



File No: J-11011/124/2008-IA-II(I)

Government of India
Ministry of Environment, Forest and Climate Change
IA Division



Date 07/10/2024



To,

Sh. Janakiraman Ganesan,
M/s HINDUSTAN OIL EXPLORATION CO LIMITED,
Lakshmi Chambers, 192, St.Mary's Road, Alwarpet, Near Billroth Hospital, Chennai - 600018, TAMIL
NADU
gjanakiraman@hoec.com

Subject: Drilling of 4 Infill wells and 22 Development wells in the Mehsana District of Gujarat by M/s. Hindustan Oil Exploration Company Ltd. – Consideration of Environment Clearance reg.

Sir/Madam,

This is in reference to your application submitted to MoEF&CC vide proposal number IA/GJ/IND2/445136/2024 dated 02/02/2024 for grant of prior Environmental Clearance (EC) to the proposed project under the provision of the EIA Notification 2006 and as amended thereof.

2. The particulars of the proposal are as below :

(i) EC Identification No.	EC24A0303GJ5232630N
(ii) File No.	J-11011/124/2008-IA-II(I)
(iii) Clearance Type	Fresh EC
(iv) Category	A
(v) Project/Activity Included Schedule No.	1(b) Off-shore and onshore oil and gas exploration, development and production, 1(b) Off-shore and onshore oil and gas exploration, development and production
(vi) Sector	Industrial Projects - 2
(vii) Name of Project	Drilling of 4 Infill wells and 22 Development wells in the Mehsana District of Gujarat by HOEC
(viii) Name of Company/Organization	HINDUSTAN OIL EXPLORATION CO LIMITED
(ix) Location of Project (District, State)	MAHESANA, GUJARAT
(x) Issuing Authority	MoEF&CC
(xi) Applicability of General Conditions as per EIA Notification, 2006	No

3. The Ministry of Environment, Forest and Climate Change has examined the proposal seeking environmental clearance for the drilling of 4 Infill wells and 22 Development wells in the Mehsana District of Gujarat by M/s. Hindustan Oil Exploration Company Ltd is located at Cambay Basin [North], Gujarat, India Asjol & North Balol Block, Taluk Mehsana, District Mehsana, State Gujarat by M/s. Hindustan Oil Exploration Company Ltd.

4. All Products are listed at S. No. 1(b)-Offshore and onshore Oil and Gas Exploration Development and Production of Schedule of Environmental Impact Assessment (EIA) Notification 2006 and its Amendments under Category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC).

5. The details of Existing wells of product and capacity are placed in Annexure-II.

6. The Ministry has issued Environment Clearance to the 4 in-fill development wells vide file no. J-11011/124/2008-IA II(I) dated 19.03.2008. Certified compliance report of existing EC has been obtained from Integrated Regional Office, MoEF&CC, vide File no – J-11/41-2022-IROG NR dated 31.07.2023 based on inspection done on 10th July 2023. As per CCR, the project was not commenced and the validity of EC has already lapsed. EAC found the information satisfactory.

7. The ToR has been issued by the Ministry vide F. No. J-11011/124/2008-IA-II(I) dated 02.01.2021. It was informed that no litigation is pending against the project.

Public Hearing for the proposed project had been conducted by the Gujarat Pollution Control Board on 18.01.2022, 11:00 AM at Palaj Leuva Patidar Vadi, Near Palaj Prathmic Shala Taluk, Mehsana District, Gujarat chaired by ADM, Mehsana as a representative of District Collector & District Magistrate, Mehsana. The overall budget allocation for Public Hearing commitment was 2.25 lakhs. The main issues raised during the public hearing and their action plan are placed in Annexure III.

8. Total land area- Area for Well Drilling and Campsite = 2 ha per drill. The existing greenbelt present within the North Balol block is 0.0947 Ha and the proposed greenbelt will be 0.5306 Ha. The total greenbelt developed within the North Balol block will be 0.6253 Ha. i.e., 33% of the total GGS area of 1.895 Ha. The existing greenbelt present within the Asjol block is 0.103 Ha and the proposed greenbelt will be 0.5768 Ha. The total greenbelt developed within the Asjol block will be 0.6798 Ha. i.e. 33% of the total GGS area of 2.06 Ha. The estimated project cost is Rs. 345 Crores. The revised final project cost is Rs.120 Crores. The capital cost of EMP per well would be Rs. 66 Lakhs and the recurring cost for EMP per well would be Rs. 11.29 Lakhs per annum. PP proposes to allocate Rs. 7 Crores towards CER (Corporate Environment Responsibility). Total Employment will be 117 persons as direct & indirect.

9. There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance. There is no Reserve forests/protected forests. There is no Eco-sensitive Zone is spread over an area of square kilometres with an extent varying kilometres around the boundary Conservation plan for schedule I species has been submitted to the Deputy Conservation of Forests dated 27.11.23, and a budget of 0.15350 Crores has been earmarked for the same.

Water bodies: Balgamda Lake is present Inside North Balol Block, Palaj Lake is present Inside North Balol Block, Katosan Lake is present Inside Asjol Block, Rudathal Lake is at a distance of ~ 4.70km direction of SW (Asjol Block), Dhinoj Lake is at a distance of ~5.54km direction of NE (North Balol Block). POND -Pond near Udheda is present Inside North Balol Block, Hathiya Talav is present Inside North Balol Block, Bhojsar Talav is at a distance of ~5.50km direction of WNW (North Balol Block), CANAL - Narmada Main Canal is at a distance of Inside Asjol Block, Zinzuwada Branch Canal is present Inside Asjol Block, Canal near Kanpura is at a distance of ~0.40km direction of W (Asjol Block), Kharaghoda Branch Canal is at a distance of ~ 3.57km direction of SSW (Asjol Block), Goriya Branch Canal is at a distance of ~6.65km direction of S (Asjol Block), Canal near Mudhera is at a distance of ~8.03km direction of W (North Balol Block), Canal near Mesra Panchasar is at a distance of ~ 9.08km direction of W (North Balol Block), Canal near Mudhera is at a distance of ~ 9.68km direction of W (North Balol Block), NADI-Rupen Nadi is present Inside North Balol Block, Khari Nadi is present Inside North Balol Block, Pushpavati Nadi is at a distance of ~1.63km direction of N (North Balol Block), Okaro Kharaghoda Nadi is at a distance of ~ 3.29km direction of SW (Asjol Block). Khari Nadi is at a distance of ~ 7.46km direction of NW (North Balol Block). NALA–Nala is present Inside North Balol Block.

10. Ambient air quality monitoring was carried out at 16 locations during April 2023 to June 2023 and the baseline data indicates the ranges of concentration as: PM10 (26.43-66.51 $\mu\text{g}/\text{m}^3$), PM2.5 (15.36-39.91 $\mu\text{g}/\text{m}^3$), SO2(5.69-15.76 $\mu\text{g}/\text{m}^3$) and

NO₂(9.64-31.56 g/m³). AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project for North Balol Block would be 67.43g/m³, 16.62g/m³, 32.31g/m³ respect to PM₁₀, SO₂ and NO_x. The resultant concentrations are well within the National Ambient Air Quality Standards (NAAQS). AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project for Asjol Block would be 67.21g/m³, 16.41g/m³, 32.32g/m³ respect to PM₁₀, SO₂ and NO_x. The resultant concentrations are well within the National Ambient Air Quality Standards (NAAQS).

11. Total fresh water requirement per well shall not exceed 25 KLD which will be met from private tankers. Extraction of groundwater shall not be permitted for industrial operations. The proposed Effluent generation will be 14KLD (9KLD - Treated in Mobile ETP of capacity 10KLD + 6KLD Reused in mud preparation after passing into degasser) which will be sent to ONGC ETP through tankers for Treatment and disposal. Sewage generation of 6.5 KLD will be treated in STP of capacity 20 KLD. The plant will be based on Zero Liquid discharge system and hence treated effluent will not be discharged outside the factory premises.

Produced water will be treated in-house Proposed ETP of capacity 20 m³/day and disposed of in disposal wells.

Production Profile – Oil				
Year	Asjol - Oil Rate BBl/Day	Cum Oil (BBl)	Water Rate m ³ /Day	Pressure (Psi)
1	0	0	-	
2	74	27010	0.06	
3	94	34310	0.85	
4	90	32850	1.53	
5	81	29565	2.91	
6	72	26280	4.34	sub-hydrostatic - NIL
7	66	24090	5.25	
8	63	22995	5.75	
9	61	22265	6.12	
10	59	21535	6.43	

Production Profile – Gas				
Year	North Balol-Gas Rate MMscf/d	Cum Gas (BCF)	Water Rate m ³ /Day	Pressure Psi
1	-	0.00		0
2	2.00	0.73		853
3	2.00	1.46		853
4	2.00	2.19		853
5	2.01	2.92		782
6	1.95	3.63	Nil (Shallow wells)	782
7	1.24	4.09		711
8	0.72	4.35		711
9	0.44	4.51		711
10	0.28	4.61		640

12. Power requirement during drilling activities will be sourced from Diesel Generators of capacity 3 x 670 kW (running) with 25m stack height, 1 x 670 kW DG set with 25 m stack height will be used as standby during power failure and 1X134 kW for campsite with stack height of 20m above ground level will be provided as per CPCB norms to the proposed DG sets.

13. Details of Process emissions generation and its management:

The source of stack are 4 nos of 670 KW Diesel Generator (1no will be standby) having a stack height of 25m, 1 no. of DG -134 kW having a stack height of 20m and flare stack of height 30 m. The expected emission from the stack for PM₁₀ (0.2943g/s), SO₂ (0.2753g/s) and NO_x (0.4110g/s) given respectively. We will install New DG sets with the latest technology meeting the CPCB emission standards and we will engage DG sets with engineering design technologies to control the emission like:

- Fuel injection technologies
- Exhaust gas recirculation
- Intake temperature management
- Selective catalytic reduction (SCR)

Flare Management:

- Regular Inspections and scheduled inspections and maintenance of the flare stack will be performed to detect and address any potential deficiency promptly.
- Monitoring Systems: Periodical monitoring systems will be complied with to continuously monitor flare stack operation, including flame presence and intensity, gas flow rates, and combustion efficiency.
- Operating Procedures will be developed and enforced for starting, operating, and shutting down the flare stack for safer operation.
- Environmental monitoring like ambient air quality near the flare stack will be carried out in the vent of flaring to ensure the results are within the national ambient air quality standards.

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

During the Construction Phase, 15.39 kg/day of Organic Municipal Solid Waste and 10.26 kg/day of Inorganic Municipal solid waste will be generated. The Organic Waste will be disposed of at nearby municipal disposal site via local vendors & Inorganic waste will be segregated and recyclable waste stored in designated bins onsite. Recyclable waste will be periodically sold to local waste recyclers.

During the Drilling Phase, 12.15 kg/day of Organic Municipal Solid Waste and 8.1kg/day of Inorganic Municipal solid waste will be generated. The Organic Waste will be disposed of at nearby municipal disposal sites via local vendors & Inorganic waste will be segregated and recyclable waste stored in designated bins onsite. Recyclable waste will be periodically sold to local waste recyclers.

During the Production Phase, 3.0375 kg/day of Organic Municipal Solid Waste and 2.7kg/day of Inorganic Municipal solid waste will be generated. The Organic Waste will be Disposed off in nearby municipal disposal site via local vendors & Inorganic waste will be Proper segregated and recyclable waste in designated bins onsite. Recyclable waste will be periodically sold to local waste recyclers.

Hazardous waste generation

Hazardous Waste Generation - Used/ spent oil (Category 5.1) of quantity 0.255 TPA will be collected in HDPE drums in secured dyked area and Disposed to CPCB/ GPCB registered used oil recyclers/ facilities via authorized vendor(s)/transporter(s).

Oil Sludge of quantity 0.15 MT will be Handling & Storage by Drying Bed and after drying will be disposed and will be sent for incineration to TSDF. The ETP sludge leftover will be sent to TSDF or SPCB-approved secured Landfill.

Non-hazardous waste generation per well & Disposal

- Drill Cuttings generated from water-based mud of quantity - 112 MT/ well was disposed in a well-designed pit lined with impervious liner located on site as per S No. 72C.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) of quantity -170 m³/well was 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.

15. During deliberations, EAC discussed the following issues:

- EAC noted that the initial proposal submitted was for the drilling of 4 infill wells & 22 development of Asjol Block and North Balol block wells. However, due to the presence of water bodies within 500 m from well locations, PP has dropped

17 wells and the revised proposal is for the drilling of 9 Development wells in the Mehsana District of Gujarat by HOEC.

- EAC opined that the revision in the tentative drilling location of wells does not PH conducted as all the wells are located in the Mehsana district only. Further, EAC opined that the EIA/EMP submitted covers the impact region and the study area remains the same after the revision of drilling locations.
- PP has informed that M/s. HOEC has obtained Consolidated Consent and Authorization (C C & A) vide letter dated 07.12.2018 for the Asjol and North Balol block areas.

The committee was satisfied with the response provided by PP on the above information. Further, the Committee desired to submit the above information in writing. Accordingly, PP has submitted the desired information and EAC found the information/commitments satisfactory.

16. The proposal was considered by the EAC (Meeting ID: EC/AGENDA/EAC/797852/7/2024) held on 25th & 31st July 2024 in the Ministry, wherein the project proponent and the accredited Consultant M/s. Hubert Enviro Care Systems (p) Limited (NABET certificate no. NABET/EIA/2224/RA0190 and validity 27.07.2024), presented the case. The Committee recommended the project for grant of environmental clearance.

17. The EAC, constituted under the provision of the EIA Notification, 2006 and comprising of Experts Members/domain experts in various fields, has examined the proposal submitted by the Project Proponent in the 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 EIA/EMP 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.

18. 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.

19. 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.

20. Based on the proposal submitted by the project proponent and recommendations of the EAC (Industry-2), the Ministry of Environment, Forest and Climate Change hereby accords environmental clearance for the establishment of Drilling of 4 Infill wells and 22 Development wells in the Mehsana District of Gujarat by M/s. Hindustan Oil Exploration Company Ltd., under the provisions of the EIA Notification, 2006, and the amendments therein, subject to compliance of the terms and conditions.

21. 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.

22. 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 the Environment (Protection) Act, 1986.

23. 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.

24. 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.

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

Copy To

1. The Principal Secretary, Forests & Environment Department, Government of Gujarat, Sachivalaya, 8th Floor, Gandhi Nagar - 382 010 (Gujarat).
2. The Regional Officer, Ministry of Env., Forest and Climate Change, Regional Office, Gandhi Nagar, A wing- 407 & 409, Aranya Bhawan, Near CH-3 Circle, Sector-10 A, Gandhi Nagar-382010.
3. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi -32.
4. The Member Secretary, Gujarat State Pollution Control Board, Paryavaran Bhawan, Sector 10 A, Gandhi Nagar-382 043 (Gujarat).
5. Compliance and Monitoring Division, Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi.
6. The District Collector, Mehsana, Gujarat.
7. Guard File/Monitoring File/Parivesh portal/Record File.

Annexure 1

Specific EC Conditions for (Off-shore And Onshore Oil And Gas Exploration, Development And Production)

1. Off-shore And Onshore Oil And Gas Exploration, Development And Production

S. No	EC Conditions
1.1	The Environmental Clearance is only for the proposed Drilling of 9 Development wells in the Mehsana District of Gujarat.
1.2	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 (Annexure-IV).
1.3	No drilling activities shall be carried out within 500 m from the water bodies.
1.4	No pipelines or its part shall be laid in the Forest land/Protected Area without prior permission /approval from the Competent Authority.
1.5	Total fresh water requirement shall not exceed 25 m ³ /day which will be met from private tankers. Prior permission shall be obtained from the concerned regulatory authority.
1.6	The project proponent will treat and reuse the treated water within the factory 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 the drilling system. The size of the waste shall be equal to the

S. No	EC Conditions
	total 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 stormwater channel and rainwater shall not be allowed to mix with wastewater. Alternatively, if possible pit less drilling be practised instead of the above. Produced water generated shall be treated within the premises as per the Standards for Liquid Effluent of Oil Drilling and Gas Extraction Industry notified in the Environment (Protection) Rules 1986 and shall not be discharged untreated anywhere or in any stream.
1.7	During production, storage and handling, the fugitive emission of methane, if any, shall be monitored using Infra-red camera/ appropriate technology. No flaring shall be carried out during the operation phase.
1.8	The project proponent also to ensure trapping/storing of the CO2 generated, if any, during the process and handling.
1.9	Approach road shall be made pucca to minimize generation of suspended dust.
1.10	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.
1.11	The company shall construct the garland drain 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.
1.12	Drill cuttings separated from drilling fluid shall be adequately washed and disposed of in HDPE lined pit. Waste mud shall be tested for hazardous contaminants and disposed of according to HWMH Rules, 2016. No effluent/drilling mud shall be discharged/disposed of 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 operations notified vide GSR.546(E) dated 30th August 2005.
1.13	Oil spillage prevention and mitigation schemes 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.
1.14	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. At the place of ground flaring, the overhead flaring stack with knockout drums shall be installed to minimize gaseous emissions during operation.
1.15	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.
1.16	Blow Out Preventer system shall be installed to prevent well blowouts during drilling operations.
1.17	On completion of the project, necessary measures shall be taken for the safe plugging of wells with secured enclosures to restore the drilling site to the original condition. The same shall be confirmed

S. No	EC Conditions
	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.
1.18	Greenbelt of at least 5-10 m width shall be developed in 0.6253 hectares i.e., 33 % of the total project area of North Balol Block and 0.6798 hectares i.e., 33 % of the total project area of Asjol Block. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department and native species shall be developed. Saplings 4-6 feet shall only be planted. Trees shall be planted in the Green Belt under the campaign #Plant4Mother #एक पेड़ माँ के नाम and uploaded on the MeriLiFE portal (https://merilife.nic.in/).
1.19	PP proposed to allocate Rs. 7.0 Crores towards Extended EMP (CER) which shall be spent as submitted in CER plan (Annexure-V). Further, all the proposed activities under CER shall be carried out in consultation with the District Administration.
1.20	No lead-acid batteries shall be utilized in the project/site.
1.21	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/masks for personal protection.
1.22	Oil content in the drill cuttings shall be monitored and reports & shall sent to the Ministry's Regional Office.
1.23	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 the site should be done.
1.24	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 compliance of the Notification published by MOEFCC on 12th August 2021. A report along with photographs of the measures taken shall also be included in the six-monthly compliance report being submitted to the concerned authority.

Standard EC Conditions for (Off-shore and onshore oil and gas exploration, development and production)

1. General Conditions

S. No	EC Conditions
1.1	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.

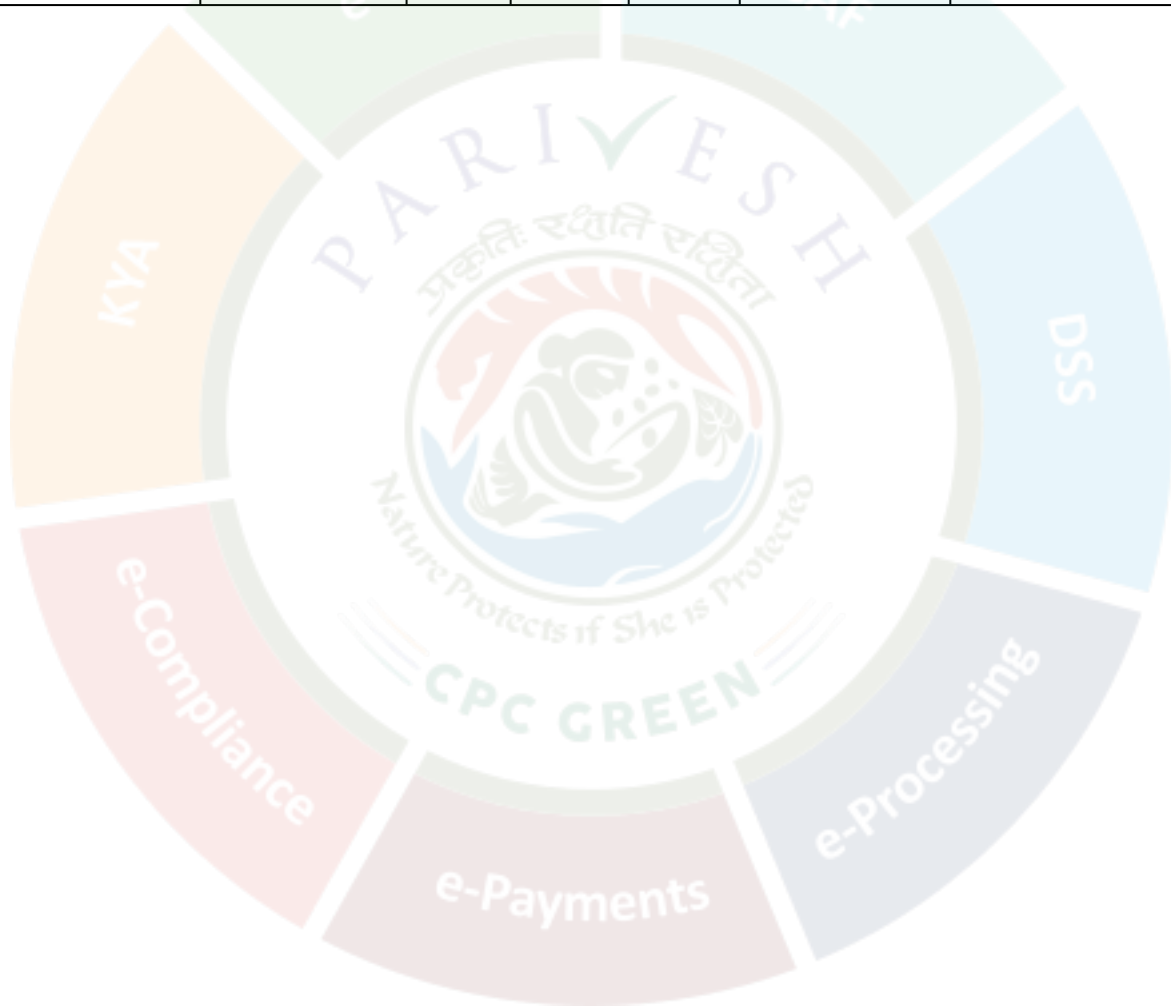
S. No	EC Conditions
1.2	The energy source for lighting purpose shall be preferably LED based, or advanced having preference in energy conservation and environment betterment.
1.3	The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures 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).
1.4	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.
1.5	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.
1.6	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.
1.7	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.
1.8	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.
1.9	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.
1.10	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.
1.11	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

S. No	EC Conditions
	to this project.

Annexure 2

Details of Products & By-products

Name of the product /By-product	Product / By-product	Existing	Proposed	Total	Unit	Mode of Transport / Transmission
GAS	Product	0	100.3428	100.3428	Tons per Annum (TPA)	Pipeline
OIL	Product	0	16560	16560	Tons per Annum (TPA)	Pipeline



The details Existing wells of product and capacity as under:

Initial Proposal							
S. No	Block	Well Name	Well Locations as per EIA		Distance of Water Body from the proposed Well(m)	Name of the Water Body & Direction	Remarks
			Latitude	Longitude			
1	Asjol Block	Loc-1	23°27'27.33"N	72°13'30.27"E	230	Lake, NNW	Dropped
2		Loc-2	23°27'10.57"N	72°13'16.43"E	420	Pond, SE	Dropped
3		Loc-3	23°27'16.94"N	72°12'55.48"E	460	Pond, NNE	Dropped
4		Loc-4	23°27'27.36"N	72°12'43.56"E	460	Pond, ENE	Dropped
5		Loc-5	23°29'11.61"N	72°11'24.20"E	160	Narmada Main Canal, SW	Dropped
6		Loc-6	23°29'6.46"N	72°11'30.58"E	100	Narmada Main Canal, ENE	Dropped
7		Loc-7	23°28'50.3908"N	72°12'1.2480"E	370	Zinzuwada Branch Canal, WSW	Dropped
8		Loc-8	23°28'7.0880"N	72°12'22.3729"E	230	Lake, E	Dropped
9		Loc-9	23°27'22.5217"N	72°12'33.2327"E	440	Pond, S	Dropped
10		Loc-10	23°27'48.37"N	72°13'37.30"E	410	Lake, SW	Dropped
11	North Balol Block	Loc-1	23°34'49.9220"N	72°14'27.2951"E	240	Pond, NE	Dropped
12		Loc-2	23°34'35.92"N	72°14'13.23"E	450	Lake, SSE	Dropped
13		Loc-3	23°33'40.0564"N	72°13'44.7082"E	690	Pond, N	Retained
14		Loc-4	23°31'53.8425"N	72°14'26.4441"E	320	Pond, NNW	Dropped
15		Loc-5	23°36'16.3963"N	72°13'23.2977"E	350	Rupen Nadi, SE	Dropped
16		Loc-6	23°35'59.14"N	72°13'1.95"E	130	Rupen Nadi, SE	Dropped
17		Loc-7	23°31'57.7846"N	72°14'55.9096"E	600	Pond, N	Retained
18		Loc-8	23°35'32.8306"N	72°14'21.4876"E	250	Pond, SW	Dropped
19		Loc-9	23°34'1.8035"N	72°13'54.9458"E	110	Pond, NW	Dropped
20		Loc-10	23°33'54.3573"N	72°14'18.5502"E	490	Pond, SSW	Dropped
21		Loc-11	23°31'46.6138"N	72°15'7.8149"E	780	Lake,SSW	Retained
22		Loc-12	23°34'12.41"N	72°14'44.95"E	70	Pond, W	Dropped
23		Loc-13	23°34'55.9385"N	72°13'41.0975"E	440	Pond, SW	Dropped
24		Loc-14	23°32'38.2281"N	72°14'15.7817"E	150	Pond, E	Dropped
25		Loc-15	23°32'49.5317"N	72°13'56.4281"E	360	Khari Nadi, NNW	Dropped
26		Loc-16	23°32'55.38"N	72°14'40.48"E	240	Lake, NNW	Dropped

Final Proposal							
S. No	Block	Name of the Well	Well Coordinates		Distance of Water Body from the Well(m)	Name of the Water Body	Remarks
			Latitude	Longitude			
1	Asjol Block	Asjol_EC_Loc-A	23°28'18.6969"N	72°13'27.6157"E	570 m	Krishnapura Lake, SW	New Well
2		Asjol_EC_Loc-B	23°27'32.1136"N	72°12'40.8780"E	510 m	Pond, E	New Well
3	North Balol Block	NB_EC_Loc-1	23°31'53.2389"N	72°14'57.5661"E	730 m	Pond, N	New Well
4		NB_EC_Loc-2	23°36'21.6335"N	72°13'9.1205"E	640 m	Rupen Nadi, S	New Well
5		NB_EC_Loc-3	23°31'44.6039"N	72°14'27.5313"E	520 m	Matravali Talav (Pond), SW	New Well
6		NB_EC_Loc-4	23°34'43.6790"N	72°14'11.9910"E	600 m	Pond, WSW	New Well
7		NB_EC_Loc-5	23°33'40.0564"N	72°13'44.7082"E	690 m	Pond, N	Retained Well

8	NB_EC_Loc-6	23°31'57.7846"N	72°14'55.9096"E	600 m	Pond, N	Retained Well
9	NB_EC_Loc-7	23°31'46.6138"N	72°15'7.8149"E	780 m	Lake, SSW	Retained Well

Final Proposal on North Balol Block

S. No	Product/byproduct	Existing Quantity (No.s)	Proposed Quantity (No.s)	Total Quantity(No.s)
1	Development Well	9#	7	16
2	Production Setup	Gas Gathering Station (GGS) = 25000SCMD	Nil	Gas Gathering Station (GGS) =25000SCMD
3	Interconnecting Pipeline	13 kms. Underground pipelines (NB2 to GCS, NB1 to GCS, NB4 to NB1)	20.96 km of 4 inch dia underground pipelines to manifold at existing GGS	-

Note: # Started from the 2005 before the period of EIA notification 2006-Well 6 to 9 (Abandoned), Well1,3,4(Closed), Well 2 & 5 (Operating)

Final Proposal on Asjol Block

S.No	Product/byproduct	Existing Quantity(No.s)	Proposed Quantity(No.s)	Total Quantity(No.s)
1	Infill Wells	4*	0	4*
2	Development Well	6##	2	8
3	Production Setup	Early Production System(EPS) = 135m ³ /day	Nil	Early Production System(EPS) = 135m ³ /day
4	Interconnecting Pipeline	2.25 kms. Underground pipelines (A6 to EPS, A7 to EPS and EPS- NKGGS3)	2.5 km of 4 inch dia underground pipelines to manifold at existing EPS	-

Note: ## Started from the 1995 before the period of EIA notification 2006- Well 1,2,4 are dry Well, well 5 to 7 are operating Wells

*EC available for four wells but not yet commissioned due to financial reasons

Details of Coordinates of Proposed 9 development of Asjol Block and North Balol block wells

Proposed Location	Coordinates of Revised Well Locations		GGS/ EPS Name	GGS/EPS Processing Capacity			Distance of Well from GGS/ EPS through interlinked pipeline (km)
	Latitude	Longitude		Design	Operating	Post Operating	
Asjol_EC_Loc-A	23°28'18.6969"N	72°13'27.6157"E	Asjol Oil Handling System	100MT	35MT	100MT	1.16
Asjol_EC_Loc-B	23°27'32.1136"N	72°12'40.8780"E					1.23
NB_EC_Loc-1	23°31'53.2389"N	72°14'57.5661"E	North Balol Gas Gathering System	16560 MT	90MT	16560 MT	1.23
NB_EC_Loc-2	23°36'21.6335"N	72°13'9.1205"E					7.58
NB_EC_Loc-3	23°31'44.6039"N	72°14'27.5313"E					1.46
NB_EC_Loc-4	23°34'43.6790"N	72°14'11.9910"E					4.19
NB_EC_Loc-5	23°33'40.0564"N	72°13'44.7082"E					2.68
NB_EC_Loc-6	23°31'57.7846"N	72°14'55.9096"E					1.08
NB_EC_Loc-7	23°31'46.6138"N	72°15'7.8149"E					1.54

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

S. No.	Name and Address	Points represented	Replies from Project Proponent	Budget and Timeline
1	Patel Amrutbhai Ugerdas; Dy Sarpanch, Palaj	Where is the location of the proposed project?	Project proponent informs that HOEC plant is located within 500 mts. Near Palaj Village.	Not Applicable
		HOEC plant is there since what time?	The gas production from plant was started since year 2005.	Not applicable
		Village road is not proper, requested to help in this regards.	Regarding road project proponent informed that the same be discussed in consultation with villagers and concerned department of the government for appropriate action.	The proposed village road is of 300 metre length and 1.5m width and the budget for completing the road construction is 60 lakhs. HOEC will coordinate with village sarpanch & Public works department (PWD) for construction of this road. Construction and repair of roads for a distance of 2km to 3km in each villages of Krishnapura, Katosan Ranhela Balol Udheda
2	M.M Patel, VP, Golf Ceramic, Palaj	He welcomed the proposed project and anticipated that land prices may increase, employment may be generated and development will also occur.	Project proponent thanked the good wishes for the proposed project.	Project Proponent continues to provide employment to local skilled population. Once work commences post EC clearance HOEC shall deploy local skilled people as per work requirement. This budget shall be included in the annual plan of operating expenditure. HOEC awaits clearance of EC so that budget provision can be made in subsequent Financial Year.
3	Parmar Roit Jenabhai, Palaj	In proposed project it is requested to give first priority to local villagers who have optimum qualification.	Project proponent informed that as far as possible company will make best efforts to provide work to local technically qualified people.	Project Proponent continues to provide employment to local skilled population. Once work commences post EC clearance HOEC shall deploy local skilled people as per work requirement. This budget shall be included in the annual plan of operating expenditure. HOEC awaits clearance of EC so that budget provision can be made in subsequent Financial Year
4	Thakor	It was requested	Project proponent	The said taxes have been paid to

S. No.	Name and Address	Points represented	Replies from Project Proponent	Budget and Timeline
	chaturbhai, Palaj	that the eligible taxes currently being paid in district may be paid in the village panchayat so that extra income can be generated.	replied that the said taxes shall be payable as per government rules and regulations.	village panchayat by the project proponent.
5	Amrutbhai	Suitable compensation should be paid to land owners for any gas pipeline passing through their land.	Project proponent informed that in the proposed project if any gas pipeline would be laid in any farm land suitable compensation shall be paid as per prevailing rate and rules.	The time-line shall be based once the well produces commercial hydrocarbons and budget for the compensation shall be based on current prevailing rates. The land value will be evaluated according to Government norms and regulations. The land will be acquired with fair compensation and agreement with the owner.
6	Hitesh Patel, Zirconia Ceramics, Palaj	He welcomes the proposed project and said that there is no environment damage due to production and use of natural gas and very beneficial to area and region.	Project proponent thanked the good wishes for the proposed project.	Not applicable

Reply to the issues (Written Complaints) raised by the public during Public Hearing on 18.01.2022:

S.no	Name and Address	Written Complaints	HOEC Reply
1	Vishwa Bandhu Awareness Mission(N.G.O)	According to Constitution 51 when everyone has a duty to protect the environment, when we have joined the Save the Peacock campaign by the Prime Minister of the country, how many peacocks are found in the villages of Katosan and Palaj (Tal.Mahesana) and in the affected villages AFO of the local forest department about it. It is our written proposal that the opinion of be taken and if there are peacocks in this area, a separate budget should be allocated for peacock conservation according to the environment. Then village sarpanch and talati should take	To create awareness to the people in the village about the forest laws regarding punishments being given for killing the peacocks; knowledge of giving first aid treatment in case of injury; motivation to use Natural fertilizes and insecticides in Agriculture for conflict management. The Budget of Rs. 25,000 was allocated(will be done within (2024-

		<p>written opinion regarding protection of national peacock so that it will be easier for the district administration when any legal situation arises in future and also C.S.R. and C.E.R. Kindly request you to take appropriate action from your level with the suggestion that this public hearing be recorded in the minute book for the conservation and public awareness of National Peacock in the fund.</p>	<p>2025) for awareness programme. The supportive document was attached</p>
2(I)	<p>Paryavaran sadhna (N.G.O)</p>	<p>To check the details of the public meeting its information has been widely disseminated by the company (excluding newspapers)</p>	<p>Company has widely disseminated information of public meeting through auto announcement with mike in nearby villages with banner of the same on auto in Gujarati language. This announcement has been video/photo recorded and the same is being submitted to GPCB office. Further scroll line is being Played for 3 days in GTPL channel which has wide circulation in Mehsana region. A proof of the same shall be submitted by GTPL representative. These documents shall be submitted to GPCB office for record. The same has been Submitted by Company to RO, GPCB Mehsana. The supportive document was attached</p>
2(II)		<p>To check whether the company has actually 2(III) circulated the copies of the executive summary of the draft environment IMPACT Assessment report in the surrounding villages for effective publicity.</p>	<p>Details of public meeting have been widely disseminated by the Company. Auto Besides newspaper advertisement, Company has submitted Executive Summary of the Draft EIA report in nearby villages and has taken acknowledgement from authorized</p>

			representative of each village. The same has been Submitted by Company to RO, GPCB-Mehsana.The supportive document was attached
2(III)		Investigate the work done by the company in the last 3 years for Environmental awareness and development in the area around the project site and the amount spent, if the applicant company is an existing unit and has applied for expansion.	Company has been doing very marginal work in creating environmental awareness mainly on account of pandemic effects of Covid-19 and its related effects in logistics. Mainly the activities are in covering site and surrounding region with plantation and green cover in best possible manner.
2(IV)		If the company has been given closure notice or fined for violating environmental laws or if any order has been issued by NGT or any court of India in the past, the matter should be taken seriously by the Authorities.	No closure notice or fine for violating environmental laws or any order by NGT or any court of India in past has been issued. The sworn affidavit was attached
2(V)		To study the Audited Annual report of the last 3 financial years if the applicant firm is already existing.	Audited Annual Report of the last 3 financial years are available on company website for reference.
2(VI)		If any criminal offences are filed against the director/ administrator of the applicant company, men nu approval should be granted without studying all details of his criminal record.	No criminal offences are filed against any director/ administrator. The sworn affidavit was attached
2(VII)		If the director/administrator of the applicant company has been declared defaulter by any Nationalised or Co-operative Bank, then no approval should be granted without studying all details.	No default has been declared by any National or Co-operative Bank. The sworn affidavit was attached
2(VIII)		If the said company or any other organization run by its director/administrator has been blacklisted by the movement or any office under its control, then no approve should be granted without Studying all details.	HOEC has never been blacklisted by Government. The sworn affidavit was attached

2(IX)		The NGOs or prominent persons working the surrounding areas must be invited to the public hearing	Suggestion is noted
-------	--	---	---------------------

Annexure - IV

Capital cost and recurring cost of EMP are given below:

S. No.	Particulars	Budget in Lakhs per well	
		Capital cost	Recurring cost
1	Construction of waste pit for collection and storage of drill cuttings and drilling waste	11	2
2	Procurement & Installation of HDPE Liner in the waste pit to prevent soil contamination	3.5	0.5
3	Bund construction / garland drain around drill site	3	0.5
4	Dust suppression through water sprinkling in the internal roads at drill sites (@Rs. 2000 per day x 45 days construction & drilling phase, 15 days decommissioning phase per well)	0.9	0.2
5	Emission monitoring and sample analysis of Ambient air quality, Noise emission, stack monitoring, Effluent waste water, etc	-	0.75
6	Monitoring of ground water quality at drill sites (2 locations in each drill site)	-	0.3
7	Monitoring- surface water quality (3 locations in each drill site)	-	0.3
8	Monitoring- treated runoff at drill sites (1 location, once during drilling phase –monsoon period) sites)	-	0.25
9	Soil quality monitoring - 1 location in each drill site	-	0.25
10	Engagement of Sewage Treatment Plant	15	-
11	Disposal of Drill Cuttings & Hazardous waste	8	2
12	Construction of Chemical Storage shed with Spill Containment Provision	3	1
13	Green Belt Development during production phase	21.6	3.24
Total		66	11.29

Annexure - V

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

Proposed Activities under CER	Category	Description	year 1	year 2	TOTAL
-------------------------------	----------	-------------	--------	--------	-------

Construction/Repair of village roads & approach road to the site	Rural Development	Construction and repair of roads for a distance of 2km to 3km in each villages of Krishnapura, Katosan Ranhela Balol Udheda	30	30	60
Skill development training will be in and around operational areas in Mehsana district for 50candidates (i.e, 25 candidates for each year)	Employment enhancing vocation skill development program	Digital literacy, Tailoring, Special trades such as welding technology programs etc	150	150	300
Providing Potable drinking water to the nearby village of project Sitesuch as Krishnapura, Katosan, Ranhela, Balol, Udhedawherever higher level of fluoride are detected.	Eradicating hunger, poverty and malnutrition	Potable drinking water in the form of R.O plant or water tanks proposed in the villages of Krishnapura Katosan, Ranhela Balol, Udheda	10	10	20
Installation of Solar street lamps at a cost of 25K each along the road side villages such as Krishnapura, Katosan, Ranhela, Balol, Udhedain the project area in consultation with PWD officials	Rural Development	Solar street lamps at a interval of 50 Metres proposed along the road side at the distance of 3Km	25	25	50
Infrastructure development at schools in the operating area such as Construction of classrooms, Auditorium, Sanitation facility, Setting up of labs & Library, Compound wall in consultation with education department of Government of Gujarat	Infrastructure development	The Schools was identified in nearby regions are, 1) Palaj primary school located near North Balol. 2) Shah S.M vidhyalaya located in katosan village	50	50	100
Improving sanitation facility in villages such as Krishnapura, Katosan, Ranhela, Balol, Udhedanear the operating area like	Promoting health care and sanitation	Advice from Local Municipal Administration will be sought before implementing this project	20	20	40

construction of Community toilet with water connection and disposal pits, construction of bathing spaces. (as per need based requirement of village near the released well sites)					
Desalting and revamping of water bodies such as ponds and lake in the villages	Conservation of natural resources	Activities proposed to undertake in the villages such as Krishnapura, Katosan, Ranhela, Balol, Udheda	20	20	40
Health care facility in the nearby villages, Infrastructure support & Supply of medical equipment such as wheel chairs, stretcher, hospital bed and diagnostic equipment etc in consultation with nearby Government hospitals or primary care center	Promoting health care and Medical welfares	Project will be implemented in the villages near project area such as Krishnapura, Katosan, Ranhela, Balol, Udheda	45	45	90
TOTAL (lakhs)			350	350	700

