

**F. No. J-11011/245/2014-IA II (I)**  
**Government of India**  
**Ministry of Environment, Forest and Climate Change**  
**(I.A. Division)**

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**Dated: 19<sup>th</sup> July, 2017**

**To,**  
**Shri G Janakiraman**  
**HSE Manager,**  
**M/s Hindustan Oil Exploration**  
**Company Ltd.,**  
**HOEC House, Tandalja Road,**  
**Off Old Padra Road,**  
**Vadodara-390 020 Gujarat**

**Subject: Development drilling of six wells (DRK-1, DRK-2, DRK-4, DRK-5, DRK-6 and DRK-7), Group Gathering Station (GGS), Gas Processing Plant (GPP) Gas Pipeline (12") of 11.5 kilometers from GGS to GPP and Gas pipeline (4") of 11.5 kilometers from GGS to GPP at onshore block AAP-ON-94/1, village Dirok, Tea Estate, Tehsil Margherita, District Tinsukia, Assam by M/s Hindustan Oil Exploration Company Ltd.- Environmental Clearance reg.**

**Ref.: Your online proposal no. IA/AS/IND2/31891/2014; dated 10<sup>th</sup> December, 2015.**

Sir,

This has reference to your online proposal no. IA/AS/IND2/31891/2014; dated 10<sup>th</sup> December, 2015 along with project documents including Form I, Terms of References, Pre-feasibility Report, EIA/EMP Report along with Public Hearing Report regarding above mentioned project.

2.0 The Ministry of Environment, Forests and Climate Change has examined the application. It is noted that proposal is for Development drilling of six wells (DRK-1, DRK-2, DRK-4, DRK-5, DRK-6 and DRK-7), Group Gathering Station (GGS), Gas Processing Plant (GPP) Gas Pipeline (12") of 11.5 kilometers from GGS to GPP and Gas pipeline (4") of 11.5 kilometers from GGS to GPP at onshore block AAP-ON-94/1, village Dirok, Tea Estate, Tehsil Margherita, District Tinsukia, Assam by M/s Hindustan Oil Exploration Company Ltd. The Block AAP-ON-94/1 of HOEC is located in Assam-Arakan Basin and falls within geologically complex Schuppen Thrust Belt. It is located in Tinsukia District of the State of Assam, NE India. This block covers approximately 305 sq. km area. The proposed project activity falls within Tinsukia district of Assam. Following activities are proposed:

- (i) To put three existing wells into production, drill and complete three new development wells to produce hydrocarbons from Dirok field, safely without significant impact on the environment;



- (ii) To set up a new Gas Gathering Station (GGS) and a Gas Processing Plant (GPP) with handling capacity of 20 million standard cubic foot per day (mmscfd) of natural gas.
- (iii) To lay underground pipelines to transport natural gas from wells to GPP via GGS
- (iv) To lay underground pipelines to transport natural gas from GPP to an OIL (Oil India Limited) operated existing GGS at Kusijan
- (v) To lay underground pipelines to transport oil condensate from GPP to the existing IOCL refinery at Digboi

Coordinates of the proposed wells, GGS and GPP are as under:

DRK-5	95° 37' 03.74" / E; 27° 16' 12.14" / N
DRK-6	95° 37' 27.57" / E; 27° 16' 13.85" / N
DRK-7	95° 37' 48.18" / E; 27° 16' 13.85" / N
GGS	95° 37' 41.06" / E; 27° 15' 45.42" / N
GPP	95° 37' 42.99" / E; 27° 21' 49.97" / N

3.0 Well will be drilled upto depth of 2500 m. Cost of project is Rs. 550 Crore. Area of Forest land involved is 4.5 ha. Elephant Corridor – In between the Powai tea estate in south and Golai village in north lies the Golai-Powai elephant corridor. Elephant uses this corridor to move between Upper Dehing (West Block) R.F. and Upper Dehing (East Block) R.F. The pipeline crosses the elephant corridor, however, the pipeline will be buried underground. Forest & Wildlife Sanctuary– GPP to Kusijan GGS stretch of 4.5 km pipeline route is planned to pass through Digboi Reserved Forest (West Block). Also, 11.5kms length of the pipeline (connecting GGS to GPP) out of the total pipeline length is passing through ecological sensitive zone of Dehing Patkai Wildlife Sanctuary. The PP has proposed to meet water requirement from the surface water resources under which 20 m<sup>3</sup>/day peak water requirement is for drilling of each well. Besides 150 m<sup>3</sup>/day and 15 m<sup>3</sup>/day of water will be used for construction and operation of GPP respectively. Average consumption of water during drilling phase will be 45-50 m<sup>3</sup>/day. Four 670 KW of DG set will be installed for operation of rig. One 450 KVA DG set shall be used for construction and operation of GGS. With regard to GPP, 3670 KW DG set during construction and 2600 KVA captive gas generator will be installed during production.

Drill cutting will be separated from drill fluid and washed temporarily stored in an impervious HDPE lined pit. Drilling waste water will be disposed through treatment in ETP to comply with the CPCB onshore effluent discharge standard for oil and gas industry. Sewage will be treated in a combination of septic tank and soak pit. Scrap metal, waste oil surplus chemical and lead acid batteries shall be disposed to authorized waste oil/used oil recyclers.

4.0 Public Hearing / Public Consultation meeting conducted by the Assam Pollution Control Board on 3<sup>rd</sup> July, 2015. The issues raised during Public Hearing were regarding local employment, elephant corridor, compensation of land etc.

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.



7.0 The proposal was considered by the Expert Appraisal Committee (Industry) in its 6<sup>th</sup> meetings held during 30<sup>th</sup> March to 2<sup>nd</sup> April 2016. Project Proponent and the EIA Consultant namely (M/s SENES Consultant India Pvt. Ltd., have presented EIA / EMP report as per the TOR. EAC has found the EIA / EMP Report and additional information to be satisfactory and in full consonance with the presented TORs. The Committee recommended the proposal for environmental clearance.

6.0 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 14<sup>th</sup> September 2006, subject to the compliance of the following Specific and General Conditions:

**A. SPECIFIC CONDITIONS:**

- (i) The Forest Clearance to be obtained. Work on non-forest land may only be executed upto such point (to be selected by the user agency) on either side of the forest land if it is explicitly certified by the user agency that in case approval under the Forest (Conservation) Act, 1980 for diversion of forest land is declined, it is technically feasible to execute the project along an alternate alignment without involving diversion of forest land will not confer any right on the user agency with regard to grant of approval under the Forest (Conservation) Act, 1986.
- (ii) The environmental clearance is subject to obtaining prior clearance from forestry and wildlife angle including clearance from the Standing Committee of the National Board for Wildlife as applicable. Grant of environmental clearance does not necessarily implies that Forestry and Wildlife Clearance shall be granted to the project and that their proposals for forestry and Wildlife Clearance will be considered by the respective authorities on their merits and decision taken. The investment made in the project, if any, based on environmental clearance so granted, in anticipation of the clearance from wildlife angle shall be entirely at the cost and risk of the project proponent and Ministry of Environment, Forest & Climate Change shall not be responsible in this regard in any manner.
- (iii) Ambient air quality should 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 16<sup>th</sup> November, 2009 for PM10, PM2.5, SO2, NOX, 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 should be provided as per CPCB guidelines.
- (vii) Total water requirement shall not exceed 40 m<sup>3</sup>/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 and land. Separate drainage system shall be created for oil contaminated and non-oil contaminated water. Effluent shall 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 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 Shillong.
- (x) Produced water shall be treated in ETP. Treated produced water shall be disposed off through injection well as per CPCB/MoEF guidelines.
- (xi) Good sanitation facility shall be provided at the drilling site. Domestic sewage shall be disposed off through septic tank/ soak pit.
- (xii) 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.
- (xiii) 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.
- (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.
- (xv) The company shall develop a contingency plan for H<sub>2</sub>S release including all necessary aspects from evacuation to resumption of normal operations. The workers shall be provided with personal H<sub>2</sub>S detectors in locations of high risk of exposure along with self containing breathing apparatus.



- (xvi) On completion of drilling, the company have to plug the drilled wells safely and obtain certificate from environment safety angle from the concerned authority.
- (xvii) 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.
- (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 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.
- (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) Restoration of the project site shall be carried out satisfactorily and report shall be sent to the Ministry's Regional Office at Shillong.
- (xxiii) 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 Shillong.
- (xxiv) 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.
- (xxv) 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.
- (xxvi) All personnel including those of contractors should be trained and made fully aware of the hazards, risks and controls in place.
- (xxvii) Company shall have own Environment Management Cell having qualified persons with proper background.
- (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.



**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 modifications in the plant shall be carried out without prior approval of the Ministry of Environment and 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 locations of ambient air quality monitoring stations shall be decided in consultation with the State Pollution Control Board (SPCB) and it shall be ensured that at least one station is installed in the upwind and downwind direction as well as where maximum ground level concentrations are anticipated.
- iv. The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16<sup>th</sup> November, 2009 shall be followed.
- 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 Environment (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).
- vi. The Company shall harvest rainwater from the roof tops of the buildings and storm water drains to recharge the ground water and use the same water for the process activities of the project to conserve fresh water.
- vii. Training shall be imparted to all employees on safety and health aspects of chemicals handling. Pre-employment and routine periodical medical examinations for all employees shall be undertaken on regular basis. Training to all employees on handling of chemicals shall be imparted.
- viii. The company shall also comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, risk mitigation measures and public hearing relating to the project shall be implemented.
- ix. The company shall undertake all relevant measures for improving the socio-economic conditions of the surrounding area. CSR activities shall be undertaken by involving local villages and administration.
- x. The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment.



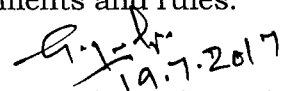
- xi. A separate Environmental Management Cell equipped with full fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.
- xii. The company shall earmark sufficient funds towards capital cost and recurring cost per annum to implement the conditions 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 earmarked for environment management/ pollution control measures shall not be diverted for any other purpose.
- xiii. A copy of the clearance letter shall be sent by the project proponent to concerned Panchayat, ZilaParisad/Municipal Corporation, Urban local Body and the local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal.
- xiv. The project proponent shall also submit six monthly reports on the status of compliance of the stipulated Environmental Clearance conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional Office of MoEF, the respective Zonal Office of CPCB and SPCB. A copy of Environmental Clearance and six monthly compliance status report shall be posted on the website of the company.
- xv. The environmental statement for each financial year ending 31<sup>st</sup> March in Form-V as is mandated shall be submitted 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 along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Regional Offices of MoEF by e-mail.
- xvi. 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/Committee and may also be seen at Website of the Ministry at <http://moef.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 concerned Regional Office of the Ministry.
- xvii. The 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 start of the project.

7.0 The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.

8.0 The Ministry reserves the right to stipulate additional conditions, if found necessary. The company in a time bound manner will implement these conditions.




9.0 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.

  
19.7.2017  
**(Yogendra Pal Singh)**  
**Scientist 'D'**

Copy to :-

1. The Principal Secretary, Department of Environment & Forest, Govt. of Assam, Guwahati, Assam.
2. The Chairman, Assam Pollution Control Board, Bahunimatram, Assam, Guwahati.
3. The Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, Delhi - 110032.
4. The Conservator of Forests (Central), Ministry of Environment, Forests and Climate Change, , Regional Office (Northeast Eastern Regional Office, Uplands Road, Laitumkhrah, Shillong - 793003, Meghalaya.
5. Monitoring Cell, Ministry of Environment, Forests and Climate Change, Indira Paryavaran Bhawan, CGO Complex, New Delhi.
6. Guard File/Record File/Notice Board.

  
19.7.2017  
**(Yogendra Pal Singh)**  
**Scientist 'D'**