

F. No. J-11011/289/2009- IA II (I)
Government of India
Ministry of Environment and Forests
(I.A. Division)

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Dated: July 10, 2009

To,

The Asstt. General Manager
M/s Focus Energy Limited (operator)
3E, 3rd floor, Gopala Tower, 25 Rajendra Place
New Delhi

Sub: Proposed drilling of 17 production wells, construction of gas production facilities and installation of requisite processing facilities at SGL gas field within block RJ-ON/6, at Dist. Jaisalmer in Rajasthan by M/s Focus Energy Limited – reg environmental clearance

Sir,

This has reference to your letter no. nil dated 8th May, 2009 along with pre-feasibility report and subsequent communications dated 28th May, 2009 and 17th June, 2009 on the above mentioned project seeking environmental Clearance.

2.0 The Ministry of Environment and Forests has examined your application. It is noted that M/s Focus Energy Limited have proposed for drilling of production wells and installation of requisite processing facilities at SGL gas field, block RJ-ON/6, in Dist. Jaisalmer in Rajasthan. The company has already carried out exploratory drilling and found the commercially viable gas reserve in SGL gas field within the block area. The unit is now proposing to undertake development of SGL gas field by drilling of 17 more development wells and installation of requisite processing facilities. Total area of the block is 4026.16 km². Area of the SGL gas field is 176 km². Approximately 1-1.2 ha of area will be cleared for drilling of each well and approximately 18 ha of area will be required for construction of production, condensate storage, gas transportation and other associated facilities within the SGL gas field area. Wells will be drilled up to the depth of 3000-4000m. There are no reserve forests and eco-sensitive areas within the block. The block area is sandy arid plain and near the Indo-pak border and constitutes part of Thar Desert in western Jaisalmer. Produced gas will be supplied to Rajasthan Rajya Vidyut Utpadan Nigam Ltd. (RRVUNL) at Ramgarh, located at a distance of 100 km from SGL Gas field. M/s GAIL will construct a gas pipeline to transport natural gas from SGL gas field to Langtalla to the power station. Gas production will be at the rate of 0.2 million metric standard cubic meter per day (MMSCMD) for initial period of one year and thereafter at the rate of 0.95 (MMSCMD) for a period of 12 years. Cost of the project will be Rs.1195.00 crores.

3.0 Requisite processing facilities which will include (i) 2 nos of flow manifold for 8 wells each with one test header; (ii) 2 nos of three phase inlet separator having 65 MMScf/day capacity each; (iii) 1 no. of glycol gas dehydration unit having capacity of 65 MMScf/day each; (iv) 1 no. of glycol regeneration unit dedicated to individual dehydration unit; (v) 1 no. of heat exchanger and low temperature separator for dew point control having a capacity of 65 MMScf/day; (vi) Sales gas metering skid consisting of 3 meter run, each having a capacity of 100 MMScf/day (2 working and 1 stand by); (vii) 2000 Bbls/day capacity condensate stabilizer, re-boiler, run down cooler and flash gas compressor; (viii) 3 nos of condensate

storage having capacity of 1000 bbls each with offloading system; (ix) water disposal system after de-salination at surface; (x) 1 test separator with capacity of 50 MMScf/day to test individual well periodically and for production allocation and optimization; (xi) Slug catcher having 1000 Bbls capacity; (xii) close drain vessels and pumps (xiii) Pig launcher suitable for intelligent pigging of lines; (xiv) 1 no. of CO₂ removal unit having capacity of 65 MMScf/day each; (xv) provision of ESD system as per API norms; (xvi) 1 fire fighting system including fire tender, fire water system and safety equipments; (xvii) suitable nos of fire extinguishers, first aid and life saving drugs and equipments; (xviii) 2 nos of gas turbine driven centrifugal gas compressor with suction, scrubber and after cooler, each having capacity of 65 MMScf/day. Out of two units, one will be acting as standby; (xix) 2 nos of gas turbine generator and one emergency diesel generator; (xx) one portable generator; (xxi) utility consisting of flare system, instrument air compressor, fuel gas system/ hot oil system, close drain, open drain, diesel storage, portable water treatment system etc; (xxii) control system consisting of processing control and monitoring with safety system; (xxiii) SCADA with remote supervision facility and (xxiv) electrical and instrumentation with auxiliaries for the facilities etc.

4.0 Water requirement of 50 m³/day for each well during drilling will be met from the bore wells. Water requirement for production facilities will be 40 m³/d during the project life. Liquid effluent will be in the form of waste drilling fluid (200 – 500 m³/well) will be mixed with local soil/sand and will be disposed of in on site land fill site. Waste water generated as a result of washing of drill cuttings, silt and sand (5 m³/day). Formation water produced during gas production will be treated and reused. Unused treated formation water will be allowed to dry by solar evaporation. Domestic effluent (10 m³/day) will be disposed through septic tank/soak pit. Power requirement of 1850 KW will be met from the 3 mobile DG sets. Fuel requirement for the DG sets will be HSD (8-10 Kl/day). On commencement of gas production, gas turbine generator and gas compressor will meet power requirement of 0.5 MW. Gaseous emissions from the DG sets will be dispersed through stack height of 4m.

5.0 The company will use water based mud. Drilling fluid will be recycled. The waste water based mud will be stored in disposal pit lined with HDPE sheet. Solid waste generation will be in the form of drill cuttings (250-500 m³/ well). Oily drill cuttings will be biodegraded using bacterial culture & nutrients for removal of oil. On attaining the oil content of less than 10 g/kg drill cuttings will be disposed in on- site land fill site. Used oil (0.3 m³) will be sold to MoEF / RSPCB approved recyclers. Discarded containers (20 nos./month) will be sold to recyclers.

6.0 The offshore/onshore oil & gas exploration projects have been listed at S. no. 1 (b) as category 'A' projects as per the EIA notification 2006. The proposal was considered by the Expert Appraisal Committee (I) in its 95th meeting held on 15-17th June, 2009. The Committee recommended the proposal for grant of environmental clearance subject to specific and general conditions as per para 7(ii) of EIA Notification, 2006 considering this is an extension of existing activity in the same block RJ-ONN/6 area which covers SGL gas field area.

7.0 Based on the information submitted by the project authorities, the Ministry of Environment and Forests hereby accords environmental clearance to above project 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 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.
- ii. 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.
- iii. The surface facilities shall be installed as per applicable codes and standards, international practices and applicable local regulations.
- iv. The top soil removed shall be stacked separately for reuse during restoration process.
- v. 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.
- vi. 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.
- vii. 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 the company's web site.
- viii. 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.
- ix. Company shall construct the garland drain around the drilling site to prevent runoff of oil containing waste into the nearby water bodies.
- x. The recyclable waste (oily sludge) and spent oil shall be disposed to the authorized recyclers.

- xi. 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.
- xii. 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.
- xiii. Pre hire rig inspection, safety meetings, tool box meeting, job safety analysis and audits shall be carried out to identify hidden /potential hazardous.
- xiv. 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.
- xv. 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.
- xvi. 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.
- xvii. 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.
- 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 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.
- xix. 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.
- xx. Occupational health surveillance of the workers shall be carried out as per the prevailing Acts and Rules.

B: GENERAL CONDITIONS:

- i. 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 Lucknow /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 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 by e-mail.
- xii. 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.
- xiii. 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:

- i) Secretary, Department of Environment and Forests, Government of Rajasthan, Jaipur.
- ii) Chief Conservator of Forests, Central Region, Ministry of Environment and Forests, B-1/72, Sector-A, Aliganj, Lucknow-226020.
- iii) Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD-cum-Office complex, East Arjun Nagar, New Delhi-1100032.
- iv) Chairman, Rajasthan State Pollution Control Board, 4, Institutional area, Jhalana, Doongri, Jaipur.
- v) Ministry of Environment and Forests, CGO Complex, Lodhi Road, New Delhi
- vi) Monitoring Cell, Ministry of Environment & Forests.
- vii) Monitoring file/Guard File/Record File.


(Dr. P. L. Ahujarai)
Director