



OIL AND NATURAL GAS CORPORATION LTD.

Health, Safety & Environment (HSE) Department, KG Basin

Room No. 08, 8th Floor, CMDA Tower-I, East Wing.

No.1, Gandhi Irwin Road, Egmore, Chennai- 600 008.

e-mail: hsekgb2011@gmail.com

Phone: 044-28573832 Fax: 044-28542527

No: ONGC / KG-PG / HSE / EC / 2011-12

Dated: 05.06.2012

From: M. Haragopal, Chief Chemist. HSE – KG Basin.

✓ To: DGM (CC), in-charge, Corporate Communications, , 8th Floor, CMDA Tower-I, East Wing,
CMDA Towers, Chennai- 600 008

Sub: Publication of Environmental Clearance order in two local newspapers, one in English and one in Telugu

Ref: EC order No. F. No. J-11011/474/2010- IA II (I) dated 18th May, 2012 (copy enclosed)

As per above EC orders,

Quote:

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.

Unquote.

Copies of the paper cuttings of the advertisements of both the enclosed EC orders may be forwarded to In-charge, HSE, KG-PG Basin, 08E, 8th Floor, CMDA building, Egmore, Chennai, for submission to MoEF through CHSE, Delhi.

M. Haragopal

Copy for Information to
EA, Basin Manager, KG-PG Basin

F. No. J-11011/474/2010- 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 : lk.bokolia@nic.in
Telefax : 011: 2436 6017
Dated 18th May, 2012

To,

Shri Anoop Kumar, Executive Director & Chief HSE,
M/s ONGC Limited,
8th Floor, Core-4, Scope Minar,
Laxmi Nagar,
Delhi-92

E-mail : sharma_js@ongc.co.in ; anoopkumar2k@yahoo.com

Subject: Exploratory Drilling of Additional 24 On-land Wells in K.G. Basin by M/s Oil and Natural Gas Corporation Ltd. (ONGCL) under revised Minimum Work Program – Environmental Clearance reg.

Ref. : Your letter no. ONGC/CHSE/EC/11 dated 25th November, 2011.

Sir,

This has reference to your letter dated 25th November, 2011 alongwith Form-1, Prefeasibility Report, EIA/EMP report alongwith public hearing report regarding above mentioned subject.

2.0 The Ministry of Environment & Forests has examined your application. It is noted that proposal is for exploratory drilling of additional 24 On-land wells in K.G. Basin under revised Minimum Work Program. Proposed drilling depth is 3000-4000 m. Cost of the project is Rs. 731.00 Crores. No forest land is involved. Following wells will be drilled:

S.N.	Work Centre	Block	Block Area in Sq. Km.	No. of wells
1	KG basin	Exploratory Drilling in PEL-1A Block in KG on-land	1518.5	4
2		Exploratory Drilling in PEL-1B Block in KG on-land	2108	20

3.0 Air emissions from D.G. sets will be dispersed by providing adequate stack height. Water requirement will be 25 m³ / day out of which, 15 m³ / day for mud preparation and 10 m³ / day for domestic use. Wastewater generation during drilling operation will be 16 m³/day. Effluent will be treated in ETP comprising equalization, chemical coagulation, flocculation and clarification by settling and treated water will be disposed off in waste pit. During drilling operation, 200 m³ per well of wet drill cutting will be generated. Drill cutting (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.

4.0 The proposal was considered by the Expert Appraisal Committee (Industry-2) in its 17th & 30th meetings held during 22nd-23rd December, 2010 and 15th-16th December, 2011 respectively.



Dr. J.S. Singh
G. Kumar
BLM - onland
HSE

5.0 All 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 centre level.

6.0 Public hearings were held on 11th October, 2011, 4th November, 2011 and 30th November, 2011.

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

A. SPECIFIC CONDITIONS :

- i. As proposed, only 24 Nos. exploratory wells shall be drilled. No additional wells shall be drilled without prior permission from this Ministry.
- ii. Decision of the High Court of AP in the matter of WP No. 13341 of 2008 does not get prejudiced by this EC.
- iii. 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.
- iv. 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, PM_{2.5}, SO₂, NO_x, CO, CH₄, HC, Non-methane HC etc.
- v. Mercury shall also be analyzed in air, water and drill cuttings twice during drilling period.
- vi. Approach road shall be made pucca to minimize generation of suspended dust.
- vii. 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.
- viii. Total fresh water requirement from ground water source shall not exceed 25 m³/day/well and prior permission shall be obtained from the concerned authorities.
- ix. 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.
- x. Good sanitation facility shall be provided at the drilling site. Domestic sewage shall be disposed off through septic tank/ soak pit.
- xi. 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 landfill shall be created at the site as per the design approved by the CPCB and

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obtain authorization from the SPCB. Copy of authorization or membership of TSDP shall be submitted to Ministry's Regional Office at Bangalore.

- xii. Oil spillage prevention and mitigation 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.
- xiii. Ground water analysis shall be carried out at different depth to see stratification.
- xiv. 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.
- xv. 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.
- xvi. 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.
- xvii. 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.
- xviii. Blow Out Preventor (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.
- xix. Emergency Response Plan (ERP) shall be based on the guidelines prepared by OISD, DGMS and Govt. of India.
- xx. 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 the area in 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. Remote monitoring of site shall be done.
- xxi. Occupational health surveillance of the workers shall be carried out as per the prevailing Acts and Rules.
- xxii. 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.
- xxiii. Restoration of the project site shall be carried out satisfactorily and report shall be sent to the Ministry's Regional Office at Bangalore.
- xxiv. 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 Bangalore.

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- xxv. Under Corporate Social Responsibility (CSR), sufficient budgetary provision shall be made for health improvement, education, water and electricity supply etc. in and around the project.
- xxvi. Company shall have own Environment Management Cell having qualified persons with proper background.
- xxvii. Company shall prepare and circulate the environmental policy.
- 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. Drilling site shall be at least 500 m away from the school.

B. GENERAL CONDITIONS:

- i. The project authorities must strictly adhere to the stipulations made by the A.P. 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 (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. 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.



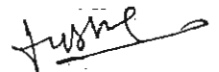
The criteria pollutant levels namely, PM₁₀, SO₂, NO_x, HC (Methane & Non-methane), VOCs (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.

- 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.
- ix. The environmental statement for each financial year ending 31st 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 shall 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 and Transboundary Movement) Rules, 2008 and the Public (Insurance) Liability Act, 1991 along with their amendments and rules



(Lalit Bokolia)
Joint 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.