

F. No.J-11011/158/2018-IA-II (I)
Government of India
Ministry of Environment, Forest & Climate Change
Impact Assessment Division

Indira Paryavaran Bhavan,
Vayu Wing, 3rd Floor, Aliganj,
Jor Bagh Road, New Delhi-110 003

Dated: 6th December, 2019

To

M/s Oil and Natural Gas Corporation Ltd
HSE Department
Western Onshore Basin, Regional Stores Complex
Makarpura Road, Vadodara
Gujarat – 390 009

Sub: Onshore oil & gas exploration by drilling 46 wells in 12 ML Blocks of Western Onshore Basin, District Mehsana (Gujarat) by M/s Oil and Natural Gas Corporation Limited-Environmental Clearance - reg.

Sir,

This has reference to your proposal No. IA/GJ/IND2/74678/2018 dated 31st July 2019, submitting the EIA/EMP report on the above subject matter.

2. The Ministry of Environment, Forest and Climate Change has examined the proposal for environmental clearance to the project for onshore oil & gas exploration by drilling 46 wells in 12 ML Blocks of Western Onshore Basin, District Mehsana (Gujarat) by M/s Oil and Natural Gas Corporation Limited.

3. The estimated land requirement is 110m x 110m for each exploratory well. The estimated project cost is Rs.460 crore. Total capital cost earmarked towards environmental pollution control measures is Rs. 32.64 crores and the recurring cost (O&M) will be about Rs. 5.86 crores per annum. About 30-40 persons will be working in shifts at site.

4. There are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site.

5. Total water requirement is estimated to be 25 cum/day which will be met from nearby ONGC source. Wastewater (drill cutting washing + rig washing+ cooling etc) shall be generated at an average rate of around 5 cum/day during the drilling operations from a single well. Waste water will be discharged in HDPE lined evaporation pit, available at site and will be solar dried.

Power requirement will be met through three DG sets of 1250 kVA capacity. Stack height will be provided as per CPCB norms to the proposed DG sets.

6. The project/activity is covered under category A of item 1(b) 'Offshore and onshore oil and gas exploration, development & production' of schedule to the

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Environment Impact Assessment (EIA) Notification, 2006, and requires appraisal at central level by sectoral Expert Appraisal Committee in the Ministry.

7. Standard Terms of Reference (ToR) for the project was issued on 1st June, 2018. Public Hearing for the project was conducted by the State Pollution Control Board on 6th June, 2019.

8. The proposal was considered by the Expert Appraisal Committee (Industry-2) in its meetings held during 29-31 July, 2019 and 26-27 September, 2019 in the Ministry, wherein the project proponent and their consultant presented the EIA/EMP report as per the ToR. The Committee found the EIA/EMP report complying with the ToR and recommended the project for grant of environmental clearance.

9. Based on the proposal submitted by the project proponent and recommendations of the EAC (Industry-2), Ministry of Environment, Forest and Climate change hereby accords environmental clearance to the project for onshore oil & gas exploration by drilling 46 wells in 12 ML Blocks of Western Onshore Basin by M/s Oil and Natural Gas Corporation Limited located at District Mehsana (Gujarat), under the provisions of the EIA Notification, 2006, subject to the compliance of terms and conditions as under:-

- (i) No drilling shall be carried out in Protected Areas.
- (ii) 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.
- (iii) As proposed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged to any surface water body, sea and/or on land. Mobile ETP along with RO plant shall be installed to treat the waste water.
- (iv) To control source and the fugitive emissions, suitable pollution control devices shall be installed to meet the prescribed norms and/or the NAAQS. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.
- (v) 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.
- (vi) Ambient air quality shall be monitored at the nearest 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 PM₁₀, PM_{2.5}, SO₂, NO_x, CO, CH₄, HC, Non-methane HC etc.
- (vii) During exploration, production, storage and handling, the fugitive emission of methane, if any, shall be monitored using Infra-red camera/ appropriate technology.
- (viii) The project proponent also to ensure trapping/storing of the CO₂ generated, if any, during the process and handling.

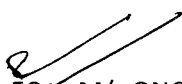
- (ix) Approach road shall be made pucca to minimize generation of suspended dust.
- (x) The company shall make all arrangements for control of noise from the drilling activity. Acoustic enclosure shall be provided for the DG sets along with the adequate stack height as per CPCB guidelines.
- (xi) Total fresh water requirement shall not exceed 25 cum/day/well. Prior permission shall be obtained from the concerned regulatory authority. Mobile ETP shall be installed coupled with RO to reuse the treated water in drilling system. 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.
- (xii) 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.
- (xiii) 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 be discharged/disposed off into nearby surface water bodies. 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 30th August, 2005.
- (xiv) 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 recyclable waste (oily sludge) and spent oil shall be disposed of to the authorized recyclers.
- (xv) 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.
- (xvi) The company shall develop a contingency plan for H₂S release including all necessary aspects from evacuation to resumption of normal operations. The workers shall be provided with personal H₂S detectors in locations of high risk of exposure along with self containing breathing apparatus.
- (xvii) 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 Regional Office.
- (xviii) Blow Out Preventer 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.

- (xix) Emergency Response Plan shall be based on the guidelines prepared by OISD, DGMS and Govt. of India.
- (xx) On completion of the project, necessary measures shall be taken for safe plugging of wells with secured enclosures to restore the drilling site to the original condition. The same shall be confirmed by the concerned regulatory authority from environment safety angle. In case of hydrocarbon not found economically viable, a full abandonment plan shall be implemented for the drilling site in accordance with the applicable Indian Petroleum Regulations.
- (xxi) All the commitments made to the public during public hearing/consultation shall be satisfactorily implemented.
- (xxii) At least 2% of the total project cost shall be allocated for Corporate Environment Responsibility (CER) and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office.
- (xxiii) No lead acid batteries shall be utilized in the project/site.
- (xxiv) Occupational health surveillance of the workers shall be carried out as per the prevailing Acts and Rules.
- (xxv) Oil content in the drill cuttings shall be monitored by some Authorized agency and report shall be sent to the Ministry's Regional Office.
- (xxvi) 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.

10. The project proponent shall strictly comply the sector specific conditions as mentioned in the Ministry's Office Memorandum No. 22-34/2018-IA.III, dated 9th August, 2018. The said OM is available at the Ministry's website. The grant of Environmental Clearance is further subject to compliance of other generic conditions as under:-

- (i) The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board (SPCB), State Government and/ or any other statutory authority.
- (ii) No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change. In case of deviations or alterations in the project proposal from those submitted to 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.
- (iii) The locations of ambient air quality monitoring stations shall be decided in consultation with the State Pollution Control Board (SPCB) and it shall be ensured that at least one stations each is installed in the upwind and downwind direction as well as where maximum ground level concentrations are anticipated.

- (iv) The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 shall be complied with.
- (v) The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under the Environment (Protection) Act, 1986 and the Rules made thereunder.
- (vi) The Company shall harvest rainwater from the roof tops of the buildings and storm water drains to recharge the ground water and utilize the same for different industrial operations within the plant.
- (vii) Training shall be imparted to all employees on safety and health aspects of chemicals handling. Pre-employment and routine periodical medical examinations for all employees shall be undertaken on regular basis. Training to all employees on handling of chemicals shall be imparted.
- (viii) The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, risk mitigation measures and public hearing shall be implemented.
- (ix) The company shall undertake all measures for improving socio-economic conditions of the surrounding area. CER activities shall be undertaken by involving local villagers, administration and other stake holders. Also eco-developmental measures shall be undertaken for overall improvement of the environment.
- (x) A separate Environmental Management Cell equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.
- (xi) The company shall earmark sufficient funds towards capital cost and recurring cost per annum to implement the conditions stipulated by the Ministry of Environment, Forest and Climate Change as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so earmarked for environment management/ pollution control measures shall not be diverted for any other purpose.
- (xii) A copy of the clearance letter shall be sent by the project proponent to concerned Panchayat, ZilaParisad/ Municipal Corporation, Urban local Body and the local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal.
- (xiii) The project proponent shall also submit six monthly reports on the status of compliance of the stipulated Environmental Clearance conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional Office of MoEF&CC, the respective Zonal office of CPCB and SPCB. A copy of Environmental Clearance and six monthly compliance status report shall be posted on the website of the company.


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- (xiv) The environmental statement for each financial year ending 31st March in Form-V as is mandated shall be submitted to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Regional offices of MoEF&CC by e-mail.
- (xv) The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB/Committee and may also be seen at Website of the Ministry at <http://moef.nic.in>. This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the concerned Regional office of the Ministry.

11. The Ministry reserves the right to stipulate additional conditions, if found necessary at subsequent stages and the project proponent shall implement all the said conditions in a time bound manner. The Ministry may revoke or suspend the environmental clearance, if implementation of any of the above conditions is not found satisfactory.

12. Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.

13. Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

14. The above conditions will be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, the Hazardous Waste (Management, Handling and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 read with subsequent amendments therein.

15. This issues with the approval of the competent authority.

(डा. अरि. बा. माल)
(Dr. R. B. Lal)
Scientist 'E'/Additional Director

पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय
Min. of Environment, Forest and Climate Change
भारत सरकार, ई-5, दिल्ली
Govt. of India, E-5, Delhi

Copy to: -

1. The Deputy DGF (C), MoEF&CC Regional Office (MZO) E-5, Kendriya Paryavaran Bhawan, E-5 Arera Colony, Link Road-3, Ravishankar Nagar, Bhopal -16
2. The Secretary, Forests and Environment Department, Government of Gujarat, Block 14, 8th Floor, Sachivalaya, Gandhinagar (Gujarat) -10
3. The Member Secretary, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi - 32

4. The Member Secretary, Gujarat Pollution Control Board, ParyavaranBhavan, Sector-10A, Gandhinagar (Gujarat) - 10
5. The District Collector, District **Mehsana** (Gujarat)
6. Guard File/Monitoring File/Website/Record File


(Dr. R. B. Lal)
Scientist 'E'/Additional Director

