

F. No. J-11011/842/2007-IA II (I)
Government of India
Ministry of Environment and Forests
(I.A. Division)

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Dated 14th January, 2011

✓ To,

Shri T.P. Vasanthakumar, DGM (Chem)
M/s Oil and Natural Gas Corporation Ltd. (ONGCL)
Cauvery Basin, CMDA Tower-II
No.1, Gandhi Irwin Road, Egmore
Chennai-600 008, Tamil Nadu.

E-mail: sharma_js@ongc.co.in; Fax No. : 033-22483378 / 044-28542555.

Subject: Exploratory Drilling (on-land) in NELP-VI, Block CY-ONN-2004/1 in Chidambaram area and CY-ONN-2004/2 in Pandanallur area of Cauvery Basin in Tamil Nadu by M/s Oil and Natural Gas Corporation Ltd. – Environmental clearance reg.

Ref. : Your letter no. CB/HSE/NELP/2010-11 dated 13th August, 2010.

Sir,

This has reference to your letter no. CB/HSE/NELP/2010-11 dated 13th August, 2010 on the above mentioned subject alongwith project documents including Prefeasibility Report, Draft Terms of References, EIA/EMP report, public hearing report and subsequent communications vide letters dated 14th October, 2010 on the above mentioned subject.

2.0 The Ministry of Environment & Forests has examined your application. It is noted that the project involves on-shore Exploratory Drilling (on-land) in NELP-VI, Block CY-ONN-2004/1 in Chidambaram area and CY-ONN-2004/2 in Pandanallur area of Cauvery Basin in Tamil Nadu by M/s Oil and Natural Gas Corporation Ltd. Block CY-ONN-2004/1 is covered in 214 Km² of Cauvery basin. Four wells will be drilled. Total cost of the project will be 12.29 million USD. Following are the details of location:

S.N.	Location	TD (m)	Co-ordinates
1	CY-ONN-2004-1-A	4900/ Basement	Lat: 11°22'46.18" ; Long: 79°39'51.74" X-354288.31 ; Y-1258176.38
2	CY-ONN-2004-1-B	5000/ Basement	Lat: 11°25'22.77" ; Long: 79°42'1.36" X-358238.25 ; Y- 1262968.62

Block CY-ONN-2004/2 is covered in 375 Km² of Cauvery basin. Four wells will be drilled. Total cost of project will be 19.58 million USD. Following are the details of location:

S.N.	Location	TD (m)	Co-ordinates
1	CY-ONN-2004-2-A	4200/ Basement	Lat: 11°12'17.89" ; Long: 79°25'39.48" X-328351.08 ; Y-1239008.24
2	CY-ONN-2004-2-C	3150/ Basement	Lat: 11°09'38.23" ; Long: 79°18'20.96" X-315021.99 ; Y- 1234176.47

3.0 Drilling of deep wells will be for 30-50 days. If exploratory drilling is successful, ONGC may go for development at activities including facilities for production, pipelines and development wells.

4.0 Emissions from DG sets will be controlled by providing stacks of adequate height. Total water requirement from supply base will be 20-30 m³/day. All the effluent will be treated, recycled or disposed as per guidelines. Spent oil will be sent to base for disposal. Facilities for the treatment of solid waste/drilled rock cuttings will be provided on drilling rig. Only water based drilling mud will be used. Drill cuttings will be generated during drilling of well and no drill cuttings will be disposed to sea.

5.0 Public Hearing / Public Consultation meeting for CY-ONN-2004/2 and CY-ONN-2004/1 was held on 8th June, 2010 and 22nd June, 2010 respectively as per EIA Notification, 2006.

6.0 The proposal was considered by the Expert Appraisal Committee (Industry-2) in its 73rd and 16th meeting held during 24th-26th October, 2007 and 18th-19th November, 2010. The Committee recommended the proposal for environmental clearance.

7.0 Based on the information submitted by the project proponent, 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. 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. and reports submitted to the Ministry's Regional Office at Bangalore.
- ii. The stacks of adequate height shall be provided to DG sets as per the regulatory requirements and emissions from stacks shall meet the MOEF/CPCB guidelines.
- iii. Mercury shall also be analyzed in air, water and drill cuttings twice during drilling period.
- iv. The company shall make the arrangement for control of noise from the drilling activity and DG sets and meet DG set norms notified by the MoEF.
- v. Approach road shall be made pucca to minimize generation of suspended dust.
- vi. The flare system shall be designed as per good oil field practices and oil industry Safety Directorate (OISD) guidelines.
- vii. 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 and drill cutting (DC) wash water shall be treated to conform to limits notified under the Environment (Protection) Act, 1986 before disposal. The treated effluent shall be monitored regularly.
- viii. Total ground water requirement shall not exceed 30 m³/day/well and prior permission shall be obtained from the concerned agency. A copy of the permission letter shall be submitted to the Ministry's Regional Office at Bangalore.


- ix. Only water based drilling mud shall be used. The drilling mud shall be recycled. Hazardous waste shall be disposed of as per Hazardous Waste (Management, Handling and Transboundary Movement) Rules, 2008. Quantities of storage of chemicals and additives required for drilling mud preparation shall be below the specified threshold for specified storage permitted under the MSIHC Rules.
- x. 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.
- 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 land fill shall 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 shall be submitted to Ministry's Regional Office at Bangalore.
- xii. Oil spillage 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. 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.
- xiv. 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. To prevent fire and explosion at Oil and Gas facility, potential ignition sources shall be kept to a minimum and adequate separation distance between potential ignition sources and flammable material shall be in place.
- xv. 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.
- xvi. 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.
- xvii. 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.
- xviii. Emergency Response Plan (ERP) shall be based on the guidelines prepared by OISD, DGMS and Govt. of India.
- xix. 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 are 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.

- xx. The top soil removed shall be stacked separately for reuse during restoration process.
- xxi. Restoration of the project site shall be carried out satisfactorily and report shall be sent to the Ministry's Regional Office at Bangalore
- xxii. Occupational health surveillance of the workers shall be carried out as per the prevailing Acts and Rules.
- xxiii. 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.
- xxiv. The project proponent shall also comply with the environmental protection measures and safeguards recommended in the EIA / EMP report.
- xxv. The surface facilities shall be installed as per applicable codes and standards, international practices and applicable local regulations.
- xxvi. Pre-hire rig inspection, safety meetings, tool box meeting, job safety analysis and audits shall be carried out to identify hidden potential hazardous.
- xxvii. The design, material of construction, assembly, inspection, testing and safety aspects of operation and maintenance of pipeline and transporting the natural gas/oil shall be governed by ASME/ANSI B 31.8/B31.4 and OISD standard 141.
- xxviii. All the commitments made during the Public Hearing / Public Consultation meeting held on 8th June, 2010 and 22nd June, 2010 shall be satisfactorily implemented and adequate budget provision shall be made to comply with all the issues raised during public hearing.
- xxix. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, Safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

B. GENERAL CONDITIONS:

- i. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board (SPCB), 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 project authorities must strictly comply with the rules and regulation with regarding to handling and disposal of Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008 wherever applicable. Authorization from the State Pollution Control Board must be obtained for collections/treatment/storage/ disposal of hazardous wastes.
- v. 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).
- vi. A separate Environmental Management Cell equipped with full fledged laboratory facilities must be set up to carry out the environmental management and monitoring functions.
- vii. The project authorities shall 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.
- viii. The Regional Office of this Ministry/Central Pollution Control Board/ State Pollution Control Board shall monitor the stipulated conditions. A six monthly compliance report and the monitored data alongwith statistical interpretation shall be submitted to them regularly.
- ix. 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.
- x. 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 SPCB. The criteria pollutant levels namely; SPM, RSPM, 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.
- xi. 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 SPCB. The Regional Office of this Ministry / CPCB / SPCB shall monitor the stipulated conditions.
- xii. 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.
- xiii. 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 SPCB 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.

- xiv. 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 and Handling) Rules, 2003 and the Public (Insurance) Liability Act, 1991 along with their amendments and rules


(Dr. P. B. Rastogi)
Director

Copy to :

1. The Secretary (Environment) Govt. of Tamil Nadu, Fort St. George, Chennai - 560 560, Tamil Nadu.
2. The Chairman, Tamil Nadu Pollution Control Board, 100, Anna Salai, Guindly, Chennai-600 032, Tamil Nadu.
3. The Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110 032.
4. The Chief Conservator of Forests (Central), Regional Office (SZ), Kendriya Sadan, 4th Floor, E&F Wings, 7th Main Road, 2nd Block, Koramangala, Bangalore - 560034, Karnataka.
5. Adviser (IA-II), Ministry of Environment and Forests, Paryavaran Bhawan, CGO Complex, New Delhi.
6. Monitoring Cell, Ministry of Environment and Forests, Paryavaran Bhawan, CGO Complex, New Delhi.
7. Guard / Monitoring / Record file


(Dr. P. B. Rastogi)
Director