

F. No. J-11011/201/2012- IA II (I)
Government of India
Ministry of Environment, Forest and Climate Change
(I.A. Division)

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Dated 22nd June, 2015

To,
✓ Shri P V Satyamurty (General Manager)
M/s Heramec Ltd.
2nd Floor, V V Mansion 6-3-885/7/B/4, Somajiguda,
Hyderabad- 500 082

E-mail: info@hermec.com ; Fax No.: 91-40-2333-2323

Subject: Drilling of Development Wells (4 Nos.) in Kanward field at Village Kanward, District Anand, Gujarat by M/s Heramec Ltd.– Environmental Clearance reg.
Ref.: Your letter no. HL/MoEF/14-15/538 dated 27th February, 2015.

Sir,
This has reference to your letter dated 27th February, 2015 alongwith Form-1, Prefeasibility Report, EIA/EMP report alongwith public hearing report and subsequent submission of additional information vide letter dated 23rd April, 2015 regarding above mentioned project.

2.0 The Ministry of Environment, Forest and Climate Change has examined the application. It is noted that proposal is for drilling of Development Wells (4 Nos.) in Kanward field at Village Kanward, District Anand, Gujarat by M/s Heramec Ltd. The field is having an aerial extent of 6.3 sq. km. The field was awarded to Heramec – GSPC Joint Venture under Production Sharing Contract (PSC). Two wells Kanawara#2 (K#2) & Kanawara (K#3) were existing at the time of awarding the field to Heramec. Basic Early Production System (EPS) was established by ONGC at K#2 in Jan 1990. Basic Production Sharing Contract (PSC) of the block was signed on 23.02.2001. Consortium ML granted by Government of Gujarat on 27.02.2003. Existing Oil and Gas separation facility is designed for oil production of 288 m³/day and gas production of 150,000 m³/day. However, existing production at Kanwara field for crude oil is 30 m³/day and natural gas of the tune of 4000 m³/day. M/s Heramec proposes drilling of additional four (4) development wells within the field to increase the production and further connecting it to the existing EPS. This shall increase the production quantity of crude oil from 30 m³/day to 200 m³/day. It is reported that there is no National Park/ Wild life Sanctuary/ reserve Forest/ Eco sensitive area within the study area. There is no forest land involved in the proposed project. Depth of the proposed wells varies from 1650m to 1750m. Water based mud will be used. Cost of project is Rs. 36 Crore.

3.0 Air emissions from D.G. sets will be dispersed by providing adequate stack height. Water consumption from surface water supply will be 19.15 m³/day. Wastewater generation will be 5 m³/day. It is reported that no produced water 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. 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 authorized recyclers. Blow out preventers (BOP) will be installed to control fluid from the formation gushing to the surface.

4.0 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.

5.0 Public hearing/public consultation was held on 15th July, 2014.

6.0 The proposal was considered by the Expert Appraisal Committee (Industry) in its meetings held during 3rd – 5th December, 2012 and 20th – 21st April, 2015 respectively. Project Proponent and the EIA Consultant namely Kadam Environmental Consultants 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 Based on the information submitted by the project proponent, the Ministry of Environment and Forest 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. The gaseous emissions from DG set shall be dispersed through adequate stack height as per CPCB standards. Acoustic enclosure shall be provided to the DG sets to mitigate the noise pollution.
- ii. 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.
- iii. Mercury shall also be analyzed in air, water and drill cuttings twice during drilling period.
- iv. Approach road shall be made pucca to minimize generation of suspended dust.
- v. Drilling site should be selected 500 m away from the nearest village.
- vi. Total water requirement shall not exceed 20 m³/day and prior permission shall be obtained from the concerned agency.
- vii. 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.
- viii. 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 Bhopal.
- 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 30th 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 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.
- xiv. On completion of drilling, the companies have to plug the drilled wells safely and obtain certificate from environment safety angle from the concerned Authority.
- xv. Blowout 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.
- 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. Abandoned well inventory and remediation plan shall be submitted within six months from the date of issue of letter.
- 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 Bhopal.
- xxi. 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.
- xxii. An audit shall be done to ensure that the Environment Management Plan is implemented in totality and report shall be submitted to the Ministry's Regional Office.
- xxiii. All personnel including those of contractors shall be trained and made fully aware of the hazards, risks and controls in place.
- xxiv. At least 2.5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details should be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program should be ensured accordingly in a time bound manner.
- xxv. Company shall have own Environment Management Cell having qualified persons with proper background.

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- xxvi. 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 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 & Forest. 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, ZilaParishad / 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 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 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 Forest 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.

11.0 Environmental Clearance is issued to M/s Heramec Ltd. for Drilling of Development Wells (04 Nos.) in Kanward field at Village Kanward, District Anand, Gujarat.



(Lalit Bokolia)
Additional Director

Copy to:

1. The Principal Secretary, Forest & Environment Department, Government of Gujarat, Sachivalaya, 8th Floor, Gandhi Nagar - 382 010, Gujarat.
2. The Chief Conservator of Forest (Western Zone), Ministry of Environment, Forest and Climate Change, 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, Forest and Climate Change, Indira Paryavaran Bhavan, Jor Bagh Road, New Delhi.
6. Guard File/Monitoring File/Record File.



(Lalit Bokolia)
Additional Director