



OIL AND NATURAL GAS CORPORATION LTD
Mehsana Asset

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File Ref. NO. MHN/HSE/EC-Drlg/2020-21

Date 24-11-2020

To:

The Chief Conservator of Forests (Western Zone),
Ministry of Environment, Forest and Climate Change,
Regional Office, E-5, Arera Colony, Link Road -3,
Ravi Shankar Nagar, Bhopal-462 016, M.P.

Sub: Six monthly compliance to Environmental clearance (EC) for Development drilling of 350 Nos. of development wells in Mehnsana Asset.

Ref : EC No. F.No. J-11011/503/2011-IA II (I) dated 26.11.2014.

Sir

This has the reference to the Environment clearance (EC) accorded by Ministry of Environment, Forest & Climate Change (MoEFCC) for Development drilling of 350 Nos. of development wells in ONGC Mehnsana Asset under provisions of EIA notification 2006.

In compliance to EIA notification 2006, item wise six monthly compliance report is submitted below for the period Apr 2020 to Sept 2020.

A. SPECIFIC CONDITIONS:

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| i | Compliance to all the environmental conditions stipulated in EC letter no. J-11011/1062/2007-1A II (I) dtd 1 st April 2009 and 20 th April 2011 shall be satisfactorily implemented and compliance reports submitted to Ministry's Regional Office at Bhopal. | Copy of compliance report already submitted. (Letter No. MHN/HSE/EC-Drlg/2015-16 dtd 21-05-2015) |
| ii | Ambient air quality shall be monitored near the closest human settlements as per the National 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. | Ambient air quality monitoring has been carried out & all the parameters are under permissible limits. Results of latest monitoring report done in Sept-2020 has been updated on ONGC website "ongcindia.com". https://www.ongcindia.com/wps/wcm/connect/en/sustainability/environment/compliance-status/ |
| iii | Mercury shall also be analysed in air, water and drill cuttings twice during drilling period. | Mercury is being analyzed in waste water & drill cuttings twice per well and is found well within limits. Results of monitored data has been updated on ONGC website "ongcindia.com". |

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| | | https://www.ongcindia.com/wps/wcm/connect/en/sustainability/environment/compliance-status/ |
| iv | Approach road shall be made pucca to mitigate generation of suspended dust. | Roads are being constructed as per site requirement and also preventive/repair are periodically undertaken to contain generation of suspended dust. |
| v | The company shall make the arrangement for control of noise from the drilling activity and DG sets and proper stack height should be provided as per CPCB guidelines. | Noise from drilling activity & DG sets is controlled by providing DG sets with acoustic enclosure & maintaining good engineering practices. Occupational hazards due to noise are also minimized by minimum exposure time of employees through Admin. control and use of PPE. Latest noise monitoring report has been updated on ONGC website "ongcindia.com". https://www.ongcindia.com/wps/wcm/connect/en/sustainability/environment/compliance-status/ |
| vi | Total water requirement shall not exceed 20m ³ /day/well and prior permission shall be obtained from the concerned agency. | Following actions are taken to reduce fresh water consumption: 1) Treated effluent water is used for mud & brine preparation and cleaning purpose. 2) Recycling more mud. |
| vii | 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 created for oil contaminated and non-oil contaminated. Effluent shall be properly treated and treated wastewater shall conform to CPCB standards. | Drains are constructed through which drill cutting as well as other wastes are finally collected in the waste pits which are HDPE lined, for further disposal. Waste water/ Effluent is collected in disposal pit lined with HDPE lining. The waste water is tested/ analyzed to ascertain the quality. All the parameters are found to be within permissible limits. Further, as the wells drilled in Mehsana Asset are of shallow depth, the waste pits provided for these wells are not fully filled by the volume of waste water generated even till the completion of well. There have been no instances of run-off of any oil containing waste into the nearby water bodies. |
| viii | Drilling wastewater including drill cuttings wash water shall be collected in disposal pit lined with HDPE lining evaporated or treated and shall comply with the notified standards for onshore disposal. The membership of common TSDF shall be obtained for the disposal of drill cuttings and hazardous waste. Otherwise, secured land fill shall be created at the site as per the design approved by the CPCB and obtain authorization from the SPCB. Copy of authorization or membership of TSDF shall be submitted to Ministry's Regional Office at Bhopal. | Drilling waste water including drill cuttings wash water is collected in disposal pit lined with HDPE lining. The waste water/ drill cuttings are tested/ analyzed to ascertain the quality and accordingly action is taken for disposal i.e. evaporation/ treatment. All the parameters are found to be within permissible limits. Results of monitored data has been updated on ONGC website "ongcindia.com". |

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| | | https://www.ongcindia.com/wps/wcm/connect/en/sustainability/environment/compliance-status/ . ONGC Mehsana is a member of TSDF (Treatment, Storage, Disposal Facility) at M/s Saurashtra Enviro Projects Pvt Ltd, Surat. (approved TSDF by GPCB). | | | | | | |
| ix | Produced water shall be treated in ETP. Treated effluent will be injected back by closed pipeline into the effluent disposal well below 1000m from GL as per recommended code of practice. | Produced water is treated at the ETPs of Mehsana Asset and injected back by closed pipeline into effluent disposal well below 1000m from ground level. | | | | | | |
| x | Good sanitation facility shall be provided at drilling site. Domestic sewage shall be disposed off through septic tank/ soak pit/ STP. | Proper sanitation facilities are provided at drilling sites. The domestic sewage is disposed through adequate septic tanks and soak pits. | | | | | | |
| xi | Oil spillage prevention scheme shall be prepared. In case of oil spillage/contamination, action plan shall be prepared to clean the site by adopting proven technology. The recyclable waste (oily sludge) and spent oil shall be disposed of to the authorized recyclers. | <p>Oil spillage prevention scheme and its action plan for a possible leakage/spill is available in form of Standard Operation procedure for onshore pipeline which covers method to control oil spillage. Further the CTFs of Mehsana Asset are equipped with oil spill dispersant, leak control kit and Petroleum product clean up chemical (in form of poly propylene booms) to control leaks and spillage. Spent oil is being sent to authorized recyclers through MSTC Vadodara. Last two years data for spent oil sent through MSTC is given below, same is being submitted to GPCB in Environment statement:</p> <table border="1"> <thead> <tr> <th>Year</th> <th>2018-19</th> <th>2019-20</th> </tr> </thead> <tbody> <tr> <td>Qty, kilo liters</td> <td>25</td> <td>20</td> </tr> </tbody> </table> | Year | 2018-19 | 2019-20 | Qty, kilo liters | 25 | 20 |
| Year | 2018-19 | 2019-20 | | | | | | |
| Qty, kilo liters | 25 | 20 | | | | | | |
| xii | The company 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 30 th August, 2005. | Water based drilling fluid system is used for drilling at Mehsana Asset. Impervious lining pits are being provided for collecting drill cuttings & waste water and is complied as per GSR.546 (E) dated 30th August, 2005. | | | | | | |
| xiii. | 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. | ONGC has Disaster Management Plan (DMP), Site Specific Emergency Response Plan (ERP) and contingency plans in place. In case of any contingency, action will be taken as per DMP/ERP. | | | | | | |
| xiv. | The company shall develop a contingency plan for H ₂ S release including all necessary aspects from evacuation to resumption of normal operations. The workers shall be provided with personal H ₂ S detectors in locations of high risk of exposure along with self containing breathing apparatus. | Emergency Response Plan for H ₂ S release is available. H ₂ S detectors are available at drilling rigs. In locations of high risk of exposure to H ₂ S gas the availability of personal H ₂ S detectors along with self-containing breathing apparatus is ensured. | | | | | | |

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| xv. | The Company shall carry out long term subsidence study by collecting base line data before initiating drilling operation till the project lasts. The data so collected shall be submitted six monthly to the Ministry and its Regional Office at Bhopal. | In Mehsana area hydrocarbon are produced from pay sand below 930M MGLH (Mean Ground Level Height) from sea. These pay sands are compacted due to overburden pressure (i.e. more than 930M of litho-column). Hydrocarbons are stored in the pores of already compacted sand. Therefore there is no chance of subsidence of land due to production of hydrocarbons. Moreover the exploitation of hydrocarbon is carried out in Mehsana area having flat topography. |
| xvi. | Blow Out Preventor (BOP) system shall be installed to prevent well blowouts during drilling operations. BOP measures during drilling shall focus on maintaining well bore hydrostatic pressure by proper pre-well planning and drilling fluid logging etc. | <ol style="list-style-type: none"> 1. Blow out preventer (BOP) system is mandatorily installed on each well to prevent well blow out drilling operations. 2. Proper well planning is done before commencement of drilling a well. A Geo-Technical Order (GTO) is issued to this effect, prior to the start of drilling operations. 3. The GTO provides well-bore pressures expected to be encountered at different depths, during the course of drilling. It also provides drilling fluid specific gravity to be maintained during drilling to ensure primary well control through hydrostatic head of the drilling - fluid column in the well. 4. The drilling fluid properties (specific gravity, viscosity etc.) are monitored round the clock by the Chemist present at the drill site to ensure that primary control on the well is not lost at any point of time. 5. In order to maintain the desired specific gravity of the drilling fluid and consequently, desired hydrostatic pressure in the well bore. Degassers are installed at each drilling rig, de-gas the drilling fluid if required. |
| xvii | Emergency Response Plan (ERP) shall be based on the guidelines prepared by OISD, DGMS and Govt. of India. | Disaster management plan (DMP) & site specific Emergency Response Plan (ERP) have been prepared on the relevant guidelines. |
| xviii | The company shall take measures after completion of drilling process by well plugging and secured enclosures, decommissioning of rig upon abandonment of the well and drilling site shall be restored the area in original condition. In the event that no economic quantity of hydrocarbon is found a full abandonment plan shall be implemented for the drilling site in accordance with the applicable Indian Petroleum Regulations. | The sites are restored to original condition and handed over to land owner after following approved SOP & laid down procedures. |
| xix. | Occupational health surveillance of the workers shall be carried out as per the prevailing Acts and Rules. | Occupational health surveillance of the workers is being carried out as per |

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| | | prevailing ONGC guidelines on the subject. Reports of PME of workers are maintained at our local ONGC Health Centre database. PME in respect of all employees is carried out as and when it is due |
| xx | Restoration of the project site shall be carried out satisfactorily and report shall be sent to the Ministry's Regional Office at Bhopal. | Restoration of the project site is being carried out satisfactorily. |
| xxi. | Oil content in the drill cuttings shall be monitored by some Authorized agency and report shall be sent to the Ministry's Regional Office at Bhopal. | Only water based mud is being used. Even then waste water & cuttings are analyzed for oil & grease content. The agency carrying out analysis is M/s Greenleaf Envirotech (P) Ltd., Surat is GPCB approved and NABL accredited. (NABL No. TC-5446) Further, another agency E-cure Environment Projects & Services, Kadi is an approved agency by GPCB(GPCB No. EA-344) Results of monitored data has been updated on ONGC website "ongcindia.com". https://www.ongcindia.com/wps/wcm/connect/en/sustainability/environment/compliance-status/ |
| xxii | All the commitments made to the public during public hearing/ consultation meeting held on 21 st May 2013 for Gandhinagar district, 24 th May 2013 for Patan District and 7 th June 2013 shall be satisfactorily implemented and adequate budget provision should be made accordingly. | All the commitments made to the public during public hearing/ consultation meeting held on 21 st May 2013 for Gandhinagar district, 24 th May 2013 for Patan District and 7 th June 2013 are satisfactorily implemented and adequate budget provision has been made accordingly. (Point wise reply of commitments already submitted (Letter No. MHN/HSE/EC-Drig/2015-16 dtd 21-05-2015).) |
| xxiii | Atleast 5% of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on Public hearing issues, locals need an itemwise details alongwith time bound action plan shall be prepared and submitted to Ministry's Regional Office at Bhopal. Implementation of such program shall be ensured accordingly in a time bound manner. | Letter dtd 02.12.2014 and 16.04.2015 for amendment regarding point no. xxiii of EC of 350 wells (File No-J-11011/503/2011-1A II (I)) was sent to MoEF&CC, Delhi. (Copy of both letters already submitted in earlier compliance reports.) Expenditure on Corporate Social Responsibility of ONGC Mehsana Asset for half yearly 2020-21 (H'1) is ₹ 1.99 crores. |
| xxi v | Company should have own Environment Management Cell having qualified persons with proper background. | Company is having Environment Management Cell under CGM-Head Environment, Corporate HSE, Delhi. |
| xxv | Company should prepare operating manual in respect of all activities. It should cover all safety and environment related issues and system. Measures to be taken for protection. One set of environment manual should be made available at drilling site/project site. Awareness should be created at each level of management. All the schedules and results of | Standard Operating Procedures for Drilling Operations have been given to supervisors and concerned persons at all drilling Rigs. Safe Work Practices is also made available at all rigs. |

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| | environmental monitoring should be available at project site office. | Ambient / stack air quality report and potable water test reports are available at rigs Regular Safety & Environment training is being provided to the employees by our various In-house training Institutes like IPSHEM Goa, IDT & KDMIPE Dehradun & RTI Baroda etc. |

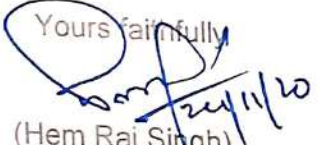
B: GENERAL CONDITIONS:

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| i | The project authorities must strictly adhere to the stipulations made by the Gujarat Pollution Control Board (GPCB), State Government and any other statutory authority. | Being done. |
| ii | No further expansion or modification in the project shall be carried out without prior approval of the Ministry of Environment & Forests. In case of deviations or alterations in the project proposal from those submitted to this Ministry for clearance, a fresh reference shall be made to the Ministry to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any. | All the development wells drilled are infill locations. |
| iii | The project authorities must strictly comply with the rules and regulations under Manufacture, Storage and Import of Hazardous Chemicals Rules, 2000 as amended subsequently. Prior approvals from Chief Inspectorate of Factories, Chief Controller of Explosives, Fire Safety Inspectorate etc. must be obtained, wherever applicable. | During drilling water based mud is used and no hazardous/toxic chemicals are used. All the mud systems got tested through National Institute of Oceanography (NIO), Goa and found non-hazardous and non-toxic. Hence this point is not applicable. However as precautionary measure MSDS of chemicals are displayed at site. Permission of explosives is taken separately for logging operations. Proper storage facility (i.e. properly covered raised platforms at the chemical handling area) is now provided at drill-sites. |
| iv | The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under EPA Rules, 1989 viz. 75 dB(A) (daytime) and 70 dB(A) (night time). | The overall noise levels in and around the rig area is well within the standards. The ambient noise levels also conform to the standards prescribed under EPA Rules, 1989 Latest noise monitoring report has been updated on ONGC website "ongcindia.com". https://www.ongcindia.com/wps/wcm/connect/en/sustainability/environment/compliance-status/ |
| v | A separate Environmental Management Cell equipped with full-fledged laboratory facilities must be set up to carry out the environmental management and monitoring functions. | Environment Management cell exists both at Asset and at Corporate level where qualified Engineers are posted. For analysis of waste water or treated effluent full fledged laboratory exists at |

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| | | <p>Asset as well as regional office i.e. ONGC Vadodara.</p> <p>For Ambient Air/Stack Emission Quality Monitoring (AAQM/SEQM), NABL and GPCB approved consultant is hired and sampling and analysis is being done by them on quarterly basis.</p> <p>Further, reports received of AAQM/SEQM is being monitored by qualified Environment Engineer of Environment Management cell.</p> |
| vi | <p>A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad / Municipal Corporation, Urban Local Body and the local NGO, if any, from whom suggestions / representations, if any, were received while processing the proposal. The clearance letter shall also be put on the web site of the company by the proponent.</p> | <p>Informed general public by an advertisement on "Indian Express" and "Gujarat Samachar" on 20.01.2015 (Copy of advertisement already submitted in earlier compliance reports.)</p> |
| vii | <p>The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the MOEF&CC, the respective Zonal Office of CPCB and the GPCB. The criteria pollutant levels namely; PM₁₀, SO₂, NO_x, HC (Methane & Non-methane), VOCs (ambient levels as well as stack emissions) or critical sectorial parameters, indicated for the projects shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.</p> | <p>Compliance status is being sent to MoEF&CC office. Compliance of status uploaded in ONGC website. Emissions levels are being monitored through reputed Environmental monitoring Agency. Status of compliance of stipulated EC conditions, including results of monitored data on ONGC website "ongcindia.com" is already updated.</p> <p>https://www.ongcindia.com/wps/wcm/connect/en/sustainability/environment/compliance-status/</p> <p>Environmental parameters are displayed at the main gate of fix production installations as per Hazardous Waste Declaration-SC Ruling 14 Oct 2003.</p> |
| viii | <p>The project proponent shall also submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MOEF&CC, the respective Zonal Office of CPCB and the GPCB. The Regional Office of this Ministry / CPCB / GPCB shall monitor the stipulated conditions. Environmental clearance and six monthly compliance report shall be posted on website of the company.</p> | <p>Noted for compliance. Being complied.</p> |
| ix | <p>The Environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules 1986, as amended subsequently, shall be put on the website of the company along with the status of compliance of environmental conditions shall also be sent to respective Regional Offices of the MOEF&CC by e-mail.</p> | <p>Environment Statement for each financial year ending 31st March in Form-V is being submitted regularly to GPCB.</p> <p>Environment Statement for the period 2019-20 has been submitted to GPCB office on 28.09.2020. Further, it has been uploaded on public domain of ONGC website and copy sent to RO, MoEF&CC Bhopal by e-mail.</p> |

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| x | The Project Proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the GPCB and may also be seen at Website of the Ministry of Environment and Forests at http://envfor.nic.in . This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the Regional office. | EC was received by Mehsana Asset office on 5th Dec 2014. For advertisement in newspapers, approval was sought by Corporate Communications, Mehsana from headquarters which took a longer time. EC advertised in "Indian Express" and "Gujarat Samachar" on 20.01.2015. (Copy of advertisement already submitted in earlier compliance reports.) Further, EC has been uploaded in public domain of ONGC website. In future, due care for advertising within seven days from the date of issue of the clearance letter will be taken care off. First, Six monthly compliance report for period ending 31st Mar 2015 for drilling of 350 development wells has been submitted to MoEF&CC, Bhopal on 21.05.2015. |
| xi | Project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work. | Noted |

Thanking you.

Yours faithfully

 (Hem Raj Singh)
 GM - Head HSE

Copy for kind information to:

1. ED - AM, ONGC Mehsana.
2. Chief HSE, Delhi-110070, 3rd Floor, Tower- A, ONGC Complex, Plot 5A&B, Nelson Mandela Marg, Vasant Kunj, Fax No-011-22406681