



F. No. J-11011/1109/2007- IA II (I)
Government of India
Ministry of Environment and Forests
(I.A. Division)

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Dated: June 11, 2009

To,
 The Vice President- Operations
M/s Jubilant Oil and Gas Private Limited
 A-80, sector-2, Noida-201301

E-mail : vasant_vaidya@jubilantenergy.com

Sub : Exploratory /appraisal for 15 wells in on-shore oil & gas exploration block AA-ONN-2002-1- in Districts: Dhalai, West Tripura and South Tripura in Tripura by **M/s Jubilant Oil and Gas Private Limited- reg. Environmental Clearance**

Sir,

This has reference to letter no. F-17 (10)/TSPCB/W/Drilling/(L-Red)/2989/1255-56 dated 31.03.2009 from the Tripura State Pollution Control Board forwarding the public hearing reports and your letter no. JE-ND/HSE-Golaghat/MOEF/137/09 dated 2nd April, 2009 along with final EIA report on the above mentioned subject seeking environmental clearance under the provisions of EIA Notification, 2006.

2.0 The Ministry of Environment and Forests has examined your application. It is noted that M/s Jubilant Oil & Gas Private Limited (JOGPL) have proposed for exploratory drilling for 15 Nos. of exploration / appraisal wells for Oil & Gas exploration in the block AA-ONN-2002/1 in Districts Dhalai, West Tripura and South Tripura in the State of Tripura. The area of the block is 1680 km². The block area is mostly covered with dense mixed mountainous forest ranges and involves an area of 1116 km² of forest land. An area of 292 km² of Gumti Wild life Sanctuary is partly located within the block at its eastern edge. Sepahijala Wild life Sanctuary is located at a distance of 34 km west of block edge. Khowai, Gumti and Mahuri which are perennial rivers flow through the block. The drilling activities will be avoided near the Wildlife Sanctuary/river bed /forest area. Mobile rotary drilling rig and associated system will be used for drilling of wells. Water based mud (WBM) will be used as drilling fluid. Use of Synthetic based mud (SBM) is also proposed when considered necessary. Drilling operations will be carried out up to a depth of 3500 to 4000 m. Time required for actual drilling and completion of one well up to a depth of 4000 m will be 120 days. The cost of proposed drilling and testing of 15 exploratory/assessment wells will be Rs. 1125 crores @ Rs. 75 crores per well.

3.0 Water requirement of 75 m³/day will be met through tankers from the available water supply sources. Effluent during drilling and production testing will be drilling and drainage discharges, used/wasted WBM, used/wasted SBM, recovered formation water and domestic waste water. Liquid effluent will be stored in HDPE lined solar evaporation pit and will be treated in ETP. Treated waste water will be reused after passing through the RO system. Formation water will be treated in formation water clarification system and treated effluent will be stored in



HDPE lined solar evaporation pit. Used/wasted SBM will not be discharged in to the HDPE lined effluent pits and will be given to SBM supplier for reprocessing and reuse. Domestic effluent will be disposed through septic tank/soak pit. Power requirement for residential campsite and drilling site will be met through the 4 x 900 KW DG sets. Fuel for DG set will be HSD (15 to 20 kl/day).

4.0 Gaseous emissions will be mainly exhaust emission from DG sets during drilling and other activities, flaring during testing, exhaust fumes from vehicles and dust emission from vehicular traffic on road. Exhaust gases from power generators will be discharged through adequate stacks height. Separated gases will be properly flared in the suitably designed ground/elevated flare pit to mitigate adverse impact.

5.0 Hazardous wastes generation will be in the form of spent oil generated from oil changes or leakage from equipment or diesel storage tanks and used lubricating oil (from engine oil changes) will be sold to MoEF/SPCB approved recyclers. Combustible waste after segregation will be sent to recyclers. ETP sludge will be dried and stored in lined HDPE pit. All biodegradable waste (food & kitchen waste) at the drilling site will be collected and disposed of into two small humus pits (each of 2 m x 2 m x 1.5 m) within the drilling site area. The humus pits will be covered with soil on daily basis to avoid any odour nuisance due to decomposition

6.0 The project activity is listed at Sl. No. 1(b) and is of "A" Category under the Schedule of EIA Notification, 2006. The proposal was considered by the Expert Appraisal Committee (I) in the 94th meeting held during 12th -16th May, 2009. The Committee recommended the proposal for grant of environmental clearance. Public hearings for the project were held separately in three Districts, for Dhalai on 20.03.2009 , for West Tripura on 24.03. 2009 and for South Tripura on 25.03.2009.

7.0 Based on the information provided by the project proponent, the Ministry of Environment and Forests hereby accords environmental clearance to the above project under the provisions of EIA Notification, 2006 subject to strict compliance of the following Specific and General Conditions.

A. SPECIFIC CONDITIONS:

- i. Environmental clearance is subject to obtaining clearance under the Wildlife (Protection) Act, 1972 from the competent authority and National Board for Wildlife .
- ii. Environmental clearance is subject to final order of the Hon'ble Supreme Court of India in the matter of Goa Foundation Vs. Union of India in Writ petition (Civil) No. 460 of 2004 as may be applicable to this project.
- iii. No drilling activities shall be carried within the Wild life Sanctuary and movement of the rigs and vehicles should be away from the Wildlife Sanctuary.

The company shall pay compensation for acquisition of private land as per the Central Government/State Government norms. The compensation to be paid to the land loser shall not be less than the norms/package as per the Policy on National Resettlement and Rehabilitation Rules, 2007.

- v. The company shall obtain permission for diversion of forest land if any under the Forest (Conservation) Act, 1980.



- vi. 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.
- vii. The surface facilities shall be installed as per applicable codes and standards, international practices and applicable local regulations.
- viii. The top soil removed shall be stacked separately for reuse during restoration process.
- ix. The Company shall take necessary measures to reduce noise levels at the drill site by providing mitigation measures such as proper acoustic enclosures to the DG set and meet the norms notified by the MoEF. Height of all the stacks/vents shall be provided as per the CPCB guidelines.
- x. Monitoring of HC concentration in the ambient air and non-methanated HC shall be undertaken and data submitted to the Ministry and State Pollution Control Board.
- xi. The company shall upload the status of compliance of the stipulated environmental clearance conditions, including results of monitored data on its website and shall update the same periodically. It shall simultaneously be sent to the Regional office of MOEF, the respective Zonal office of CPCB and the State Pollution Control Board. The criteria pollutant levels namely; SPM, RSPM, SO₂, NO_x (ambient levels as well as stack emissions) or critical parameters like methanated HC, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.
- xii. Drilling waste water 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 with the Authorization of the State Pollution Control Board. The design of the secured shall be approved by the State Pollution Control Board.
- xiii. Company shall construct the garland drain around the drilling site to prevent runoff of oil containing waste into the nearby water bodies.
- xiv. The recyclable waste (oily sludge) and spent oil shall be disposed to the authorized recyclers.
- xv. Only water based drilling mud shall be used. The drilling mud shall be recycled. In case of use of synthetic oil based mud due to any problem due to geological formation for drilling, low toxicity, Oil Based Mud (OBM) having aromatic content < 1 % shall be used. If it is intended to use such OBM/SBM to mitigate specific hole problem, it should be intimated to Ministry of Environment and Forests/ State Pollution Control Board.
- xvi. Quantities of storage and chemicals and additives required for drilling mud preparation shall be below the specified threshold for specified storage permitted under the MSIHC Rules.



- xvii. Pre hire rig inspection, safety meetings, tool box meeting, job safety analysis and audits shall be carried out to identify hidden /potential hazardous.
- xviii. The Company shall take necessary measures to prevent fire hazards, containing oil spill and soil remediation as needed. At place of ground flaring, the overhead flaring stack with knockout drums shall be installed to minimize gaseous emissions during flaring.
- xix. To prevent fire and explosion at Oil and Gas facility, potential ignition sources should be kept to a minimum and adequate separation distance between potential ignition sources and flammable material should be in place.
- xx. The company shall develop a contingency plan for H2S release including all necessary aspects from evacuation to resumption of normal operations. The workers should be provided with personal H2S detectors in locations of high risk of exposure along with self containing breathing apparatus.
- xxi. To prevent well blowouts during drilling operations, Blow Out Preventor (BOP) system shall be installed. Blow Out Prevention measures during drilling shall focus on maintaining well bore hydrostatic pressure by proper pre-well planning and drilling fluid logging etc.
- xxii. 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 near 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.
- xxiii. In case the commercial viability of the project is established, the company shall prepare a detailed plan for development of Oil and Gas field and obtain fresh clearance from the Ministry.
- xxiv. Provision shall be made for the housing for the construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile sewage treatment plant, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structure to be removed after the completion of the project. All the construction wastes shall be managed so that there is no impact on the surrounding environment.
- xxv. Occupational health surveillance of the workers shall be carried out as per the prevailing Acts and Rules.



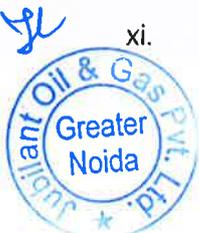
GENERAL CONDITIONS:

The project authorities must strictly adhere to the stipulations made by the Rajasthan Pollution Control Board and the State Government.

- 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.

- iii. The emissions of (RSPM, SPM, SO₂, NO_x, HC & VOC) from DG Set and from flare stack shall conform to the standards prescribed by the SPCB. Regular monitoring of Ambient Air for HC and VOC shall be carried out as per CPCB guidelines. Stack height attached to DG sets shall be in-conformance with the environment protection acts and rules.
- iv. The project authorities must strictly comply with the rules and regulations under Manufacture, Storage and Import of Hazardous chemicals Rules, 1989 as amended subsequently. Prior approvals from Chief Inspectorate of Factories, Chief Controller of Explosives, Fire Safety Inspectorate etc. must be obtained, wherever applicable.
- v. The project authorities must strictly comply with the rules and regulation with regard to handling and disposal of Hazardous Wastes (Management, Handling and Trans Boundary Movement) Rules, 1989/ 2003 / 2008 wherever applicable. Authorization form the State Pollution Control Board must be obtained for collections/treatment/storage/disposal of hazardous wastes.
- vi. 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 dBA (daytime) and 70 dBA (nighttime).
- vii. A separate Environmental Management Cell equipped with full fledged laboratory facilities must be set up to carry out the environmental management and monitoring functions.
- viii. The project authorities will provide adequate funds both recurring and non-recurring to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so provided shall not be diverted for any other purposes.
- ix. The project proponent shall also submit six monthly reports on the status of compliance of the stipulated E C conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional Office of MoEF, the respective Zonal Office of CPCB and the State Pollution Control Board. The Regional Office of this Ministry at Shillong /Central Pollution Control Board/State Pollution Control Board shall monitor the stipulated conditions.
- x. A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parisad/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 website of the company by the proponent.
- xi. 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 State Pollution Control Board/ Committee and may also be seen at Website of the Ministry and Forests at <http://www.envfor.nic.in>. This shall be advertised within seven



days of the issue of this letter in at least two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned.

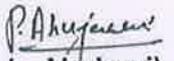
- xii. The Project Authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.

8.0 The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.

9.0 The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner will implement these conditions.

10.0 Any appeal against this environmental clearance shall lie with the National Appellate Authority, if preferred, within a period of 30 days as prescribed under section 11 of the National Environment Appellate Authority Act, 1997.

11.0 The above conditions will be enforced, inter alia under the provisions of the Water(Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 Hazardous Wastes (Management, Handling and Trans Boundary Movement) Rules, 2008 and the Public Liability Insurance Act, 1991 along with their amendments and rules.


(Dr. P. L. Ahujarai)
Director

Copy to:-

1. Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110032.
2. Chairman, Tripura State Pollution Control Board, Vigyan Bhavan, Pandit Nehru Complex, Gorkhabasti, PO. Kunjaban, Agartala, West Tripura – 799 006, Tripura
3. Chief Conservator of Forests, Regional Office (NEZ), Upland Road, Laitumkhrah, Shillong – 793 003
4. Commissioner & Secretary, Science, Environment & Technology, Agartala West Tripura
5. Director, Monitoring Cell, Ministry of Environment and Forests, Paryavaran Bhavan, CGO Complex, New Delhi.
6. Guard File.
7. Monitoring File.
8. Record File.


(Dr. P. L. Ahujarai)
Director

