

F.No. J-11011/374/2013-IA II(I)
Government of India
Ministry of Environment, Forest and Climate Change
(IA-II Division)

Indira Paryavaran Bhawan
Jorbagh Road, New Delhi - 3
Dated: 6th July, 2018

To,
M/s Oil and Natural Gas Corporation Limited,
1st Floor, HSCL building,
Near Naya More,
Bokaro Steel city - 827001 (West Bengal)

Sub: Development and Production of Coal Bed Methane Gas by M/s ONGCL-CIL Consortium at Ranigani North block, District Paschim Bardhaman (West Bengal) - Environmental Clearance - reg.

Ref.: Online proposal No. IA/WB/IND/21531/2013 dated 16th April, 2018

Sir,

This has reference to your online proposal No. IA/WB/IND/21531/2013 dated 16th April, 2018 for environmental clearance to the above project, along with the documents including Form-1, Terms of Reference (ToR), EIA/ EMP report containing the public hearing proceedings/details.

2. The Ministry of Environment, Forest and Climate Change has examined the proposal for environmental clearance to the project 'Development and Production of Coal Bed Methane Gas' by M/s Oil and Natural Gas Corporation Limited - Coal India Limited (ONGCL-CIL) Consortium in a total area of 311780000 sqm at Ranigani North block, District Paschim Bardhaman (West Bengal).

3. Total project cost is estimated to be Rs.957 crores. The capital cost earmarked for pollution control measures is Rs.278.6 lakhs and the recurring cost (operation and maintenance) would be about Rs.92.8 lakhs per annum. It is proposed to develop greenbelt in an area of 102887400 sqm, covering 33% of total project area. There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km from the project site

4. Total water requirement is estimated to be 800 cum/day per well proposed to be met from authorized water tanker vehicles. Effluent of 10 - 12 m³/well shall be treated in the Effluent Treatment Plant. There will be no discharge of treated/untreated waste water from the unit, and thus ensuring Zero Liquid Discharge.

5. Power requirement after expansion will be 33 - 350 kVA; depending on operation type [DG Sets of 350 KVA capacity will be used for drilling purposes. During Work Over 33 KV Gen set would be used while during testing power requirement will be met out from 100 KVA DG set. It is estimated that per month 36 KL of diesel will be required during drilling phase and 5 KL of diesel would be used during testing. Further average 7.2 KL of diesel would be used per day during stimulation] and will be met from West Bengal State power distribution corporation limited (WBSPDCL).

6.1 Details of Process emissions generation and its management

- (i) Dismantling of the rig, all associated equipments and the residential camp, and transporting it out of the project area;



- (ii) The wellhead and all casing string will be cut off to a minimum depth of 3 m below ground level;
- (iii) All concrete structures will be broken up, and the debris disposed off as per the regulatory requirements;
- (iv) All solid and liquid wastes will be disposed in accordance to the CPCB guidelines and HWMH Rules.
- (v) All fencing and access gates will be removed.
- (vi) All pits will be backfilled and closed out.
- (vii) Restoration of unusable portion of the access track, removal of pilings;
- (viii) After decommissioning of site, it will be de-compacted and stored top soil will be overlaid on the de-compacted site with certain moisture conservation measures and seeding of leguminous plant for restoration soil nutrient level.

6.2 Details of Solid waste/ Hazardous waste generation and its management:

The drilling process will generate solid and hazardous waste streams as stated below:

Hydrocarbon Wastes: Waste oils from leakage from equipment or diesel storage tanks, used oil (from engine oil changes) is designated as hazardous;

Non-hazardous solid waste: Non-hazardous wastes like paper, wood, plastics, containers (plastic or metallic used for substances other than chemicals) etc.,

Off specified hazardous wastes: Off specified hazardous wastes are Containers (including poly bags) holding hazardous ingredients like fluid, or testing chemicals, or previously holding volumes of hazardous chemicals or used batteries, disposed air filters etc.; and

Biodegradable waste: The drill site will generate food rejects constituting biodegradable wastes.

Hazardous waste streams viz. used/waste oil will be disposed through WBPCB registered hazardous waste recyclers. All recyclable solid waste viz. paper, plastic, bottles etc. will be segregated at source and recycled through local waste recyclers registered with municipal authorities. Food waste will be stored in properly labeled containers and disposed to nearby municipal dumping grounds. [According to EPR rules 1986, guidelines given under Oil Drilling and Gas Extraction Industry A, B and C.]

7. The project/activity is covered under category A of item 1(b) 'Offshore and onshore oil and gas exploration, development & production' of schedule to the Environment Impact Assessment (EIA) Notification under category 'A' and requires appraisal at central level by sectoral Expert Appraisal Committee (EAC).

8. The ToR for the project was granted on 5th March, 2014 and extended for its validity for a period of one year vide letter dated 20th July, 2017. Public hearing was conducted by SPCB on 27th & 28th February, 2018.

9. The proposal was considered by the Expert Appraisal Committee (Industry-2) in its 37th meeting held during 29-31 May, 2018. The project proponent and their accredited consultant M/s Arcadis India Pvt Ltd, presented the EIA / EMP report as per the ToR. The Committee found the EIA / EMP Report to be satisfactory and complying with the ToR. The Committee has recommended the proposal for grant of environmental clearance.

10. Based on the proposal submitted by the project proponent and recommendations of EAC (Industry-2), the Ministry of Environment, Forest and Climate change hereby accords environmental



clearance to the project '**Development and Production of Coal Bed Methane Gas**' by M/s ONGCL-CIL Consortium at Ranigani North block, District Paschim Bardhaman (West Bengal), under the provisions of the EIA Notification, 2006, subject to the compliance of terms and conditions as below:

- (a) Consent to Establish/Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.
- (b) As proposed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged to any surface water body, sea and/or on land.
- (c) To control source and the fugitive emissions, suitable pollution control devices shall be installed to meet the prescribed norms and/or the NAAQS. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.
- (d) Necessary authorization required under the Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016, Solid Waste Management Rules, 2016 shall be obtained and the provisions contained in the Rules shall be strictly adhered to.
- (e) 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.
- (f) Approach road shall be made pucca to minimize generation of suspended dust.
- (g) The company shall make all arrangements for control of noise from the drilling activity. Acoustic enclosure shall be provided for the DG sets along with the adequate stack height as per CPCB guidelines.
- (h) Total fresh water requirement shall not exceed the proposed quantum of 800 cum/day/well proposed to be met from water tankers, and prior permission shall be obtained from the concerned regulatory authority.
- (i) 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.
- (j) Drill cuttings separated from drilling fluid shall be adequately washed and disposed in HDPE lined pit. Waste mud shall be tested for hazardous contaminants and disposed according to HWMH Rules, 2016. No effluent/drilling mud/drill cutting shall be discharged/disposed off into nearby surface water bodies. 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.
- (k) Oil spillage prevention and mitigation 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.
- (l) 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.



- (m) 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.
- (n) 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 Regional Office.
- (o) Blow Out Preventer 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.
- (p) Emergency Response Plan shall be based on the guidelines prepared by OISD, DGMS and Govt. of India.
- (q) 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 area 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.
- (r) All the commitments made to the public during public hearing/consultation shall be satisfactorily implemented.
- (s) At least 1% of the total project cost shall be allocated for Corporate Environment Responsibility (CER) and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office.
- (t) Occupational health surveillance of the workers shall be carried out as per the prevailing Acts and Rules.
- (u) Restoration of the project site shall be carried out satisfactorily and report shall be sent to the Ministry's Regional Office.
- (v) Oil content in the drill cuttings shall be monitored by some Authorized agency and report shall be sent to the Ministry's Regional Office.
- (w) 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.
- (x) Company shall have own Environment Management Cell having qualified persons with proper background.
- (y) Company shall prepare operating manual in respect of all activities, which would cover all safety & environment related issues and 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. Remote monitoring of site should be done.
- (z) On completion of drilling, the company has to plug the drilled wells safely and obtain certificate from environment safety angle from the concerned authority.



10.1 The grant of Environmental Clearance is further subject to compliance of other generic conditions as under:-

- (i) The project authorities must strictly adhere to the stipulations made by the state Pollution Control Board (SPCB), State Government and/ or 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, Forest and Climate Change. 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 stations each 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 16th November, 2009 shall be complied with.
- (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 utilize the same for different industrial operations within the plant.
- (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 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 shall be implemented.
- (ix) The company shall undertake all measures for improving socio-economic conditions of the surrounding area. CSR activities shall be undertaken by involving local villagers, administration and other stake holders. Also eco-developmental measures shall be undertaken for overall improvement of the environment.
- (x) A separate Environmental Management Cell equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.
- (xi) The company shall earmark sufficient funds towards capital cost and recurring cost per annum to implement the conditions stipulated by the Ministry of Environment, Forest and Climate Change 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.



- (xii) A copy of the clearance letter shall be sent by the project proponent to concerned Panchayat, Zila Parisad/ Municipal Corporation, Urban local Body and the local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal.
- (xiii) 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&CC, 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.
- (xiv) The environmental statement for each financial year ending 31st 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&CC by e-mail.
- (xv) 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.

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

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

13. The above conditions will 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, the Hazardous Waste (Management, Handling and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 read with subsequent amendments therein.

SK
6/7/2018
(S. K. Srivastava)
Scientist E

Copy to: -

1. The Additional Principal Chief Conservator of Forests (C), Ministry of Environment, Forest and Climate Change, Regional Office (EZ), A/3, Chandrasekharpur, Bhubaneswar - 751023 (Odisha)
2. The Additional Chief Secretary, Department of Environment, 5th Floor, Pranisampad Bhawan, Block LB-II, Salt Lake, Sector III, Bidhannagar, **Kolkata** - 700 106(West Bengal)
3. The Member Secretary, Central Pollution Control Board, Parivesh Bhavan, East Arjun Nagar, **Delhi** - 32
4. The Member Secretary, West Bengal Pollution Control Board, Paribesh Bhavan, 10A, Block-L.A., Sector 3, Salt Lake City, **Kolkata** - 700098 (West Bengal)
5. Monitoring Cell, Ministry of Environment, Forest and Climate Change, **New Delhi**.
6. Guard File/Monitoring File/Record File

SK
6/7/2018
(S. K. Srivastava)
Scientist E