

F. No. J-11011/188/2013- IA II (I)
Government of India
Ministry of Environment, Forest and Climate Change
(I.A. Division)

Indira Paryavaran Bhawan
Aliganj, jorbagh Road
New Delhi – 110 003

E-mail : lk.bokolia@nic.in
Telefax : 011: 24695313
Dated: 10th September, 2015

To,
Lt Col Jitender Prasad, Basin Manager (Cauvery Basin)
M/s ONGC,
11th Floor, East Wing,
CMDA Tower-I,
No.1, Gandhi-Irwin Road,
Egmore, Chennai-600 008

Subject: Exploratory Drilling of 10 Wells in NELP-VI, Onshore Block CY-ONN-2004/2 in Ariyalur District, Tamil Nadu by M/s ONGC Ltd. – Environmental Clearance reg.
Ref : Your online proposal no. IA/TN/IND/19111/2013 dated 9th January, 2015.

Sir,
This has reference to your online proposal no. IA/TN/IND/19111/2013 dated 9th January, 2015 alongwith project documents including Form I, Terms of References, Pre-feasibility Report and EIA/EMP Report regarding above mentioned project.

2.0 The Ministry of Environment, Forest and Climate Change has examined your application. It is noted that proposal is for the exploratory drilling of 10 Wells in NELP-VI, Onshore Block CY-ONN-2004/2 in Ariyalur District, Tamil Nadu by M/s ONGC Ltd. The block was awarded to ONGC (80 %) & BPCL (20%) with ONGC as operator. The production sharing contract (PSC) between ONGC and BPCL was signed on 02.03.2007. The Petroleum Exploration License (PEL) was granted w.e.f. 30.05.2008 for 7 years. The cost of drilling project is Rs. 200.00 Crore. Block area is 375 Km². Environmental clearance was obtained for 4 locations vide MoEF letter no. J-11011/842/2007-IA II(I) dated 14th January, 2011. Now, it is proposed to drill additional 10 wells. The target depth of drilling of these wells is 3000-4500 m. It is reported that no wild life sanctuaries or national parks are located within 10 km distance. Forest land is not involved. The Coordinates of the tentative proposed locations are as under:

Name of Locations	Latitude	Longitude	Accessibility
A1	11° 12' 22.53"	79° 27' 13.158"	Chennai-Gangaikondacholapuram X road- Kumbakonam NH (45c). 2.0 km from Gangaikondacholapuram X road towards Jayakondam (Highway 227).
A2/NPAI	11° 09' 38.862"	79° 22' 53.786"	Chennai-Gangaikondacholapuram X road-Annaikarai-Kumbakonam NH (45c). Annaikarai-Periyavalayam junction-Vanathirayanpattinam-Udayarpalayam road. Location just about 1.0 km north of Vanathirayanpattinam.
B2	11° 12' 12.12"	79° 29' 12.4"	Chennai-Gangaikondacholapuram X road-Kumbakonam NH.

25

			About 3 km from Gangaikondacholapuram X road in Kattagaram South village road.
B3	11° 07' 44.41"	79° 23' 6.808"	Chennai-Gangaikondacholapuram X road-Annaikarai-Kumbakonam NH (45c). Annaikarai-Periyapalayam junction-Udayarpalayam road. Periyapalayam X road -Angarayanallur East-Anaikudam road. Location 1.5 km East of Anaikudam.
B4	11° 08' 10.65"	79° 22' 03.548"	Chennai-Gangaikondacholapuram X road-Annaikarai-Kumbakonam NH (45c). Annaikarai-Periyapalayam junction-Udayarpalayam road. Periyapalayam X road -Angarayanallur East-Anaikudam road. 1.0 km west of Anaikudam x road.
B5	11° 08' 40.445"	79° 17' 51.414"	Chennai-Gangaikondacholapuram x road-Kumbakonam NH. Gangaikondacholapuram X road-Jayamkondam-Udayarpalayam town. Udayarpalayam –Thathanur. Location About 3 km east of Thathanur.
B6	11° 07' 2.543"	79° 20' 47.605"	Chennai-Gangaikondacholapuram X road-Annaikarai-Kumbakonam NH (45c). Annaikarai-Periyapalayam junction-Udayarpalayam road. Periyapalayam X road - AngarayanallurEast-Anaikudam road. 3.0 km west of Anaikudam x road.
B7	11° 07' 39.064"	79° 19' 2.931"	Chennai-Gangaikondacholapuram x road-Kumbakonam NH. Gangaikondacholapuram X road-Jayamkondam-Udayarpalayam town. Udayarpalayam –Thathanur. Location About 6.5 km east of Thathanur.
NPAE	11° 11' 3.32"	79° 15' 30.79"	Jayamkondam-Udayarpalayam-Paluvur Highway. About 4 km from Udayarpalayam towards Paranam –Kumiliyan road. Location is nearer to Paranam village.
BH1/ NPAF	11° 09' 28.775"	79° 13' 44.561"	Chennai-Gangaikondacholapuram X road-Annaikarai-Kumbakonam NH (45c). Annaikarai-Periyapalayam junction-Vanathirayanpattinam-Udayarpalayam. Udayarpalayam-Managathiroad(Highway227).Location about 2.5 km north of Managathi village.

3.0 Air emissions from D.G. sets will be dispersed by providing adequate stack height. Fresh water requirement from surface water source will be 25m³/day. Water based mud (WBM) will be used. Total wastewater generation will be around 6m³/day. 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. Disposal of drill cuttings and drill mud will be carried out in accordance with the GSR 546 (E) dated 30th August, 2005. Used oil will be sent to the Authorised recyclers. HSD (6 KLPD) will be used as fuel in rig and D.G. sets during drilling period. DG sets will be installed. Blow out prevention techniques will be part of drilling rig unit. Blow out preventers (BOP) will be installed to control fluid from the formation gushing to the surface. In the event the well is unsuccessful, the well bore will be cement plugged. All fuels, lubricants and chemicals will be kept in a well-designed storage facility with regular inventory checking. Used and unused chemicals will be stored in a lined & bounded area. Waste oil/spent oil/waste batteries will be sold to registered recyclers/re-processors. DG set (3 x 1250 KVA) will be installed.

4.0 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.

5.0 Public Hearing/Public Consultation meeting was conducted on 20th October, 2014.

6.0 The proposal was considered by the Expert Appraisal Committee (Industry) in its meetings held during 29th – 31st July, 2013, 20th-21st January, 2015 and 16th-17th June, 2015 respectively. Project Proponent and the EIA Consultant namely M/s ONGC Ltd. have presented EIA / EMP report as per the TOR. EAC has found the EIA / EMP Report and additional information to be adequate and in full consonance with the presented TORs. The Committee recommended the proposal for environmental clearance.

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. The present EC is for Exploratory Drilling only. In case Development drilling to be done in future, prior environmental clearance must be obtained from the Ministry.
- ii. 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.
- iii. 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 16th November, 2009 for PM₁₀, PM_{2.5}, SO₂, NO_x, CO, CH₄, HC, Non-methane HC etc.
- iv. Mercury shall be analyzed in air, water and drill cuttings twice during drilling period.
- v. Approach road shall be made pucca to mitigate generation of suspended dust.
- vi. 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 should be provided as per CPCB guidelines.
- vii. Total water requirement shall not exceed 25 m³/day/well and prior permission shall be obtained from the concerned agency.
- viii. 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.
- ix. 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 Chennai.

- x. Good sanitation facility shall be provided at the drilling site. Domestic sewage shall be disposed off through septic tank/ soak pit/STP.
- xi. 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.
- xii. 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.
- xiii. 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.
- xiv. 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.
- xv. Blowout 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. Occupational health surveillance of the workers shall be carried out as per the prevailing Acts and Rules.
- xix. Abandoned well inventory and remediation plan shall be submitted within six months from the date of issue of letter.
- xx. 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.
- xxi. Restoration of the project site shall be carried out satisfactorily and report shall be sent to the Ministry's Regional Office at Chennai.
- xxii. 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 Chennai.
- xxiii. All the commitments made to the public during public hearing/public consultation meeting held on 20th October, 2014 shall be satisfactorily implemented and adequate budget provision shall be made accordingly.
- xxiv. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action



plan shall be prepared and submitted to the Ministry's Regional Office. Implementation of such program shall be ensured accordingly in a time bound manner.

- xxv. 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.

B. GENERAL CONDITIONS:

- i. The project authorities must strictly adhere to the stipulations made by the Tamil Nadu Pollution Control Board (TNPCB), 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 TNPCB. 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.
- 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 TNPCB. The Regional Office of this Ministry / CPCB / TNPCB 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 TNPCB 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.



(Lalit Bokolia)
Additional Director

Copy to :

1. The Principal Secretary, Department of Environment, Ground Floor, Panagal Buildings 1, Jeenis Road , Saidapet, Chennai - 600 015.
2. Additional Principal Chief Conservator of Forests (C), Ministry of Environment, Forest and Climate Change, Regional Office (SEZ), Ist and IInd Floor, Handloom Export Promotion Council, 34, Cathedral Garden Road, Nungambakkam, Chennai – 34
3. The Chairman, Central Pollution Control Board Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, New Delhi - 110 032.
4. The Chairman, Tamil Nadu Pollution Control Board, Corporate Office, 76, Anna Salai, Guindy, Chennai - 600 032.
5. Monitoring Cell, Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhavan, Jorbagh Road, New Delhi.
6. Guard File/Monitoring File/Record File.



(Lalit Bokolia)
Additional Director