

F. No. J-11011/91/2012-IA-II (I)
Government of India
Ministry of Environment, Forest and Climate Change
(Impact Assessment Division)

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Dated: 06th March, 2017

To,

The DGM (Chemistry), CHSE
(Shri Rajeeva Kumar)
M/s Oil and Natural Gas Corporation
Corporate HSE, 8th Floor Core IV,
Scope Minar, Delhi- 110 092

Sub: Drilling of 6 exploratory wells (RBK-1, LBAA, RPAA, RLBK-1, RTDN-1 and RBK-3) in Pre-NELP Block AA-ONJ/2 at Cachar, Assam by M/s Oil and Natural Gas Corporation – Environmental Clearance – reg.

Ref: Online Proposal No. IA/AS/IND/25378/2012 dated 25th October, 2014.

Sir,

This has reference to your online proposal no. IA/AS/IND/25378/2012 dated 25th October, 2014 along with project documents including Form I, Terms of References, Pre-feasibility Report and EIA/EMP Report regarding the above mentioned project.

2. The Ministry of Environment, Forest and Climate Change has examined the application. It is noted that the proposal was for Drilling of 9 exploratory wells in Pre-NELP Block AA-ONJ/2 at Cachar, Assam by M/s Oil and Natural Gas Corporation (ONGC). As informed and as per the documents submitted by the Project Proponent (PP), the pre-NELP Block AAONJ/2 of ONGC covers 1277 sq. km area encompassing 802 sq. km of Cachar District, Assam; 220 sq. km of Jiribam District, Manipur; 255 sq. km of Aizawl and Kolasib Districts of Mizoram. PP informed that nearest wildlife sanctuary/protected area is Borail WLS, which is outside the block boundary on the NW side. As per the EIA/EMP report, three proposed wells i.e. RBK-3, RTNG-1 and RTDN-2 are falling under the forest land. Cost of the project is Rs. 270 crore. The names of the six wells, located in part of the block falling in Cachar district of Assam are RBK-1, LBAA, RPAA, RBK-3, RLBK-1, and RTDN-1. The names of the three wells located in the part of the block falling in the states of Manipur and Mizoram are RJDR, RTNG-1, and RTDN-2.

3. All the projects related to Offshore and Onshore Oil and Gas exploration, Development and Production are listed in S. No. 1(b) of Schedule of Environmental Impact Assessment (EIA) Notification, 2006 under Category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC).



4. The project proposal was considered by the Expert Appraisal Committee (Industry -2) in its 38th meeting held during 20th - 21st April, 2015 and 16th meeting held during 8th- 9th December, 2016. The project proponent and their accredited consultant M/s Senes Consultants India Pvt., Noida (now known as M/s Aracadis India Pvt. limited) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 34th Meeting of the Expert Appraisal Committee (Industry) held during 13th -14th April, 2012 for preparation of EIA-EMP report. The TOR was issued by Ministry vide letter dated 13th July, 2012.

5. Public Hearing for the proposed project has been conducted by the Assam Pollution Control Board on 26th August, 2014 and 27th August, 2014 for Cachar District. The concerns were raised regarding pollution control, land compensation, development of road, drinking water etc. The EAC noted that the issues have been satisfactorily responded by the PP and incorporated in the final EIA-EMP report. PP informed that the public hearing for wells located in Mizoram and Manipur was not conducted and intends to drop the proposal of drilling at this place.

6. The PP has informed that EAC that the ambient air quality (AAQ) monitoring was carried out at 8 locations during May-June, 2013. The baseline data indicates the ranges of concentrations as: - PM₁₀ (44 µg/m³ to 63 µg/m³), SO₂ (4.8 µg/m³ to 6.6 µg/m³) and NO₂ (19.2 µg/m³ to 24.8 µg/m³). AAQ modeling study for point source emissions indicates that the maximum incremental ground level concentrations (GLCs) after the proposed project would be 0.00108 µg/m³, 0.00414µg/m³ and 0.1795 µg/m³ with respect to SPM, SO₂ and NO_x. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

7. The estimated land required per drill site is approximately 2.25 ha and will be taken on temporary lease. The power requirement of the drilling rig will be met by using 3 Nos. of DG Sets of capacity 750 KW, each. Air emissions from D.G. sets will be dispersed by providing adequate stack height of around 5.5 m and will be equipped with acoustic enclosure to attenuate noise. Fresh water requirement from surface or ground water will be 20 m³/day. Effluent will be treated in effluent treatment plant (ETP) comprising equalization, chemical coagulation, flocculation and clarification by settling and residual unusable mud will be collected in HDPE lined pits and solar evaporated. Drill cuttings (DC) will be separated from water based mud (WBM) and washed properly and unusable drilling fluids (DF) will be disposed off in well designed lined pit with impervious liner for solar drying. Disposal of drill cuttings and drill mud which is non toxic and non hazardous will be carried out in accordance with the GSR 546 (E) dated 30th August, 2005. Used oil will be sent to authorized recyclers.

8. The EAC, in its 38th meeting held during 20th -21st April, 2015, has found that the final EIA/EMP report submitted by the PP is adequate. The EAC after detailed deliberations, on the basis of the information and presentation made by the PP, has recommended the project for environmental clearance subject to submission of stage- 1 forest clearance for the exploratory well locations namely RBK-3, RTNG-1 and RTDN-2 and with other specific and general conditions.

9. In response to Ministry's letter dated 15.06.2015 regarding the forest clearance, the PP vide letter dated 01.08.2016 informed that the exploratory well location namely



RBK-3 falls outside the forest land. The PP has submitted a copy of the letter no. B/35/6404 dated 05.02.2015 issued by Divisional Forest Officer, Cachar Division, Silchar; wherein the co-ordinates mentioned are not matching with the co-ordinates mentioned in the EIA report for the exploratory wells location RBK-3.

10. The proposal is again considered in the 16th meeting of EAC held during 8th–9th December, 2016. During the presentation, PP has requested for issuing the environmental clearance for the six (06) exploratory wells locations namely RBK-1, LBAA, RPAA, RLBK-1, RTDN-1 and RBK-3 wherein the forest clearance is not required. The EAC has examined the proposal and facts presented by the PP and observed that coordinates mentioned in the EIA/EMP report for RKB-3 are Lat 24°42'47.86" Long 93°00'50.46"; whereas no such co-ordinates are mentioned in the letter issued by Division Forest Officer, Silchar.

11. The EAC in its 16th meeting held during 8th–9th December, 2016, after detailed deliberations recommended to consider the proposal, considering the importance of the project for Country's oil production/demand and unusual delay being occurred due to pending stage-1 forest clearance, for issuing the environment clearance for the locations namely RBK-1, LBAA, RPAA, RLBK-1, RTDN-1 and RBK-3, wherein no forest clearance issue is involved.

12. Based on the proposal and information submitted by the Project Proponent, and based on the recommendation by the Expert Appraisal Committee (Industry-2), the Ministry of Environment, Forest and Climate Change hereby accords Environmental Clearance to the project 'Drilling of 6 exploratory wells (RBK-1, LBAA, RPAA, RLBK-1, RTDN-1 and RBK-3) in Pre-NELP Block AA-ONJ/2 at Cachar, Assam by M/s Oil and Natural Gas Corporation' under the provisions of EIA Notification dated 14th September 2006, subject to the compliance of the following Specific and General Conditions:

A. Specific Conditions:

- i. The company shall not do drilling in the forest areas.
- ii. No drilling shall be carried out in the wells falling states of Manipur and Mizoram as proposal for drilling has been dropped.
- iii. 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 PM10, PM2.5, SO2, NOX, CO, methane & Non-methane HC etc.
- iv. Mercury shall also be analyzed in air, water and drill cuttings twice during drilling period.
- v. Approach road shall be made pucca to minimize generation of suspended dust.
- vi. The company shall make the arrangement for control of noise from the drilling activity. Acoustic enclosure shall be provided to DG sets and proper stack height shall be provided as per CPCB guidelines.
- vii. Total water requirement shall not exceed 20 m³/day and prior permission shall be obtained from the concerned agency.



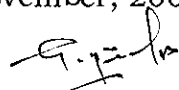
- viii. The company shall construct the garland drain all around the drilling site to prevent runoff of any oil containing waste into the nearby water bodies. Separate drainage system shall be created for oil contaminated and non-oil contaminated. Effluent shall be properly treated and treated wastewater shall conform to CPCB standards.
- ix. 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 on-shore 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 Shillong.
- x. Good sanitation facility shall be provided at the drilling site. Domestic sewage shall be disposed off through septic tank/soak pit.
- 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.
- 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 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.
- xiv. 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.
- xv. On completion of drilling, the companies have to plug the drilled wells safely and obtain certificate from environment safety angle from the concerned authority.
- xvi. Blowout Preventer (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.
- xvii. Emergency Response Plan (ERP) shall be based on the guidelines prepared by OISD, DGMS and Govt. of India.
- 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 to the 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.



- xix. Abandoned well inventory and remediation plan shall be submitted within six months from the date of issue of letter.
- xx. Occupational health surveillance of the workers shall be carried out as per the prevailing Acts and Rules.
- xxi. In case the commercial viability of the project is established, the Company shall prepare a detailed plan for development of oil and gas fields and obtain fresh environmental clearance from the Ministry.
- xxii. Restoration of the project site shall be carried out satisfactorily and report shall be sent to the Ministry's Regional Office at Shillong.
- xxiii. 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 Shillong.
- xxiv. Under Enterprise Social Responsibility (ESR), sufficient budgetary provision shall be made for health improvement, education, water and electricity supply etc. in and around the project during drilling period.
- xxv. An audit shall be done to ensure that the Environment Management Plan is implemented in totality and report shall be submitted to the Ministry's Regional Office.
- xxvi. All personnel including those of contractors shall be trained and made fully aware of the hazards, risks and controls in place.
- xxvii. Company shall have own Environment Management Cell having qualified persons with proper background.
- xxviii. Company shall prepare operating manual in respect of all activities. It shall cover all safety & environment related issues and system. 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.
- xxix. The necessary Forest Clearance shall be obtained, if applicable.

B. General Conditions:

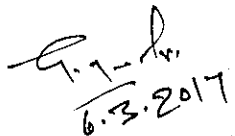
- i. The project authorities must strictly adhere to the stipulations made by the Assam Pollution Control Board, State Government and any other statutory authority.
- ii. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forest 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 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 followed.



- 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 Environment (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).
- vi. The Company shall harvest rainwater from the roof tops of the buildings and storm water drains to recharge the ground water and use the same water for the process activities of the project to conserve fresh water.
- 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 also 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, and risk mitigation measures relating to the project shall be implemented.
- ix. The company shall undertake all relevant measures for improving the socio-economic conditions of the surrounding area. CSR activities shall be undertaken by involving local villages and administration.
- x. The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment.
- xi. A separate Environmental Management Cell equipped with full fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.
- xii. 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.
- xiii. A copy of the clearance letter shall be sent by the project proponent to concerned Panchayat, Zilla Parishad/Municipal Corporation, Urban local Body and the local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal.
- xiv. 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.
- xv. 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

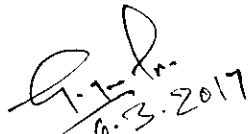


- with the status of compliance of environmental clearance conditions and shall also be sent to the respective Regional Offices of MoEF&CC by e-mail.
- xvi. The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance 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.
- xvii. The 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 start of the project.
13. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
14. The Ministry reserves the right to stipulate additional conditions, if found necessary. The company in a time bound manner will implement these conditions.
15. The above conditions will be enforced, *inter alia* under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, Air (Prevention & Control of Water Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous Waste (Management, Handling and Trans-boundary Movement) Rules, 2008 and the Public Liability Insurance Act, 1991 along with their amendments and rules.


6.3.2017
(Yogendra Pal Singh)
Scientist 'D'

Copy to:-

1. The Secretary, Department of Environment and Forests, Government of Assam, Secretariat, Dispur, Assam.
2. The Additional Principal Chief Conservator of Forests, Ministry of Environment, Forest and Climate Change, Regional Office (NEZ), Law-U-Sib, Lumbatngen, Near MTC Workshop, Shillong.
3. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex East Arjun Nagar, Delhi - 110 032.
4. The Chairman, Pollution Control Board Assam, Bamunimaidam, Guwahati - 21, Assam.
5. Monitoring Cell, Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhavan, Jor Bagh, New Delhi - 110 003.
6. Guard File/Monitoring File/Website/Record File.


6.3.2017
(Yogendra Pal Singh)
Scientist 'D'

