Complete Date |
|---|---|---|---|
| 30.05.2024 | 02.06.2024 | 02.06.2024 | 09.06.2024 |

## ANALYSIS RESULT

| A. | General information about stack : | : RIG ENGINE-4 (SL NO-IGZ05200) |
|---|---|---|
| 1. | Stack connected to | : RIG |
| 2. | Emission due to | : HSD |
| 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 | **: 1200 KVA** |
| **B.** | **Physical characteristics of stack :** | |
| 1. | Height of the stack from ground level | : 8.5344 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) | 187 | ... | USEPA Part 2, 25.09.1996 |
| 2. | Barometric Pressure (mm of Hg) | 762 | ... | USEPA Part 2, 25.09.1996 |
| 3. | Velocity of gas (m/sec.) | 20.49 | ... | USEPA Part 2, 25.09.1996 |
| 4. | Quantity of Gas Flow (Nm3/hr) | 385 | ... | 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) | 27.6 | **150** | 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) | 29.5 | ... | USEPA-29, 25/06/1996 |
| 9. | Concentration of Nitrogen Oxide (ppmv) | 76.3 | **360** | USEPA Part-6, 25/09/1996 |
| 10. | Concentration of Lead (mg/Nm3) | <0.005 | ... | USEPA-29, 25/06/1996 |
| 11. | Concentration of Particulate matter (mg/Nm3) | 45.1 | **75** | USEPA Part-17, 16/08/1996 |
| 12. | Concentration of Hydrocarbons (ppm) | <0.0003 | **100** | 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 : Hiramoni Rajbongshi
Designation. : Office Assistant

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

Signature
Name : Mr. Rajib Roy
Designation : Branch Manager

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

# STACK GAS MONITORING REPORT

| Name & Address of the Customer | Report No. | : MSK/2024-25/00634 |
|---|---|---|
| "M/s OIL INDIA LIMITED" | Report Date | : 02.07.2024 |
| | Nature of Sample | : Stack Emission |
| Duliajan, Dibrugarh, Assam-786602 | *Sample Mark* | : ***MKE RIG CH 5(DURING DRILLING)*** |
| | Sample Number | : MSKGL/ED/2024-25/06/01536 |
| | Instrument ID | : 135-H-19 |

Ref. No.:W.O. NO.- 8129283 of Contract No. 6119277

| Date of Sampling | Sample Received Date | Analysis Start Date | Analysis Complete Date |
|---|---|---|---|
| 30.05.2024 | 02.06.2024 | 02.06.2024 | 09.06.2024 |

## ANALYSIS RESULT

| | | |
|---|---|---|
| A. | **General information about stack :** | **: GENSET-5** |
| 1. | Stack connected to | : |
| 2. | Emission due to | : HSD |
| 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 | **: 500 KVA** |
| B. | **Physical characteristics of stack :** | |
| 1. | Height of the stack from ground level | : 7.3152 m |
| 2. | Diameter of the stack at sampling point | : 0.1524 m |
| 3. | Area of Stack | : 0.01823 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) | 168 | ... | 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.) | 19.26 | ... | USEPA Part 2, 25.09.1996 |
| 4. | Quantity of Gas Flow (Nm3/hr) | 850 | ... | 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) | 0.381 | **≤ 3.5** | 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) | 25.3 | ... | USEPA-29, 25/06/1996 |
| 9. | Concentration of Nitrogen Oxide & Hydrocarbons (g/kW-hr) | 0.514 | **≤ 4.7** | 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) | 0.108 | **≤ 0.3** | 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. Dipankar Mazumdar
Designation. : Executive Chemist

**Prepared By:**
Signature :
Name : Hiramoni Rajbongshi
Designation. : Office Assistant

**Authorized Signatory**
**For Mitra S.K. Private Limited**
Signature :
Name : Mr. Rajib Roy
Designation : Branch Manager

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**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/2024-25/00438 |
| | Report Date : 02.07.2024 |
| "M/s OIL INDIA LIMITED", | Sample Description : Ambient Air |
| Duliajan, Dibrugarh, Assam-786602 | Sample Number : MSKGL/ED/2024-25/06/01051 |
| | **Sampling Location : MKE RIG CH 5(BEFORE DRILLING)** |
| | Instrument ID : RDS 202-DTF-2016/ FDS 59-DTF-2016 |
| Ref. No.:W.O. NO.- 8129283 of Contract No. 6119277 | GPS Reading : N 27°42'44", E 95°41'16" |

| Date of Sampling | Sample Received Date | Analysis Start Date | Analysis Complete Date |
|---|---|---|---|
| 11.05.2024 | 14.05.2024 | 14.05.2024 | 21.05.2024 |

Enviromental Conditions During Sampling & Transport Condition :Temperature : 32°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) | 75.2 | 100 |
| 2. | Particulate Matter ( $PM_{2.5}$) | IS : 5182 (Part-24) | (µg/m3) | 47.1 | 60 |
| 3. | Sulphur Dioxide ( $SO_2$ ) | IS : 5182 (Part-2)-2001 | (µg/m3) | 7.9 | 80 |
| 4. | Nitrogen Dioxide ( $NO_2$ ) | IS : 5182 (Part-6)-2006 | (µg/m3) | 24.5 | 80 |
| 5. | Carbon Monoxide ( CO ) | IS 5182 : (Part-10) :1999 | (mg/m3) | 0.46 | 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 | 1.98 | ... |
| 15. | Non-methane (Hydrocarbon) | IS 5182 : (Part 17) | ppm | <0.5 | ... |
| 16. | Total Hydrocarbon | IS 5182 : (Part 17) | ppm | 1.98 | ... |
| 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 : Hiramoni Rajbongshi
Designation. : Office Assistant

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

Signature
Name : Mr. Rajib Roy
Designation : Branch Manager

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**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

# Ambient Air Quality Monitoring Report

| | |
|---|---|
| Name & Address of the Customer : | Report No. : MSK/2024-25/00515 |
| | Report Date : 02.07.2024 |
| "M/s OIL INDIA LIMITED", | Sample Description : Ambient Air |
| Duliajan, Dibrugarh, Assam-786602 | Sample Number : MSKGL/ED/2024-25/06/01141 |
| | **Sampling Location : MKE RIG CH 5 (DURING DRILLING)** |
| | Instrument ID : RDS 221-DTJ-2016/ FDS 94-DTL-2021 |
| Ref. No.:W.O. NO.- 8129343 of Contract No. 6119277 | GPS Reading : N 27°42'43", E 95°45'09" |

| Date of Sampling | Sample Received Date | Analysis Start Date | Analysis Complete Date |
|---|---|---|---|
| 30.05.2024 | 02.06.2024 | 02.06.2024 | 09.06.2024 |

Enviromental Conditions During Sampling & Transport Condition :Temperature : 27°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) | 60.9 | 100 |
| 2. | Particulate Matter ( $PM_{2.5}$ ) | IS : 5182 (Part-24) | (µg/m3) | 33.7 | 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) | 17.4 | 80 |
| 5. | Carbon Monoxide ( CO ) | IS 5182 : (Part-10) :1999 | (mg/m3) | 0.54 | 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 | 1.95 | ... |
| 15. | Non-methane (Hydrocarbon) | IS 5182 : (Part 17) | ppm | <0.5 | ... |
| 16. | Total Hydrocarbon | IS 5182 : (Part 17) | ppm | 1.95 | ... |
| 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 : Hiramoni Rajbongshi
Designation. : Office Assistant

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

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

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**Email : info@mitrask.com. Website: www.mitrask.com**

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

**Annexure - III**

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, 9435008667, 8876028672
E-mail: envirocon@rediffmail.com

ISO 9001:2015 Certified
ISO 45001:2018 Certified

**Report No.: ENV/ARDS/24-25/FODL/WW-09/01**
**Date : 20/09/2024**

**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/2024/FODL/1209/01
Sample Source : FODL/MKE Hahkhati, Ushapur
Sample Type : ETP Treated Water
Collected On : 12-09-2024
Received On : 13-09-2024
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 | 7.52 | 5.5 – 9.0 |
| 4 | Temperature, °C | 26.3 | 40 °C |
| 5 | TSS, mg/l | 21 | 100 |
| 6 | BOD, mg/l | 22 | 30 |
| 7 | COD, mg/l | 81 | 100 |
| 8 | Chlorides (as Cl), mg/l | 76 | 600 |
| 9 | Sulfates (as $SO_4$), mg/l | 141 | 1000 |
| 10 | TDS, mg/l | 584 | 2100 |
| 11 | Sodium, (%) | 9.1 | 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 | 0.2 | 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 | 0.016 | 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 | 0.035 | 3.0 |
| 23 | Zinc, mg/l | <0.01 | 2.0 |

Analysis Protocol: IS 3025

ENVIROCON * DIGBOI, ASSAM * Date

*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.

DGM– Chem (L)

**CSIR-NORTH EAST INSTITUTE OF SCIENCE AND TECHNOLOGY**
*(Formerly Regional Research Laboratory)*
(Council of Scientific & Industrial Research)
**JORHAT – 785 006, ASSAM, INDIA**
Phone: 0376-2371284/2370012(O) +919706633281 (M) 13/12
EPABX: 2370117, 2370121, 2370139
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E mail : manashjyoti@neist.res.in
Website: www.neist.res.in

सी एस आई आर-उत्तर पूर्व विज्ञान तथा प्रोद्योगिकी संस्थान
(पूर्व क्षेत्रीय अनुसंधान प्रयोगशाला)
(वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद)
जोरहाट - 785006 आसाम, भारत
फोन : 0376-2371284/2370012 (O) +919706633281 (M)
इपीएबीक्स : 0376-2370117/2370121/2370139
ग्राम : रिसर्च, फैक्स : 0376 2370011
ई-मेल : manashjyoti@neist.res.in
वेबसाईट : www.neist.res.in

**Annexure - IV**

**From: The Director**

**No. QSP/MgS/01/Testing/2023**
**Date: 04.12.2023**

To
Syamanta Gogoi,
GM-Chemical (HoD)
Oil India Limited, P.O.: Duliajan,
Dist: Dibrugarh, Pin: 786602, Assam

**Sub: Chemical analysis of Barite sample.**
**Ref: Your letter no. Chem: 02/10(h)/SG/2023 dated 05.09.2023**
**For the sample received on 08.09.2023.**

**Sir,**

With reference to the above, please find enclosed herewith the test report for your needful. For your kind information please note that the report(s) are not to be used for any legal purpose and shall not be produced in any court of law to any dispute whatsoever.

The testing report shall not be utilized for any sales promotion or advertisement. We would be happy if you could send your feedback in the enclosed "customer satisfaction" format so that we can serve you better.

Thanking you,

Yours faithfully

04.12.23

Head, Research Planning and Business Development Division

Encl: as above

Copy to: HoD/GL, **Analytical Chemistry Group, Materials Science and Technology Division**

RIGHT TO INFORMATION

**CSIR-NORTH-EAST INSTITUTE OF SCIENCE & TECHNOLOGY**
**JORHAT – 785 006, ASSAM**

| Name of the Division : Analytical Chemistry Group, MSTD | **Report No.** CSIR-NEIST-Jorhat/QSP/MR/20/AnC/TR- 3588(A)/2023 | |
|---|---|---|
| **TEST REPORT OF Barite (2 nos.)** | DATE 29/11/2023 | PAGE 3 of 3 |

2. **RESULT**

| SL. No. | Sample name (barite) (Source/Supplier) | Hg (µg/gm) | Cd (mg/gm) |
|---|---|---|---|
| 1 | M/S Gimpex Pvt. Ltd | 0.03 | BDL |
| 2 | M/S Ambika Mineral | 0.07 | BDL |

BDL: Below detection limit, <0.01 mg/gm

| TEST CONDUCTED BY | CHECKED BY | APPROVED BY |
|---|---|---|
| 29/11/23 Dr. Ankana Phukan (Sr. Tech. Officer) | 29/11/2023 Dr. P. J. Saikia (GL, Analytical Chemistry Group, MSTD) | 30/11/2023 Dr. A. M. Das (Chairman, Testing Report Committee) |

গ্রীনটেক্ এনভাইৰনমেন্টল ইঞ্জিনিয়াৰ এণ্ড কন্সালটেন্টছ্
GREEN TECH ENVIRONMENTAL ENGINEER & CONSULTANTS
House No-11, Champaknagar, Narayan Path, Bhetapara, Guwahati-781028, www.greentecheec.in
Telefax -0361 3501950 Mobile: 9435046677, 9954089052, E-mail: green_pranjal@hotmail.com, info@greentecheec.in
TC-5991

## TEST REPORT

GEEC/FM/450A

| | | | |
|---|---|---|---|
| ULR Number: TC59912400000674F | | | |
| Report No:GEEC/FL/23/TOX/2024/06/08 | | Date: | 05/07/2024 |
| Name of the Industry: | **OIL INDIA Ltd.** | Lab ID | GEEC/TT/2024/06/08 |
| Address: | Oil India Ltd.<br>Duliajan<br>District: Dibrugarh,<br>State : Assam | Date of Sampling/Collection: | 05/06/2024 |
| | | Date of Receipt in Duliajan: | 07/06/2024 |
| | | Date of Receipt in Lab: | 08/06/2024 |
| Rig | **CH-5** | Test Start Date: | 16/06/2024 |
| Location: | **MKE** | Test End Date: | 20/06/2024 |

**DRILL FLUID QUALITY FOR TOXICITY**

SAMPLING RESULT

| | | | |
|---|---|---|---|
| Depth | 1560 m | Mud Weight (MW,pcf) | 67 |
| Mud Type | BS-Mud | MFV sec | 65 |

| **Dose** | **Sample Concentration** | **Mortality (In%)** | **Test Method** |
|---|---|---|---|
| 1 | Control sample | 0 | IS 6582 (Part 2) Bioassay using Zebra Fish |
| 2 | 5000 mg/L | 10 | |
| 3 | 10000 mg/L | 20 | |
| 4 | 20000 mg/L | 20 | |
| 5 | 30500 mg/L | 30 | |
| 6 | 40000 mg/L | 40 | |
| 7 | 50000 mg/L | 50 | |

**Sample Drawn By : Client**

Remarks: Limit for Toxicity of Drill Fluid 96 Hrs LC 50 > 30000 mg/l by fish toxicity.

Checked by:

Dr. Belinda Lahon
Quality Manager

Reviewed by:

Pranjal Buragohain
Authorised Signatory

* The results relate only to the item tested.
* The test report shall not be produced except in full, without written approval of the laboratory.
* The test report cannot be used as evidence in the court of law without prior writtten approval of the laboratory.

********** End of report **********

**Annexure - VI**

# FORESIGHT CREW PME LIST(MKE)

| SL no. | NAME | DESGNATON | DATE OF EXAMINATION | AGE | STATUS | BLOOD GROUP |
|---|---|---|---|---|---|---|
| 1 | PROBIN KONWAR | RIG SUPERITENDENT | 12-08-2023 | 53 | OK | A +IVE |
| 2 | BINANDA BARUAH | RIG SUPERITENDENT | 28-08-2023 | 55 | OK | O +IVE |
| 3 | NILUTPAL BHAKTIYARI | TOOL PUSHER | 28-11-2023 | 41 | OK | AB +IVE |
| 4 | BITUL GOGOI | TOOL PUSHER | 22-07-2020 | 42 | OK | B +IVE |
| 5 | ROBIN BEHERA | NIGHT TOOL PUSHER | 28-06-2024 | 38 | OK | O +IVE |
| 6 | SAUL MARAK | NIGHT TOOL PUSHER | 10-11-2023 | 39 | OK | O +IVE |
| 7 | CHINTU GOGOI | DRILLER | 22-12-2023 | 40 | OK | O +IVE |
| 8 | KUKIL BORGOHAIN | DRILLER | 04-11-2023 | 46 | OK | AB +IVE |
| 9 | JOHN BARUAH | DRILLER | 02-10-2023 | 35 | OK | A +IVE |
| 10 | NITUL GOGOI | DRILLER | 20-04-2021 | 40 | OK | A +IVE |
| 11 | MUNINDRA NATH PHUKAN | MECHANICAL ENGINEER | 28-08-2023 | 56 | OK | O +IVE |
| 12 | ANIL KUMAR SAIKIA | MECHANICAL ENGINEER | 30-08-2021 | 58 | OK | B +IVE |
| 13 | MRIDUPABAN CHUTIA | ELECTRICAL ENGINEER | 02-10-2023 | 41 | OK | B +IVE |
| 14 | PRANAB KATOKY | ELECTRICAL ENGINEER | 12-08-2023 | 57 | OK | O +IVE |
| 15 | PINKU BARUAH | HSE OFFICER | 05-06-2020 | 40 | OK | A +IVE |
| 16 | ROBI CHUTIA | HSE OFFICER | 13-01-2020 | 34 | OK | B +IVE |
| 17 | ASHIM KUMAR GOGOI | MUD ENGINEER | 20-10-2023 | 55 | OK | O +IVE |
| 18 | KUKIL SUNDAR BORGOHAIN | MUD ENGINEER | 23-04-2024 | 43 | OK | B +IVE |
| 19 | PRITHIRAJ BURAGOHAIN | MUD ENGINEER | 28-08-2023 | 54 | OK | O +IVE |
| 20 | DHARMESWAR CHANGMAI | MUD ENGINEER | 22-09-2023 | 47 | OK | O +IVE |
| 21 | MONTU SONOWAL | ASSISTANT DRILLER | 18-10-2023 | 52 | OK | B +IVE |
| 22 | GANESH GOGOI | ASSISTANT DRILLER | 23-07-2020 | 42 | OK | A +IVE |
| 23 | CHIRAJ MORAN | ASSISTANT DRILLER | 21-07-2020 | 36 | OK | A +IVE |
| 24 | KARUNA BARUAH | ASSISTANT DRILLER | 24-07-2020 | 39 | OK | O +IVE |
| 25 | PRIYAM KUMAR DAS | RIG MEDIC | 23-07-2020 | 31 | OK | B +IVE |
| 26 | DILIP KUMAR BORTHAKUR | RIG MEDIC | 30-09-2023 | 65 | OK | O +IVE |
| 27 | RAJIB RAJKONWAR | DERRICK MAN | 18-05-2020 | 39 | OK | B +IVE |
| 28 | LUHIT PAHUCHUNGI | DERRICK MAN | 23-07-2020 | 38 | OK | O +IVE |
| 29 | PHURAK JYOTI SONOWAL | DERRICK MAN | 23-07-2020 | 32 | OK | O +IVE |
| 30 | HEMANTA GOGOI | DERRICK MAN | 16-05-2020 | 36 | OK | A +IVE |
| 31 | BISWAJIT BORA | DERRICK MAN | 15-05-2020 | 35 | OK | O +IVE |
| 32 | DIJU BORAH | DERRICK MAN | 23-07-2020 | 30 | OK | B +IVE |
| 33 | JAYANTA MALAGHARIA | DERRICK MAN | 20-07-2020 | 38 | OK | AB +IVE |
| 34 | BOLUKON DANGORIA | DERRICK MAN | 29-05-2020 | 36 | OK | AB +IVE |
| 35 | BHADRA CHANGMAI | ELECTRICIAN | 06-10-2023 | 56 | OK | AB +IVE |
| 36 | SUKHEN LAHON | ELECTRICIAN | 20-07-2024 | 57 | OK | O +IVE |
| 37 | DANEY GOHAIN | ELECTRICIAN | 11-10-2023 | 42 | OK | A +IVE |
| 38 | ANIL BARMAN | ELECTRICIAN | 12-11-2021 | 55 | OK | AB +IVE |
| 39 | RINTU KHANIKAR | MECHANIC | 12-09-2023 | 38 | OK | A +IVE |
| 40 | PULIN KONWAR | MECHANIC | 23-07-2020 | 39 | OK | B +IVE |
| 41 | MUHIN GOGOI | MECHANIC | 08-06-2020 | 39 | OK | A +IVE |
| 42 | BINUD MECH | MECHANIC | 15-05-2020 | 32 | OK | O +IVE |
| 43 | AMRIT BARUAH | WELDER | 29-05-2020 | 40 | OK | A +IVE |
| 44 | KALPAJYOTI PHUKAN | WELDER | 22-07-2020 | 42 | OK | B +IVE |
| 45 | TULEN GOGOI | WELDER | 23-07-2020 | 46 | OK | O +IVE |
| 46 | MADHUJYA BORGHAIN | WELDER | 10-11-2021 | 35 | OK | A +IVE |
| 47 | KARUNAKAR GOGOI | GAS LOGGER | 15-05-2020 | 32 | OK | B +IVE |
| 48 | PRANJAL SHARMA | GAS LOGGER | 24-07-2020 | 30 | OK | B -IVE |
| 49 | RAJANI LIKSON | GAS LOGGER | 06-06-2024 | 38 | OK | A +IVE |

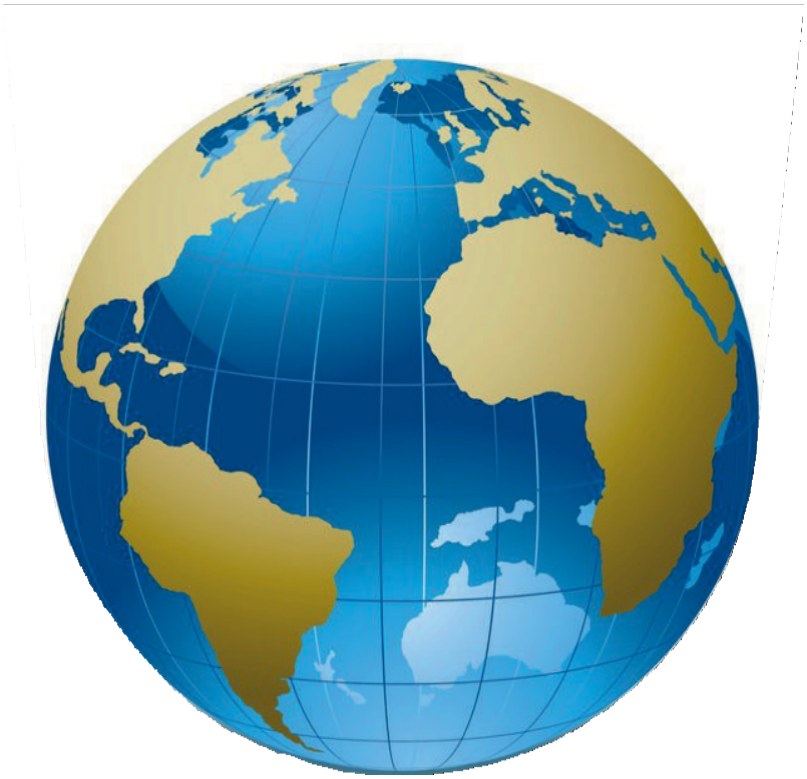
| | | | | | | |
|---|---|---|---|---|---|---|
| 50 | LOKENDRA GOGOI | GAS LOGGER | 03-02-2023 | 42 | OK | O +IVE |
| 51 | DIGANTA PHUKAN | FLOOR MAN | 15-05-2020 | 40 | OK | O +IVE |
| 52 | POROMA GOGOI | FLOOR MAN | 24-07-2020 | 38 | OK | O +IVE |
| 53 | NIPON GOGOI | FLOOR MAN | 21-07-2020 | 39 | OK | O +IVE |
| 54 | JISHUMONI GOGOI | FLOOR MAN | 03-05-2021 | 35 | OK | O +IVE |
| 55 | KUMUD MORAN | FLOOR MAN | 15-05-2020 | 33 | OK | A +IVE |
| 56 | UDYAN SONOWAL | FLOOR MAN | 20-07-2020 | 32 | OK | A +IVE |
| 57 | ABBAS HUSSAIN | FLOOR MAN | 15-05-2020 | 26 | OK | O +IVE |
| 58 | MANURANJAN GOGOI | FLOOR MAN | 20-07-2020 | 28 | OK | B +IVE |
| 59 | CHITRARANJAN GOGOI | FLOOR MAN | 20-07-2020 | 29 | OK | O +IVE |
| 60 | MRINAL BORGOHAIN | FLOOR MAN | 15-09-2021 | 35 | OK | AB +IVE |
| 61 | ARUP GOGOI | FLOOR MAN | 20-07-2020 | 36 | OK | O +IVE |
| 62 | DEBAJIT GOGOI | FLOOR MAN | 20-07-2020 | 35 | OK | O +IVE |
| 63 | KARUNA DUTTA | FLOOR MAN | 05-10-2023 | 49 | OK | AB +IVE |
| 64 | DULEN GOGOI | FLOOR MAN | 05-10-2023 | 35 | OK | A +IVE |
| 65 | NABAJYOTI MORAN | FLOOR MAN | 18-05-2020 | 32 | OK | B +IVE |
| 66 | RAHUL BARUAH | FLOOR MAN | 15-05-2020 | 36 | OK | O +IVE |
| 67 | NABAJYOTI THAKURIA | FLOOR MAN | 20-08-2021 | 29 | OK | O +IVE |
| 68 | GOKUL DAS | FLOOR MAN | 20-07-2020 | 40 | OK | O +IVE |
| 69 | RANJIT HATIMURIA | FLOOR MAN | 23-07-2020 | 36 | OK | A +IVE |
| 70 | HIMANTA URANGIA | FLOOR MAN | 17-11-2023 | 36 | OK | O +IVE |
| 71 | RUBUL CHUTIA | ROUSTABOUT | 16-07-2024 | 32 | OK | O +IVE |
| 72 | DANIEL BORAH | ROUSTABOUT | 13-02-2024 | 22 | OK | O +IVE |
| 73 | KIRAN MORAN | ROUSTABOUT | 23-07-2020 | 30 | OK | O +IVE |
| 74 | BITUPAN BARUAH | ROUSTABOUT | 20-07-2020 | 38 | OK | O +IVE |
| 75 | KESOB GOGOI | ROUSTABOUT | 19-07-2020 | 34 | OK | B +IVE |
| 76 | BOIKUNTHA CHUTIA | ROUSTABOUT | 16-12-2022 | 24 | OK | O +IVE |
| 77 | RITU SHARMA | ROUSTABOUT | 27-06-2024 | 29 | OK | O +IVE |
| 78 | PRABITRA BAYAN | ROUSTABOUT | 20-07-2020 | 32 | OK | B +IVE |
| 79 | BHOBESH CHAUDHARY | ROUSTABOUT | 20-08-2021 | 25 | OK | B +IVE |
| 80 | LAKHYA CHAUDHARY | ROUSTABOUT | 20-08-2021 | 37 | OK | O +IVE |
| 81 | SURAJ SONAR | ROUSTABOUT | 09-09-2023 | 28 | OK | A +IVE |
| 82 | RAJANI KANTA SILPONIA | ROUSTABOUT | 20-07-2020 | 30 | OK | B +IVE |
| 83 | PRINCE LAHON | ROUSTABOUT | 05-02-2024 | 25 | OK | B +IVE |
| 84 | DEEPJYOTI PHUKAN | ROUSTABOUT | 20-07-2020 | 22 | OK | O +IVE |
| 85 | ANJAN GOGOI | ROUSTABOUT | 17-08-2023 | 23 | OK | A +IVE |
| 86 | DANDIDHAR BURAGOHAIN | ROUSTABOUT | 23-11-2023 | 30 | OK | B +IVE |
| 87 | PRABITRA BARUAH | ROUSTABOUT | 27-04-2023 | 32 | OK | O +IVE |
| 88 | SIDHARTHA MORAN | ROUSTABOUT | 16-05-2020 | 30 | OK | A +IVE |
| 89 | MRIDUL DHEKIEL | ROUSTABOUT | 10-02-2024 | 45 | OK | A +IVE |
| 90 | PHATIK BORAH | ROUSTABOUT | 20-07-2020 | 36 | OK | O +IVE |
| 91 | JOGESWAR BORO | CRANE OPERATOR | 07-01-2022 | 44 | OK | O +IVE |
| 92 | RINKU SONOWAL | CRANE OPERATOR | 21-10-2021 | 40 | OK | O +IVE |
| 93 | ROBIN PHUKAN | CRANE OPERATOR | 14-12-2021 | 42 | OK | O +IVE |
| 94 | PRABITRA GOGOI | CRANE OPERATOR | 23-10-2021 | 40 | OK | B +IVE |
| 95 | DINESH DAS | ETP OPERATOR | 08-08-2021 | 39 | OK | A +IVE |
| 96 | MONTU BORGOHAIN | ETP OPERATOR | 08-08-2021 | 50 | OK | AB +IVE |
| 97 | AMLAN GOGOI | ETP LAB ASST. | 08-08-2021 | 34 | OK | O +IVE |
| 98 | ARNAB JYOTI BORAH | ETP LAB ASST. | 27-04-2023 | 26 | OK | O +IVE |

**ANNEXURE - A**

## ENVIRONMENT MANAGEMENT CELL OF OIL INDIA LIMITED – FHQ, DULIAJAN

| S.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 (Environment) | B.E (Civil Engineering), M.Tech (Environmental Engineering) |
| 6. | Sri. Jiban Jytoti Das | Superintending Engineer (Environment) | B.Tech (Computer Science and Engineering), M.Tech (Environment Engineering and Managment) |
| 7. | Sri. Vinay Yadav | Senior Officer (HSE) | B.E (Civil Engineering), M.Tech (Environmental Engineering) |
| 8. | Sri. Mohit Yadav | Senior Officer (HSE) | B.Tech (Civil Engineering), M.Tech (Environmental Engineering) |

# 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

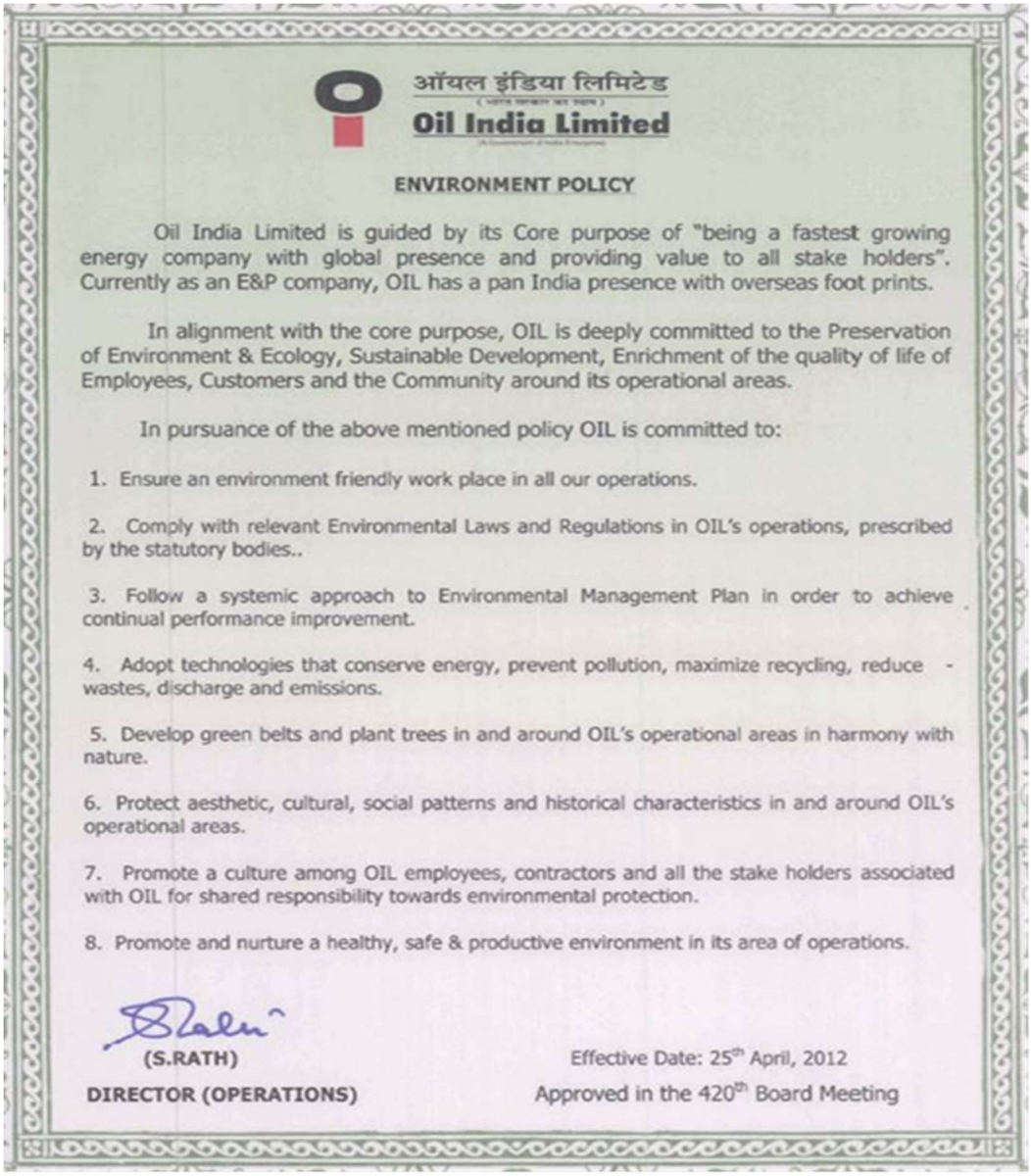
This Environmental Management Plan and Monitoring Framework is a site-specific document for the drilling activities that have been developed to ensure that OIL can implement the project in an environmentally conscious manner and where all contractors, understand the potential environmental risks arising 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;<br><br>Vehicle / equipment air emissions will be controlled by good practice procedures (such as turning off equipment when not in use);<br><br>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.<br><br>Restriction on unnecessary use of horns by trucks and vehicle in settlement area | Site<br><br>Inspection/Records of<br><br>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<br><br>Inspection/Records of<br><br>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<br><br>Preventive maintenance of machinery to be undertaken as per manufacturers schedule<br><br>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<br><br>Preventive maintenance of machinery to be undertaken as per manufacturers schedule | Site<br><br>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 |

| S 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<br><br>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<br><br>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<br><br>Ensure that any runoff from such temporary storage area | Site<br><br>Inspection and Record keeping | Drilling and Decommissioning Phases | OIL/Contractor | Surface water quality management plan and Spill Management plan |

| S 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<br><br>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.<br><br>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<br><br>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<br><br>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<br><br>Obtain an early warning of emergency conditions so as to prevent a negative impact on personnel, the environment, and assets<br><br>Safeguard personnel to prevent injuries or loss of life by either protecting personnel from the hazard and/or evacuating them from the facilities<br><br>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<br><br>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<br><br>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<br><br>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 |

| S 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
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/21(B)/1013 दिनांक/Date: 24.09.2024

| | | |
|---|---|---|
| **From** | : | ED (HSE & ESG) I/C |
| **To** | : | The Member Secretary,<br>Pollution Control Board, Assam,<br>Bamunimaidam, Guwahati- 781021. |
| **Subject** | : | 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, 2024 pertaining to the operations of Oil India Limited in the districts of Dibrugarh, Tinsukia, Sivsagar and Charaideo in Assam.

Thanking you.

24/09/24

(Rupam Jyoti Sutrdhar)
**ED (HSE & ESG) I/C**
**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, 2024**

## 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. 2023-24:

- **Crude Oil:** 3.2864 MMT.
- **Natural Gas:** 2885.016 MMSCM
- **LPG:** 31,550 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:** 20.09.2023.

## PART – B
## WATER AND RAW MATERIAL CONSUMPTION

(I) Water consumption $m^3/d$:

| S.No | Purpose | Water Consumption ($m^3$/ day) |
|---|---|---|
| 1. | Process & Cooling | 14495.34 |
| 2. | Domestic | 15956.26 |
| **TOTAL** | | **30451.60** |

| Name of Products | Process water consumption per unit of product output | |
|---|---|---|
| | During F.Y. 2022-23 | During F.Y. 2023-24 |
| (1) | (2) | (3) |
| Hydrocarbon (Crude Oil, Natural Gas, LPG) | 1 $m^3$/MT (Approx.) | 0.96 $m^3$/MT (Approx.) |

(II) Raw material consumption

| *Name of raw materials | Name of products | Consumption of raw material per unit | |
|---|---|---|---|
| | | During F.Y. 2022-23 | During F.Y. 2023-24 |
| 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.**<br>There is no discharge of pollutants from drilling locations and Production Installations.<br>• Wastewater generated from drilling locations is treated in Effluent Treatment Plant (ETP) and reused back in the drilling operation.<br>• 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***).<br>• Quality of Formation water is analyzed frequently (Test report enclosed as ***Annexure-*** | No variation is observed.<br><br>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.<br><br>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. 2022-23** | **During F.Y. 2023-24** |
| a) From process | S.No. 2.2 Sludge containing Oil | 4671.52 MT | 3541.99 MT |
| | S.No. 5.1 Used or Spent Oil | 208 KL | 55 KL |
| | S.No. 33.1 Empty barrels/ containers/liners contaminated with hazardous chemicals/ wastes | 26616 Nos. | 11150 Nos. |
| | S.No. 33.2 Contaminated cotton rags or other cleaning materials | 6.19 MT | 5.58 MT |
| b) From pollution control facilities | S.No. 33.5 Chemical sludge from waste water treatment | 120.84 KL | 98.44 KL |

## PART – E
## SOLID WASTES

| Solid Wastes | Total Quantity | |
|---|---|---|
| | During F.Y. 2022-23 | During F.Y. 2023-24 |
| *(a) From process*<br><br>Drill Cuttings | 27,000 $m^3$ (Approx.) | 15,200 $m^3$ (Approx.) |
| *(b) From pollution control facilities* | NIL | |
| *(c)*<br>(1) Quantity recycled or re-utilized within the unit.<br>(2) Sold<br>(3) Disposed | N/A<br><br>N/A<br>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. 2023-24 | Disposal Practices |
|---|---|---|
| a) Sludge containing Oil | 3541.99 MT | Sent to Sludge Processing Plant for oil recovery followed by Bioremediation |
| b) Used or Spent Oil | 55 KL | Stored in barrels under covered shed and sold to authorized recyclers through auction |
| c) Empty barrels/ containers/liners contaminated with hazardous chemicals/ wastes | 11150 Nos. | Sold to authorized recyclers through auction |
| d) Contaminated cotton rags or other cleaning materials | 5.58 MT | Bioremediation |
| e) Chemical sludge from waste water treatment | 98.44 KL | Disposed in HDPE lined pits |

**(I) Solid Wastes:**

| Name of the Solid Waste | Quantity generated during F.Y. 2023-24 | Disposal Practices |
|---|---|---|
| a) Drill Cuttings | 15,200 $m^3$ (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.

**********

Annexure - I

ऑयल इंडिया
OIL INDIA

ऑयल इंडिया लिमिटेड
Oil India Limited
Chemical Laboratory
(An ISO 9001:2015 Certified Laboratory)
Duliajan, Dibrugarh, 786602, Assam
Email- chemical@oilindia.in

For internal use only

Ref.no.: Chem/Ana/Misc./306/DJN/24

Date: 26.02.2024

Asset Manager Eastern Asset
Attn.: Vishal Singh Jadon, SE (P-E), Eastern Asset

## Sub: ETP WATER SAMPLE ANALYSIS REPORT

Ref. no :- Your ref. no. Nil,

Dated: 23.02.2024

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

| Characteristics | Units | Test Results | | Test method/Instrument used |
|---|---|---|---|---|
| | | Inlet | Outlet | |
| Total Dissolved Solids | mg/l | 1509 | 128 | BIS 3025-16 / Gravimetric method |
| Oil & Grease | mg/l | Nil | Nil | BIS 3025-39 / Horiba oil content analyser |
| pH | - | 6.1 | 7.0 | BIS 3025-11 / Metrohm pH meter |
| Total Suspended Solid | mg/l | 1451 | 88 | BIS 3025-17 / Gravimetric method |
| Carbonate as $CO_3^-$ | mg/l | Nil | Nil | BIS 3025-23 / Titration with HCl |
| Bicarbonate as $HCO_3^-$ | mg/l | 1098 | 183 | BIS 3025-23 / Titration with HCl |
| Dissolved Oxygen | mg/l | 4.21 | 4.32 | BIS 3025-38 / Hach Dissolved Oxygen meter |
| Turbidity | NTU | 90.6 | 4.8 | BIS 3025-10 / Turbidity meter |

**Sample details:-**

The above ETP water samples were collected by Eastern Asset, Digboi from Hebeda GCS on 22.02.2024 and received at Analytical & Environmental Lab. on 23.02.2024.

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

*Tested by: SB/BD*

Dipjyoti Hazarika
Dy. Chief Chemist (Lab.)
For GM - Chemical (HoD)

Copy : Analytical & Environmental Sec.file.

ChemLab/Ana/Report/Water/04

Annexure - II

ऑयल इंडिया लिमिटेड
Oil India Limited
Chemical Laboratory
(An ISO 9001:2015 Certified Laboratory)
Duliajan, Dibrugarh, 786602, Assam
Email- chemical@oilindia.in

ऑयल इंडिया
OIL INDIA

12 Feb 2024

For internal use only

Ref. No.: Chem/Ana/STF/234/DJN/24 Date: 12.02.2024

CGM - PSS RVCL 12.02.2024

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

**Sub: WATER SAMPLE ANALYSIS REPORT OF STF MADHUBAN**

Ref.:- PSS/STF-35/2023-24/765, Dated:- 10.02.2024

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

| Characteristics | Unit | Clarified T -14, ETP | ORF Outlet ETP | TPI Inlet ETP | Test Method/ Instrument used |
|---|---|---|---|---|---|
| pH | - | 8.2 | 8.2 | 8.2 | BIS 3025-11 / Metrohm pH meter |
| TDS | mg/l | 3930 | 3465 | 3600 | BIS 3025-16 / Gravimetric method |
| TSS | mg/l | 36 | 18 | 932 | BIS 3025-17 / Gravimetric method |
| Turbidity | NTU | 2.60 | 1.71 | NM | BIS 3025-10 / Turbidity meter |
| Dissolved Oxygen | mg/l | 5.6 | 5.4 | NM | BIS 3025-38 / HACH DO Meter |
| Oil & Grease | mg/l | Nil | 0.9 | 45.0 | BIS 3025-39 / Horiba Oil Content Analyser |

**Sample details :**

The water samples were collected by PSS Department from the above mentioned sources of STF Madhuban on 09.02.2024 & received at Analytical & Environmental laboratory on 10.02.2024 for necessary testing.

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

***NM : Not measured. Turbidity and Dissolved oxygen are not measured due to oily sample.***

***Tested by :- SB/BD***

KBoruah
(Kashmiri Boruah) 13/02/24

For Dipjyoti Hazarika
Dy. Chief Chemist (Lab)
For GM-Chemical (HoD)

Copy : Analytical & Environmental sec. file

ChemLab/Ana/Report/Water/04C

8

**Annexure - III**

Mitra S. K. Private Limited

MSK TESTING & INSPECTION

# Ambient Air Quality Monitoring Report

| | |
|---|---|
| Name & Address of the Customer | **Report No. : MSK/2023-24/1917** |
| "M/s OIL INDIA LIMITED", | Report Date : 30.11.2023 |
| Duliajan, Dibrugarh, Assam-786602 | Sample Description : Ambient Air |
| | Sample Number : MSKGL/ED/2023-24/11/00555 |
| | **Sampling Location : GCS TENGAKHAT** |
| 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 |
|---|---|---|---|
| 16.10.2023 | 19.10.2023 | 19.10.2023 | 26.10.2023 |

Enviromental Conditions During Sampling & Transport Condition : Temperature : 31°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) | 60.5 | 100 |
| 2 | Particulate Matter ( $PM_{2.5}$ ) | IS : 5182 (Part-24) | (µg/m3) | 35.6 | 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) | 20.8 | 80 |
| 5 | Carbon Monoxide ( CO ) | IS 5182 (Part-10) :1999 | (mg/m3) | 0.62 | 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*

**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

# STACK GAS MONITORING REPORT

| Name & Address of the Customer | | Report No. | : MSK/2023-24/2598 |
|---|---|---|---|
| "M/s OIL INDIA LIMITED" | | Report Date | : 28.02.2024 |
| Duliajan, Dibrugarh, Assam-786602 | | Nature of Sample | : Stack Emission |
| | | Sample Mark | : GCS TENGAKHAT |
| | | Sample Number | : MSKGL/ED/2023-24/01/00642 |
| Ref. No. W.O. NO.- 8125981 of Contract No. 6116895 | | | |
| Date of Sampling | Sample Received Date | Analysis Start Date | Analysis Complete Date |
| 20.01.2024 | 23.01.2024 | 23.01.2024 | 30.01.2024 |

## ANALYSIS RESULT

| A. | General information about stack : | : GB-1 | | |
|---|---|---|---|---|
| 1. | Stack connected to | : GAS COMPRESSOR | | |
| 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 | : N/A | | |
| B. | Physical characteristics of stack : | | | |
| 1. | Height of the stack from ground level | : 4.572 m | | |
| 2. | Diameter of the stack at sampling point | : 3.658 m | | |
| 3. | Area of Stack | : 0.03241m2 | | |
| 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) | 213 | ... | 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.) | 24.88 | ... | USEPA Part 2, 25.09.1996 |
| 4. | Quantity of Gas Flow (Nm3/hr) | 1771 | ... | USEPA Part 2, 25.09.1996 |
| 5. | Concentration of Oxygen (%v/v) | 13.8 | ... | IS:13270 :1992 Reaff. 2014 |
| 6. | Concentration of Carbon Monoxide (mg/Nm3) | 19.3 | 150 | IS:13270 :1992 Reaff. 2014 |
| 7. | Concentration of Carbon Dioxide (%v/v) | 6.2 | ... | IS:13270 :1992 Reaff. 2014 |
| 8. | Concentration of Sulphur Dioxide (mg/Nm3) | 21.5 | ... | USEPA-29, 25/06/1996 |
| 9. | Concentration of Nitrogen Oxide (ppmv) | 72.8 | 360 | USEPA Part-6, 25/09/1996 |
| 10. | Concentration of Lead (mg/Nm3) | <0.005 | ... | USEPA-29, 25/06/1996 |
| 11. | Concentration of Particulate matter (mg/Nm3) | 32.8 | 75 | USEPA Part-17, 16/08/1996 |
| 12. | Concentration of Hydrocarbons (ppm) | <0.0003 | 100 | 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 : Miss Jyosmita Borah
Designation. : Office Assistant

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

Signature :
Name : Mr. [illegible]
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-18 Udayan Industrial Estate,3 Pagladanga Road Kol-700015*

**Head Office: Sharachi 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**

**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-311/21-22/329 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-311/21-22/3294-A/300 Dated Guwahati the, 13th Oct, 2022

Copy to:

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

13/10/22

**(Shantanu Kr. Dutta)**
**Member Secretary**

F. No- CGWA-26/7/2021-CGWA **Annexure - E**

Government of India
Ministry of Jal Shakti
Department of Water Resources, River Development & Ganga Rejuvenation
Central Ground Water Authority

# PUBLIC NOTICE No. 11/2023

New Delhi, Dated 1st August, 2023

(In supersession of the Public Notice no. 06/2023 dated 11.05.2023 regarding "Exemption to obtain NOC for ground water well drilling used for scientific study by Government Organisation/Institute")

**Sub: Exemption to obtain NOC for ground water well drilling used for scientific study by Government Organisation/Institute – reg.**

Whereas the Central Government constituted the Central Ground Water Authority (hereinafter referred to as the Authority) vide notification Number S.O. 38(E), dated 14th January, 1997, followed by notification number S.O. 1124(E) dated 6th November, 2000 and S.O. 1121 (E) dated 13th May, 2010 of the Government of India in the Ministry of Environment & Forests, for the purposes of regulation and control of ground water development and management in the whole of India and to issue necessary regulatory directions.

And whereas, the Ministry of Jal Shakti has issued 'Guidelines to control and regulate ground water extraction in India' vide notification number S.O. 3289(E) dated 24th September, 2020, notified by Department of Water Resources, River Development and Ganga Rejuvenation, Ministry of Jal Shakti.

And whereas an Amendment Notification dated 29.03.2023 has been further issued by Ministry of Jal Shakti, published in the Gazette of India, Extraordinary, Part II, section 3, sub-section (ii), vide Notification number S.O. 1509 (E).

**This is to bring to the notice that-:**

- Government organizations/Institutes dealing in ground water well drilling, such as drilling of Exploratory well, Piezometer, Observation Well, Pilot well etc. for scientific studies and exploration activities, **and such PSUs like ONGC, Oil India Ltd. etc. involved in research and exploration activities requiring site-specific temporary borewells,** shall remain exempted from seeking of No Objection Certificate for Ground Water extraction for the period of scientific studies, from Central Ground Water Authority.
- However, such Government organizations/Institutes shall be required to submit details of the drilling to the concerned Regional Office of CGWB.
- In case, another agency uses the well for ground water extraction, after the completion of scientific studies and exploration activities, the same shall be required to obtain No Objection Certificate from CGWA as per the due process.

Member Secretary
CGWA