

F. No. J-11011/439/2011- IA II (I)  
Government of India  
Ministry of Environment and Forests  
(I.A. Division)

Paryavaran Bhawan  
CGO Complex, Lodhi Road  
New Delhi - 110 003

E-mail : vp.upadhyay@nic.in  
Telefax : 011: 2436 2875  
Dated 16<sup>th</sup> September, 2013

To,

Shri A. A. Khan, Executive Director -Asset Manager  
M/s Oil & Natural Gas Corporation Ltd. (ONGCL)  
SC-3, Godavari Bhavan, Base Complex,  
Lala Cheruvu, Rajahmundry-533 106, A.P.

E-mail: [sharma\\_js@ongc.co.in](mailto:sharma_js@ongc.co.in)/[sharmajswarup@hotmail.com](mailto:sharmajswarup@hotmail.com) ; Fax No.: 0883-2434386.

Subject: Development Drilling of Wells (on-land, 24 Development Wells) and establishment of Early Production Facilities (one) at Malleswaram, District Krishna, A.P. by M/s Oil & Natural Gas Corporation Ltd. (ONGCL) - Environmental Clearance reg.  
Ref. : Your letter no. ONGC/CHSE/EC/KG-OSN/2012-13 dated 4<sup>th</sup> January, 2013.

Sir,

This has reference to your letter dated 4<sup>th</sup> January, 2013 alongwith Form-1, Prefeasibility Report, EIA/EMP report regarding above mentioned subject.

2.0 The Ministry of Environment & Forests has examined your application. It is noted that proposal is for drilling of development wells (on-land, 24 Wells) and establishment of Early Production Facilities (one) at Malleswaram, District Krishna, Andhra Pradesh. Out of 24 wells, 16 wells will be drilled in ML Block (46.60 sq km) out of total block area of PEL-1A (1518.50 sq km). 8 wells will be drilled in ML Block (303.10 sq. km) out of total block area of PEL-1B (2108 sq km). Land to be acquired 4-5 acres per well. Depth of well will be vary from 2000m-4000m. Early Production system will have handling capacity of liquid (Oil and Water; 450 m<sup>3</sup>/day), gas ( 30,000 M<sup>3</sup>/day) and effluent (120 m<sup>3</sup>/day). Total cost of the project is Rs. 264.00 Crore. Rs. 13.5 Lakhs per well have been earmarked towards Capital cost and recurring cost for implementation of EMP. Development wells will be located at following locations:

S.N.	Fields	Proposed Wells
1	Mandapeta	1
2	Pasarlapudi	3
3	GS-23	1
4	Malleswaram	13
5	Kammapalem	2
6	Kaikalur	3
7	Gopavaram	1

Following process facilities will be installed:

S.N.	Facility	Qty.
1	Bath Heater	1 No.
2	Heater Treater	01 No.
3	Vertical Separators	3 Nos.
4	Horizontal Tanks of 40 m <sup>3</sup> each	4 Nos.
5	Horizontal Tanks of 45 m <sup>3</sup> each	4 Nos.

3.0 Air emissions from D.G. sets will be controlled by providing adequate stack height. Gas production during testing will be flared. Total water requirement from tanker supply will be 25

GGM - ASSET MANAGER

DAK No. 132

Date. 24/9/13

Date.

25/9/13

S.M / S.M / EIC / JSE

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ARUN NANGIA  
GGM - HES  
Asset Manager (ONGC)  
ONGC, Rajahmundry

m<sup>3</sup>/day/well for drilling process. Water based drilling mud will be used. Effluent generation during drilling operation will be 5 m<sup>3</sup>/day. The drilling mud carrying cuttings will be separated and recycled to maximum extent and non usable portion will be stored in HDPE lined pit. Produced water (11.5 m<sup>3</sup>/day) will be treated in effluent treatment plant (ETP). Treated produced water shall be disposed off through injection well after meeting the standards. Domestic effluent will be disposed of through septic tank followed by soak pit. No effluent will be discharged outside the premises and 'Zero' effluent discharge concept will be adopted. Drill cuttings and non-usable drilling mud will be stored in HDPE lined pit. Disposal of drill cuttings and drill mud will be carried out in accordance with the GSR 546 (E) dated 30<sup>th</sup> August, 2005. Used oil will be sold to authorized recyclers.

4.0 The proposal was considered by the Expert Appraisal Committee (Industry) in its meetings held during 16<sup>th</sup> - 17<sup>th</sup> February, 2012 and 16<sup>th</sup> - 17<sup>th</sup> May, 2013 respectively.

5.0 The projects related to offshore and onshore Oil and Gas exploration, development and production are listed in para 1(b) of schedule of EIA Notification, 2006 covered under category 'A' and appraised at Central level.

6.0 Public Hearing/Public Consultation meeting was exempted under section 7 (ii) of EIA Notification, 2006.

7.0 The Ministry of Environment and Forests hereby accords environmental clearance to the above project under the provisions of EIA Notification dated 14<sup>th</sup> September, 2006 subject to strict compliance of the following specific and general conditions:

**A. SPECIFIC CONDITIONS :**

- i. Gas produced during testing shall be flared with appropriate flaring booms. The flare system shall be designed as per good oil field practices and Oil Industry Safety Directorate (OISD) guidelines. The stack height shall be provided as per the regulatory requirements and emissions from stacks will meet the MOEF/CPCB guidelines.
- ii. 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 16<sup>th</sup> November, 2009 for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, CH<sub>4</sub>, HC, Non-methane HC etc.
- iii. Approach road shall be made pucca to mitigate generation of suspended dust.
- iv. The company shall make the arrangement for control of noise from the drilling activity. Acoustic enclosure should be provided to DG sets and proper stack height should be provided as per CPCB guidelines.
- v. Total water requirement shall not exceed 25 m<sup>3</sup>/day/well and prior permission should be obtained from the Competent Authority.
- vi. 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 should conform to CPCB standards.
- vii. 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 should 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 should be submitted to Ministry's Regional Office at Bangalore.

- viii. Produced water (11.5 m<sup>3</sup>/day) shall be treated in ETP. Treated produced water shall be disposed off through injection well as per CPCB/MoEF guidelines.
- ix. Good sanitation facility shall be provided at the drilling site. Domestic sewage shall be disposed off through septic tank/ soak pit.
- x. 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.
- xi. 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 30<sup>th</sup> August, 2005.
- xii. 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.
- xiii. The company shall develop a contingency plan for H<sub>2</sub>S release including all necessary aspects from evacuation to resumption of normal operations. The workers shall be provided with personal H<sub>2</sub>S detectors in locations of high risk of exposure along with self containing breathing apparatus.
- xiv. 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 its Regional Office at Bangalore.
- xv. Blow Out Preventer (BOP) system shall be installed to prevent well blowouts during drilling operations. BOP measures during drilling should focus on maintaining well bore hydrostatic pressure by proper pre-well planning and drilling fluid logging etc.
- xvi. Emergency Response Plan (ERP) shall be based on the guidelines prepared by OISD, DGMS and Govt. of India.
- 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 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.
- xviii. Bioremediation plan of abandonment sites in the whole lease area shall be explored in addition to measures as stipulated at (xvi) above.
- xix. Occupational health surveillance of the workers shall be carried out as per the prevailing Acts and Rules.
- xx. Restoration of the project site shall be carried out satisfactorily and report shall be sent to the Ministry's Regional Office at Bangalore.
- xxi. Oil content in the drill cuttings should be monitored by some Authorized agency and report shall be sent to the Ministry's Regional Office at Bangalore.
- xxii. Company shall have own Environment Management Cell having qualified persons with proper background.
- xxiii. Company shall prepare operating manual in respect of all activities. It should 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.

**B. GENERAL CONDITIONS:**

- i. The project authorities must strictly adhere to the stipulations made by the Andhra Pradesh Pollution Control Board (APPCB), State Government and any other statutory authority.
- 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 project authorities must strictly comply with the rules and regulations under Manufacture, Storage and Import of Hazardous Chemicals Rules, 2000 as amended subsequently. Prior approvals from Chief Inspectorate of Factories, Chief Controller of Explosives, Fire Safety Inspectorate etc. must be obtained, wherever applicable.
- 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 (day time) and 70 dBA (night time).
- 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. A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad / 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 web site of the company by the proponent.
- vii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the MOEF, the respective Zonal Office of CPCB and the APPCB. The criteria pollutant levels namely; PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, HC (Methane & Non-methane), VOCs (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.
- viii. The project proponent shall also submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MOEF, the respective Zonal Office of CPCB and the APPCB. The Regional Office of this Ministry / CPCB / APPCB shall monitor the stipulated conditions. Environmental Clearance and six monthly compliance status reports shall be posted on the website of the company.
- ix. The environmental statement for each financial year ending 31<sup>st</sup> March in Form-V as is mandated to be submitted by the project proponent 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 alongwith the status of compliance of environmental conditions and shall also be sent to the respective Regional Offices of the MOEF by e-mail.
- x. 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 APPCB and may also be seen at Website of the Ministry of Environment and Forests at

<http://envfor.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 Regional office.

- xi. 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 shall implement these conditions.

10.0 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.

  
(V P Upadhyay)  
Director

Copy to:

1. The Principal Secretary, Department of Environment, Forest, Science & Technology, Government of Andhra Pradesh, Hyderabad, A.P.
2. The Chief Conservator of Forests, Regional Office (Southern Zone, Bangalore)Kendriya Sadan, 4th Floor, E&F Wing, II Block Koramangala, Bangalore-560034.
3. The Chairman, Central Pollution Control Board Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, New Delhi - 110 032.
4. The Chairman, Andhra Pradesh Pollution Control Board, Paryavaran Bhawan, A-III, Industrial Estate, Sanath Nagar, Hyderabad - A.P.
5. Joint Secretary, IA II(I), Ministry of Environment and Forests, Paryavaran Bhavan, CGO Complex, New Delhi.
6. Monitoring Cell, Ministry of Environment and Forests, Paryavaran Bhavan, CGO Complex, New Delhi.
7. Guard File/Monitoring File/Record File.

  
(V P Upadhyay)  
Director