

F. No. J-11011/660/2007- IA II (I)
Government of India
Ministry of Environment and Forests
(I.A. Division)

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Dated: 6th May, 2008

To,

Shri Santosh Gupta
Head Environment
M/s Essar Oil Limited (EOL).
Essar House, P.O. Box – 7945, Mahalaxmi
Mumbai -400 034
Maharashtra

Email: jarafat@essar.com / gudayabhaskar@essar.com

Sub: Exploration Drilling Activity for Coal Bed Methane (CBM), in CBM Block, RG (East) –CBM-2001/1, Raniganj West Bengal by M/s Essar Oil Limited – Environmental Clearance reg.

Sir,

This has reference to your letter No. EOL/ENV/EC/08-03 - dated 10th March, 2008 on the above-mentioned project seeking environmental Clearance.

2. The Ministry of Environment and Forests has examined your application. It is noted that proposal is for environmental clearance for coal bed methane exploration in CBM Block, RG (East) –CBM-2001/1, Raniganj West Bengal. Total Area of the block is 500 sq km The block is located in three districts of Burdwan, Birbhum and Bankura in West Bengal. About 50 % of the Block area is located in the Burdwan district. It is proposed to drill 12 numbers of core holes and 15 number of test wells. About 100m X 100 m of land will be acquired on temporary lease basis. Total land requirement for 12 core holes and 15 test wells drilling is about 3.0 and 15.0 ha respectively. Depth of each well would be 900m -1100m. About 25 m³/d of water will be required for each well which will be met from the local water suppliers. Power requirement of 1500 HP will be met from the two nos. of 250 KVA each of DG Set. Water based mud will be used as drilling fluid in core hole. Drill cuttings comprising of shale, sands, clays will be stored in the HDPE lined pits at the well site. No national park /wild life sanctuary/biosphere reserve, etc. is located within 10 km radius of the proposed location. The unspent oil will be sold to the registered recyclers. Public hearing of the project was held on 5.2.2008. The total cost of the project is Rs.40 crores.

3. 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. 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.

- ii. 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.
- iii. The company shall monitor data on methane and non-methane hydrocarbons and data submitted to the Ministry.
- iv. The drilling shall be restricted to the mine free area. The company shall use water based drilling mud.
- v. The surface facilities shall be installed as per applicable codes and standards, international practices and applicable local regulations.
- vi. The top soil removed wherever suitable shall be stacked separately for reuse during restoration process.
- vii. 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.
- viii. The Company shall take necessary measures to prevent fire hazards and soil remediation as needed. At place of ground flaring, the flare pit shall be lined with refractory bricks and efficient burning system shall be provided. In case of overhead flare stacks, the stack height shall be provided as per the norms to minimize gaseous emissions and heating load during flaring.
- ix. The produced water during drilling operations shall be collected in the lined waste pits to prevent ground water contamination. The water shall be treated to the prescribed standards before disposal. The treated produced water shall be used for irrigation, pisci-culture and ground water recharge etc.
- x. To prevent underground coal fire, preventive measures shall be taken for ingress of ambient air during water withdrawal inside the coal seams by adopting technologies including vacuum suction. Gas detectors for detection of CH₄ and H₂S shall be installed
- xi. 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.
- xii. Proper infrastructure and sanitation facilities shall be provided for the construction workers during construction. All the construction wastes shall be managed so that there is no impact on the surrounding environment.
- xiii. The Company shall take necessary measures to prevent fire hazards, containing oil spill and soil remediation as need
- xiv. The project proponent shall also comply with the environmental protection measures and safeguards recommended in the EIA /EMP / risk analysis report as well as the recommendations of the public hearing panel.

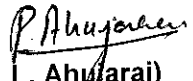
- xv. To prevent well blowouts during drilling operations, Blow Out Preventor (BOP) system shall be installed. Blow Out Prevention measures during drilling shall focus on maintaining well bore hydrostatic pressure by proper pre-well planning and drilling fluid logging etc.
- xvi. Occupational health surveillance of the workers shall be carried out as per the prevailing Acts and Rules.
- xvii. 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.
- xviii. In case the commercial viability of the project is established, the company will prepare a detailed plan for development of CBM block to obtain fresh clearance from this Ministry.

B. GENERAL CONDITIONS:

- i. 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.
- ii. The project authorities must strictly comply with the rules and regulations under Manufacture, Storage and Import of Hazardous chemicals Rules, 1989 as amended in 2000. Prior approvals from Chief Inspectorate of Factories, Chief Controller of Explosives, Fire Safety Inspectorate etc. must be obtained, wherever applicable.
- iii. The project authorities must strictly comply with the rules and regulation with regarding to handling and disposal of Hazardous Wastes (Management and Handling) Rules, 1989/ 2003 wherever applicable. Authorization form the State Pollution Control Board must be obtained for collections/treatment/storage/disposal of hazardous wastes.
- 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 dBA (daytime) and 70 dBA (nighttime).
- 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.
- vi. 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.

- vii. The Regional Office of this Ministry at Bhubaneswar/Central Pollution Control Board/State Pollution Control Board will monitor the stipulated conditions. A six monthly compliance report and the monitored data along with statistical interpretation shall be submitted to them regularly.
 - viii. 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.
 - ix. 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.
4. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
 5. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner will implement these conditions.
 6. Any appeal against this environmental clearance shall lie with the National Environment Appellate Authority, if preferred within a period of 30 days as prescribed under Section 11 of the National Environment Appellate Authority Act, 1997.
 7. 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, Hazardous Wastes (Management & Handling) Rules, 1989, 2003 and the Public Liability Insurance Act, 1991 along with their amendments and rules.


(Dr. P. L. Ahujarai)
Director

Copy to:-

2. The Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110032.
3. The Chairman, West Bengal Pollution Control Board, Parivesh Bhawan, 10A Block-LA Sector-III, Salt Lake, Calcutta- 700091.
4. The Chief Conservator of Forests, Regional Office (EZ), Ministry of Environment and Forests A-3 Chandrashekharapur, Bhubaneswar – 751 023
5. The Secretary, State Department of Environment, Govt. of West Bengal, Kolkata.
6. Monitoring Cell, Ministry of Environment and Forests, Paryavaran Bhavan, CGO Complex, New Delhi.
7. Guard File.
8. Monitoring File.
9. Record File.


(Dr. P. L. Ahujarai)
Director