

F. No. J-11011/446/2010- 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 : aditya.narayan@nic.in
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Dated 14th October, 2013

To,

Shri Ramesh Kher
Additional G.M. (Gas Sourcing)
M/s NTPC Limited
Room No. 308, R&D Building, EOC, A-8A, Sector-24
NOIDA-201 301, Uttar Pradesh.

E-mail : rameshkher@ntpceoc.co.in ; Fax No.: 0120-241 0633.

Subject: Exploratory Drilling (On-land; 8 Wells) at Block No. CB-ONN-2009/5 in Cambay Basin, Districts Ahmedabad & Mehasana, Gujarat by M/s NTPC Ltd. – Environmental Clearance reg.

Ref. : Your letter no. CC/GS/E&P/CB5/A2 dated 22nd April, 2013.

Sir,

This has reference to your letter dated 22nd April, 2013 alongwith Form-1, Prefeasibility Report, EIA/EMP report alongwith public hearing report regarding the above mentioned subject.

2.0 The Ministry of Environment & Forests has examined your application. It is noted that proposal is for exploratory drilling (On-land; 8 Wells) at Block No. CB-ONN-2009/5 in Cambay Basin, Districts Ahmedabad & Mehasana, Gujarat by M/s NTPC Ltd. M/s NTPC Limited has signed a 'Production Sharing Contract' (PSC) on 30th June, 2010 with the Govt. of India for the Cambay Onland-CB-ONN-2009/5 Oil and Gas exploration Block located in Mehsana and Ahmedabad, Gujarat. NTPC Limited is the 'Operator' of the block with 100% Partnership Internal (PI). No ecologically sensitive area such as Biosphere reserve, national park and wildlife sanctuary is located within 10 Km distance from the block. No forest land is involved. Total block area is 165 Km². Total cost of project is Rs. 70.00 Crores. Depth of drilling will be vary from 1500 m to 2500 m. Latitude and longitude of the proposed drilling well locations as under:

| S.N. | Well No. | Latitude | Longitude |
|------|-----------|----------------|----------------|
| 1 | Sadra | 230 18' 48.2"N | 720 15' 10.0"E |
| 2 | Sangpara | 230 19' 27.6"N | 720 12' 34.0"E |
| 3 | Detroj | 230 20' 09.3"N | 720 11' 21.9"E |
| 4 | Sadatpura | 230 20' 02.3"N | 720 07' 44.3" |
| 5 | Dekavada | 230 20' 54.2"N | 720 08' 54.6"E |
| 6 | Ughoraj | 230 21' 33.5"N | 720 06' 06.2"E |
| 7 | Odhav | 230 24' 29.2"N | 720 07' 21.3"E |
| 8 | Dadhana | 230 23' 33.1"N | 720 04' 36.8"E |

3.0 Air emissions from D.G. sets will be dispersed by providing adequate stack height. Water based mud will be used. Total water requirement from tanker supply will be 20 m³/day. Drilling and wash water generation will be 5 m³/day and treated in ETP and stored in HDPE lined pit. Domestic effluent will be treated in septic tank followed by soak pit. No effluent will be discharged outside the premises and 'Zero' effluent discharge concept will be adopted. 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 sold to authorized recyclers.

4.0 The proposal was considered by the Expert Appraisal Committee (Industry) in its meetings held during 18th-19th November, 2010 and 10th-11th June, 2013 respectively.

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 central level.

6.0 Public hearing/public consultation meetings were held on 14th September, 2012 for Ahmedabad District and 19th March, 2013 for Mehsana District.

7.0 Based on information submitted by you, presentation made by you and Environmental Consultant namely Detox Corporation Pvt. Ltd., 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. This EC is only for Exploratory Drilling. In case Development drilling is 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 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, methane & Non-methane HC etc.
- iv. Mercury shall also be analyzed in air, water and drill cuttings twice during drilling period.
- v. Approach road shall be made pucca to minimize 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 shall be provided as per CPCB guidelines.
- vii. Total water requirement shall not exceed 20 m³/day 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 channels. effluent should be properly treated and treated wastewater shall 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 should comply with the notified standards for on-shore disposal. The membership of common TSDF should 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 with prior authorization from the SPCB. Copy of authorization or membership of TSDF shall be submitted to Ministry's Regional Office at Bhopal.
- x. Good sanitation facility shall be provided at the drilling site. Domestic sewage shall be disposed off through septic tank/ soak pit.
- 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. On completion of drilling, the company have to plug the drilled wells safely and obtain certificate from environment safety angle from the concerned authority.
- xvi. Blow Out Preventer (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.
- xvii. Emergency Response Plan (ERP) shall be based on the guidelines prepared by OISD, DGMS and Govt. of India.
- xviii. 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.

- xix. All the commitments made to the public during public hearing/public consultation meeting held on 14th September, 2012 for Ahmedabad District and 19th March, 2013 for Mehsana District shall be satisfactorily implemented and adequate budget provision shall be made accordingly.
- xx. Abandoned well inventory and remediation plan shall be submitted within six months from the date of issue of letter.
- 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 Bhopal.
- 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 Bhopal.
- xxv. Under Enterprise Social Commitment (ESC), sufficient budgetary provision shall be made for health improvement, education, water and electricity supply etc. in and around the project.
- xxvi. An audit shall be done to ensure that the Environment Management Plan is implemented in totality and report should be submitted to the Ministry's Regional Office.
- xxvii. A social audit shall be carried out for the whole operation area with the help of reputed institute like Madras Institute of Social Science etc.
- xxviii. All personnel including those of contractors should be trained and made fully aware of the hazards, risks and controls in place.
- xxix. Company shall have own Environment Management Cell having qualified persons with proper background.
- xxx. 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 should be made available at the drilling site/ project site. Awareness should be created at each level of the management. All the schedules and results of environmental monitoring should be available at the project site office.

B. GENERAL CONDITIONS:

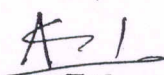
- i. The project authorities must strictly adhere to the stipulations made by the Gujarat Pollution Control Board (GPCB), State Government and any other statutory authority.
- ii. No further expansion or modification in the project shall be carried out without prior approval of the Ministry of Environment & 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 GPCB. The criteria pollutant levels namely; PM₁₀, SO₂, NO_x, HC (Methane & Non-methane), VOCs (ambient levels) 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 GPCB. The Regional Office of this Ministry / CPCB / GPCB 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 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 GPCB 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.


(A.N. Singh)
Dy. Director (S)

Copy to:

1. The Principal Secretary, Forests & Environment Department, Government of Gujarat, Sachivalaya, 8th Floor, Gandhi Nagar - 382 010, Gujarat.
2. The Chief Conservator of Forests (Western Zone), Ministry of Environment & Forests, Regional Office, E-5, Arera Colony, Link Road -3, Bhopal -462 016, M.P.
3. The Chairman, Central Pollution Control Board Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, New Delhi - 110 032.
4. The Chairman, Gujarat State Pollution Control Board, Paryavaran Bhawan, Sector 10 A, Gandhi Nagar-382 043, Gujarat.
5. Monitoring Cell, Ministry of Environment and Forests, Paryavaran Bhavan, CGO Complex, New Delhi.
6. Guard File/ Record File/Notice Board.


(A.N. Singh)
Dy. Director (S)