



Government of India
Ministry of Environment, Forest and Climate Change
(Impact Assessment Division)

To,

The General Manager
OIL AND NATURAL GAS CORPORATION LIMITED
Deendayal Urja Bhavan, 5, Nelson Mandela Marg, Vasant
Kunj,,Ramanathapuram,Tamil Nadu-110070

Subject: Grant of Environmental Clearance (EC) to the proposed Project Activity under the provision of EIA Notification 2006-regarding

Sir/Madam,

This is in reference to your application for Environmental Clearance (EC) in respect of project submitted to the Ministry vide proposal number IA/AS/IND2/423980/2023 dated 14 Jun 2023. The particulars of the environmental clearance granted to the project are as below.

1. EC Identification No.	EC23A002AS160394
2. File No.	IA-J-11011/149/2023-IA-II(I)
3. Project Type	New
4. Category	A
5. Project/Activity including Schedule No.	1(b) Offshore and onshore oil and gas exploration, development & production
6. Name of Project	Onshore Development and Production of oil and gas from 28 wells and establishment of kasomarigaon EPS and GGS at SUAB drill site in forest area in 6 PML Blocks, Golaghat district, Assam
7. Name of Company/Organization	OIL AND NATURAL GAS CORPORATION LIMITED
8. Location of Project	Assam
9. TOR Date	N/A

The project details along with terms and conditions are appended herewith from page no 2 onwards.

Date: 31/07/2023

(e-signed)
A N Singh
Scientist E
IA - (Industrial Projects - 2 sector)

Note: A valid environmental clearance shall be one that has EC identification number & E-Sign generated from PARIVESH. Please quote identification number in all future correspondence.

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This has reference to your online proposal no. IA/AS/IND2/423980/2023 dated 14th June, 2023 for environmental clearance to the above-mentioned project.

2. The Ministry of Environment, Forest and Climate Change has examined the proposal seeking environmental clearance for Onshore Development and Production of oil and gas from 16 wells and establishment of Kasomarigaon EPS and GGS at SUAB drill site in forest area in 6 PML Blocks located at Village Kasmari Gaon, Tehsil Sarupathar, District Golaghat, State Assam by M/s. Oil and Natural Gas Corporation Limited.

3. The proposed project is included under activity 1(b) "Offshore and onshore oil and gas exploration, development & production" are listed at S.N. 3 of Schedule of Environment Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC).

4. The details of products and capacity as under:

S. No	Product Details	Existing Quantity	Proposed Quantity	Total quantity (Estimated)
1	Development & production well	None	The estimated production of crude oil is 330 m ³ /day and natural gas of 1.115 LSCMD. The proposed EPS would be established with a capacity of 800 m ³ /day and 1 Lakh SCMD of natural gas. The GGS at SUAB would be established with a capacity of 400 m ³ /day and 25,000 SCMD of natural gas.	The estimated production of crude oil is 330 m ³ /day and natural gas of 1.115 LSCMD. The proposed EPS would be established with a capacity of 800 m ³ /day and 1 Lakh SCMD of natural gas. The GGS at SUAB would be established with a capacity of 400 m ³ /day and 25,000 SCMD of natural gas.

5. PP informed that TOR was obtained for drilling in 28 locations in six PML Blocks i.e Golaghat District PML (52.12 Sq. Km.), Kasomarigaon PML additional area (56 Sq. Km), Kasomarigaon PML (20 Sq. Km), East Lakhbari PML (8.5 Sq. Km), Khoraghat Extn – I PML (83 Sq. Km) and Nambor PML (26 Sq. Km). All the PMLs are located in the forest area of Nambor and Dayang Reserve Forest. ONGC has also proposed to set up a Group Gathering station (GGS) at Kasomarigaon PML

(Additional area), and an Early Production system (EPS) at Kasomarigaon PML. Further, PP informed that out of the proposed 28 wells, forest clearance has been accorded to 16 wells, Kasomarigaon EPS and GGS at SUAB. The forest clearance for the rest of the 12 well locations are pending and therefore ONGC has dropped the proposal for drilling of remaining 12 wells from EC application) in forest Area in 6 PML Blocks Golaghat District, Assam. Development and production in these locations would augment the production of hydrocarbons in the present scenario of growing demand of oil and gas in the country.

Drilling will be carried out up to the desired depth of 2200-3300. Drilling is a temporary activity which will continue for about 30-60 days for each well in the block. If the well is found to be a successful hydrocarbon bearing structure, it will be sealed off for future development and would be connected to GGS. Water based mud (WBM) will be used to the possible extent.

Oil produced during development phases will be transferred to the nearby GGS /EPS by Oil tankers/Pipeline network. A Group Gathering Station (GGS) has been proposed for this project in kasamarigaon PML (Additional area). The set up is meant for Oil/Gas/Water separation from the development drilling site, along with oil treatment and stabilisation gas treatment and compression.

6. Ministry has issued Environmental Clearance for exploration activity vide certificate number J-11011/620/2007-IA-II(I) dated 22.10.2007. Certified Compliance report of existing EC has been obtained from Integrated Regional Office, MoEFCC, Guwahati vide File no- RO-NE/EIA/AS/MI/9/3910-12 dated 04.05.2023. Action Taken Report has been submitted to IRO, MOEFCC, ONGC/Jorhat Asset/HSE/CCR/KSAB dated 26.05.2023. EAC was satisfied with the response.

7. Standard Terms of Reference have been obtained vide F. No IA-J-11011/99/2019-IA-II(I) dated 20th April 2019. It was informed that no litigation is pending against the project.

Public Hearing for the proposed project had been conducted by the Assam Pollution Control Board on 30th September 2020 at Borbali ME School field, Sarupathar of Golaghat districts chaired by Additional District Magistrate. The main issues raised during the public hearing (Golaghat District) and their action plan to address the said issues raised is placed at Annexure-I.

8. Total land area required is 29.126 hectares. Greenbelt will be developed in 1.1979 hectares of land of GGS and EPS. The estimated project cost is Rs. 625 Crores. Capital cost of EMP would be Rs. 0.2825 Crores and recurring cost for EMP would be Rs. 0.1756 Crores per annum. Industry proposes to allocate Rs. 1.4 Crores towards Extended EMP (Corporate Environment Responsibility). Total Employment will be 310 persons as direct & indirect.

9. PP informed that there are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance. Two reserve forests, Dayang Reserve Forest, and Nambor Reserve Forest, are present within 10 km boundary of the PML blocks. Forest clearance is already obtained for 16 wells and Kasomarigaon EPS and SUAB GGS located within reserve forest. Forest clearance for rest of 12 wells is pending and would be dropped from EC application. Nambor wildlife sanctuary is present towards northwest direction of the block. The nearest PMLs are Kasomarigaon PML (additional area III) and East Lakhbari PML, which are 11.86 km and 10.55 km in Northwest from the ESZ boundary of the Nambor WLS respectively. The Nambor wildlife Sanctuary is located at a distance of 13 Km in Northwest direction from the nearest well (ELDD). ESZ notification for same is still not published. No activity is planned within the default ESZ of 10 km of Number wildlife sanctuary. Dhansiri river flows in the western side of all the PMLs, from south to north direction. The nearest PML is Golaghat District PML (Cluster 1), which is almost 4 km from the Dhansiri river. Dayang River and Rengma River, a tributary of Dayang River through are the main rivers flowing through PML area, while two other minor rivers, Ghiladhari and Sesapani runs within the PML area.

10. Ambient air quality monitoring was carried out at 8 locations during October 2019 to January 2020 and the baseline data indicates the ranges of concentrations as: PM₁₀ (69.72 - 71.41 µg/m³), PM_{2.5} (29.17 - 32.77 µg/m³), SO₂ (8.40 - 9.0 µg/m³) and NO₂ (13.77 - 15.21 µg/m³). AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.18 µg/m³, 0.63 µg/m³, and 4.5 µg/m³ with respect to PM₁₀, SO₂ and NO_x. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

As the previous monitoring period is already three years old, additional set of monitoring was carried out from October 2022 to December 2022. The baseline data indicates the ranges of concentrations as: PM₁₀ (46.2 - 66.5 µg/m³), PM_{2.5} (22.8 - 35.4 µg/m³), SO₂ (5.2-6.8 µg/m³) and NO₂ (23.2 - 26.1 µg/m³).

11. Total fresh water requirement will be 25 CMD which will be met from tanker during drilling period. Out of which, 15 m³ /day would be used for mud preparation and 10 m³/d for domestic purposes (including drinking). Tankers would be deployed from nearby source through contractors. Effluent of 20 CMD quantity will be treated through Effluent Treatment Plant of capacity 25 KLPD. Mud used during the operation will flush out formation cuttings from the well hole. These cuttings will be separated from the drilling mud by thoroughly washing and stored in the HDPE lined pits and after completion of the drilling activities, cuttings will be tested for hazardous nature and based on nature of the drill cuttings, final disposal pathway will be done. The total amount of cuttings produced during the entire drilling period

is projected to be about 225 m³ per well. Once the cuttings have been separated, the drilling fluid will be reused or processed after further treatment in a system designed to remove suspended solids that are too fine for mechanical separation in solids control package producing inlet particles called 'flocs'. The flocs will be removed in the decanting centrifuges and the resultant sludge disposed off in High Density Polyethylene (HDPE) lined pits. The cleaned wastewater will also be stored in HDPE lined pits and disposed off, after testing and any necessary treatment, to meet the regulatory requirements. The estimated amount of drilling fluid and drilling wastewater generated from the whole process would be 700 m³ and 15 - 20 m³ /day for each well. STP of capacity 25 KLPD will be installed to treat sewage generated from factory premises. The plant will be based on Zero Liquid discharge system and no effluent/treated water will be discharged outside factory premises.

12. The power requirement during the site preparation and construction phase would be met by 4 Nos. of DG Sets. The power requirement for drilling will be met by using the four Diesel Generator Sets of 750 kVA, 3 working and 1 standby. Stack of 7.7 m will be provided as per CPCB norms to the proposed DG sets.

13. Details of Process emissions generation and its management:

The emission would be generated from activities such as flaring, functioning of DG sets, etc. The management of emission is given in the following points

- All vehicles used for transportation of raw material and personnel would have valid Pollution under Control Certificate (PUC). Vehicular exhaust would be complying with the CPCB specified emission norms for vehicular Emission.
- Adequate stack height would be provided to DG sets in accordance with CPCB standards.
- Exhausts of diesel/Gas generators would be positioned at a sufficient height to ensure dispersal of exhaust emissions; engines would not be left running.
- Preventive maintenance of GEG/DG sets would be undertaken;
- Flaring would be undertaken in accordance with the CPCB Guidelines for Gaseous Emissions for Oil & Gas.

14. Details of solid waste/Hazardous waste generation and its management:

Waste type	Quantity	Characteristics	Disposal
Kitchen waste	10- 15 kg/day	Organic waste (Non HW)	The waste would be segregated at source (organic/inorganic) and

Waste type	Quantity	Characteristics	Disposal
			disposed as per Solid Waste Management Rules, 2016.
Drill cuttings	225 m ³ /well	Mainly Inert material Consisting of shales, sands and clay; about 1% of drilling mud. (Non HW)	Drill cuttings will be disposed off in a well-designed pit lined with impervious liner located on site as per S No. 72 C.1.a Schedule I Standards for Emission or Discharge of Environmental Pollutants from Oil Drilling and Gas Extraction Industry of CPCB as modified in 2005.
Waste Drilling Mud (Fluid)	700 m ³	Barite, Bentonite and Traces of Heavy metals	The mud will be tested for hazardous contaminants and will be disposed as per S No. 72 C.1.a Schedule I Standards for Emission or Discharge of Environmental Pollutants from Oil Drilling and Gas Extraction Industry of CPCB as modified in 2005.
Waste oil/ Used oil	-	Used and waste oil	Hazardous waste (waste and used oil) would be managed in accordance with Hazardous Waste (Management, & Transboundary Movement) Rules, 2016.
Recyclables viz. plastic packaging, paper waste etc.	-	Depending on usage	Proper segregation and storage of recyclable waste in designated bins onsite. Recyclables will be periodically sold to local waste recyclers.

15. Total land of 29.126 Hectares of forest land is under possession of the company.

Detail of Forest clearance is presented below:

S.N.	Well	FC Status
1	DPDD	In-Principle Approval obtained.

2	DPDJ	
3	DPDI	
4	DPDL	
5	DPDH	
6	DPDK	
7	DPDM	
8	DPDN	
9	DPDO	
10	DPDP	
11	DPDQ	
12	DPDR	
13	KSDC	The approval for forest land diversion is granted.
14	KSDD	
15	ELDA	The approval for forest land diversion is granted.
16	NRDJ	The approval for forest land diversion is granted.
A	Kasomarigaon EPS	In-Principle Approval obtained.
B	GGs Suphayam-1 drill site	The approval for forest land diversion is granted.

List of Wells where Forest Clearance are Pending and would be dropped:

S.N.	Well	FC Status
1	DPDA	Forest land diversion process is in advanced stage. These well locations will be dropped from the EC application
2	DPDB	
3	DPDC	
4	DPDE	
5	DPDF	
6	DPDG	
7	KHDE	Forest land diversion process is in advanced stage. These well locations will be dropped from the EC application
8	NRDK	These well locations will be dropped from the EC application
9	NRDE	
10	NRDG	
11	NRDH	
12	NRDL	

Co-ordinates of proposed wells for 1(b) projects:

Sl. No.	Oil Field	Wells to be Drilled/EPS/GGS	Well Coordinate
1	Nambor	NRDJ	NRDJ- 93° 53' 35.170" E 26° 3' 1.540" N,

Sl. No.	Oil Field	Wells to be Drilled/EPS/GGS	Well Coordinate
2	Kasomarigaon	KSDC, KSDD	KSDC- 94° 2' 48.430" E 26° 17' 38.790" N, KSDD- 94° 3' 26.196" E 26° 17' 58.452" N
3	East Lakhibari	ELDA	ELDA- 94° 2' 58.190" E 26° 22' 4.730" N
4	Kasomarigaon	EPS under GAGD project	A 94° 02' 51.73" E 26° 17' 37.33" N, B 94° 02' 57.25" E 26° 17' 38.85" N C 94° 02' 55.32" E 26° 17' 44.53" N, D 94° 02' 45.29" E 26° 17' 41.77" N E 94° 02' 45.27" E 26° 17' 40.08" N, F 94° 02' 50.36" E 26° 17' 41.34" N
5	Dayalpur (Kasomarigaon PML additional area, cluster 3)	DPDM, DMDN, DPDO, DPDP, DPDQ DPDR	DPDM- 94° 0' 30.421" E 26° 14' 16.320" N, DPDN- 94° 0' 30.220" E 26° 14' 16.330" N DPDO- 94° 0' 30.020" E 26° 14' 16.330" N, DPDP- 94° 0' 30.411" E 26° 14' 16.030" N DPDQ- 94° 0' 30.210" E 26° 14' 16.040" N, DPDR- 94° 0' 30.010" E 26° 14' 16.040" N
6	Dayalpur (Kasomarigaon PML additional area, cluster 2)	DPDD, DPDH, DPDI, DPDJ, DPDK and DPDL	DPDD- 94° 0' 4.261" E 26° 13' 36.320" N, DPDJ- 94° 0' 4.060" E 26° 13' 36.330" N DPDI- 94° 0' 4.250" E 26° 13' 36.140" N, DPDL-94° 0' 4.050" E 26° 13' 36.150" N

Sl. No.	Oil Field	Wells to be Drilled/EPS/GGS	Well Coordinate
			DPDK- 94° 0' 3.850" E 26° 13' 36.150" N, DPDH- 94° 0' 3.860" E 26° 13' 36.330" N
7	Suphyam	GGs at Suphyam - 1	A 94° 0' 41.199" E 26° 13' 16.444" N, B 94° 0' 38.309" E 26° 13' 19.501" N C 94° 0' 35.179" E 26° 13' 16.537" N, D 94° 0' 38.296" E 26° 13' 13.490" N

16. During deliberations, EAC discussed following issues:

- PP informed that TOR was obtained for drilling in 28 locations in six PML Blocks i.e Golaghat District PML (52.12 Sq. Km.), Kasomarigaon PML additional area (56 Sq. Km), Kasomarigaon PML (20 Sq. Km), East Lakhbari PML (8.5 Sq. Km), Khoraghat Extn – I PML (83 Sq. Km) and Nambor PML (26 Sq. Km). All the PMLs are located in the forest area of Nambor and Dayang Reserve Forest. ONGC has also proposed to set up a Group Gathering station (GGs) at Kasomarigaon PML (Additional area), and an Early Production system (EPS) at Kasomarigaon PML. Further, PP informed that out of the proposed 28 wells, forest clearance has been accorded to 16 wells, Kasomarigaon EPS and GGS at SUAB. The forest clearance for the rest of the 12 well locations are pending and therefore ONGC has dropped the proposal for drilling of remaining 12 wells from EC application) in forest Area in 6 PML Blocks Golaghat District, Assam. PP has also submitted revised form 1 for the project.
- The Committee deliberated on 12 observations of IRO on CCR. PP has submitted Reply/action plan on observations raised. Regarding condition no ii, there are 2 existing pits at KSAB site, which will be used for upcoming drilling activities. Regarding Condition No V, -PP informed that ONGC has rate contract with OTBL for bio-remediation of oily sludge. For restoration of drill site, ONGC has SOP in place. Regarding condition no vi, the form IV is being submitted to APCB on annual basis wherein year wise details of oily sludge and spent oil are provided. Regarding condition No xii, at present there is no flaring at KSAB site and gas is flared at KSAG. Also the present facility at KSAG is temporary and the provision of flaring as per OSD Norms would be taken up. Regarding condition No. Xvi, PP informed that ONGC has an approved SOP of site restoration. Condition no xvi, PP informed that

exploratory location KSAB was drilled and put on extended production testing. After wards the development EC has been obtained vide no J 11011-563-2011 IA II (I) dated 8th December, 2020 and KSAB well was converted into development wells. Further two development wells KSDB and KSDC are planned to be drilled from KSAB for which EC has been applied. The Committee suggested the PP to train their Officers for compliance management as well as to provide all project related details alongwith documents to the IRO while they visit the project site for inspection. PP also informed action taken report related to General Conditions. PP also submitted the information in writing.

- PP has submitted the information desired by EAC such as Correlation of 2 seasons baseline data; SOP for restoration of drill site; Revised Action Plan for Public Hearing; Input data used for Air quality modelling; Revised EIA report with new baseline report as addendum; Soft copy of wild life conservation plan (10 years); Clarity on incremental value of NO_x, SO_x; Revised ATR action plan with timeline; Clarification on transportation plan of hydrocarbons; Proof of maintaining separate head/account for Environmental management plan implementation; Clarification regarding status of road preparation.
- The Committee suggested to develop Greenbelt in GGS and EPS in total area of 1.1979 hectares i.e., 33% of total project area with tree density @ 2500 trees per hectares, mainly along the plant periphery. Indigenous species shall only be planted as part of greenbelt and non-indigenous / alien species shall be replaced with native species. No invasive or alien or non-native tree species shall be selected for plantation. PP shall plant at least 20 variety of species as a part of greenbelt. Saplings 4-6 feet high shall be planted.

The committee was satisfied with the response provided by PP on above information

17. The proposal was considered by the EAC (Meeting ID: IA/IND2/13523/26/06/2023) held on 26th June, 2023 in the Ministry, wherein the project proponent and the accredited Consultant namely M/s. AECOM Indian Private Limited (NABET certificate no. NABET/EIA/2124/RA 0247 and validity 19th November, 2024), presented the case. The Committee **recommended** the project for grant of environmental clearance.

18. The EAC, constituted under the provision of the EIA Notification, 2006 and comprising of Experts Members/domain experts in various fields, have examined the proposal submitted by the Project Proponent in desired form along with the EIA/EMP report prepared and submitted by the Consultant accredited by the QCI/NABET on behalf of the Project Proponent. The EAC noted that the Project Proponent has given undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the report. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental

Clearance given, if any, will be revoked at the risk and cost of the project proponent.

19. The Committee noted that the EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. The Committee has found the baseline data is within NAAQ standards. The Committee has deliberated the action plan proposed by the project proponent to arrest the incremental GLC due to the project. The Committee has also deliberated on the CER plan and found to be addressing the issues in the study area. The EAC has deliberated the proposal and has made due diligence in the process as notified under the provisions of the EIA Notification, 2006, as amended from time to time and accordingly made the recommendations to the proposal. The Experts Members of the EAC have found the proposal in order and have **recommended** for grant of Environmental Clearance.

20. The environmental clearance granted to the project/activity is strictly under the provisions of the EIA Notification 2006 and its amendments. It does not tantamount/construe to approvals/consent/ permissions etc. required to be obtained or standards/conditions to be followed under any other Acts/ Rules/ Subordinate legislations, etc., as may be applicable to the project. The project proponent shall obtain necessary permission as mandated under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, as applicable from time to time, from the State Pollution Control Board, prior to construction & operation of the project.

21. Based on the proposal submitted by the project proponent and recommendations of the EAC (Industry-2), Ministry of Environment, Forest and Climate Change hereby accords environmental clearance for Onshore Development and Production of oil and gas from 28 wells and establishment of Kasomarigaon EPS and GGS at SUAB drill site in forest area in 6 PML Blocks, Golaghat district, Assam located at Village Kasmari Gaon, Tehsil Sarupathar, District Golaghat, State Assam by M/s. Oil and Natural Gas Corporation Limited, under the provisions of the EIA Notification, 2006, and the amendments therein, subject to compliance of the terms and conditions as under:-

A. Specific Condition:

- (i). As proposed by the Project Proponent, out of 28 wells, the proposal for drilling of 12 wells from EC application (where forest clearance is pending) in 6 PML Blocks Golaghat District, Assam has been dropped. Now, PP has to apply separately for the consideration of environmental clearance for the remaining 12 wells located in the forest area in case they want to drill the said wells. Therefore, environmental clearance has been granted for Onshore Development and Production of oil and gas from 16 wells and establishment of Kasomarigaon EPS and GGS at SUAB drill site in forest area in 6 PML

Blocks.

- (ii). Implementation of Action Plan on the issues raised during the Public Hearing shall be ensured. The Project Proponent shall undertake all the tasks as per the Action Plan submitted with budgetary provisions during the Public Hearing.
- (iii). 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, and risk mitigation measures relating to the project shall be implemented as per proposed in Annexure-II.
- (iv). No pipelines or its part shall be laid in the Forest land/Protected Area without prior permission/approval from the Competent Authority.
- (v). Total fresh water requirement shall not exceed 25 CMD and will be met from surface water. Prior permission shall be obtained from the concerned regulatory authority.
- (vi). The project proponent will treat and reuse the treated water within the drilling site and no waste or treated water shall be discharged outside the premises. Mobile ETP coupled with RO shall be installed to reuse the treated water in drilling system. Mobile STP shall also be installed. The size of the waste pit shall be equal to the hole volume+ volume of drill cutting and volume of discarded mud if any. Two feet free board may be left to accommodate rainwater. There shall be separate storm water channel and rainwater shall not be allowed to mix with wastewater. Level of the Drilling site shall be constructed in such a way that outside rainwater shall not enter into the drilling site. Alternatively, if possible, pit less drilling be practiced instead of above.
- (vii). PP shall ensure the compliance of standards stipulated for flaring in the Environmental (Protection) Rules, 1986. In case of elevated flaring, the minimum stack height shall be 30 m. Height of stack shall be such that maximum GLC never exceeds the prescribed ambient air quality limit.
- (viii). The company shall construct the garland drain to prevent runoff of any oil containing waste entering into the nearby water bodies. Separate drainage system shall be created for oil contaminated and non-oil contaminated wastes.
- (ix). As proposed, produced formation water is stored in formation water tanks shall be disposed to the abandoned wells of ONGC after necessary treatment.

Separated water from phase separation system will be treated in an ETP and will be reused. Treated effluent shall meet the water quality standards for re-injection well as per the CPCB/SPCB guidelines. PP shall monitor water quality of treated effluent regularly and maintain records.

- (x). During production, storage and handling, the fugitive emission of methane, if any, shall be monitored using Infra-red camera/ appropriate technology.
- (xi). The project proponent also to ensure trapping/storing of the CO₂ generated, if any, during the process and handling.
- (xii). Approach road shall be made pucca to minimize generation of suspended dust.
- (xiii). The project proponent 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.
- (xiv). 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 HOW(M&TM) Rules, 2016. No effluent/drilling mud 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.
- (xv). 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.
- (xvi). The project proponent shall take necessary measures to prevent fire hazards, containing oil spill and soil remediation as needed. At fixed installations or plants use of ground flare shall be explored.
- (xvii). The project proponent 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.
- (xviii). Blow Out Preventer system shall be installed to prevent well blowouts during drilling operations.
- (xix). On completion of the project, necessary measures shall be taken for safe

plugging of wells with secured enclosures to restore the drilling site to the original condition. The same shall be confirmed by the concerned regulatory authority from environment safety angle. In case of hydrocarbon not found economically viable, a full abandonment plan shall be implemented for the drilling site in accordance with the applicable DGH / Indian Petroleum Regulations. After completion of drilling of any well, the owner or operator shall restore the well site, remove or fill all pits used to contain produced fluids or industrial waste and remove all drilling supplies and equipment not needed for production.

- (xx). PP proposed to allocate Rs. 1.40 Crores towards Extended EMP (CER) which shall be spent as submitted in CER plan (Annexure-III). Further, all the proposed activities under CER shall be completed within 2 years of commencement of project activities in consultation with District Administration.
- (xxi). End of life lead acid batteries shall be disposed in compliance with the rules specified in Battery Waste Management Rules.
- (xxii). Occupational health surveillance of the workers shall be carried out as per the prevailing Acts and Rules. All workers & employees shall be provided with required safety kits/mask for personal protection.
- (xxiii). Oil content in the drill cuttings shall be monitored and report & shall sent to the Ministry's Regional Office.
- (xxiv). The project proponent 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.
- (xxv). PP should establish in house (at project site) environment laboratory for measurement of environment parameter with respect to air quality and water (surface and ground. A dedicated team to oversee environment management shall be setup at site which should comprise of Environment Engineers, Laboratory chemist and staff for monitoring of air, water quality parameters on routine basis instead of engaging environment monitoring laboratories/consultants. Any non- compliance or infringement should be reported to the concerned authority.
- (xxvi). The Project Proponent shall undertake Occupational Health survey for initial

and Periodical medical examination of the workers engaged in the Project and maintain records accordingly as per the provisions of the Mines Rules, 1955 and DGMS Circulars. Besides carrying out regular periodic health check-up of their workers, 20% of the workers engaged in active drilling operations shall be subjected to health check-up for occupational diseases and hearing impairment, if any.

- (xxvii). Greenbelt will be developed for GGS and EPS in total area of 1.1979 hectares i.e., 33% of total project area with tree density @ 2500 trees per hectares, mainly along the plant periphery. Indigenous species shall only be developed as part of greenbelt and non-indigenous / alien species shall be replaced with native species. No invasive or alien or non-native tree species shall be selected for plantation. PP shall develop at least 20 variety of species as a part of greenbelt. Saplings 4-6 feet high shall be planted. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department and native species shall be developed. Records of tree canopy shall be monitored through remote sensing map. Greenbelt development shall be completed before commissioning of the plant.
- (xxviii). PP shall sensitize and create awareness among the people working within the project area as well as its surrounding area on the ban of Single Use Plastic in order to ensure the compliance of Notification published by MOEFCC on 12th August, 2021. A report along with photographs on the measures taken shall also be included in the six-monthly compliance report being submitted to concerned authority.

B. General Condition:

- (i) No further expansion or modifications in the plant, other than mentioned in the EIA Notification, 2006 and its amendments, shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change/SEIAA, as applicable. 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/SEIAA, as applicable, to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.
- (ii) The energy source for lighting purpose shall be preferably LED based, or advanced having preference in energy conservation and environment betterment.
- (iii) 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 the Environment (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).

- (iv) The company shall undertake all relevant measures for improving the socio-economic conditions of the surrounding area. CER activities shall be undertaken by involving local villages and administration and shall be implemented. The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment.
- (v) 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.
- (vi) A copy of the clearance letter shall be sent by the project proponent to concerned Panchayat, Zilla Parishad/Municipal Corporation, Urban local Body and the local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal.
- (vii) 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.
- (viii) 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.
- (ix) 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 and at <https://parivesh.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.

- (x) 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.
- (xi) This Environmental clearance is granted subject to final outcome of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, if any, as may be applicable to this project.

22. The Ministry reserves the right to stipulate additional conditions, if found necessary at subsequent stages and the project proponent shall implement all the said conditions in a time bound manner. The Ministry may revoke or suspend the environmental clearance, if implementation of any of the above conditions is not found satisfactory.

23. Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.

24. Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

25. 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.

26. This issues with the approval of the competent authority.

(A. N. Singh)
Scientist-'E'

Copy to: -

1. The Secretary, Environment & Forest, H-Block, 2ndFloor, Janata Bhawan, Disupr, Guwahati - 781006 (Assam)
2. The Regional Officer, Ministry of Env., Forest and Climate Change, Integrated Regional Office, Guwahati, 4th Floor, HOUSEFED Building, G.S. Road

- Rukminigaon, Guwahati - 781022
3. The Member Secretary, Central Pollution Control Board, Parivesh Bhawan, East Arjun Nagar, Delhi - 32
 4. The Member Secretary, Pollution Control Board Assam, Bamunimaidam, Guwahati - 21 (Assam)
 5. Monitoring Cell, Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi - 3
 6. District Collector, Golaghat, Assam
 7. Guard File/Monitoring File/ Parivesh Portal /Record File

(A. N. Singh)
Scientist-'E'

E-mail: aditya.narayan@nic.in
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Annexure –I

The main issues raised during the public hearing and their action plan:

S I. N o	Name of the attende e	Concerns raised during Public Hearing	Response to the concerns/iss ues raised in public hearing	Activity	Estimated Expenditure (INR)	Time line
1	Dipak Ch. Bora from Upper Lengtha Gaon	He raised some concern, and those were: Ground water has been affected by the bombing activity by ONGC from 1971 onwards, and at the present scenario the water has become oily and full of iron. He also suggested that ONGCL should hang a hoarding, mentioning their activities, where they have done their CSR activities. He also stated that land acquisition process of ONGC is a one-sided	To the answer of the first concern regarding water quality, ONGC replied, iron content is naturally high in the area. He also stated that, during drilling ground water is only used for domestic purpose, otherwise recycled water is used in the drilling process. ONGC also	To ensure Safe drinking water supply through installation of Borewell and Iron Filter (Capacity 2000 lit/ day) for the local villagers.	Rs. 40 lakhs.	It would be completed within two years from the commencement of the project.

S I. N o	Name of the attende e	Concerns raised during Public Hearing	Response to the concerns/iss ues raised in public hearing	Activity	Estimated Expenditure (INR)	Time line
		<p>decision. He himself gave his land, but till now he didn't get the agreement of the land and he called himself a sufferer for this.</p>	<p>stated that two ETP have been installed in Khoraghat and Nambar area, and mobile ETPs are also being used in many sites. He also assured that the reinjection of water is done with the suggestion of ASPCB, and it is much below the ground water level. For the second suggestion from the person, ONGC welcomed his suggestion. Regarding the land acquisition ONGC stated that as per the Government rule and with consultation with the District administration ONGC initiate the land acquisition process. In this regard ADC, Golaghat made him clear that now</p>			

S I. N o	Name of the attende e	Concerns raised during Public Hearing	Response to the concerns/iss ues raised in public hearing	Activity	Estimated Expenditure (INR)	Time line
			a days an ACT has been enacted, land acquisition is done according to the act only. In reply, Dipak Ch. Bora state that his land was taken on lease, and the amount offered was not sufficient. Year wise consolidated list of all the CSR activities to be displayed in the area of concern by 30.04.2021			
2	Prasadi Bora, from Baroghoria Gaon	He stated that his paddy field is near to one of the ONGC's drill site and due to gas flaring production has been less in the recent years, for which he has also lodged a complaint to ONGC, but till date he has not received any compensation for his loss.	ADC Golaghat requested ONGC representative to look into the matter immediately and to take necessary steps.	A technical committee has been formed to assess the claim made by the complainant and due compensation would be paid by ONGC	-	-
3	Shri Binod Gogoi,	He alleged that due to ONGC's activities his agrifarm production is	In this regard ONGC stated that usually they don't		-	

S I. N o	Name of the attende e	Concerns raised during Public Hearing	Response to the concerns/iss ues raised in public hearing	Activity	Estimated Expenditure (INR)	Time line
	Barghori a Gaon	getting low. He has requested ONGC to give compensation for the damage, they have caused in agri-farm production. He also welcomed the new project prospect in the area, by ONGC. But also requested ONGC to keep an eye on the welfare of the local people. He requested ONGC to hire local people in unskilled labour category, so that job generation get boosted in the area. He said that in Bebejia Goan production of crude oil has started, and it is the duty of the local people to safeguard the resources. He also stated that one pipeline has passed in front of this house, and he wanted to know from ONGC, that is there any kind of rules or protocol that local youth could be appointed as guard to keep an eye on the pipeline.	allow laying of pipelines near to any house, paddy field or any other sensitive area. Moreover, personnel are already appointed to inspect the pipeline if there is any leakage. Village defence personnel are there, to report to ONGC, if any kind of unusual occurred in the pipeline. ONGC made it clear again that they reuse the water after treatment but does not allow discharge of untreated water. ETP and mobile ETPs are present in the site, for the treatment of water. But in case if any loss happens due to the			

S I. N o	Name of the attende e	Concerns raised during Public Hearing	Response to the concerns/iss ues raised in public hearing	Activity	Estimated Expenditure (INR)	Time line
			untreated water from ONGC site, they are ready to provide the compensation.			
4	Shri Mahim Bora, from Bobali Gaon	He stated his quarries as, during the survey period or drilling period ONGC dug hole, but after they left the site, in case of unavailability of oil, they did not restore the place, as it was previously. For this reason, sometimes their cattle fell into that hole.	ONGC clarified the matter by saying that in seismic survey the wells are dug to a small depth, which is shot hole. In this process with the help of blasting artificial earthquakes are being made, so as a result the hole get filled automatically. If not, ONGC is ready to fill up this hole.	Compliance for filling the small-bore hole drilled for seismic survey will be ensured by ONGC.	-	-
5	Shri Arindam Nag, Bebejia Gaon	He spoke that as a result of ONGC activity heavy vehicles ply on the road and damage it. He wanted to know whether ONGC will take the responsibility to repair the roads.	ONGC representative clarify the matter by saying that the maintenance work of the road are usually done by the ONGC, and in future they will continue to do so.	ONGC has approved the fund of Rs. 76 lakhs for Road repair in the working area and is expected to complete the work by 31.12.2020.	30 lakhs	(Already Completed)

S I. N o	Name of the attende e	Concerns raised during Public Hearing	Response to the concerns/iss ues raised in public hearing	Activity	Estimated Expenditure (INR)	Time line
6	Shri Karlos Marua, Borbali Gaon	He stated that he is happy as ADC Golaghat, EE PCBA and ONGC officials are present and all the grievances are placed Infront of them. ONGC previously made some promises for the welfare of the village under CSR programme, but till date it has not been fulfilled. He also stated that guard wall near the drill site should be constructed. He also stated that installation of solar light in the village road are done by the ONGC.	ONGC stated that many people submit their grievances, but those demands should be comes from the concerned area SDO, hence they will definitely look into the matter and fulfil it. The ADC, Golaghat made it clear that the grievances should be submit at SDO office, Circle office and OC of the concerned area and the district administration will go through the matter. He gave stress on ecological development of the country. He also stated that, after proper justification of the grievances the matter would be put up at the	1.ONGC have approved fund forSolar Street lights. 2.Additionally, ONGC have approved fund for Plantation activity in villages through Panchayat 3.Organizing Health and Eye Check-up Camp for village people.	1. Rs. 50 lakhs 2. Rs.10 Lakhs 3.Rs.10 lakhs	1. It would be completed within two years from the commencement of the project. 2. It would be completed within two years from the commencement of the project.

S I. N o	Name of the attende e	Concerns raised during Public Hearing	Response to the concerns/iss ues raised in public hearing	Activity	Estimated Expenditure (INR)	Time line
			concerned level or authority.			
				Total	1.4 Cr	

Annexure - II

Capital cost and recurring cost of EMP are given below:

Sr. No.	Mitigation/Management measures	Total Capital Cost (in INR)	Recurring Cost (in INR)
1	Wastewater and effluent Management Modular STP Water Quality Monitoring	10,00,000	40,000 40,000
2	Fuel, Lubricant and Chemical Management	15,00,000	65,000
3	Noise and Vibration Mitigation Acoustic Enclosure and Personal Protective Equipment Noise Monitoring Maintenance cost of equipment	1,75,000	35,000 58,000
4	Solid Waste Management	1,50,000	50,000
5	Air emission mitigation Maintenance of D.G. sets Air monitoring	-----	10,00,000 1,25,000
6	Soil Quality	-----	43,000
7	Training to Staff	-----	1,25,000
8	General Awareness in Local Public	-----	1,75,000
Total		28,25, 000	17,56,000

Annexure - III

Details of extended EMP (CER) with proposed activities and budgetary allocation:

S. no.	District	Particulars	Activity	Timeline	Total in INR
1	Golaghat	Community infrastructure	Solar Street lights Safe drinking water supply through installation of Borewell and Iron Filter (Capacity 2000 lit/ day) for the local villagers.	Within 2 years from the commencement of the project	0.40 Crores
2		Environment	Plantation Activity in villages through Panchayat		0.50 Crores
3		Health	Health and Eye Check-up Camp		0.10 Crores
4		Infrastructure	Road Preparation		0.30 Crores
Total funds under CER					Rs. 1.4 Crores