

**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL,
PRINCIPAL BENCH AT NEW DELHI**

IN

I.A. No. 533 of 2025

(ORIGINAL APPLICATION No. 19 OF 2014)

IN THE MATTER OF:

DR. KASHMIRA KAKATI

... APPLICANT

VERSUS

THE UNION OF INDIA & ORS.

... RESPONDENTS

NEXT DATE 08.10.2025

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DATE: 26.08.2025

PLACE: NEW DELHI

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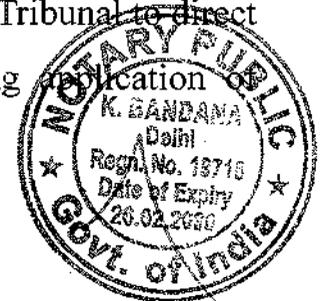
**REPLY-AFFIDAVIT ON BEHALF OF UNION OF INDIA- MINISTRY OF
ENVIRONMENT, FOREST AND CLIMATE CHANGE (RESPONDENT
NO.1)**

I, Rajendra Kumar son of Sh. Madan Singh, aged about 51 years, resident of A-287 East Gokalpur, Delhi-94, do hereby solemnly affirm and state as under:

1. That I am working as Scientist 'D' in the Ministry of Environment, Forest and Climate Change (hereinafter referred as MoEF&CC), Government of India, which has been arrayed as Respondent No. 1 in the Original Application (hereinafter referred to as 'OA'). I am conversant with the facts of the present Application. In response to the present Application, a reply Affidavit is being filed, and it is stated that the same has been drafted under my instructions, is based on records, is in the normal course of business and is true & correct.

STATEMENT OF FACTS:

2. The present Application has been filed by Oil India Limited (Respondent No. 7 in O.A. 19/2014), inter alia, seeking before this Hon'ble Tribunal to direct the MoEF&CC (Respondent No. 1) to consider the pending application



Respondent No. 7 for the grant of Environmental Clearance. The Applicant further prays for setting aside the communication dated 04.12.2023 and for issuance of appropriate directions to the MoEF&CC/Respondent No. 1 to take a decision on Application No. IA/AS/IND/220363/2007, J- 11011/1251/2007-IA II (I), submitted by Respondent No. 7 for grant of Environmental Clearance.

REPLY ON MERITS:

3. It is respectfully submitted that the matter relates to proposal no. IA/AS/IND2/220363/2007, dated 11th October 2021, for Environmental Clearance (hereinafter referred to as "EC") for the Onshore Oil & Gas development drilling and production project in Dumduma Pengeri Area, Tinsukia District, under PMLs, namely Mechaki PML, Borhapjan PML, Dumduma PML, and Digboi PML, Tinsukia, Assam, by M/s Oil India Limited (hereinafter referred to as "PP").

The proposal was presented by the project proponent/consultant to the 42nd meeting of Expert Appraisal Committee (EAC) (Industry-2) held on 20th – 22nd October 2021 wherein EAC recommended the project. A copy of the minutes of the 42nd meeting of EAC (Industry-2) on 20th – 22nd October 2021 is annexed herewith as **Annexure No. R1**.

4. That while processing the proposal it was observed that the project proponent has concealed the fact that the proposed activity area falls under the critical elephant habitat and corridor, which connects the two States, Assam and Arunachal Pradesh. Furthermore, the proposed diversion is completely falling under the Dihing Patkai Elephant Reserve, Assam and South Arunachal Elephant Reserve, Arunachal Pradesh. The proposed activities (Onshore Oil & Gas development drilling) may adversely impact elephant conservation and lead to further escalation of the Human Elephant Conflicts. Moreover, the project proponent has also concealed a court case against the proposed area.

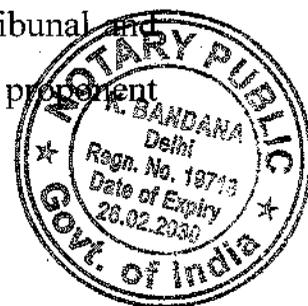


5. It is further submitted that the EAC also noted that the project proponent has not complied with observations of Joint Committee given below:-

- i. Oil is leaking from underground pipelines in the Reserve forest.
- ii. At several places, oily sludge pits of abandoned wells have been found and natural drains pass through these pits.
- iii. Oil spill have been found in several oil producing wells and Crude Gathering Stations. No fencing had been provided at these well sites.
- iv. More than 800 wells have been drilled since the operation of Burma Oil Company Limited. OIL India Ltd. does not even have the inventories of these abandoned oil wells, let alone treatment of these pits.
- v. In the three oil sludge remediation sites visited, the remediation has not resulted in complete conversion of oily sludge into biodegradable matter. They do not even maintain the inventors of abandoned oil wells. OIL India Ltd. has been unable to stop the release of untreated oil effluent in open sludge pits and seepage areas around oil rigs in the Digboi Oil field.” The Ministry had filed the compliance affidavit/status report and the same was acknowledged in the Order dated 16.03.2023 passed by the Hon’ble Supreme Court.”

6. It is submitted that considering all the factors, Additional Details were sought on PARIVESH portal vide letter dated 04th December, 2023 and the project proponent was asked to approach the Ministry after the final outcome of the court case. A copy of letter dated 04.12.2023 is annexed herewith as **Annexure No. R2.**

7. That the answering Ministry vide letter dated 04.12.2023, issued a Show Cause Notice (hereinafter referred to as “SCN”) to M/s ERM India Pvt. Ltd. (Consultant) for alleged concealment of a pending court case in the proposal for prior Environmental Clearance of the Onshore Oil & Gas Development Drilling and Production Project at Dumduma–Pengeri Area, Tinsukia District, Assam, under the Mechaki, Borhapjan, Dumduma and Digboi PMLs of M/s Oil India Limited; to which the Consultant, in reply, stated that the project proponent had not disclosed the orders/directions of the Hon’ble National Green Tribunal and further clarified that it had sought an explanation from the project proponent



regarding non-disclosure of Original Application No. 19 of 2014 (Dr. Kashmiri Kakati vs. Union of India & Ors.), concerning the protection of elephant population and conservation of elephant corridors/reserves. A copy of SCN issued to the consultant and the response of the consultant are annexed herewith as **Annexure No. R3 and R4, respectively.**

8. That the project in question was once again considered in the meeting of the EAC (industry-2 sector projects) held on 6th – 7th May, 2025. The committee, considering all the factors, directed project proponent to submit the proposal only after receipt of final outcome of the court case, as the matter is subjudice. Accordingly, the proposal was returned. A copy of the Minutes of the meeting of the expert appraisal committee (industry-2 sector projects) held on 6th – 7th May, 2025 is annexed herewith as **Annexure No. R5.**

9. It is most respectfully submitted that the MoEF&CC is taking all the necessary steps for the protection and conservation of elephants and their habitats & corridors.

10. It is humbly submitted that the answering Respondent is duty-bound and fully committed towards the Conservation of flora and fauna of the country. In light of the foregoing submissions, it is respectfully prayed that this Hon'ble Tribunal be pleased to issue such orders, directives, or relief as it may deem appropriate and just under the circumstances of the present case and in the interest of justice.



DEPONENT

(**डॉ. राजेन्द्र कुमार**)
(Dr. RAJENDRA KUMAR)
 वैज्ञानिक 'डी' / Scientist 'D'
 पर्यावरण, वन एवं जलवायु परिवर्तन विभाग
 Min. of Environment, Forest and Climate Change
 भारत सरकार, नई दिल्ली
 Govt. of India, New Delhi

VERIFICATION

06 OCT 2025

I, the answering Respondent do hereby verify at New Delhi on this ___ of October, 2025 and declare that the contents of paragraphs from 1 to 10 of the above affidavit are true to the best of my knowledge derived from the office records maintained in the office. No part of it is false and nothing material has been concealed therefrom.

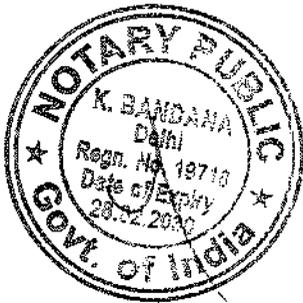


DEPONENT

(डा. राजेन्द्र कुमार)
(Dr. RAJENDRA KUMAR)
वैज्ञानिक 'डी' / Scientist 'D'
पर्यावरण, वन एवं जलवायु परिवर्तन विभाग
Min. of Environment, Forest and Climate Change
भारत सरकार, नई दिल्ली
Govt. of India, New Delhi

Shri Arun Kumar (COP/4047/2007)
IDENTIFIED

06 OCT 2025



ATTESTED
NOTARY PUBLIC DELHI
Govt. of India

EMPOWERED TO ADMINISTER THE OATH
SECTION 139 OF CPC 1908
SECTION 297 OF CRPC 1973
DELHI HIGH COURT RULES 1967
PART-5, CHAPTER XVIII-227
EVIDENCE BY AFFIDAVIT BEFORE NOTAR
SUPREME COURT RULES, 2013
ORDER-X-7

**GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE
(IA DIVISION-INDUSTRY-2 SECTOR)**

Dated: 01.11.2021

**MINUTES OF THE 42nd MEETING OF THE EXPERT APPRAISAL
COMMITTEE**

(INDUSTRY-2 SECTOR PROJECTS)

HELD ON 20th – 22nd October, 2021

**Venue: Ministry of Environment, Forest and Climate Change,
Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi-
110003 **through Video Conferencing (VC)****

(i) Opening Remarks by the Chairman: The Chairman made hearty welcome to the Committee members and appreciated the efforts of the Committee. After opening remarks, the Chairman opened the EAC meeting for further deliberations.

(ii) Confirmation of minutes: The EAC, having taken note that final minutes were issued after incorporating comments received from the EAC members on the minutes of its 41st Meeting of the EAC (Industry-2) held during 28th - 30th September, 2021 conducted through Video Conferencing (VC), confirmed the same.

After welcoming the Committee Members, discussion on each of the agenda items was taken up ad-seriatim.

Details of the proposals considered during the meeting **conducted through Video Conferencing (VC)**, deliberations made and the recommendations of the Committee are explained in the respective agenda items as under: -

20th October, 2021 (Wednesday)

Agenda No. 42.1

Proposed 200 KLPD Grain based Ethanol Plant at village Begrajpur Paragana Khatauli District Muzaffarnagar Uttar Pradesh by M/s CRYSTAL BALAJI INDUSTRIES PRIVATE LIMITED- Consideration of Environment Clearance.

[IA/UP/IND2/228826/2021, J-11011/365/2021-IA-II(I)]

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The Project Proponent and the accredited Consultant M/s. Environmental and Technical Research Centre., made a detailed presentation on the salient features of the project and informed that:

The proposal is for environmental clearance for establishment of 200 KLPD grain-based ethanol plant with 5.0 MW co-generation of power at Begrajpur village, Khatauli Paragana, Muzaffarnagar district Uttar Pradesh by M/S Crystal Balaji Industries Private Limited.

All grain based distilleries producing ethanol, solely to be used for Ethanol Blended Petrol Programme of the Government of India are listed at S.N. 5(ga) of Schedule of Environmental Impact Assessment (EIA) Notification, 2006 amendment vide S.O 2339 dated 16th June 2021 under category 'B-2' and are appraised at Central Level by Expert Appraisal Committee (EAC).

The project proposal is exempted from obtaining ToR & conducting Public Hearing as per EIA notification, 2006 amendment vide S.O 2339 dated 16th June 2021. It was informed that no litigation is pending against the project.

The details of products and capacity are as under:

Sr. No.	Product Details	Quantity
1	Ethanol	200 KLD
2	Co-Gen Power	5 MW

Proposed land area is 5.949 hectares, which is already under the possession of M/s Crystal Balaji Industries Private Limited. Conversion of land documents has been obtained from Collectorate office, Muzaffarnagar vide letter dated 19.07.2021 which has been accepted by EAC. Industry will develop greenbelt in an area of 33 % i.e., 1.97 hectares out of total area of the project.

The estimated project cost is Rs 19900 lakhs. Total capital cost earmarked towards environmental pollution control measures is Rs 1925 Lakh and the Recurring cost (operation and maintenance) will be about Rs 120 Lakh per annum. Total Employment will be 136 persons as direct & indirect. Industry proposes to allocate Rs. 290 lakhs towards Corporate Environmental Responsibility.

There is no National Parks, Reserved Forests (RF)/ Protected Forests (PF), within 10 Km radius. River/ water body Kali Nadi is flowing at a distance of 1.07 Km in the West direction.

Total water requirement for the Grain based Ethanol Plant will be 2437 KLPD out of which 1137 KLPD will be recycled in plant operations. Hence, the fresh water requirement for the project will be 1300 KLPD which will be met from ground water. Spent Wash (Slops) generation from

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Distillation, will be sent through separation of suspended solids in Decanter Centrifuge, part Thin Slops are concentrated in multi-effect evaporators to form a Thick (Protein) Syrup, which is mixed with the Wet Cake DWG separated earlier from Decanters. This interim product called DWGS has 30-32% w/w Solids is subject to drying in a rotating steam tube bundle dryer to deliver a value-added by-product – DDGS – Distillers Dried Grains with soluble and which has min. 90% Solids and max 10% moisture. This DDGS sells as Cattle Feed / Poultry Feed / Fish Feed based on its Protein Content. Hence, entire spent wash is decanted, concentrated into syrup in a Multi-Effect Evaporation followed by Drying, in order to achieve Zero Effluent Discharge. Effluent of 1137 KLPD quantity will be treated through state of art CPU/Effluent Treatment Plant of 1300 KLPD capacity (Anaerobic, aerobic, Filters, & RO system). The plant will be based on Zero Liquid discharge system.

Power requirement for proposed project will be 4 MW (maximum) will be met from Co-generation power plant of 5 MW. Unit has proposed 1 no.s of boiler of capacity 50 TPH. Electro Static Precipitator (ESP) with a stack of height of 72 m will be installed for controlling the particulate emissions within the statutory limit of 50 mg/Nm³ for the proposed boilers.

Details of process emissions generation and its management:

ESP with a stack height of 72 m will be installed for controlling the particulate emissions. Online Continuous Emission Monitoring System will be installed with the stack and data will be transmitted to CPCB/SPCB servers. CO₂ generated (120 TPD) during the fermentation process will be collected by utilizing CO₂ scrubbers and sold to authorized vendors.

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

Waste	Quantity	Uses / Disposal
Total Ash	8 MT/Day	Due to high potash content, will be used as manure.
Yeast Sludge	18 MT/Day	Due to high potash content
Condensate polishing unit sludge	2 KLD	Due to high potash content
Cattle Feed DDGS	96 MT/Day	Will be sold as cattle feed.

As per OM dated 16th June, 2021, PP has submitted self-certification in the form of affidavit declaring that the proposed capacity of 200 KLPD will be for manufacturing of fuel ethanol only.

During the deliberations EAC desired the following information/commitments:

- Proposed parking area shall be increased to 15 %.
- Fuel used in the boiler shall be biomass based.
- Water balance shall be revised @4kL fresh water consumed/kL production of Ethanol.

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- Industry shall conform to ZLD and no waste or treated water shall be discharged outside the premises.
- Solar power plant of 0.5 MW shall be installed within the plant and it shall be utilized in meeting power requirement of the plant.
- The proposed budget to be spent on CER shall be increased to Rs 3.00 crores and it shall be spent on installing solar power to the villages nearby. It was also suggested that the proposed activities under CER shall be completed before the commissioning of the plant.

PP has agreed to the above conditions. However, desired information/commitments sought by EAC have not been submitted.

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 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.

The Committee 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.

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.

The EAC, after detailed deliberations, **recommended** the project for grant of environmental clearance, subject to compliance of terms and conditions as under, and general terms of conditions at Annexure: -

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- (i). As per OM dated 16th June, 2021, project falls in category B2 and the proposed additional capacity of 200 KLPD shall be only for fuel ethanol manufacturing as per self-certification in form of an affidavit by the Project Proponent. Provided that subsequently if it is found that the ethanol, produced based on the EC granted as per this dispensation, is not being used completely for EBP Programme, or if ethanol is not being produced, or if the said distillery is not fulfilling the requirements based on which the project has been appraised as category B2 project, the EC shall stand cancelled.
- (ii). 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.
- (iii). 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.
- (iv). Total fresh water requirement shall not exceed 4kL fresh water consumed/kL production of Ethanol and it shall be met from ground water. Extraction of ground water shall not be done without obtaining prior permission of CGWA/concerned authority. No ground water recharge shall be permitted within the premises.
- (v). Effluent will be treated through state of art CPU/Effluent Treatment Plant. The spent wash shall be concentrated and dried to form DDGS to be used as cattle feed.
- (vi). CO₂ generated from the process shall be bottled/made solid ice and utilized/sold to authorized vendors.
- (vii). Occupational Health Centre for surveillance of the worker's health shall be set up. The health data shall be used in deploying the duties of the workers. All workers & employees shall be provided with required safety kits/mask for personal protection.
- (viii). Training shall be imparted to all employees on safety and health aspects of chemicals handling. Safety and visual reality training shall be provided to employees.
- (ix). The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Firefighting system shall be as per the norms.
- (x). Process organic residue and spent carbon, if any, shall be sent to Cement other suitable industries for its incinerations. ETP sludge, process inorganic & evaporation salt shall be disposed of to the TSDF.

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- (xi). The company shall undertake waste minimization measures as below
(a) Metering and control of quantities of active ingredients to minimize waste; (b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes. (c) Use of automated filling to minimize spillage. (d) Use of Close Feed system into batch reactors. (e) Venting equipment through vapour recovery system. (f) Use of high pressure hoses for equipment clearing to reduce wastewater generation.
- (xii). The green belt of 5-10 m width shall be developed in nearly 33% of the total project area, mainly along the plant periphery. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department. Records of tree canopy shall be monitored through remote sensing map. Development of greenbelt shall be completed along with commissioning of the project.
- (xiii). PP proposed to allocate Rs. 3.00 Crores for CER and it shall be spent on installing solar power to the villages nearby. All the proposed activities under CER shall be completed before the commissioning of the plant.
- (xiv). There shall be 15% space inside the plant premises earmarked for parking of vehicles for raw materials and finished products as per CPCB norms and no parking to be allowed outside on public places.
- (xv). Storage of raw materials shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions.
- (xvi). Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.
- (xvii). A separate Environmental Management Cell (having qualified person with Environmental Science/Environmental Engineering/specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.

Agenda No. 41.2

Establishment of new Sugar Syrup/ Molasses (C or B Heavy Molasses) / Grain Based Distillery Having Capacity – 350 KLD along with 15 MW Co Gen Power at village: Maizapur, PO: Haldharmau, Tehsil: Colonelganj, Distt – Gonda (UP) – 271126 (UP) of M/s Balrampur Chini Mills Ltd, Unit Maizapur.

[IA/UP/IND2/209541/2021, J-11011/178/2021-IA-II(I)]

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The Project Proponent and the accredited consultant M/s. Environmental and Technical Research Centre made a detailed presentation on the salient features of the project and informed that:

The proposal is for environmental clearance to the project establishment of new Sugar Syrup/ Molasses (C or B Heavy Molasses) / Grain Based Distillery Having Capacity – 350 KLD along with 15 MW Co Gen Power at village: Maizapur, PO: Haldharmau, Tehsil: Colonelganj, Distt – Gonda (UP) – 271126 (UP) of M/s Balrampur Chini Mills Ltd, Unit Maizapur.

All Molasses based distilleries >100 KLPD & Non-Molasses based distilleries >200 KLD are listed at S.N. 5(g) of Schedule of Environment Impact Assessment (EIA) Notification dated 14.9.2006 and as amended on 13.6.2019 under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC). It was informed that no litigation is pending against the proposal.

Standard ToR has been issued by Ministry of Environment, Forests & Climate Change vide letter IA-J-11011/178/2021-IA-II(I) dated 30th April 2021. Public Hearing for the proposed project has been conducted by the State Pollution Control Board on 12.08.2021 at the project site presided by Additional District Magistrate, Gonda district. The main issues raised during the public hearing are related to about air Pollution, water pollution, noise pollution and their mitigation measures in the proposed project.

The details of products and capacity are as under:

Sr. No	Product Details	Existing Quantity	Proposed Quantity	Total Quantity
1	RS /Ethanol / ENA	-	350 KLD	350 KLD
2	Co-Gen Power	-	15 MW	15 MW

Proposed land area is 26.559 hectare, which is already under the ownership of M/s Balrampur Chini Mills limited (Unit: Maizapur). Industry will develop greenbelt in an area of 33 % i.e., 8.83 hectare out of total area of the project. Proposed land is already industrial in land use and proposed establishment is proposed adjacent to existing sugar premises.

The estimated project cost is Rs 45584.94 Lakhs. Total capital cost earmarked towards environmental pollution control measures is Rs 6000 Lakh and the Recurring cost (operation and maintenance) will be about Rs 350 Lakh per annum. Total Employment will be 300 persons as direct & indirect after expansion. Industry proposes to allocate Rs 350 Lakhs towards Corporate Environmental Responsibility.

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There are no National Parks, Reserved Forests (RF)/ Protected Forests (PF), within 10 Km radius. River/ water body Terhi River is flowing at a distance of 4.45 Km in the East direction. Sarju River is flowing at distance of 13.35 km in south west.

Ambient air quality monitoring was carried out at 8 locations during winter season 01st December, 2020 to 28th February, 2021 and the baseline data indicates the ranges of concentrations as: PM₁₀ (58.2 to 85.5 µg/m³), PM_{2.5} (35.7 to 48.9 µg/m³), SO₂ (9.5 to 14.5 µg/m³) and NO₂ (11.6 to 22.9 µg/m³). AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.91 µg/m³, 0.58 µg/m³, 1.62 µg/m³ and 1.07 µg/m³ with respect to PM₁₀, PM_{2.5}, SO₂ and NO₂. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

Source of fresh water requirement will be met through Ground water. Fresh Water requirement for Sugar Syrup based operation 1400 KLD (@ 4.0 KL / KL of Product), for Molasses (B heavy Molasses or C Heavy Molasses) based operation 2000 KLD (@ 5.7 KL / KL of product) and for Grain based operation 1920 KLD (@ 5.5 KL/KL of Product). Maximum fresh water requirement will be 2000 KLD (@ 5.7 KL / KL of product). Spent wash generation from the distillation which is a variable in different mode operations. Spent wash generation in Mode-I, 350 KLD (100 % Sugar Syrup based distillery) operation will be 2030 KLD, in Mode-II, 350 KLD (100 Molasses based distillery) operation will be 2436 KLD and in Mode-III, 350 KLD grain based (100% Grain based Operation) operation it will be 2248 KLD. Spent wash generated will be concentrated in MEE then concentrate from MEE will be used as fuel in Slop fired Boiler of Capacity 75 TPH & 50 TPH during Mode I & Mode II. During mode III, Spent Wash (Slops) generation from Distillation, will be sent through separation of suspended solids in Decanter Centrifuge, part Thin Slops are concentrated in Multi-effect evaporators to form a Thick (Protein) Syrup, which is mixed with the Wet Cake DWG separated earlier from Decanters. This interim product called DWGS has 30-32% w/w Solids is subject to drying in a rotating steam tube bundle dryer to deliver a value-added by-product – DDGS – Distillers Dried Grains with soluble and which has min. 90% Solids and max 10% moisture. This DDGS sells as Cattle Feed / Poultry Feed / Fish Feed based on its Protein Content. Hence, entire spent wash is decanted, concentrated into syrup in a Multi-Effect Evaporation followed by Drying, in order to achieve Zero Effluent Discharge. Other effluent generated from cooling tower blow down, boiler blow down, vacuum pump, process condensate will be treated in CPU and recycled in the process after treatment. The plant will be based on Zero Liquid discharge system.

Power requirement for proposed project will be 9135 KW (maximum) will be met from Co-generation power plant of 15 MW. The total power requirement for the proposed project will be 7400 KW (Mode-I), 9135 KW (Mode-II) and 8900 KW (Mode-III), which will be sourced from Co

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generation power plant; 15 MW. D.G Set (1 x 1500 KVA) State power Distribution Corporation Limited (SPDCL). Adequate Stack (7.7 meters above roof top) will be provided as per CPCB norms to the proposed DG sets. Unit proposed 2 nos of Slope fired boiler of capacity 75 TPH & 50 TPH. Electro Static Precipitator (ESP) with a stack of height of 85 m will be installed for controlling the particulate emissions within the statutory limit of 50 mg/Nm³ for the proposed boilers.

Details of process emissions generation and its management:

CO₂ (273 TPD) generated during the fermentation process will be recovered by CO₂ Scrubbers and sold to authorized vendors.

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

Waste	Mode -1	Mode - 2	Mode - 3	Uses / Disposal
Total Ash	40.62 MT/Day	146 MT/Day	10.68 MT/Day	Due to high potash content, will be used as manure. Fly ash generated during mode - III will be provided to brick manufacturer.
Yeast Sludge	22 MT/Day	28 MT/Day	30 MT/Day	Will be mixed with press mud of Sugarmill and sold to the farmer.
Condensate polishing unitsludge	2.0 KLD	2.2 KLD	1.8 KLD	Will be mixed with press mud of Sugarmill and sold to the farmer.
Cattle Feed DDGS	Nil	Nil	175.0 MT/Day	Will be sold as cattle feed.

During deliberations EAC suggested that:

- The integrated project sugar factory and proposed distillery shall conform to Zero Liquid Discharge.

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- Industry shall construct rain water storage facility of capacity from which it can meet at least 60 days fresh water requirement.
- Proposed CER funds shall be increased to Rs. 4.55 Crores and it shall be spent on installing solar power and providing drinking water facilities to the nearby villages. The proposed activities under CER shall be completed before the commencement of operations of the plant.
- Ash generated shall be transported outside the plant only after proper packing.

Further, EAC directed that proposed parking area of 10 % shall be increased to 15 %. PP has agreed for the same and submitted an undertaking in compliance of the above.

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 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.

The Committee noted that the EMP report is in compliance of the PFR. The Committee 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.

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.

The EAC, after detailed deliberations, **recommended** the project for grant of environmental clearance, subject to compliance of terms and conditions as under, and general terms of conditions at Annexure: -

- (i). 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.
- (ii). The project proponent will treat and reuse the treated water within the integrated industry and no waste or treated water shall be discharged outside the premises. The integrated project sugar factory and proposed distillery shall conform to Zero Liquid Discharge.
- (iii). Total freshwater requirement will be 2000 KLPD which will be sourced from groundwater. Prior permission shall be obtained from the concerned regulatory authority/CGWA in this regard, and renewed from time to time. No ground water recharge shall be permitted within the premises. Industry shall construct rain water storage facility of capacity from which it can meet at least 60 days fresh water requirement.
- (xviii). Effluent will be treated through state of art CPU/Effluent Treatment Plant. The spent wash shall be concentrated and dried to form DDGS to be used as cattle feed.
- (iv). CO₂ generated from the process shall be bottled/made solid ice and utilized/sold to authorized vendors.
- (v). Occupational Health Centre for surveillance of the worker's health shall be set up. The health data shall be used in deploying the duties of the workers. All workers & employees shall be provided with required safety kits/mask for personal protection.
- (vi). Training shall be imparted to all employees on safety and health aspects of chemicals handling. Safety and visual reality training shall be provided to employees.
- (vii). The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Firefighting system shall be as per the norms.
- (viii). Process organic residue and spent carbon, if any, shall be sent to Cement other suitable industries for its incinerations. ETP sludge, process inorganic & evaporation salt shall be disposed of to the TSDF.
- (ix). The company shall undertake waste minimization measures as below
 - (a) Metering and control of quantities of active ingredients to minimize waste;
 - (b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.
 - (c) Use of automated filling to minimize spillage.
 - (d) Use of Close Feed system into batch

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reactors. (e) Venting equipment through vapour recovery system. (f) Use of high pressure hoses for equipment clearing to reduce wastewater generation.

- (x). The green belt of at least 5-10 m width shall be developed in nearly 33% of the total project area, mainly along the plant periphery. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department. Records of tree canopy shall be monitored through remote sensing map.
- (xi). PP proposed to allocate Rs. 4.55 Crores for CER and it shall be spent on installing solar power and providing drinking water facilities within nearby villages. All the proposed activities under CER shall be completed before the commencement of operations of the plant.
- (xii). There shall be adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products as per CPCB norms and no parking to be allowed outside on public places.
- (xiii). Storage of raw materials shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions.
- (xiv). Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.
- (xv). A separate Environmental Management Cell (having qualified person with Environmental Science/Environmental Engineering/specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.

Agenda No. 42.3

Proposed 360 KL/Day Grain Based Distillery Project along with 9 MW CoGen Power Plant and ZLD Unit at Village Panimura Jungle, Tehsil Tarbha, District- Subranpur, Odisha by M/s. Mash Bio-Fuels Pvt. Ltd - Consideration of Environment Clearance.

[IA/OR/IND2/229184/2021, J-11011/368/2021-IA-II(I)]

The PP/consultant were absent for the appraisal of proposal. It has been informed that PP desires to withdraw the proposal. Therefore, EAC has decided to return the proposal in present form.

Accordingly, proposal was **returned** in present form.

Agenda No. 42.4

Establishment of 230 KLPD Grain based Distillery along with Electricity generation 5 MW at plot no. B3/1, Mul Growth Center, Tal.: Mul, Dist.:Chandrapur, by M/s Carnival Industries Pvt Ltd - Consideration of Environment Clearance.

[IA/MH/IND2/229515/2021, J-11011/380/2021-IA-II(I)]

The Project Proponent and the accredited Consultant M/s. Equinox Environments (I) Pvt. Ltd., made a detailed presentation on the salient features of the project and informed that:

The proposal is for environmental clearance for establishment of 230 KLPD Grain based Distillery along with Electricity generation 5 MW at plot no. B3/1, Mul Growth Center, Mul taluk, Chandrapur district, by M/s Carnival Industries Pvt Ltd.

All grain based distilleries producing ethanol, solely to be used for Ethanol Blended Petrol Programme of the Government of India are listed at S.N. 5(ga) of Schedule of Environmental Impact Assessment (EIA) Notification, 2006 amendment vide S.O 2339 dated 16th June 2021 under category 'B-2' and are appraised at Central Level by Expert Appraisal Committee (EAC).

The project proposal is exempted from obtaining ToR & conducting Public Hearing as per EIA notification, 2006 amendment vide S.O 2339 dated 16th June 2021. It was informed that no litigation is pending against the project.

The details of products and capacity are as under:

Industrial Unit	Description	Quantity
Distillery (Proposed 230 KLPD)	Product	
	Ethanol	230 KL/D
	By-product	
	DDGS (10% Moisture)	150 MT/D
	CO ₂	190 MT/D

Total plot land area is 1,89,650 m². Proposed Distillery Built- up is 39,718.65 m². Land has been allotted by Maharashtra Industrial Development Corporation vide letter No. MIDC/RO(NGP)/MUL/LMS-70/1633/2021 dated 29th June, 2021. Industry will develop greenbelt in an area of 34% i.e, 63,365.17 m² out of total plot area.

The estimated project cost is Rs. 207.91 Crores. Total capital cost earmarked towards environmental pollution control measures under

proposed project will be Rs.16.20 Crores and the Recurring cost (operation and maintenance) will be about Rs.1.90 Crores per annum. Total Employment will be 425 persons as direct & indirect after proposed project. Industry proposes to allocate Rs.315 Lakh @ of 1.5% towards Corporate Environment Responsibility.

The ESZ of Tadoba Andhari Tiger Reserve WLS is at 5.4 Km from the Project Site and boundary of sanctuary is at 17.31 Km from project site and do not come in the ESZ of Todabha Andhari Tiger reserve. Mul River is flowing at a distance 3 Km from North to South.

Total water requirement is 2,519 CMD. Out of which 854 CMD will be fresh water taken from MIDC Water Supply Scheme (Wainganga River). For proposed Distillery; Wet Cake from decantation operation and Thin Slop from MEE will be mixed together and this mixture known as DDGS will be used as Cattle Feed. Other effluents generated from the grain distillery plant comprise of FOC lees, PRC lees, Thick Slope, RC less and condensate which are treated in CPU & the treated effluent is reused for watering of Green Belt. Lees generated from grain base distillery operations along with other effluent @ 1,380 M³/Day will be treated in proposed CPU having capacity 1500 M³/Day. Treated effluent from CPU will be reused for industrial operations, thereby achieving Zero Liquid Discharge (ZLD) for process effluent. same CPU will be used for grain-based operations. This wet cake further dried in dryers will result in to loss of moisture thereby forming Distillers Dry Grains with Soluble (DDGS- 10% moisture) @150 MT/D. This DDGS has more shelf life & sold as cattle feed.

Power requirement for proposed project will be 3.5 MW which will be met from own Cogeneration Plant. One DG set of 750 KVA which will be operated only during failure. Stack 5 M ARL will be provided as per CPCB norms to the proposed DG sets. New boiler of 45 TPH will be installed under proposed distillery unit. ESP with a stack of height of 70 M will be installed for controlling the particulate emissions within the statutory limit of 115 mg/Nm³ for the boiler.

Details of process emissions generation and its management:

The CO₂ generation shall take place in fermenters of the distillery. CO₂ to the tune of 190 MT/Day shall be released from 230 KLPD distillery plant. CO₂ shall be bottled and supplied to manufacturers of beverages.

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

No.	Unit	Waste Type	Quantity (MT/D)	Disposal
1.	Distillery	Yeast Sludge	33	To Dryer / To be used as Manure
		CPU Sludge	1.3	To be used as Manure
		Boiler Ash	21	To be sold to Bricks

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No.	Unit	Waste Type	Quantity (MT/D)	Disposal
				Manufacturer

No any Hazardous waste is generated from Distillery.

As per OM dated 16th June, 2021, PP has submitted self-certification in the form of affidavit declaring that the proposed capacity of 230 KLPD will be for manufacturing of fuel ethanol only.

During the deliberations EAC directed PP to submit an undertaking for the following commitments:

- Brick manufacturing unit will be installed within the plant premises for utilization of fly ash.
- Solar power plant of 0.5 MW shall be installed within the plant and it shall be utilized in meeting power requirement of the plant.
- The budget to be spent on CER shall be Rs 3.15 crores and it shall be spent on providing solar power to the nearby villages. It was also suggested that the proposed activities under CER shall be completed before the commissioning of the plant.

PP has submitted the desired information as sought above and EAC found it to be in order.

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 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.

The Committee 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.

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

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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.

The EAC, after detailed deliberations, **recommended** the project for grant of environmental clearance, subject to compliance of terms and conditions as under, and general terms of conditions at Annexure: -

- (i). As per OM dated 16th June, 2021, project falls in category B2 and the proposed additional capacity of 230 KLPD shall be only for fuel ethanol manufacturing as per self-certification in form of an affidavit by the Project Proponent. Provided that subsequently if it is found that the ethanol, produced based on the EC granted as per this dispensation, is not being used completely for EBP Programme, or if ethanol is not being produced, or if the said distillery is not fulfilling the requirements based on which the project has been appraised as category B2 project, the EC shall stand cancelled.
- (ii). 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.
- (iii). 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.
- (iv). Total fresh water requirement shall be 854 CMD which will be met from MIDC Water Supply Scheme (Wainganga River). No ground water recharge shall be permitted within the premises.
- (v). The spent wash shall be concentrated and dried to form DDGS to be used as cattle feed. PP shall install brick manufacturing plant within factory for utilization of fly ash.
- (vi). CO₂ generated from the process shall be bottled/made solid ice and utilized/sold to authorized vendors.
- (vii). Occupational Health Centre for surveillance of the worker's health shall be set up. The health data shall be used in deploying the duties of the workers. All workers & employees shall be provided with required safety kits/mask for personal protection.
- (viii). Training shall be imparted to all employees on safety and health aspects of chemicals handling. Safety and visual reality training shall be provided to employees.

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- (ix). The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Firefighting system shall be as per the norms.
- (x). Process organic residue and spent carbon, if any, shall be sent to Cement other suitable industries for its incinerations. ETP sludge, process inorganic & evaporation salt shall be disposed of to the TSDF.
- (xi). The company shall undertake waste minimization measures as below
(a) Metering and control of quantities of active ingredients to minimize waste; (b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes. (c) Use of automated filling to minimize spillage. (d) Use of Close Feed system into batch reactors. (e) Venting equipment through vapour recovery system. (f) Use of high pressure hoses for equipment clearing to reduce wastewater generation.
- (xii). The green belt of 5-10 m width shall be developed in nearly 33% of the total project area, mainly along the plant periphery. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department. Records of tree canopy shall be monitored through remote sensing map. Development of greenbelt shall be completed along with commissioning of the project.
- (xiii). PP proposed to allocate Rs 3.15 crores and it shall be spent on providing solar power to the nearby villages. All the proposed activities under CER shall be completed before the commissioning of the plant.
- (xiv). There shall be adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products as per CPCB norms and no parking to be allowed outside on public places.
- (xv). Storage of raw materials shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions.
- (xvi). Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.
- (xvii). A separate Environmental Management Cell (having qualified person with Environmental Science/Environmental Engineering/specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.

Agenda No. 42.5**Expansion of Molasses / Sugarcane Juice/Syrup based Distillery from 65 KLPD to 110 KLPD by using Molasses/ Cane Syrup/Grain) by M/s Davangere Sugar Company Ltd. (DSCL) - Consideration of Environment Clearance.****[IA/KA/IND2/229479/2021, J-11011/386/2021-IA-II(I)]**

The Project Proponent and the accredited Consultant M/s. Equinox Environments (I) Pvt Ltd made a detailed presentation on the salient features of the project and informed that:

The proposal is for environmental clearance to the project proposed expansion of Molasses / Sugarcane Juice/Syrup based Distillery from 65 KLPD to 110 KLPD by using Molasses/ Cane Syrup/Grain) by M/s Davangere Sugar Company Ltd. (DSCL).

The project/activities are covered under category A of item 5 (g) 'Distilleries' of the Schedule to the EIA, 2006 and requires appraisal at central level by the sectoral Expert Appraisal Committee (EAC). The proposal has been submitted under the Ministry's EIA Notification, 2006 amendments vide Notification no. S.O. 345(E) dated 17th January 2019 & extension of notification S.O. 750(E) dated 17th February 2020, S.O 980(E) dated 2nd March, 2021. Accordingly, the proposal has been appraised as category 'B2' project.

The project proposal is exempted from obtaining ToR & conducting Public Hearing as per EIA notification, 2006 amendment vide S.O 980(E) dated 2nd March, 2021. It was informed that no litigation is pending against the project.

SEIAA, Karnataka State has issued EC earlier vide letter No. SEIAA/02/IND/2020 dated 26th August, 2020 to the existing 65 KLPD Molasses/ Sugarcane Juice based Distillery in favor of M/s Davangere Sugar Company Ltd. (DSCL).

The details of products and capacity are as under:

Industrial Unit	Product	Units	Quantity		
			Existing	Expansion	Total
Distillery (65-110 KLPD)	Rectified Spirit (RS)/ ENA	KLPD	65	-	65
	Ethanol (Molasses/ Sugarcane Syrup Based)	KLPD	65	45	110
	Ethanol (Grain Based)	KLPD	-	110	110
	Fusel Oil	MT/M	3	2.1	5.1
By- Products					

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Industrial Unit	Product	Units	Quantity		
			Existing	Expansion	Total
	CO ₂	MT/M	1620	1110	2730
	DDGS (110 KLPD)	MT/M	-	5160	5160

Total plot land area is 6,67,731.30 m². Existing built-up area 49,147.53 m²; additional built-up for proposed project will be 52,609.1 m². Industry has already developed Green Belt in an area of 1,17,359 m² (18% out of total plot area). Moreover, additional Green Belt area of 1,00,000 m² (15% out of total plot area) will be developed. After expansion of Distillery, the total Green Belt area would be 2,17,359 m² which accounts for 33% of total plot area.

The estimated project cost is Rs. 208 Crores including existing investment of Rs.98 Crores. The distillery will be operated for 330 days. Total capital cost earmarked towards environmental pollution control measures under proposed expansion project will be Rs.8.6 Crores and the Recurring cost (operation and maintenance) will be about Rs.0.70 Crores per annum. Total Employment will be 552 persons as direct & indirect after proposed project. Industry proposes to allocate Rs. 83 Lakh @ of 0.75 % towards Corporate Environment Responsibility.

There are no national parks, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 Km Study Area. Shyagale Halla River is flowing at a distance 0.5 Km from South East to North west.

Total water requirement after Distillery expansion project will be 1,927 CMD. Out of which 919 CMD will be fresh water taken from Shyagale Halla River. After expansion of Distillery from 65 KLPD to 110 KLPD, process effluent generated from Molasses based operations in the form of raw spent wash to the tune of 880 M³/D which would be concentrated in Multiple Effect Evaporator (MEE) and the conc. Spent wash @ 176 MT/D (1.6 KL/KL of alcohol) would be blended with bagasse or coal and burnt in existing 30 TPH incineration boiler. Other effluents viz. spent lees @ 257 M³/D, MEE condensate @ 704 M³/D and Other effluents @ 153 M³/D will be treated in existing CPU which will be duly upgraded under of Distillery. Treated effluent from CPU will be reused in process and boiler makeup, thereby achieving Zero Liquid Discharge (ZLD) for Distillery. After expansion of Distillery from 65 KLPD to 110 KLPD, process effluent generated from Grain based operations in the form of FOC , PRC RC Lees – 360 M³/D, Condensate – 260 M³/D & Other effluent to the tune of 773 M³/D which will be treated in existing CPU to be upgraded under expansion activity & recycled in process. Same CPU will be used for Molasses Based, Sugarcane Syrup Based & Grain Based Operations.

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Power requirement for proposed project will be 2.5 MW which will be met from own Turbine Generation. Existing unit has 250 KVA DG Set. No additional DG set will be installed under expansion activity. DG sets to be used as standby during power failure. Stack (height 5 M) is provided as per CPCB norms to the existing DG Set. Existing Distillery has one 30 TPH Incineration Boiler which is already installed. ESP with a stack of height of 74 M is installed for controlling the particulate emissions within the statutory limit of 115 mg/Nm³ for the boiler.

Details of process emissions generation and its management:

The CO₂ generation shall take place in fermenters of the distillery. CO₂ to the tune of 91 MT/Day shall be released from 110 KLPD distillery plant. CO₂ shall be compressed, bottled and supplied to manufacturers of beverages.

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

No.	Description	Quantity (MT/D)		Disposal Facility
		Existing	After Expansion	
1	Yeast Sludge	14	23	Used as Manure.
2	Boiler Ash	30	57	Sold to Farmer (As fertilizer) / Brick Making
3	CPU Sludge	0.6	1.1	Burnt in Incineration Boiler

No any Hazardous waste is generated from Distillery.

Certified Compliance report has been issued by IRO, Bangalore vide letter No. EP/12.1/2020-21/02/SEIAA/KAR/602 dated 14th September, 2021. It mentioned that the construction work of 65 KLPD distillery was started in May 2021 but due to COVID - 19 pandemic, the construction activities were slowed down and the distillery plant erection is expected to be completed in another 7- 8 months. Further, IRO report mentioned that Since the project is in initial stage of construction and PA has obtained all necessary clearance/NOC from various departments and complied initial stage of EC conditions, detailed compliance has not been prepared and the compliance is rated as Satisfactory.

As per OM dated 16th June, 2021, PP has submitted self-certification in the form of affidavit declaring that the proposed expansion of 45 KLPD will be for manufacturing of fuel ethanol only.

During the deliberations EAC directed PP to submit an undertaking for the following commitments:

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- Solar power plant of 0.5 MW shall be installed within the plant and it shall be utilized in meeting power requirement of the plant.
- The proposed budget to be spent on CER shall be increased to Rs 3.00 crores and it shall be spent on installing solar power in the nearby villages. It was also suggested that the proposed activities under CER shall be completed before the commissioning of the plant.
- Ash management plan.

PP has submitted desired information except for increase in the CER funds to Rs. 3.00 Crs.

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 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.

The Committee 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.

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.

The EAC, after detailed deliberations, **recommended** the project for grant of environmental clearance, subject to compliance of terms and conditions as under, and general terms of conditions at Annexure: -

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- (i). As per OM dated 16th June, 2021, project falls in category B2 and the proposed additional capacity of 45 KLPD shall be only for fuel ethanol manufacturing as per self-certification in form of an affidavit by the Project Proponent. Provided that subsequently if it is found that the ethanol, produced based on the EC granted as per this dispensation, is not being used completely for EBP Programme, or if ethanol is not being produced, or if the said distillery is not fulfilling the requirements based on which the project has been appraised as category B2 project, the EC shall stand cancelled.
- (ii). 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.
- (iii). 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.
- (iv). Total fresh water requirement shall be 919 KLPD which will be met from Shyagale Halla River. Extraction of ground water shall not be done without obtaining prior permission of CGWA/concerned authority. No ground water recharge shall be permitted within the premises.
- (v). The spent wash shall be concentrated and dried to form DDGS to be used as cattle feed.
- (vi). CO₂ generated from the process shall be bottled/made solid ice and utilized/sold to authorized vendors.
- (vii). Occupational Health Centre for surveillance of the worker's health shall be set up. The health data shall be used in deploying the duties of the workers. All workers & employees shall be provided with required safety kits/mask for personal protection.
- (viii). Training shall be imparted to all employees on safety and health aspects of chemicals handling. Safety and visual reality training shall be provided to employees.
- (ix). The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Firefighting system shall be as per the norms.
- (x). Process organic residue and spent carbon, if any, shall be sent to Cement other suitable industries for its incinerations. ETP sludge, process inorganic & evaporation salt shall be disposed of to the TSDF.

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- (xi). The company shall undertake waste minimization measures as below
(a) Metering and control of quantities of active ingredients to minimize waste; (b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes. (c) Use of automated filling to minimize spillage. (d) Use of Close Feed system into batch reactors. (e) Venting equipment through vapour recovery system. (f) Use of high pressure hoses for equipment clearing to reduce wastewater generation.
- (xii). The green belt of 5-10 m width shall be developed in nearly 33% of the total project area, mainly along the plant periphery. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department. Records of tree canopy shall be monitored through remote sensing map. Development of greenbelt shall be completed along with commissioning of the project.
- (xiii). PP proposed to allocate Rs. 3.00 Crores for CER and it shall be spent on installing solar power in the nearby villages. All the proposed activities under CER shall be completed before the commissioning of the plant.
- (xiv). There shall be 15% space inside the plant premises earmarked for parking of vehicles for raw materials and finished products as per CPCB norms and no parking to be allowed outside on public places.
- (xv). Storage of raw materials shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions.
- (xvi). Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.
- (xvii). A separate Environmental Management Cell (having qualified person with Environmental Science/Environmental Engineering/specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.

Agenda No. 42.6

Expansion of Molasses based Distillery from 75 to 110 KLPD for Ethanol production by using C / B Heavy Molasses/ Cane Syrup with 3 MW Captive Power Plant (CPP) including expansion of cane crushing from 10,000 to 12,000 TCD along with Co-

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generation Plant from 20 to 30 MW At: Bidri (Mouninagar), Tal.: Kagal, Dist.: Kolhapur, Maharashtra by M/S Shri Dudhganga Vedganga Sahakari Sakhar Karkhana Ltd (SDVSSKL)- Consideration of Environment Clearance.

[IA/MH/IND2/231257/2021, J-11011/403/2021-IA-II(I)]

The Project Proponent and the accredited Consultant M/s. Equinox Environments (I) Pvt Ltd made a detailed presentation on the salient features of the project and informed that:

The proposal is for environmental clearance to the project proposed expansion of Molasses based Distillery from 75 to 110 KLPD for Ethanol production by using C / B Heavy Molasses/ Cane Syrup with 3 MW Captive Power Plant (CPP) including expansion of cane crushing from 10,000 to 12,000 TCD along with Co-generation Plant from 20 to 30 MW at Bidri (Mouninagar), Kagal taluk, Kolhapur district, Maharashtra by M/S Shri Dudhganga Vedganga Sahakari Sakhar Karkhana Ltd (SDVSSKL).

The project/activities are covered under category A of item 5 (g) 'Distilleries' of the Schedule to the EIA, 2006 and requires appraisal at central level by the sectoral Expert Appraisal Committee (EAC). The proposal has been submitted under the Ministry's EIA Notification, 2006 amendments vide Notification no. S.O. 345(E) dated 17th January 2019 & extension of notification S.O. 750(E) dated 17th February 2020, S.O. 980(E) dated 2nd March, 2021. Accordingly, the proposal has been appraised as category 'B2' project.

The project proposal is exempted from obtaining ToR & conducting Public Hearing as per EIA notification, 2006 amendment vide S.O. 980(E) dated 2nd March, 2021. It was informed that no litigation is pending against the project.

SEIAA Maharashtra has granted EC for 20 MW Co-gen plant vide letter No. 2009/348/CR.72/TC.1 dated 05th August, 2009 in favor of Shri Dudhganga Vedganga Sahakari Sakhar Karkhana Ltd. Further, SEIAA Maharashtra has granted EC vide letter No. SIA/MH/IND2/57733/2020 dated 13th September, 2021 to the existing 75 KLPD Molasses Based Distillery, Sugar Factory expansion from 5000 TCD to 10,000 TCD & 20 MW Co-gen plant in favor of M/s Dudhganga Vedganga Sahakari Sakhar Karkhana Ltd.

The details of products and capacity are as under:

Industrial Unit	Product & By-products	Unit	Quantity		
			Existing	Proposed	Total
Distillery (Expansion from 75 to	Rectified Spirit / Extra Neural Alcohol (ENA) (B & C Heavy Molasses)	KLPD	75	0	75

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110 KLPD)	Ethanol (B & C Heavy Molasses)	KLPD	75	35	110
	Ethanol (Sugarcane Syrup)	KLPD	0	110	110
	CO ₂ Gas	MT/M	1,680	1,050	2,730
	Electric Power from Incineration Boiler	MW	0	3	3
Sugar Factory (Expansion from 10,000 to 12,000 TCD)	Sugar (12%)*	MT/M	36,000	7,200	43,200
	Molasses (4%)*	MT/M	12,000	2,400	14,400
	Bagasse (30%)*	MT/M	90,000	18,000	1,08,000
	Pressmud (4%)*	MT/M	12,000	2,400	14,400
Co-gen (Expansion from 20 to 30 MW)	Electricity	MW	20	10	30

Total plot land area is 7,26,219 m². Existing built-up area 61,367 m²; additional built-up for proposed project will be 2,625 m². Industry has already developed 94,408.50 m² (13% out of total plot area) of green belt. Under Expansion of Distillery, Sugar Factory, & Co-generation Plant, 1, 45,243.80 m² (20% out of total plot area) of additional Green Belt will be developed. After proposed activity, the total Green Belt area would be 2,39,652 m² which accounts for 33% of total plot area.

The estimated project cost is Rs.475.97 Crores including existing investment of Rs.425.97 Crores. The distillery will be operated for 330 days. Total capital cost earmarked towards environmental pollution control measures under proposed project will be Rs. 4.55 Crores and the Recurring cost (operation and maintenance) will be about Rs.0.44 Crores per annum.

Total Employment will be 603 persons as direct & indirect after proposed project. Industry proposes to allocate Rs.50.5 Lakh @ of 1% towards Corporate Environment Responsibility.

There is a Radhanagari Wildlife Sanctuary at a distance of 12.2 Km from SDVSSKL Site. Radhanagari Wildlife Sanctuary ESZ got finalized vide MoEFCC Notification No. SO-3630 E on 15.10.2020. SDVSSKL site is located at 9.9 Km from ESZ & do not come in the ESZ. Protected Forest is about 1.15 Km from SDVSSKL Site. Dudhganga River is flowing at a distance of 0.7 Km from West to North direction and Vedganga River is flowing at a distance of 5.8 Km from South to East direction.

Total water requirement after Expansion of Sugar Factory, Co-generation Plant & Distillery project will be 7,760 CMD. Out of which 334 CMD will be fresh water taken from Dudhganga River. Total trade effluent generated from expansion activity of Sugar Factory & Co-gen Plant @ 713 m³/Day will be treated through existing Effluent Treatment Plant (ETP) comprising of Primary, Secondary & Tertiary Treatment units.

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Treated effluent will be reused for green belt development in own factory premises. The process effluent generated after expansion of Molasses based Distillery from 75 KLPD to 110 KLPD would be in the form of raw spent wash to the tune of 880 m³/Day which would be concentrated in Multiple Effect Evaporator (MEE) and the conc. spent wash @ 176 MT/D (1.6 KL/KL of alcohol) would be burnt in existing 30 TPH incineration boiler. Other effluents viz. spent lees @ 147 m³/D, MEE condensate @ 704 m³/D and other effluents @ 51 M³/D will be treated in CPU under Distillery. Treated effluent from CPU will be reused in process and boiler makeup, thereby achieving Zero Liquid Discharge (ZLD) for Distillery.

Power requirement after Expansion of Sugar Factory, Co-generation Plant & Distillery project will be 13 MW which will be procured from own Cogeneration Plant. Existing Unit has 2 DG sets having capacity 250 KVA & 1500 KVA. No additional DG set will be installed under expansion of project. Existing units has 120 TPH bagasse fired boiler under Sugar Factory & Cogeneration Plant & 30 TPH Incineration boiler under existing Distillery. There will not be any new boiler under expansion of Distillery. After expansion, existing 30 TPH boiler will be operated with full efficiency and additional fuel will be required for same. After Expansion, 60 TPH Bagasse fired Boiler will be installed under Sugar factory & Cogeneration Plant. ESP with a stack of height of 80 M will be installed for controlling the particulate emissions within the statutory limit of 115 mg/Nm³ for the boiler.

Details of process emissions generation and its management:

The CO₂ generation shall take place in fermenters of the distillery. CO₂ to the tune of 91 MT/Day shall be released from 110 KLPD distillery plant. CO₂ shall be compressed, bottled and supplied to manufacturers of beverages.

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

Details of Solid waste generated & its management

No.	Industrial Unit	Type	Quantity (MT/M)		Disposal
			Existing	After Expansion	
1	Sugar Factory & Co-gen Plant	Boiler Ash (Bagasse)	960	1,500	Used as manure
		ETP Sludge	18	21	
2	Distillery	Boiler Ash (Coal + Sp. Wash)	840	1,710	To be forwarded for Brick making

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		Yeast Sludge	360	690	Burnt in Incineration Boiler
		CPU Sludge	18.9	28	

Details of Hazardous Waste generation & its management

No.	Category	Quantity (KL/Year)		Disposal
		Existing	After Expansion	
1	5.1 – Used Oil	6.5	7.8	Burnt in Boiler

No other Hazardous waste is generated from Distillery.

It was informed that as SEIAA Maharashtra has issued EC for expansion of sugar factory from 5000 TCD to 10000 TCD and establishment of 75 KLPD distillery on 13th September, 2021. As no progress has been made in that EC, CCR has been submitted for earlier EC granted for 20 MW Co-gen plant vide letter No. 2009/348/CR.72/TC.1 dated 05th August, 2009. IRO, Nagpur has issued CCR for the same vide letter No. EC-1247/RON/2020-NGP/7596 dated 21.12.2020 in which few non-compliances were observed. ATR for the non-complied conditions observed has been submitted to IRO on 20.07.2021. EAC found compliance status of CCR to be satisfactory.

As per OM dated 16th June, 2021, PP has submitted self-certification in the form of affidavit declaring that the proposed expansion of 35 KLPD will be for manufacturing of fuel ethanol only.

During the deliberation it has been informed to EAC that Ministry is in receipt of complaint that there is a pending court case against the Industry for violation of EIA, 2006 in NGT, Pune Bench. In this regard PP informed that there is no court case at the time of submission of proposal and shall submit an undertaking for the same which has been accepted by EAC. After the deliberations EAC directed PP to submit an undertaking for the following commitments:

- Solar power plant of 0.5 MW shall be installed within the plant and it shall be utilized in meeting power requirement of the plant.
- The proposed budget to be spent on CER shall be increased to Rs 4.10 crores and it shall be spent on providing solar power in nearby villages. It was also suggested that the proposed activities under CER shall be completed before the commissioning of the plant.
- Undertaking that there is no court case pending against the Industry.
- Installation of CO2 bottling plant.
- Plan for boiler ash management.
- Brick manufacturing unit will be installed within the plant premises for utilization of fly ash.

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PP has submitted the desired information as sought above and EAC found it to be in order.

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 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.

The Committee 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.

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.

The EAC, after detailed deliberations, **recommended** the project for grant of environmental clearance, subject to compliance of terms and conditions as under, and general terms of conditions at Annexure: -

- (i). As per OM dated 16th June, 2021, project falls in category B2 and the proposed additional capacity of 35 KLPD shall be only for fuel ethanol manufacturing as per self-certification in form of an affidavit by the Project Proponent. Provided that subsequently if it is found that the ethanol, produced based on the EC granted as per this dispensation, is not being used completely for EBP Programme, or if ethanol is not being produced, or if the said distillery is not fulfilling the requirements based on which the project has been appraised as category B2 project, the EC shall stand cancelled.

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- (ii). 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.
- (iii). 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.
- (iv). Total fresh water requirement shall be 334 CMD which will be met from Dudhganga River. Extraction of ground water shall not be done without obtaining prior permission of CGWA/concerned authority. No ground water recharge shall be permitted within the premises.
- (v). The spent wash shall be concentrated in MEE followed by incineration. Other effluents shall be treated through the CPU/ETP.
- (vi). CO₂ generated from the process shall be bottled/made solid ice and utilized/sold to authorized vendors.
- (vii). Occupational Health Centre for surveillance of the worker's health shall be set up. The health data shall be used in deploying the duties of the workers. All workers & employees shall be provided with required safety kits/mask for personal protection.
- (viii). Training shall be imparted to all employees on safety and health aspects of chemicals handling. Safety and visual reality training shall be provided to employees.
- (ix). The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Firefighting system shall be as per the norms.
- (x). Process organic residue and spent carbon, if any, shall be sent to Cement or any other suitable industries for its incinerations. ETP sludge, process inorganic & evaporation salt shall be disposed of to the TSDF.
- (xi). The company shall undertake waste minimization measures as below
(a) Metering and control of quantities of active ingredients to minimize waste; (b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes. (c) Use of automated filling to minimize spillage. (d) Use of Close Feed system into batch reactors. (e) Venting equipment through vapour recovery system. (f) Use of high pressure hoses for equipment clearing to reduce wastewater generation.
- (xii). The green belt of 5 m width shall be developed in nearly 33% of the total project area, mainly along the plant periphery. Selection of plant

species shall be as per the CPCB guidelines in consultation with the State Forest Department. Records of tree canopy shall be monitored through remote sensing map. Development of greenbelt shall be completed along with commissioning of the project.

- (xiii). PP proposed to allocate Rs. 4.10 Crores for CER and it shall be spent on providing solar power in nearby villages. All the proposed activities under CER shall be completed before the commissioning of the plant.
- (xiv). There shall be adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products as per CPCB norms and no parking to be allowed outside on public places.
- (xv). Storage of raw materials shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions.
- (xvi). Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.
- (xvii). A separate Environmental Management Cell (having qualified person with Environmental Science/Environmental Engineering/specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.

Agenda No. 42.7

Expansion of Distillery from 80 KLD to 200 KLD & Co-Generation Power Plant from 3.0 MW to 13.0 MW by installation of new 120 KLD Multi-feedbased Ethanol Plant along with 10.0 MW Co-Generation Power Plant at Village; Kothwal Kalan, Tehsil Kaisarganj, District- Bahraich, Uttar Pradesh, by M/s Parle Biscuits Pvt. Ltd. Distillery Division - Consideration of Environment Clearance.

[IA/UP/IND2/230689/2021, J-11011/398/2021-IA-II(I)]

The Project Proponent and the accredited Consultant M/s. Environmental and Technical Research Centre made a detailed presentation on the salient features of the project and informed that:

The proposal is for environmental clearance to the project proposed expansion of Distillery from 80 KLD to 200 KLD & Co-Generation Power Plant from 3.0 MW to 13.0 MW by installation of new 120 KLD Multi-feedbased Ethanol Plant along with 10.0 MW Co-Generation Power Plant

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at Village; Kothwal Kalan, Tehsil Kaisarganj, District- Bahraich, Uttar Pradesh, by M/s Parle Biscuits Pvt. Ltd. Distillery Division.

The project/activities are covered under category A of item 5 (g) 'Distilleries' of the Schedule to the EIA, 2006 and requires appraisal at central level by the sectoral Expert Appraisal Committee (EAC). The proposal has been submitted under the Ministry's EIA Notification, 2006 amendments vide Notification no. S.O. 345(E) dated 17th January 2019 & extension of notification S.O. 750(E) dated 17th February 2020, S.O. 980(E) dated 2nd March, 2021. Accordingly, the proposal has been appraised as category 'B2' project.

The project proposal is exempted from obtaining ToR & conducting Public Hearing as per EIA notification, 2006 amendment vide S.O 980(E) dated 2nd March, 2021. It was informed that no litigation is pending against the project.

SEIAA Maharashtra has issued EC earlier vide letter No. 313/Parya/SEAC/4982/2019 dated 22nd October 2019 to the existing molasses-based Distillery Plant (60 KLPD) along with Captive Power Plant (3 MW) in favour of M/s. Parle Biscuits Pvt. Ltd. Distillery Division. The unit applied for expansion (60 to 80 KLPD) in UPPCB under as per new notification of MoEF&CC vide S.O. 980 (E) dated 2nd March, 2021 and obtained Certificate of "No Increase in Pollution Load" from Uttar Pradesh Pollution Control Board vide letter no. H61102/C-6/N.O.C./145/FAZ/2021 dated 25.03.2021 for distillery capacity expansion due to use of alternative feedstock and raw material mix (B-Heavy Molasses/Sugar Syrup) from 60 KLD to 80 KLD. Thereafter, the company has obtained new CTO for Air & Water for expanded capacity of 80 KLPD vide Ref. No.- 134237/UPPCB/Faizabad (UPPCBRO)/CTO/air/ Bahraich/2021 & Ref. No. 134231/UPPCB/Faizabad(UPPCBRO)/CTO/water/Bahraich/2021 respectively dated 17.08.2021 valid till 31.12.2023

The details of products and capacity are as under:

Product details	Existing quantity	Existing quantity	Total quantity
Distillery	60 KLD RS/ENA/AA while using C-Heavy molasses as raw material and 80 KLD RS ENA AA while using B-Heavy molasses or Sugar Syrup as raw material.	120 KLD Ethanol (Cane Syrup/Grain Based)	200 KLD
Co-generation power plant	3.0 MW	10 MW	13.0 MW
Product	Absolute Alcohol-Ethanol /Extra Neutral Alcohol/Rectified Spirit	Ethanol (Bio-fuel) Only	100% Ethanol
Working Days: 365 days per annum			

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Existing plant area is 3.165 ha. Additional adjacent company own land of 3.416 Ha is required for proposed expansion. Total plant area for expansion is 6.581 ha. Land is already under possession of unit. Company has already developed greenbelt in an area of 33% i.e., 1.045 hectares out of total existing area of the project and the additional 1.255 ha will be developed under greenbelt. Thus, total greenbelt area will be 2.30 ha after adding additional area.

The estimated project cost is Rs 84.15 crores. Total capital cost earmarked towards environmental pollution control measures is Rs 2121 Lakh and the Recurring cost (operation and maintenance) will be about Rs 500 Lakh per annum. Total Employment will be 44 persons as direct & indirect. Industry proposes to allocate Rs 200 lakhs towards Corporate Environmental Responsibility.

There are no National Parks, Reserved Forests (RF)/ Protected Forests (PF), within 10 Km radius. River/ water body Jhingri River is flowing at a distance of 0.96 Km in the West direction and Pingal River at a distance of 3.45 Km in the West direction.

Total fresh water requirement after expansion will be 1200 KLD (380 KLD for molasses-based operations+ 820 KLD for Grain / cane syrup-based operations) which will be met from ground water. Effluent generation after expansion will be 1395 KLD maximum (440 KLD from molasses-based operations+ 955 KLD for Grain / cane syrup-based operations) will be treated through state of art ETP (Anaerobic, aerobic, Filters, & RO system). The plant will be based on Zero Liquid discharge system. Spent wash generation from the distillation which is a variable in different mode operations. Spent wash generated during molasses-based operations will be concentrated in MEE then concentrate from MEE will be used as fuel in Slop fired Boiler. Spent Wash (Slops) generation during Grain / cane syrup-based operations from Distillation, will be sent through separation of suspended solids in Decanter Centrifuge, part Thin Slops are concentrated in multi-effect evaporators to form a Thick (Protein) Syrup, which is mixed with the Wet Cake DWG separated earlier from Decanters. This interim product called DWGS has 30-32% w/w Solids is subject to drying in a rotating steam tube bundle dryer to deliver a value-added by-product – DDGS – Distillers Dried Grains with soluble and which has min. 90% Solids and max 10% moisture. This DDGS sells as Cattle Feed / Poultry Feed / Fish Feed based on its Protein Content. Hence, entire spent wash is decanted, concentrated into syrup in a Multi-Effect Evaporation followed by Drying, in order to achieve Zero Effluent Discharge.

Power requirement for proposed project will be 10 MW (maximum) will be met from Co-generation power plant of capacity 13 MW. Existing unit has 20 TPH Concentrated spent wash & bagasse fired boiler. Unit has

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proposed 1 no.s of boiler of capacity 50 TPH (bio-mass based). Electro Static Precipitator (ESP) with a stack of height of 70 m is installed for controlling the particulate emissions within the statutory limit of 50 mg/Nm³ for the proposed boilers

Details of process emissions generation and its management:

- Bag filter with a stack height of 70 m is installed for controlling the particulate emissions with existing 20 TPH slop fired boiler.
- ESP will be installed with proposed biomass-based boiler.
- Online Continuous Emission Monitoring System is already installed with the stack and data is transmitted to CPCB/SPCB servers.
- CO₂ generated during the fermentation process will be collected by utilizing CO₂ scrubbers and sold to authorized vendors.

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

S. No.	Type of Waste	Quantity in Molasses based Distillery in TPD	Quantity in Grain / cane syrup-based Distillery in TPD	Mode of management
1	Ash	28	25	Having high potash content will be utilized as manure. Granulation plant capacity is 50 TPD is installed.
2	Yeast sludge	10	12	Will be mixed with ash and used as manure.

The certified compliance report submitted by the Ministry's Regional office at Lucknow vide letter VII/ENV/SCL-UP/1925/2020/271 dated 21.09.2021. IRO report mentioned that no non compliances were detected and no further action was required. EAC found the compliance status satisfactory.

As per OM dated 16th June, 2021, PP has submitted self-certification in the form of affidavit declaring that the proposed expansion of 120 KLPD will be for manufacturing of fuel ethanol only.

During the deliberations EAC directed PP to submit an undertaking for the following commitments:

- Industry shall construct rain water storage facility of capacity which can store at least 60 days fresh water requirement.
- Industry shall install solar plant of 0.5 MW and shall utilize it for captive requirement.
- Integrated Industry shall conform to ZLD
- Ash management details.

PP has submitted desired information as sought above and EAC found it to be in order. Further EAC suggested that PP shall allocate Rs. 2.00 Crores for CER and it shall be spent on providing solar power in nearby villages. All the proposed activities under CER shall be completed before the commissioning of the plant. PP agreed to it.

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 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.

The Committee 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.

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.

The EAC, after detailed deliberations, **recommended** the project for grant of environmental clearance, subject to compliance of terms and conditions as under, and general terms of conditions at Annexure: -

- (i). As per OM dated 16th June, 2021, project falls in category B2 and the proposed additional capacity of 120 KLPD shall be only for fuel ethanol manufacturing as per self-certification in form of an affidavit by the Project Proponent. Provided that subsequently if it is found that the ethanol, produced based on the EC granted as per this dispensation, is not being used completely for EBP Programme, or if ethanol is not being produced, or if the said distillery is not fulfilling the

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requirements based on which the project has been appraised as category B2 project, the EC shall stand cancelled.

- (ii). 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.
- (iii). 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.
- (iv). Total fresh water requirement shall be 1200 KLPD which will be met from ground water. Industry shall construct rain water storage facility of capacity which can store at least 60 days fresh water requirement. Extraction of ground water shall not be done without obtaining prior permission of CGWA/concerned authority. No ground water recharge shall be permitted within the premises.
- (v). Effluent generated shall be treated through ETP.
- (vi). CO₂ generated from the process shall be bottled/made solid ice and utilized/sold to authorized vendors.
- (vii). Occupational Health Centre for surveillance of the worker's health shall be set up. The health data shall be used in deploying the duties of the workers. All workers & employees shall be provided with required safety kits/mask for personal protection.
- (viii). Training shall be imparted to all employees on safety and health aspects of chemicals handling. Safety and visual reality training shall be provided to employees.
- (ix). The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Firefighting system shall be as per the norms.
- (x). Process organic residue and spent carbon, if any, shall be sent to Cement other suitable industries for its incinerations. ETP sludge, process inorganic & evaporation salt shall be disposed of to the TSDF.
- (xi). The company shall undertake waste minimization measures as below
 - (a) Metering and control of quantities of active ingredients to minimize waste;
 - (b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.
 - (c) Use of automated filling to minimize spillage.
 - (d) Use of Close Feed system into batch reactors.
 - (e) Venting equipment through vapour recovery system.
 - (f) Use of high pressure hoses for equipment clearing to reduce wastewater generation.

- (xii). The green belt of 5 m width shall be developed in nearly 33% of the total project area, mainly along the plant periphery. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department. Records of tree canopy shall be monitored through remote sensing map. Development of greenbelt shall be completed along with commissioning of the project.
- (xiii). PP proposed to allocate Rs. 2.00 Crores for CER and it shall be spent on providing solar power in nearby villages. All the proposed activities under CER shall be completed before the commissioning of the plant.
- (xiv). There shall be adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products as per CPCB norms and no parking to be allowed outside on public places.
- (xv). Storage of raw materials shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions.
- (xvi). Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.
- (xvii). A separate Environmental Management Cell (having qualified person with Environmental Science/Environmental Engineering/specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.

Agenda No. 42.8

Proposed expansion of Sugar Factory capacity from 7500 to 13,200 TCD, Distillery capacity from 45 to 145 KLPD (Rectified Spirit/ENA/Ethanol) and establishment of 24MW Co-generation Power Plant at Yeshwantnagar District: Satara, Maharashtra by M/s SAHYADRI SAHAKARI SAKHAR KARKHANA LTD- Amendment in Environment Clearance.

[IA/MH/IND2/228051/2021, J-11011/114/2018-IA-II(I)]

The proposal is for amendment in the Environmental Clearance granted by the Ministry of Environment, Forest and Climate Change (MOEF&CC), New Delhi vide letter no. J-11011/114/2018-IA-II(I) dated 28.10.2020

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for the project expansion of Sugar Factory capacity from 7500 to 13,200 TCD, Distillery capacity from 45 to 145 KLPD (Rectified Spirit/ENA/Ethanol) and establishment of 24MW Co-generation Power Plant at Yeshwantnagar District: Satara, Maharashtra by M/s Sahyadri Sahakari Sakhar Karkhana Limited.

The project proponent has requested for amendment in the EC with details as under:

Sr. No.	Para of ToR/EC issued by MoEF&CC	Details as per EC	To be revised as/read as	Justification/reason
1	Para 10	ESP with stack height of 80 m for co-generation boilers and 80 m height for incineration boiler will be installed for controlling the particulate emission within the statutory limit of 150 mg/Nm ³ for the proposed boilers	It is proposed to adopt Bag-filter as APC equipment instead of ESP for incineration boiler only.	Advantages of Bag-filter over ESP such as; 1) Maintenance is low. 2) Energy consumption is much lower. 3) Easy to operate
2	Para 6	Certified compliance report for consent condition is issued by Karnataka SPCB.	Certified compliance report for consent condition is issued by Maharashtra SPCB.	Typographical error
3	Para 10	Power requirement shall be met from Mangalore Electricity Sully Company (MESCOM)	Power requirement shall be met from Maharashtra State Electricity Distribution Co. Ltd (MSEDCL)	Typographical error

EAC found the justifications satisfactory and **recommended** the amendments in EC, as proposed by the project proponent, with all other terms and conditions remain unchanged.

Agenda No. 42.9

Expansion of Distillery capacity from 120 KLPD to 700 KLPD and captive power Plant capacity from 5 MW to 16 MW at Bagalkot, Karnataka by M/S NIRANI SUGARS LIMITED- Amendment in Environment Clearance regarding.

[IA/KA/IND2/220064/2021, J-11011/130/2008-IA II(I)]

The proposal is for amendment in the Environmental Clearance granted by the Ministry of Environment, Forest and Climate Change (MOEF&CC), New Delhi vide letter no. J-11011/130/2008-IA II(I) dated 29.09.2021 for the project expansion of of Distillery capacity from 120 KLPD to 700 KLPD and captive power Plant capacity from 5 MW to 16 MW at Bagalkot, Karnataka by M/S Nirani Sugars Limited.

The project proponent has requested for amendment in the EC with details as under:

Sl. No.	Para of EC issued by MoEF & CC	Details as per the EC	To be revised/ read as	Justification/reasons
1.	EC Specific Condition point no. (ii), page 8 of 12 the EC vide letter no. J-11011/130/2008-IA II(I) dated 27.09.2021 issued by MoEF & CC.	No construction work shall be started prior to final direction of court. After disposal of court case, construction work shall start after obtaining prior permission from SPCB	Construction work shall start after obtaining prior permission from SPCB	The court case is not likely to be disposed early in view of the Court procedures. Implementation of the project under the EBP program will get delayed if we wait till the final outcome of the court case. Therefore, the request is made for Amendment to EC condition. Further Chairman, KSPCB recommended to

				delete/revise this condition.
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During deliberations PP has informed that the court case was filed by KSPCB for alleged violation of Water (Prevention and Control of Pollution) Act, 1974. Further, PP has informed that industry shall abide by the final outcome of the case and shall take prior permission from KSPCB for implementation of the expansion. Further, PP has submitted a No Objection Certificate dated 30th September, 2021 issued by Chairman, KSPCB to delete/revise the condition stipulated at Specific Condition point no. (ii), page 8 of 12 the EC vide letter no. J-11011/130/2008-IA II(I) dated 27.09.2021 issued by MoEF & CC with certain conditions. EAC found the justification valid and sought affidavit for the same. After detailed deliberations EAC **recommended** the amendments in EC, as proposed by the project proponent, with all other terms and conditions remain unchanged.

21st October, 2021 (Thursday)

Agenda No. 42.10

Onshore Oil & Gas development drilling and production in DumdumaPengeri Area in TinsukiaDistrict under PMLs namely Mechaki PML, Borhapjan PML, Dumduma PML and Digboi PML Tinsukia Assam by M/s OIL INDIA LIMITED- Consideration of Environment Clearance reg.

[IA/AS/IND2/220363/2007, J-11011/1251/2007 - IA II (I)]

The Project Proponent and the accredited Consultant M/s ERM India Pvt. Ltd made a detailed presentation on the salient features of the project and informed that:

The proposal is for environmental clearance to the project Onshore Oil & Gas development drilling and production in DumdumaPengeri Area in TinsukiaDistrict under PMLs namely Mechaki PML, Borhapjan PML, Dumduma PML and Digboi PML Tinsukia Assam by M/s Oil India Limited.

All Offshore and onshore oil and gas exploration, development & production proposals are listed at S.N. 1(b)of Schedule of Environment Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC).

Standard ToR has been issued by Ministry vide letter No. J-11011/1251/2007 - IA II (I) dated 1st June, 2018. Ministry had issued EC earlier vide letter no. J-11011/1251/2007-IA-II(I); dated 1st November

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2011 to the existing Exploratory drilling of 1 well at Dumduma-Pengry Area, District Tinsukia by M/s Oil India Limited.

Public Hearing for the proposed project has been conducted by the State Pollution Control Board on 13th March 2020 in Tinsukia district presided by Additional Deputy Commissioner, Tinsukia district. The main issues raised during the public hearing are related to protection of ecology and environment, development activities -improvement of infrastructure in schools, health initiatives, social initiatives in the area, funds for toilet development etc. It was informed that no litigation is pending against the proposal.

The details of products and capacity are as under:

S. No	Product Details	Existing Quantity	Proposed Quantity	Total Quantity
1.	Wells and production installations	1 well	26 wells and 3 production installations	27 wells and 3 production installations

The total land required for the project will be 990000 m². M/s Oil India Ltd. will develop greenbelt at the proposed production installations having total area of 52500 m².

The estimated project cost is Rs. 1109.40 crore. Recurring cost for public hearing action plan, greenbelt plan, wildlife conservation plan and environmental control measures will be a total of INR 0.9341 crores per annum. Oil India Ltd. will earmark INR 1.775 crores as part of PH Action Plan in for Tinsukia district in line with the comments and suggestions made by the local public during Public Hearing. Additionally, Oil India Ltd. will comply with the conditions mentioned by EAC in this regard. Total Employment will be 60 persons as direct & 120 persons indirect after expansion for each drill site construction and drilling. Oil India Ltd. will earmark INR 1.775 crores as part of PH Action Plan in Tinsukia district in line with the comments and suggestions made by the local public during Public Hearing. Additionally, Oil India Ltd. will comply with the conditions mentioned by EAC in this regard. OIL proposes to allocate funds for CSR activity as per CSR Act and Rules, Govt. of India.

There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves etc. within 10 km of the well locations or production installations. Bogapani elephant corridor is located within 1 km of the proposed well. Buri Dehing River is flowing through south-eastern portion of the Block.

Ambient air quality monitoring was carried out at 8 locations during 2.01.2019 to 26.03.2019 and the baseline data indicates the ranges of average concentrations as: PM₁₀ (76.17-80.57 µg/m³), PM_{2.5} (37.46-

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40.11 $\mu\text{g}/\text{m}^3$), SO_2 (7.56-8.19 $\mu\text{g}/\text{m}^3$) and NO_2 (21.72-24.11 $\mu\text{g}/\text{m}^3$). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 15.38 $\mu\text{g}/\text{m}^3$, 0.01 $\mu\text{g}/\text{m}^3$, 0.07 $\mu\text{g}/\text{m}^3$ and 0.10 $\mu\text{g}/\text{m}^3$ with respect to NO_x , SO_2 , PM_{10} and HC. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

Total water requirement is 50 m^3/day of which fresh water requirement of 39 m^3/day will be met from groundwater. Effluent of 21.8 KLD quantity will be treated through ETP and Septic tank. The project will be based on Zero Liquid discharge system.

Power requirement will be met through two Diesel Generator Sets of 1250 kVA each. Another 1250 kVA DG set will be kept as standby. Stack height of 7 m will be provided as per CPCB norms to the proposed DG sets.

Details of Process emissions generation and its management:

The operation of DG sets, movement of vehicles and machineries during construction and drilling, flaring of natural gas will result in the generation of air pollutants, if gas reserves are encountered during drilling operations. Stacks will be used with DG sets and flare system as per CPCB norms

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

Drill cuttings and spent drilling mud will be disposed to HDPE lined pit within the drill site. The kitchen waste will be disposed in nearest municipal/village dumping site on a daily basis through approved waste handling contractors. Recyclable wastes will be periodically sold to local waste recyclers. Hazardous waste (waste and used oil) will be managed in accordance with Hazardous Waste (Management, Handling & Transboundary Movement) Rules, 2016.

Certified compliance report has been by Integrated Regional Office (IRO), Guwahati vide letter No. RO-NE/E/IA/AS/MI/58/1243-1245 dated 1st October 2021. EAC found the compliance status to be satisfactory.

During deliberation the following additional information was sought from PP:

- i. Details of proposed wells and product installations.
- ii. Noise Management Plan.
- iii. Well abandonment and site restoration plan.

PP has submitted the information desired above and EAC found it in order. Also EAC noted that Bogapani elephant corridor is located within 1 km of the proposed well. In this regard PP informed that safety plan has been submitted for the same and production activities shall be done

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ensuring safety considering movement of elephants based on season. Further EAC suggested PP shall allocate Rs. 1.00 Crore apart from the amount allocated to address issues raised in Public Hearing towards Corporate Environment Responsibility. PP shall utilize the amount in improving infrastructure in the schools nearby. PP agreed to it.

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 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.

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.

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.

The EAC, after detailed deliberations, **recommended** the project for grant of environmental clearance and subject to compliance of terms and conditions as under, and general terms of conditions at Annexure: -

- (i). The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the

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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.

- (ii). No pipelines or its part shall be laid in the Forest land/Protected Area without prior permission/approval from the Competent Authority.
- (iii). The project proponent will treat and reuse the treated water within the drilling site location including at processing location and no waste or treated water shall be discharged outside the premises under any condition. Mobile ETP coupled with RO and mobile STP shall be installed to treat the waste water and sewage waste respectively.
- (iv). During production, storage and handling, the fugitive emission of methane, if any, shall be monitored using appropriate technology.
- (v). The project proponent also to ensure trapping/storing of the CO₂ generated, if any, during the process and handling.
- (vi). Approach road shall be made pucca to minimize generation of suspended dust.
- (vii). 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.
- (viii). Total fresh water requirement shall be 39 KLPD which will be met from ground water. Extraction of ground water shall not be done without obtaining prior permission of CGWA/concerned authority.
- (ix). 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.
- (x). Drill cuttings separated from drilling fluid shall be adequately washed and disposed in HDPE lined pit. Waste mud shall be tested for hazardous contaminants and disposed according to HWMH Rules, 2016. No effluent/drilling mud 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.
- (xi). 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.

- (xii). 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.
- (xiii). 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.
- (xiv). Blow Out Preventer system shall be installed to prevent well blowouts during drilling operations.
- (xv). 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.
- (xvi). PP shall allocate Rs. 1.00 Crores towards CER and it shall be spent on improving infrastructure in schools nearby.
- (xvii). No lead acid batteries shall be utilized in the project/site.
- (xviii). 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.
- (xix). Oil content in the drill cuttings shall be monitored if oil-based mud is used and report shall be sent to the Ministry's Regional Office.
- (xx). 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.

Agenda No. 42.11

Proposed 100 KLD Grain based distillery project alongwith 2.7 MW Cogeneration Plant at Mor, Mokama, Dist. Patna (Bihar) By

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**M/s BRAJENDRA KUMAR BUILDERS PRIVATE LIMITED-
Consideration of Environment Clearance.**

[IA/BR/IND2/228946/2021, J-11011/360/2021-IA-II(I)]

EAC desired that the proposal shall be considered only after obtaining document from competent authority related with conversion of land use to industrial purpose.

Accordingly, the proposal was deferred for the needful.

Agenda No. 42.12

Proposed 200 KLPD Grain based Ethanol Plant along with 6.0 MW Cogeneration Power Plant at Village Deogaon, Tehsil Maneswar, District Sambalpur (Odisha) by M/s Premier Alcobev Private Limited- Consideration of Environment Clearance

[IA/OR/IND2/229712/2021, J-11011/381/2021-IA-II(I)]

EAC desired that the proposal shall be considered only after obtaining document from competent authority related with conversion of land use to industrial purpose.

Accordingly, the proposal was deferred for the needful.

Agenda No. 42.13

Proposed 100 KLPD Grain Based Distillery at Ahmedabad Gujarat by M/s. Grain Span Nutrients Private Limited- Consideration of Environment Clearance.

[IA/GJ/IND2/229772/2021, J-11011/391/2021-IA-II(I)]

The Project Proponent and the accredited Consultant M/s. MITCON Consultancy & Engineering Services Ltd., made a detailed presentation on the salient features of the project and informed that:

The proposal is for environmental clearance for establishment of 100 KLPD Grain Based Distillery at Ahmedabad Gujarat by M/s. Grain Span Nutrients Private Limited.

All grain based distilleries producing ethanol, solely to be used for Ethanol Blended Petrol Programme of the Government of India are listed

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at S.N. 5(ga) of Schedule of Environmental Impact Assessment (EIA) Notification, 2006 amendment vide S.O 2339 dated 16th June 2021 under category 'B-2' and are appraised at Central Level by Expert Appraisal Committee (EAC).

The project proposal is exempted from obtaining ToR & conducting Public Hearing as per EIA notification, 2006 amendment vide S.O 2339 dated 16th June 2021. It was informed that no litigation is pending against the project.

The details of products and capacity are as under:

Sr. No.	Particulates	Capacity
1.	Ethanol	100 KLPD
2.	Captive power plant	3.5MW

Proposed land area is 64,800 m². Industry will develop greenbelt in an area of 34.3 % i.e., 22,200 m² out of total area of the project.

The estimated project cost is Rs 127.3 Cr. Total capital cost earmarked towards environmental pollution control measures is Rs. 4.21 Cr and the recurring cost (operation and maintenance) will be about Rs. 31.5 lakhs per annum. Total Employment will be 202 persons as direct & indirect. Industry proposes to allocate Rs 1.9 Cr. @ Greenfield project: 1.5% of total project cost (Rs. 127.3 Cr.) towards Corporate Environment Responsibility.

There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger / Elephant Reserves, Wildlife Corridors etc., within 10 km distance from the project site. There is no River within 5km radius of the proposed project. River Rodh is 8.8km towards NW of the project site.

AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.066 µg/m³, 0.044 µg/m³, 3.15 µg/m³ and 0.768 µg/m³ with respect to PM₁₀, PM_{2.5}, SO₂ and NO_x. Maximum ground level concentration occurred at a distance of 486 to 527 m in East direction. There were no village observed in downwind direction.

The total freshwater requirement for the proposed project is 556 CMD which will be sourced from groundwater. Total effluent generation from various units will be 1500 CMD. (Raw stillage will be 807 CMD, Condensate, spent lees and blow down will be 693 CMD) Raw stillage will be sent to decanter followed by MEE followed by dryer to produce DDGS. Rest all other effluent stream will be treated in 750 CMD CPU.

Power requirement will be 2.65 MW and will be met from own captive power plant. Proposed unit will have 500 kVA x1. DG set will be used only as standby during power failures. Stack height >11 m will be

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provided as per CPCB norms to the proposed DG set. Industry proposes to install boiler of capacity 30 TPH with 3.5 MW TG. Electrostatic precipitator with 56 m stack will be installed for proposed boiler.

Details of process emissions generation and its management:

Project Activity	Anticipated pollutant	Management
Process emissions	CO ₂ and Negligible VOCs.	CO ₂ shall not be release in the air. Industry will provide CO ₂ scrubber to scrub CO ₂ and bottle it.
Stack, Fugitive emissions, material handling.	PM ₁₀ , PM _{2.5} , NO _x , SO ₂ ,	Electrostatic precipitator with 56 m stack.

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

Sr.No.	Type of waste	Quantity	Final Disposal
1.	Coal ash	52 TPD	Sold to brick manufacturers
2.	Agri waste and husk ash	22.5 TPD	Ash will be used as manure
3.	CPU Sludge	25 TPD	Used as manure.
4.	Spent oil	0.6 KLA	Authorized recycler
5.	DDGS	70 TPD	Sold to cattle feed

As per OM dated 16th June, 2021, PP has submitted self-certification in the form of affidavit declaring that the proposed capacity of 100 KLPD will be for manufacturing of fuel ethanol only.

During the deliberations EAC directed PP to submit an undertaking for the following commitments:

- Proposed parking area shall be increased to 15 %.
- PP shall allocate Rs. 25 Lakhs Fund for occupational health and safety.
- For Ethanol production fresh water requirement should not exceed 4.0 kL/kL.
- Industry shall construct rain water storage facility of capacity from which it can meet at least 60 days fresh water requirement.
- The proposed budget on CER i.e Rs 2.0 crores shall be spent on installation of solar power & improving infrastructure of schools within villages nearby. It was also suggested that the proposed activities under CER shall be completed before the commissioning of the plant.

PP has submitted the desired information but the amount of fresh water requirement and CER is not as decided by EAC.

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 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.

The Committee 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.

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.

The EAC, after detailed deliberations, **recommended** the project for grant of environmental clearance, subject to compliance of terms and conditions as under, and general terms of conditions at Annexure: -

- (i). As per OM dated 16th June, 2021, project falls in category B2 and the proposed additional capacity of 100 KLPD shall be only for fuel ethanol manufacturing as per self-certification in form of an affidavit by the Project Proponent. Provided that subsequently if it is found that the ethanol, produced based on the EC granted as per this dispensation, is not being used completely for EBP Programme, or if ethanol is not being produced, or if the said distillery is not fulfilling the requirements based on which the project has been appraised as category B2 project, the EC shall stand cancelled.
- (ii). 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.

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- (iii). 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.
- (iv). Total fresh water requirement shall not exceed 4kL fresh water consumed/kL production of Ethanol and it will be met from ground water. Extraction of ground water shall not be done without obtaining prior permission of CGWA/concerned authority. No ground water recharge shall be permitted within the premises. Industry shall construct rain water storage facility of capacity from which it can meet at least 60 days fresh water requirement.
- (v). The spent wash shall be concentrated and dried to form DDGS to be used as cattle feed.
- (vi). CO₂ generated from the process shall be bottled/made solid ice and utilized/sold to authorized vendors.
- (vii). Occupational Health Centre for surveillance of the worker's health shall be set up. The health data shall be used in deploying the duties of the workers. All workers & employees shall be provided with required safety kits/mask for personal protection.
- (viii). Training shall be imparted to all employees on safety and health aspects of chemicals handling. Safety and visual reality training shall be provided to employees.
- (ix). The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Firefighting system shall be as per the norms.
- (x). Process organic residue and spent carbon, if any, shall be sent to Cement other suitable industries for its incinerations. ETP sludge, process inorganic & evaporation salt shall be disposed of to the TSDF.
- (xi). The company shall undertake waste minimization measures as below
(a) Metering and control of quantities of active ingredients to minimize waste; (b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes. (c) Use of automated filling to minimize spillage. (d) Use of Close Feed system into batch reactors. (e) Venting equipment through vapour recovery system. (f) Use of high pressure hoses for equipment clearing to reduce wastewater generation.
- (xii). The green belt of 5 m width shall be developed in nearly 33% of the total project area, mainly along the plant periphery. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department. Records of tree canopy shall be monitored through remote sensing map. Development of greenbelt shall be completed along with commissioning of the project.

- (xiii). PP proposed to allocate Rs. 2.00 Crores for CER and it shall be spent on shall be spent on installation of solar power & improving infrastructure of schools within villages nearby. All the proposed activities under CER shall be completed before the commissioning of the plant.
- (xiv). There shall be 15% space inside the plant premises earmarked for parking of vehicles for raw materials and finished products as per CPCB norms and no parking to be allowed outside on public places.
- (xv). Storage of raw materials shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions.
- (xvi). Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.
- (xvii). A separate Environmental Management Cell (having qualified person with Environmental Science/Environmental Engineering/specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.

Agenda No. 42.14

Expansion of 60 KLPD Molasses Based Distillery to 150 KLPD B & C Molasses/Cane Syrup based distillery by M/s. Natural Sugar and Allied Industries Ltd. (NSAIL) located at Sainagar, Village Ranjani, Tal. Kallam, Dist. Osmanabad, Maharashtra - Consideration of Environment Clearance.

[IA/MH/IND2/223246/2021, IA-J-11011/35/2021-IA-II(I)]

The proposal was earlier placed before the EAC (Ind-2) in its 40th and 41st meeting held during 14th - 16th September, 2021 and 28th - 30th September, 2021 respectively wherein EAC deferred the proposal and desired certain requisite information/inputs.

Information desired by the EAC and responses submitted by the project proponent is as under:

S. No	ADS	Reply of PP	Observation of EAC
1.	During the deliberations it was informed to EAC	PP/Consultant has stated that never concealed	EAC deliberated

	<p>that the CCR issued by IRO, Nagpur dated 29.06.2021 mentioned that there is no court case against the project whereas PP has submitted (Form-2) that there is an ongoing court case against the project since 2015. Further, EAC has also noted that PP/consultant have concealed the fact in the documents and in presentation. EAC directed PP to resubmit the case furnishing the details of court case.</p>	<p>any information wrt Court case. As far as mention of 'no court case' in IRO MoEFCC report dated 29.06.2021 is concern, the same was discrepancy which was communicated to IRO when observed. Subsequent to communication of discrepancy, IRO have revised the report for statement of court case against Violation of 30 to 60 KLPD distillery. Copy of same has been submitted. Further, details of court case were also presented in Form-2, EDS reply and EC presentation at slide NO.2 Sr. 17.</p> <p>Further. PP has again submitted the documents wrt court case No. 300168/2015 dated 08.04.2015 pending in Osmanabad District Court filed against Violation of 30 to 60 KIPD distillery. The latest online status and court case documents have been submitted.</p>	<p>the issue and found it satisfactory.</p>
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The Project Proponent and the accredited Consultant M/s. Equinox Environments (I) Pvt. Ltd., made a detailed presentation through Video Conferencing (VC) on the salient features of the project and informed that:

The proposal is for environmental clearance to the project for Expansion of 60 KLPD Molasses Based Distillery to 150 KLPD B & C Molasses/Cane

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Syrup based distillery by M/s. Natural Sugar and Allied Industries Ltd. (NSAIL) located at Sainagar, Village Ranjani, Tal. Kallam, Dist. Osmanabad, Maharashtra.

The project/activities are covered under category A of item 5 (g) 'Distilleries' of the Schedule to the EIA, 2006 and requires appraisal at central level by the sectoral Expert Appraisal Committee (EAC). The proposal has been submitted under the Ministry's EIA Notification, 2006 amendments vide Notification no. S.O. 345(E) dated 17th January 2019 & extension of notification S.O. 750(E) dated 17th February 2020, S.O. 980(E) dated 2nd March, 2021. Accordingly, the proposal has been appraised as category 'B2' project.

The project proposal is exempted from obtaining ToR & conducting Public Hearing as per EIA notification, 2006 amendment vide S.O 980(E) dated 2nd March, 2021. It was informed that litigation is pending against the project. A court case is pending against distillery for violation (for Capacity 30-60 KLPD) in Osmanabad district court vide No. 300168/2015 dated 08.04.2015.

SEIAA, Maharashtra has issued EC earlier vide letter No.SIA/MH/IND2/50667/2006 dated 31st March, 2020 to the existing 60 KLPD Molasses based Distillery in favour of M/s. Natural Sugar and Allied Industries Ltd. (NSAIL).

The details of products and capacity are as under:

Industrial Unit	Product	Quantity		
		Existing-	Expansion-	Total After Expansion
Distillery Unit	Rectified Spirit (RS)/ ENA	60	--	60
	Ethanol (C-Heavy)	60	90	150
	Ethanol (B-Heavy)	--	150	150
	Ethanol (Cane Syrup)	--	150	150
	Fusel Oil	2.4	3.6	6

Total plot land area is 5,16,006 M². Existing built-up area 92,960 M²; additional built-up for proposed project will be 5400 M². Industry has already developed green belt 2,67,093 M² (51.7% out of total plot area). Deification of existing Green belt will be done under expansion activity. The estimated project cost is Rs. 129.58 Crores including existing investment of Rs. 69.58 Crores. The distillery will be operated for 330 days. Total capital cost earmarked towards environmental pollution control measures under proposed project will be Rs.5.3 Crores and the Recurring cost (operation and maintenance) will be about Rs.0.65 Crores per annum. Total Employment will be 170 persons as direct & indirect

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after proposed project. Industry proposes to allocate Rs.60 Lakh @ of 1 % towards Corporate Social Responsibility.

There are no national parks, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 Km Study Area. Manjara River is flowing at a distance 4 Km from East to west.

Total water requirement after proposed project will be 2400 CMD. Out of which 442 CMD will be fresh water taken from Manjara river. The process effluent generated after expansion of 150 KLPD Molasses/Cane Syrup based Distillery would be in the form of raw spentwash to the tune of 1200 M³/D. The same would be forwarded for Bio-methanation and concentrate in MEE, conc. spentwash to the tune of 160 M³/D (1.06 KL/KL of alcohol) would be blended with coal/bagasse and burnt in existing 20 TPH incineration boiler. Other effluents viz. spent lees @ 202 M³/D, MEE condensate @ 1040 M³/D and allied effluents @ 75 M³/D will be treated in CPU under Distillery. Treated effluent from CPU will be reused in process and boiler makeup, thereby achieving Zero Liquid Discharge (ZLD) for Distillery.

Power requirement for proposed project will be 2200 KW which will be met from own Co-Gen Plant. Existing 285 KVA DG Set, which will be operated only during failure. No additional DG set will be installed under expansion activity. Existing distillery has 20 TPH Incineration boiler. ESP with a stack of height of 60 M is installed for controlling the particulate emissions within the statutory limit of 115 mg/Nm³ for the boiler.

Details of process emissions generation and its management:

The CO₂ generation shall take place in fermenters of the distillery. CO₂ to the tune of 124 MT/Day shall be released from 150 KLPD distillery plant. CO₂ under existing unit is being compressed, bottled and supplied to manufacturers of beverages. The same practice shall be followed after distillery expansion.

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

No.	Industrial Unit	Type	Quantity (MT/M)		Disposal
			Existing	After Expansion	
1	Distillery	Boiler Ash	360	1140	Supply to brick manufacturing
		Yeast Sludge	360	960	Burnt in Incineration Boiler
		CPU	17	40	Used as Manure

		Sludge			
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Visit of IRO, MoEFCC, Nagpur was conducted on 14.06.2021 and issued certified compliance report for the project vide File No. 5-40/2013(Env)/8198 dated 29.06.2021.

As per OM dated 16th June, 2021, PP has submitted self-certification in the form of affidavit declaring that the proposed expansion of 90 KLPD will be for manufacturing of fuel ethanol only.

During deliberations PP has stated that a court case is pending against distillery for violation (for Capacity 30-60 KLPD) in Osmanabad district court vide No. 300168/2015 dated 08.04.2015. Further, PP has also submitted Bank Guarantee for violation in previous EC to Maharashtra Pollution Control Board. EAC was satisfied of the reply by PP and suggested that PP shall submit NOC from MPCB to the Ministry.

After deliberations, EAC directed that PP shall construct a brick making plant within the industry which shall utilize spent wash and coal ash after combustion in incineration boiler for making bricks. Further, EAC suggested that PP shall utilize funds allocated for RS. 1.0 Crore towards CER for providing drinking water facilities and for installing solar street lights within nearby villages. PP shall install minimum 0.5 MW Solar Generation Plant in factory premises. PP agreed for the same and submitted an undertaking in the compliance of the above.

PP has submitted the desired information as sought above and EAC found it to be in order and recommended the proposal for grant of EC.

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 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.

The Committee noted that the EMP report is in compliance of the PFR. The Committee deliberated on the CER plan and found to be addressing the issues in the study area. The Committee has found the additional information submitted by the project proponent to be satisfactory and addressing the issues raised by the Committee. 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.

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.

The EAC, after detailed deliberations, **recommended** the project for grant of environmental clearance, subject to compliance of terms and conditions as under, and general terms of conditions at Annexure: -

- (i). As per OM dated 16th June, 2021, project falls in category B2 and the proposed additional capacity of 90 KLPD shall be only be used for fuel ethanol manufacturing as per self-certification in form of an affidavit by the Project Proponent. Provided that subsequently if it is found that the ethanol, produced based on the EC granted as per this dispensation, is not being used completely for EBP Programme, or if ethanol is not being produced, or if the said distillery is not fulfilling the requirements based on which the project has been appraised as category B2 project, the EC shall stand cancelled.
- (ii). 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.
- (iii). The project proponent will treat and reuse the treated water within the integrated industry and no waste or treated water shall be discharged outside the premises.
- (iv). Total fresh water requirement for the industry shall not exceed 2400 CMD and it will be met from Manjara River. No ground water recharge shall be permitted within the premises. Rainwater shall be collected in storage ponds and utilized for plant activities. Ground water monitoring shall be done regularly and report is to be submitted to concerned authorities regularly.
- (v). Raw spent wash will be sent for Bio-Methanation and concentrate in MEE. Concentrated spentwash will burnt in inceneration boiler. PP shall install brick manufacturing plant within factory for utilization of ash obtained from combustion for manufacturing bricks.

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- (vi). CO₂ generated from the process shall be bottled/made solid ice and utilized/sold to authorized vendors.
- (vii). Occupational Health Centre for surveillance of the worker's health shall be set up. The health data shall be used in deploying the duties of the workers. All workers & employees shall be provided with required safety kits/mask for personal protection.
- (viii). Training shall be imparted to all employees on safety and health aspects of chemicals handling. Safety and visual reality training shall be provided to employees.
- (ix). The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Firefighting system shall be as per the norms.
- (x). Process organic residue and spent carbon, if any, shall be sent to Cement other suitable industries for its incinerations. ETP sludge, process inorganic & evaporation salt shall be disposed of to the TSDF.
- (xi). The company shall undertake waste minimization measures as below (a) Metering and control of quantities of active ingredients to minimize waste; (b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes. (c) Use of automated filling to minimize spillage. (d) Use of Close Feed system into batch reactors. (e) Venting equipment through vapour recovery system. (f) Use of high pressure hoses for equipment clearing to reduce wastewater generation.
- (xii). The green belt of at least 5-10 m width shall be developed in nearly 33% of the total project area, mainly along the plant periphery. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department. Records of tree canopy shall be monitored through remote sensing map.
- (xiii). As committed PP shall spend Rs. 1.0 Crore for providing drinking water facilities and for installing solar street lights within nearby villages.
- (xiv). There shall be adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products as per CPCB norms and no parking to be allowed outside on public places.
- (xv). Storage of raw materials shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions.
- (xvi). Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB

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server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.

- (xvii). A separate Environmental Management Cell (having qualified person with Environmental Science/Environmental Engineering/specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.

Agenda No. 42.15

Proposed expansion of Bio-Ethanol Refinery of 100 KLPD by M/s. Bharat Petroleum Corporation Limited located at Plot no. 610 and plot no. 598 (Part-I), Baulsingha Village, Bhatli Tehsil, Bargarh District, Odisha - Consideration of Environment Clearance.

[IA/OR/IND2/221065/2021, IA-J-11011/351/2017-IA-II(I)]

The proposal was earlier placed before the EAC (Ind-2) in its 40th meeting held during 14th - 16th September, 2021 wherein EAC deferred the proposal and desired certain requisite information/inputs.

Information desired by the EAC and responses submitted by the project proponent is as under:

S. No	ADS	Reply of PP	Observation of EAC
1.	During the appraisal EAC observed that proposed fresh water requirement is high. Therefore, EAC directed PP to revise water balance reducing requirement of fresh water.	The revised fresh water consumption for 1G ethanol plant shall be around 3.95 liter/liter of ethanol production (non-monsoon season).	EAC noted that the fresh water requirement has been revised to 395 KLPD and found it in satisfactory.
2.	Further, EAC desired that PP shall incorporate details of rainwater harvesting while calculating fresh water requirement.	Rain water harvesting of around 15 kl per day is expected during monsoon season. Fresh water consumption during monsoon season shall be 3.80 liter/liter of ethanol production. Revised water balance is submitted.	EAC deliberated the issue and found it satisfactory.

The Project Proponent and the accredited Consultant M/s. Sd Engineering Services Pvt. Ltd made a detailed presentation on the salient features of the project and informed that:

The proposal is for environmental clearance to the project for Proposed expansion of Bio-Ethanol Refinery of 100 KLPD by M/s. Bharat Petroleum Corporation Limited located at Plot no. 610 and plot no. 598 (Part-I), Baulsingha Village, Bhatli Tehsil, Bargarh District, Odisha.

As per the MoEF&CC Notification S.O. 2339(E), dated 16th June, 2021, a special provision in the EIA Notification, 2006-(Schedule 5 (ga), Category B2) is made, wherein for all applications made for Grain based distilleries with Zero Liquid Discharge producing ethanol; solely to be used for Ethanol Blended Petrol Programme of the Government of India shall be considered under B2 Category and appraised at Central Level by Expert Appraisal Committee (EAC) with condition that the project proponent shall file a notarized affidavit that ethanol produced from proposed project shall be used completely for EBP Programme.

Standard ToR and public Hearing conduction is not applicable as the project falls under category B2 as per OM dated 16th June, 2021. It was informed that no litigation is pending against the project.

Ministry had issued EC earlier vide letter no. IA-J-11011/351/2017-IA-II(I) dated 10/08/2018 to the existing project of Ligno-cellulosic 2G Ethanol Plant of 100 KLPD.

The details of products and capacity are as under:

Sr. No.	Product / By-product	Unit	Quantity (Capacity)			Remark
			Existing (2G)	Proposed (1G)	Total	
1	Ethanol	KLPD	100	100	200	Product
2	Fusel oil	L/d	200	200	400	By Product
3	DDGS	TPD	0	51	51	Co-Product

Existing land area is 227150 m² and no additional land will be required for proposed expansion. Industry will develop greenbelt in an area of 33 % i.e., 20424 m² (To meet the 33% Green Belt requirement, Green belt of 5.04 acres (20424 sq.m) in being developed inside the plot while remaining Green belt of 15.28 acres (61835 sq.m) is being developed in additional Land allotted outside the plot area through Department of Forest) out of total area of the project. The estimated project cost is Rs. 170 Cr. including existing investment of Rs.747.46 Cr. Total capital cost earmarked towards environmental pollution control measures is Rs. 3.4 Cr. and the Recurring cost (operation and maintenance) will be about Rs. 0.34 Cr per annum. Total additional employment will be 25 persons per shift (Skilled: 10 nos. per shift + Unskilled: 15 nos. per shift) after expansion. Industry already

allocated/spent more than Rs. 4.25 Cr (more than @ of 2.5 %) towards Corporate Social Responsibility in the state of Odisha in current financial year.

There is Debrigarh wildlife sanctuary away from plot area by distance of 7.6 km towards NEE direction. Eco Sensitive Zone (notified vide dated 07th June, 2017) around sanctuary is away from plot area by distance of 2.65 km towards NEE direction. Danta river is flowing in the NEE (3.4 km) and Jira river is 7.86 km in SSW from the project site.

Water requirement for 1G ethanol plant is 2139 CMD (Fresh – 395 CMD & Recycled-1744 CMD) will be met from canal ~ 7 km Bargarh canal. Total Industrial Effluent of 46.978 m³/Hr (1128 CMD) quantity will be treated through existing ETP of capacity: 67 m³/hr i.e. 1608 CMD; complying with MoEF&CC/CPCB norms. Treated process condensates & treated effluent shall be recycled. The plant will be based on Zero Liquid discharge system.

Power requirement after expansion will be 18 MW including (Existing 15 MW + Proposed 3 MW) and will be met from Western electricity Supply Company of Odisha Limited (WESCO). Also 3 MW captive power plant (CPP) shall be proposed for catering the power requirement (1G Ethanol plant). Existing unit has 2 DG sets of 2500 KVA capacity each and same shall be utilized for proposed plant also. Stack height (16 m) will be provided as per CPCB norms to the DG sets. Existing unit has 2 boilers of capacity 48TPH and fuel as Mixture feed (Syrup: 250 TPD + Lignin cake: 380 TPD + Rice straw: 262 TPD). Additionally 1 boiler of capacity 30TPH and fuel as Rice Husk/Straw (210 TPD) will be used. ESP with a stack of height of 90 m (common stack) for 48TPH boiler and 39 m for 30 TPH boiler will be installed for controlling the particulate emissions within the statutory limit of 150 mg/Nm³ for the proposed boilers.

Details of process emissions generation and its management:

CO₂ shall be emitted and adequate measures shall be taken. Biogas shall be generated which shall be flared/burned in boiler

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

Non- Hazardous Waste

Sr. No	Type of Waste	Quantity (TPD)			Source of Generation	Disposal
		Existing	Proposed	Total		
1.	Dewatered Sludge	12 TPD	3 TPD	15 TPD	Process Condensate Treatment	as manure for agricultural

					Plant	fields
2.	Boiler Ash	120 TPD	35 TPD	155 TPD	From Boiler	Sale to Brick Manufacturer Industry
3.	Mud	21 TPD	0	21 TPD	-	Landfilling

Hazardous Waste: There is no Hazardous Waste from site

Details of Certified compliance report submitted by RO, MoEF&CC. – CCR received from MoEF&CC RO-Bhubaneshwar vide letter dated File No. 101-1034/EPE/955 dated 18/08/2021.

As per OM dated 16th June, 2021, PP has submitted self-certification in the form of affidavit declaring that the proposed capacity of 100 KLPD will be for manufacturing of fuel ethanol only.

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 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.

The Committee noted that the EMP report is in compliance of the PFR. The Committee deliberated on the CER plan and found to be addressing the issues in the study area. The Committee has found the additional information submitted by the project proponent to be satisfactory and addressing the issues raised by the Committee. 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.

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.

The EAC, after detailed deliberations, **recommended** the project for grant of environmental clearance, subject to compliance of terms and conditions as under, and general terms of conditions at Annexure: -

- (i). As per OM dated 16th June, 2021, project falls in category B2 and the proposed capacity of 100 KLPD shall be only be used for fuel ethanol manufacturing as per self-certification in form of an affidavit by the Project Proponent. Provided that subsequently if it is found that the ethanol, produced based on the EC granted as per this dispensation, is not being used completely for EBP Programme, or if ethanol is not being produced, or if the said distillery is not fulfilling the requirements based on which the project has been appraised as category B2 project, the EC shall stand cancelled.
- (ii). 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.
- (iii). 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.
- (iv). Total fresh water requirement shall not exceed 395 KLPD will be met from Bargarh canal. Prior permission shall be obtained from the concerned regulatory authority/CGWA in this regard, and renewed from time to time. No ground water recharge shall be permitted within the premises.
- (v). The spent wash shall be concentrated and dried to form DDGS to be used as cattle feed.
- (vi). CO₂ generated from the process shall be bottled/made solid ice and utilized/sold to authorized vendors.
- (vii). Occupational Health Centre for surveillance of the worker's health shall be set up. The health data shall be used in deploying the duties of the workers. All workers & employees shall be provided with required safety kits/mask for personal protection.
- (viii). Training shall be imparted to all employees on safety and health aspects of chemicals handling. Safety and visual reality training shall be provided to employees.

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- (ix). The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Firefighting system shall be as per the norms.
- (x). Process organic residue and spent carbon, if any, shall be sent to Cement other suitable industries for its incinerations. ETP sludge, process inorganic & evaporation salt shall be disposed of to the TSDF.
- (xi). The company shall undertake waste minimization measures as below
(a) Metering and control of quantities of active ingredients to minimize waste; (b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes. (c) Use of automated filling to minimize spillage. (d) Use of Close Feed system into batch reactors. (e) Venting equipment through vapour recovery system. (f) Use of high pressure hoses for equipment clearing to reduce wastewater generation.
- (xii). The green belt of at least 5-10 m width shall be developed in nearly 33% of the total project area, mainly along the plant periphery. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department. Records of tree canopy shall be monitored through remote sensing map.
- (xiii). As per the Ministry's OM dated 30.09.2020 superseding the OM dated 01.05.2018 regarding the Corporate Environmental Responsibility, and as per the action plan proposed by the project proponent to address the socio-economic and environmental issues in the study area, the project proponent, as committed, shall provide education funds in technical training centers/ support in nearby village's schools, support in health care facilities, drinking water supply and funds for miscellaneous activities like solar street lights, battery, solar panel etc., in the nearby villages. The action plan shall to be completed within time as proposed.
- (xiv). There shall be adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products as per CPCB norms and no parking to be allowed outside on public places.
- (xv). Storage of raw materials shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions.
- (xvi). Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.
- (xvii). A separate Environmental Management Cell (having qualified person with Environmental Science/Environmental Engineering/specialization

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in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.

Agenda No. 42.16

Proposal for distillery expansion from 200 KLPD to 845 KLPD to manufacture Ethanol at Belgaum, Karnataka by M/s. The Ugar Sugar Works Ltd located at Ugar Khurd village, Athani Taluk, Belgaum District, Karnataka State - Consideration of Environment Clearance reg.

[IA/KA/IND2/221757/2021, J-11011/335/2012-IA II (I)]

The proposal has been considered in the 39th EAC meeting wherein expansion has been recommended without achieving existing EC production capacity i.e 200 KLPD. The proposal has been referred back to EAC by competent authority to provide justification for recommending the proposal without fully achieving the production capacities of existing EC. In this regard EAC informed that the following things were considered before recommending the proposal:

- Production of biofuels is the need of hour and the proposal is in line with EBP programme under National Policy of Biofuels.
- Increase in production capacity results in the optimum utilization of raw materials and other utilities involved.
- Economies of scale are better for a project of larger production capacity compared to a project of smaller production capacity.
- There has been no compromise to the environmental standards/issues as the project is adhering to Zero Liquid Discharge.
- PP has submitted the proposal with CCR (Certified Compliance Report) issued by concerned IRO (Integrated Regional Office) with the capacity at which plant is operating.
- As per OM dated 16th June, 2021, PP has submitted self-certification in the form of affidavit declaring that the proposed expansion will be for manufacturing of fuel Ethanol only.

Agenda No. 42.17

Proposed expansion of sugarcane crushing capacity from 10000 TCD to 15000 TCD to augment the requirement of sugarcane syrup/juice as raw material during sugarcane crushing season and to expand the Distillery capacity from 300 KLPD to 600 KLPD for production of Ethanol and captive power plant from 5 MW to 8 MW under EBP programme by M/s. Shri Sai Priya Sugars Ltd.,

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located at Survey Nos. 144, 145, 146, 147, 148, 149, 150 & 151 of Maigur Village and Survey Nos. 238 & 239 of Hipparagi Village, Jamakhandi Taluk, Bagalkot District, Karnataka - Consideration of Environment Clearance.

[IA/KA/IND2/219708/2021, J-11011/277/2010-IA II(I)]

The proposal has been considered in the 39th EAC meeting wherein expansion has been recommended without achieving existing EC production capacity i.e 300 KLPD. The proposal has been referred back to EAC by competent authority to provide justification for recommending the proposal without fully achieving the production capacities of existing EC. In this regard EAC informed that the following things were considered before recommending the proposal:

- Production of biofuels is the need of hour and the proposal is in line with EBP programme under National Policy of Biofuels.
- Increase in production capacity results in the optimum utilization of raw materials and other utilities involved.
- Economies of scale are better for a project of larger production capacity compared to a project of smaller production capacity.
- There has been no compromise to the environmental standards/issues as the project is adhering to Zero Liquid Discharge.
- PP has submitted the proposal with CCR (Certified Compliance Report) issued by concerned IRO (Integrated Regional Office) with the capacity at which plant is operating.
- As per OM dated 16th June, 2021, PP has submitted self-certification in the form of affidavit declaring that the proposed expansion will be for manufacturing of fuel Ethanol only.

Agenda No. 42.18

Proposed Increase in Distillery capacity from 135 KLPD to 350 KLPD to produce Ethanol Based on Sugarcane juice/ Syrup/"C"/"B" Heavy Molasses/ Grains/ Raw Sugar by M/s. SGZ & SGA Sugars (JV) Limited located at Turchi, Taluka Tasgaon, District Sangli, Maharashtra - Consideration of Environment Clearance.

[IA/MH/IND2/216976/2020, J-11011/226/2020-IA-II(I)]

The proposal has been considered in the 40th EAC meeting wherein expansion has been recommended without achieving existing EC production capacity i.e 135 KLPD. The proposal has been referred back to

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EAC by competent authority to provide justification for recommending the proposal without fully achieving the production capacities of existing EC. In this regard EAC informed that the following things were considered before recommending the proposal:

- Production of biofuels is the need of hour and the proposal is in line with EBP programme under National Policy of Biofuels.
- Increase in production capacity results in the optimum utilization of raw materials and other utilities involved.
- Economies of scale are better for a project of larger production capacity compared to a project of smaller production capacity.
- There has been no compromise to the environmental standards/issues as the project is adhering to Zero Liquid Discharge.
- PP has submitted the proposal with CCR (Certified Compliance Report) issued by concerned IRO (Integrated Regional Office) with the capacity at which plant is operating.
- As per OM dated 16th June, 2021, PP has submitted self-certification in the form of affidavit declaring that the proposed expansion will be for manufacturing of fuel Ethanol only.

Agenda No. 42.19

Panipat Refinery Capacity Expansion from Existing 15 MMTPA to 25 MMTPA within the Existing Refinery Complex by M/S. Indian Oil Corporation Limited (IOCL) located at PR 42-128, Baholi Village, Panipat District, Haryana - Consideration of Environment Clearance reg.

[IA/HR/IND2/220613/2018, J-11011/177/2016- IA II(I)]

The proposal was earlier placed before the EAC (Ind-2) in its 40th meeting held during 14th - 16th September, 2021 wherein EAC deferred the proposal and desired certain requisite information/inputs.

Information desired by the EAC and responses submitted by the project proponent is as under:

S. No	ADS	Reply of PP	Observation of EAC
1.	The emission concentrations of different stack is mentioned in g/sec, which is required to be converted in mg/Nm ³ w.r.t gas/liquid fuel type	The tabulation after conversion of values to mg/Nm ³ has been submitted.	EAC deliberated the issue and found it satisfactory.

	of boiler, furnace, power plant, FCC generators. The emission norms are prescribed in mg/Nm ³ and fuel used by the refinery is mixed fuel. Accordingly, the concentration of PM, SOX, NOX, CO, H ₂ S of the stack should be mentioned in mg/Nm ³ .		
2.	Further Sulphur content in liquid fuel in % is not mentioned and recovery of sulphur in % in terms of capacity (Tonnes/day) is required.	Sulphur content in the liquid fuel is less than 0.5%. Total Sulphur Recovery Unit capacity is 135% of recoverable sulphur. The sulphur balance for proposed SRU requirement in P25 Project has been submitted.	EAC deliberated the issue and found it satisfactory.
3.	As the plant is located in NCR zone, what extra precaution has been taken by the unit to reduce further air pollution in NCR area.	Precautions taken for the proposed facility to reduce further air pollution in NCR area: a) RLNG will be the major fuel for the proposed facility. Liquid fuel consumption will be minimized <i>except in case of emergency</i> . b) VOC recovery system will be installed in the proposed ETP. c) Low NOx burners will be used in the proposed furnaces. The same are already in use in the existing furnaces. d) Vacuum Gas Oil (VGO) Hydrotreater unit is being incorporated to remove sulphur from the VGO stream before feeding to	EAC found the explanation satisfactory.

		<p>downstream conversion units.</p> <p>e) Off-gases will be treated with amine to remove the sulphur present in it before being utilized in furnaces.</p> <p>f) Ten number of ambient air stations (2 in Panipat city, 1 in township & 7 within the refinery premises) have been installed by IOCL Panipat for monitoring of ambient air quality as per the NAAQS standards.</p> <p>g) 2G and 3G Plants are already under implementation by IOCL Panipat. The 2G plant will help in reduction of PM caused by indiscriminate prairie burning.</p>	
4.	<p>Existing List of Hazardous emissions in work environment including Hydrogen Sulphide, the levels (annual average) in micrograms, Additional hazardous emissions following additional, plant, technology, raw material use and waste, Medical surveillance using Biological monitoring, Results of Bio monitoring.</p>	<p>List of Hazardous Emissions:</p> <p>VOCs (Methane and other HCs), Benzene, H₂S, SO₂, NO_x, PM, CO, Sulphides / Di-Sulphides.</p> <p>Measures for arresting hazardous emissions in work environment for the proposed facility:</p> <p>a) VOC recovery system shall be installed in proposed ETP facility.</p> <p>b) External Floating roof tanks will have double foam seals to</p>	EAC found the explanation satisfactory.

		<p>reduce fugitive emissions.</p> <p>c) LDAR monitoring through external agency will be conducted on quarterly basis for leak detection of VOCs and any leak is being attended promptly.</p> <p>d) H₂S gas detectors shall be installed at H₂S potential locations for early detection and rectifications. In potential units Operating personnel shall be provided with personal responders.</p> <p>e) Amine absorption system shall be incorporated to scavenge H₂S, which will then be routed to SRU for extraction of sulphur in elemental form.</p> <p>No new chemical, waste and raw material is being envisaged in proposed facility. So, no further addition of any new hazardous emissions from the proposed facility.</p> <p>Biological Monitoring: Occupational Health Assessment is done of the employees at fixed periodicity. Reports are generated and monitored for adverse impact, if any. Bio monitoring detail has been submitted.</p>	
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5.	Compliance report of recommendations given by the committee constituted by Hon'ble NGT comprising of members of NEERI & CPCB.	As per the present status, all recommendations have been complied. The latest compliance status has been submitted.	EAC found the reply satisfactory.
6.	Total pollution load generated in terms of sulphur dioxide emissions & mitigating measures for the same along with standby sulphur recovery unit in case of failure of any SRU to avoid acid rain in the surrounding areas.	5 Sulphur Recovery Unit are existing. 2 additional units will be installed. Hence, total 7 units shall be available with a combined capacity of 135% of recoverable sulphur. Accordingly, one unit will be in standby mode. The sulphur balance with capacity calculation has been submitted.	EAC found the reply satisfactory.
7.	No effluent shall be discharged in any of drains which may lead to pollution in river Yamuna.	Proposed facility shall be having ZLD. Hence, no effluent shall be discharged outside the premises.	EAC found the reply satisfactory.
8.	As per policy of government, 10% of H ₂ shall be produced by the PP through Green Hydrogen route.	IOCL shall comply with the policy of Government on Green H ₂ .	EAC found the reply satisfactory.

The project proponent and their consultant M/s. Hubert Enviro Care System (P) Ltd, Chennai, made a detailed presentation through Video Conferencing (VC) on the salient features of the project.

The proposal is for Environmental Clearance to the project for Panipat Refinery Capacity Expansion from Existing 15 MMTPA to 25 MMTPA within the Existing Refinery Complex by M/S. Indian Oil Corporation Limited (IOCL) located at PR 42-128, Baholi Village, Panipat District, Haryana.

All main products: Propylene, LPG, Naphtha, MS BS-VI, ATF, HSD BS-VI, Bitumen, RPC, Sulphur and LOBS listed at S. No. 4 (a) - "Petroleum Refining Industries" of Schedule of Environmental Impact Assessment (EIA) Notification under Category 'A', and are appraised by Central Level by Expert Appraisal Committee (EAC).

The ToR has been issued by Ministry vide letter No. IA- J-11011/177/2016-IA II(I); dated 24th August, 2018. Public Hearing for the proposed project has been conducted by Haryana State Pollution

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Control Board on 06.04.2021 and chaired by Deputy Commissioner, Panipat. The main issues raised during the public hearing are related to basic facilities for schools, labour facilities and crops getting damaged by neel gaye due to the green belt area of the PRPC. It was informed that no litigation is pending against the proposal.

Ministry had issued EC earlier vide letter no. J-11011/177/2016-IA-II(I) dated 26.03.2018 to the existing project in favour of M/s. Indian Oil Corporation Limited, Panipat Refinery.

The details of products and capacity are as under:

Existing & Proposed Products

S. No.	Products details	Unit	Existing Quantity	Proposed Quantity	Total Quantity
1	Propylene	TMTPA	123	554	677
2	LPG	TMTPA	438	752	1190
3	Naphtha	TMTPA	1435	407	1842
4	MS BS-VI	TMTPA	1965	1483	3448
5	ATF	TMTPA	1751	500	2251
6	HSD BS-VI	TMTPA	6932	5074	12006
7	Bitumen	TMTPA	449	41	490
8	RPC	TMTPA	884	0	884
9	Sulphur	TMTPA	200	187	387
10	LOBS	TMTPA	0	526	526

Existing & Proposed Capacities

S. No.	Plant / Equipment / Facility	Units	Existing Configuration	Proposed Configuration	Final configuration after expansion
1.	CDU 1	MMTPA	7.5	-	7.5
2.	VDU 1	MMTPA	3.75	-	3.75
3.	Resid Fluidized Catalytic Cracking Unit (RDCCU)	MMTPA	0.85	-	0.85
4.	Propylene Separation Unit (PSU)	MMTPA	0.225	-	0.225
5.	Once Thru Hydrocracker Unit	MMTPA	1.9	-	1.9
6.	Continuous Catalytic Reforming Unit (CCRU)	MMTPA	0.65	-	0.65
7.	Hydrogen	TMTPA	38	-	38

S · N o	Plant / Equipment / Facility	Units	Existing Configura tion	Proposed Configurat ion	Final configurat ion after expansion
	Generation Unit (HGU)				
8.	VisbreakerUnit (VBU)	MMTPA	0.4	-	0.4
9.	Diesel Hydro Desulphurisation Unit (DHDS)	TMTPA	0.77	-	0.77
10.	Bitumen Blowing Unit (BBU)	MMTPA	0.5	-	0.5
11.	SulphurRecovery Units (SRU/SSRU)	TPD	2 *115	-	2 *115
12.	Amine Regeneration Unit	m ³ /hr	400	-	400
13.	Sour Water Strippers I (Refinery)	m ³ /hr	71.8	-	71.8
14.	Sour Water Strippers II (OHCU)	m ³ /hr	16	-	16
15.	SR LPG treatment	MMTPA	0.142	-	0.142
16.	Mercox: 1.FCCGasoline 2.CrackedLPG(FC C+DCU) 3.ATF/KERO	TPA	190000 200000+1 00000 1150000	-	190000 200000+1 00000 1150000
17.	Crude Distillation Unit (CDU-II)	MMTPA	7.5	-	7.5
18.	Vacuum Distillation Unit (VDU-II)	MMTPA	3.75	-	3.75
19.	Hydrocracker Unit	MMTPA	1.8 1.7	-	1.8 1.7
20.	Delayed Coker Unit	MMTPA	3.0	-	3.0
21.	Hydrogen Generation Unit (HGU -2&3)	MTPA	2*70	-	2*70
22.	Sulphur Recovery Units SRU (3,4 &5)	TPD	3 *225	-	3 *225
23.	Coker LPG Mercox unit	MMTPA	0.1	-	0.1

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S · N o	Plant / Equipment / Facility	Units	Existing Configura tion	Proposed Configurat ion	Final configurat ion after expansion
24.	Straight Run LPG Mercox unit	MMTPA	0.142	-	0.142
25.	Diesel Hydrotreating Unit (DHDT)	TMTPA	3.5	-	3.5
26.	Amine Regeneration Unit (ARU-II)	m ³ /hr	410	-	410
27.	Sour Water Stripper (SWS- III)	m ³ /hr	170	-	170
28.	Hydrocracker Sour Water Stripper (SWS-IV)	m ³ /hr	40	-	40
29.	NSU-II	TPA	0.75	-	0.75
30.	Naptha oxygen stripping unit	MTPA	400,000	-	400,000
31.	Naptha hydrotreating	MTPA	500,000	-	500,000
32.	Continuous catalyst (Platforming + Regeneration)	MTPA	500,000	-	500,000
33.	Shell sulfolane extraction unit	MTPA	152,200	-	152,200
34.	Benzene Toluene fractionation unit	MTPA	379,800	-	379,800
35.	Paraxylene Extraction unit (PAREX)	MTPA	2,025,400	-	2,025,400
36.	Xylene fractionation unit	MTPA	481,700	-	481,700
37.	Trans alkylation Disproportionate (Tatoray) unit	MTPA	360,200	-	360,200
38.	Isomerisation unit (Isomar)	MTPA	1,656,500	-	1,656,500
39.	PTA UNITS	MTPA	553000	-	553000
40.	<u>PXFEEDUNIT(NS U-I)</u>	MMTPA (BH)	1.3	-	1.3
41.	NHT	TMTPA	410	-	410
42.	PENEX	TMTPA	400	-	400

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S · N o	Plant / Equipment / Facility	Units	Existing Configura tion	Proposed Configurat ion	Final configurat ion after expansion
43.	RSU	TMTPA	470	-	470
44.	FCCGDU	TMTPA	370	-	370
45.	AVU	MMTPA	-	10	10
46.	State Run LPG treatment unit (SR-LPGT)	MMTPA	-	0.152	0.152
47.	VGO Hydrotreater unit	MMTPA	-	3.6	3.6
48.	Diesel hydrotreater unit	MMTPA	-	5.0	5.0
49.	Propylene Recovery unit	MMTPA	-	1.15	1.15
50.	Resid Hydrocracker unit- RHCU	MMTPA	-	2.5	2.5
51.	INDMAX	MMTPA	-	2.5	2.5
52.	NHT/ CCR/ ISOM	MMTPA	-	0.95/0.625/ 0.205	0.95/0.625/ 0.205
53.	HGU	MMTPA	-	0.081	0.081
54.	ALKYLATION	MMTPA	-	0.67	0.67
55.	SARU	MTPD	-	185	185
56.	CDW/LOBS	MMTPA	-	0.56	0.56
57.	SRU-I/II/ TGTU	TPD	-	2*465 /930	2*465 /930
58.	SWS-I/II	TPH	-	252+180	252+180
59.	ARU	TPH	-	1256	1256
60.	MUG Compressor	MMTPA	-	0.17	0.17

Proposed Utilities Capacity

S.No.	Utility	Units	Capacity	Remarks
1	Raw water	m ³ /hr	2400	
2	Cooling water from CT1 and CT2	m ³ /hr	64000	
3	DM water	m ³ /hr	850	
4	Suspect condensate generation	TPH	232.5	This condensate shall be treated in CPU
5	HP steam	TPH	23.5	Case1, All units running at design capacity, except SRU operating to SRU balance
6	MP steam	TPH	231.5	Case1
7	LP steam	TPH	106.3	Case1

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S.No.	Utility	Units	Capacity	Remarks
8	HP BFW	TPH	122.3	Case1
9	MP BFW	TPH	171	Case1
10	LP BFW	TPH	14.4	Case1
11	Power	KW	222513	Case1
12	Nitrogen	Nm ³ /hr	6500	
13	RLNG	Kg/hr	115116	
14	Plant air	Nm ³ /hr	9450	
15	Instrumentation air	Nm ³ /hr	11895	
16	ETP	m ³ /hr	450	
17	Flare	Kg/hr	2191374	Design

*Note- Total steam requirement is 549 TPH

Existing land area is 6319570.99 m² (1561.6 Acres). No additional land will be used for proposed expansion. Industry has already developed greenbelt in an area of 34.5 % (539 Acres) and will develop further 5.5% (86 Acres) greenbelt taking the total to 40% (since it is located in Panipat which is coming under CEPI index) i.e. 2529000 m² (625 Acres) out of total area of the project (1561.6 Acres). The estimated project cost is Rs.32946 Crore (30349 for P25+ 2597 Cr for PP). Total capital cost earmarked towards environmental pollution control measures is Rs. 28161.32 Lakhs and the Recurring cost (operation and maintenance) will be about Rs. 2742.74 Lakhs per annum. Total Employment will be 300 persons as direct and 480 persons as indirect after expansion. Industry proposes to allocate Rs.100 Lakhs @ of 5/2.5% towards Corporate Social Responsibility.

There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, and Wildlife Corridors etc. within 10 km radius from the project site. Water bodies: Munak Drain (adjacent to project site(W), New Delhi Branch (Western Yamuna Canal) ~0.05km(S), Main Drain No 2/Indri Drain ~0.05km(E), New Delhi Parallel Branch (Western Yamuna Canal) ~0.1km(S), Gohana Distributary ~0.1km(S), Nahar Kuna Hansi/Hanal Nadi ~0.19km(N), Madlauda Minor ~0.22km(S), Thirana Minor ~0.23km(S), Khandra Drain ~0.67km(S), Begampur Minor ~0.8km(N), Joshi Drain ~0.82km(W), Untala Minor ~1.78km(S), Phurlak Drain ~2.14km(N), Tributary Drain No 1 ~2.32km(SSW), Gagsina East Drain ~2.62(N), Rer Kalan Minor ~2.67km(WNW), Kabir Branch/Bazida Distributary ~2.7km(E), Munak Minor ~2.76km(N), Hansi Branch(Western Yamuna Canal) ~4.31km(NW), Munak Canal ~4.46km(NNW), Goli Distributary ~4.88km(NNW), Gudah Minor ~5.34km(E), Binjhaul Minor ~5.39km(SE), Pabana/Pawana Drain ~5.47km(WNW), Nohra/Nauhra Drain ~5.68km(SSE), Ganda Nala/Panipat Main Drain ~5.7km(ESE), Joshi Distributary ~5.82km(W), Kurian Minor ~5.86km(NW), Untala Drain ~6.6km(S), Mor Majra Drain ~6.81km(W), Ganda Nala ~7.11km(E), Jind Distributary ~7.13km(W),

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Khukrana Branch Canal ~7.21km(S), Bhalsi Minor ~7.87km(SSW), Lift Irrigation Channel ~9.7km(N) and Bhadaur Drain ~9.91km(S).

Ambient air quality monitoring was carried out at 8 locations during March 2019 to May 2019 and average baseline data indicates the ranges of concentrations as: PM₁₀ (83.59 to 128 µg/m³), PM_{2.5} (42.77 to 64.98 µg/m³), SO₂ (14.92 to 22.83 µg/m³) and NO₂ (27.89 to 43.71 µg/m³). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 2.89 µg/m³, 30.52 µg/m³ and 22.29 µg/m³ with respect to PM, SO_x, and NO_x. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

Total water requirement is 1,62,864 m³/day of which fresh water requirement of 98880 m³/day will be met from Western Yamuna Canal.

Effluent of 1392 m³/hr quantities will be treated through existing ETP of capacity 1075 m³/hr & proposed ETP of capacity 450 m³/hr. The quantity of 255m³/hr of treated effluent discharged to Thirana Drain and remaining reused in the plant.

Wastewater treatment and Disposal Management as follows:

Unit	Existing (m ³ /hr)	Proposed (m ³ /hr)	After expansion (m ³ /hr)	Disposal Method	Facility Details
Effluent	1030	362	1392	Existing: 255m ³ /hr of treated effluent discharged to Thirana Drain and remaining reused in the plant Proposed: ZLD	Existing: Combined ETP-1 of capacity 400m ³ /hr, Combined ETP-2 of capacity 400m ³ /hr and Combined PX/PTA ETP of capacity 275m ³ /hr Proposed: ETP of capacity 450m ³ /hr. Sewage will be combined into the proposed ETP for treatment
Sewage	235	9	244		

Power requirement after expansion will be 397513 kVA including existing 175000 kVA where the existing is being met from Existing Gas Turbine while the proposed power of 222513 kVA will be met from Uttar Haryana Bijili Vitran Nigam Limited's. No DG set available in IOCL Panipat Refinery.

Existing unit has 2 nos of Boiler of 160 TPH & 230 TPH capacity of each, additionally 3 no. of Boiler of 160 TPH (2nos) & 230 TPH (1no) capacity is being used as standby and all are Low sulphur liquid fuel+Gas fired Boiler. Additionally, 3nos of Boiler of 300MTPH capacity of each is proposed from which 1no will be used as standby and all proposed are Gas+Low sulphur liquid fuel fired boiler will be installed.

Details of process emissions generation and its management:

Existing Process Emission

S. no	Process Stack	Exit Gas Volume (Nm ³ /Hr) @ 25C	Emission(g/s)			
			PM (g/sec)	SO ₂ (g/sec)	NO _x (g/sec)	CO (g/sec)
A	Panipat refining unit					
1	RFCC Heater	10702.17	0.0380	0.1479	0.4250	0.0851
2	RFCC Boiler	77661.33	0.2431	1.1861	3.0435	0.7904
3	AVU- 1	335341.24	1.2370	4.8774	9.8125	1.9198
B	MCR					
4	OHCU- Recycle gas Heater	23609.14	0.1097	0.3090	0.8758	0.1427
5	OHCU LP Section	78410.6	0.3004	1.3114	2.9498	0.5985
6	DHDS- Furnace	24562.62	0.0721	0.3572	0.8727	0.2031
7	CCRU stack- FF101, FF 102 FF 204	73167.78	0.2833	1.2237	2.5233	0.5120
8	CCRU Stack- FF 201, FF 202 FF 203	36088.83	0.1536	0.7611	1.2068	0.2640
9	CCRU Stack- FF 205	21186.13	0.0816	0.3543	0.8081	0.1685
10	VBU	21385.69	0.0766	0.4044	0.6146	0.1837
11	HGU	101595.74	0.5576	1.7731	4.0875	0.8401
C	PR Expansion Unit					
12	HCU Unit	42215.04	0.1867	0.5833	1.1249	0.2148
13	AVU- 2	341972.09	1.4230	5.9684	11.0780	2.7196
D	Hydrogen Generation Unit					
14	HGU-PDS	38499.52	0.1766	0.5039	1.2673	0.2694
15	HGU-76	140182.48	0.5775	1.9369	5.0540	1.2484
16	HGU-77	155111.13	0.7316	2.2560	5.1867	1.0362

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S. no	Process Stack	Exit Gas Volume (Nm ³ /Hr) @ 25C	Emission(g/s)			
			PM (g/sec)	SO ₂ (g/sec)	NO _x (g/sec)	CO (g/sec)
E	Diesel Hydrotreater Unit					
17	DHDT-72 Heater 01	44393.26	0.1599	0.6780	1.5773	0.4095
18	DHDT-72 Heater 02	45833.96	0.1892	0.8666	1.7721	0.4956
F	Paraxylene Aromatic Section					
19	CCR-Heater	47019.04	0.1614	0.6839	1.2775	0.2842
20	NHT Heater	12715.52	0.0377	0.2127	0.3521	0.0809
21	Xylene Charge Heater	52943.5	0.1610	0.6546	1.5215	0.3200
22	Isomer Charge Heater	18592.5	0.0525	0.2839	0.6412	0.0710
23	Tatoray charge Heater	18392.82	0.0580	0.2407	0.6150	0.1287
G	Thermal Power Station					
24	HRSG 01	146887.37	0.6218	2.0295	6.3700	0.6541
25	HRSG 02	148251.99	0.5819	1.9405	6.6619	0.6132
26	HRSG 03	159843.57	0.5093	2.6734	7.0993	0.7628
27	HRSG 04	151283.04	0.5429	2.2003	6.8771	0.6736
28	HRSG 05	158248.86	0.5495	1.9566	6.7801	0.5033
29	VHP Boiler 01	130260.73	0.5142	1.9894	5.1728	0.6629
30	VHP Boiler 02	134520.21	0.6681	2.3478	5.4824	0.6420
31	Utility Boiler 02	163531.04	0.7359	3.0921	6.5794	0.7282
H	Pur. Teraphthalic AC-Aromatic section					
32	Fired combustion preHeater	72693.78	0.3354	0.9515	2.7727	0.2312
33	Hot oil heater	73286.64	0.2463	0.7994	2.2975	0.4662
34	thermal Oxidizer	16642.03	0.0733	0.1573	0.5739	0.0794
I	Delayed Coker Unit					
35	DCU	13826.97	0.0679	0.2413	0.3974	0.1012
J	MS Quality Unit					
36	HDS (303 Heater 201) (MSQ)	63025.7	0.2495	0.7792	1.6795	0.4410
37	NHT (301 H101)	-	-	-	-	-
38	Old SRU-22/44	126752.64	-	-	-	-
39	CPP VHP-3	149983.92	-	-	-	-
40	SRU-26	126752.54	-	-	-	-
41	New SRU -57	151935.71	-	-	-	-
42	UB-1	146307.28	-	-	-	-
43	BBU Heater	-	-	-	-	-

S. no	Process Stack	Exit Gas Volume (Nm ³ /Hr) @ 25C	Emission(g/s)			
			PM (g/sec)	SO ₂ (g/sec)	NO _x (g/sec)	CO (g/sec)
44	BBU incinerator	-	-	-	-	-
45	NSRU	-	-	-	-	-
K	BS-VI	-	-	-	-	-
46	Prime G	-	-	-	-	-
47	DHDT	-	-	-	-	-
48	HGU	180000	-	-	-	-
Total (g/s)			12.7641	48.7328	117.4312	19.5453
Total (Kg/hr)			45.95076	175.4381	422.7523	70.36308

Note: Item no.37 to 48 are idle. So the emissions are not mentioned.

Proposed Process Emission

S. No	Stack details	Stack Coordinates		Stack Details					Emission per stack (g/s)			
		N	E	Height (m)	Temp (°C)	Dia. (m)	Exit Velocity (m/s)	Flue gas Flow Rate (Nm ³ /hr)	PM	SO ₂	NO _x	CO
1.	AVU (CDU/VDU)	29°29'6.07"N	76°52'1.49"E	90	165	5.3	4.76	257400	0.751	50.8	13.829	8.297
2.	VGO- HDT	29°28'52.97"N	76°52'12.69"E	65	154	3.55	3.61	89750	0.125	0.306	4.778	1.972
3.	Diesel Hydrotreater Unit	29°29'0.89"N	76°52'10.39"E	48	165	2.1	5.12	41430	0.058	0.142	2.208	0.908
4.	MS Block_Charge Heater	29°28'55.06"N	76°52'25.87"E	70	161	2.8	6	92520	0.129	0.319	4.931	2.031
5.	NHT Charge Heater	29°28'55.44"N	76°52'19.27"E	55	204	1.55	5.98	25380	0.035	0.086	1.353	0.556
6.	Naphtha Stripper reboiler Heater	29°28'57.22"N	76°52'19.86"E	50	264	1.35	6	17260	0.024	0.058	0.919	0.378
7.	CDWU_HCR Reactor Feed Heater	29°28'52.39"N	76°52'48.73"E	40	370	0.85	6	5700	0.008	0.019	0.297	0.131
8.	CDWU_DW Reactor feed Heater	29°28'49.21"N	76°52'48.75"E	40	385	0.73	6	4150	0.006	0.014	0.217	0.094
9.	CDWU_Vaccum Column Feed Furnace	29°28'51.32"N	76°52'51.05"E	50	220	1.35	6	18300	0.025	0.064	0.975	0.403
10.	Resid Hydrocracking Unit (RHCU)	29°28'52.57"N	76°52'35.96"E	70	182	2.25	5.67	53160	0.074	0.183	2.833	1.167
11.	Resid Hydrocracking Unit (RHCU)_Vaccum Heater	29°28'47.64"N	76°52'33.42"E	65	206	0.964	5.28	8630	0.012	0.031	0.469	0.206
12.	Indmax FCC_Fresh Feed Furnace	29°29'0.65"N	76°51'45.77"E	60	155	1.8	6	38500	0.053	0.133	2.050	0.844

13.	Indmax FCC_Flue Gas cooler	29°28'58.47"N	76°51'50.63"E	60	200	3.5	12	260750	3.622	3.711	6.084	7.189
14.	Sulphur recovery unit (SRU)	29°29'8.51"N	76°51'45.77"E	65	290	2.6	21.38	216570	0.037	17.889	5.464	4.925
15.	Spent Acid Recovery unit (SARU)_APH System & Stack	29°29'7.13"N	76°51'49.23"E	60	200	0.8	3.5	3850	0.005	0.047	0.233	0.094
16.	Spent Acid Recovery unit (SARU)_Decomposition furnace burner	29°29'5.73"N	76°51'52.10"E	60	80	1	8	18790	0.159	2.000	0.778	0.467
17.	Hydrogen Generation Unit	29°29'1.13"N	76°52'25.54"E	60	188	3.4	7.64	155111.13	0.732	2.256	5.186	1.036
18.	CPP Stack	29°28'56.27"N	76°52'2.03"E	90	160	3.25	17.5	871660	11.555	101.795	78.190	22.303
Total (g/s)									17.41	179.853	130.794	53.001
Total (Kg/hr)									62.676	647.4708	470.8584	190.8036

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

Solid Waste (Operation Phase):

Municipal solid waste:

S. No	Waste	Quantity (kg/day)			Collection method	Treatment / disposal method
		Existing	Proposed	After expansion		
1	Organic waste	271.89	81	352.89	Bins	Composting and used as manure for Green Belt
2	Inorganic waste	181.26	54	235.26	Bins	Disposed through authorised vendors

Existing & Proposed Hazardous Waste Management:

S. No.	Plant	Waste category	Quantity (MTPA)		Source of Waste generation	Mode of Disposal/Facility
			Existing	Proposed		
1	DHDT	Spent Catalyst	134	175	DHDT	Disposed to SPCB authorised

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S. N o.	Plant	Waste category	Quantity (MTPA)		Source of Waste generation	Mode of Disposal/F acility
			Exist ing	Propo sed		
						Recycler
2	CCR Regener ation Section	Spent Catalyst Fines	0.85	1.58	Catalyst Fines from Spent Catalyst Fines Collection Pot	Disposed to SPCB authorised Recycler
3	CCR Platformi ng Process Unit	Spent Catalyst	7.25	4.173	Spent catalyst from Reactors	Disposed to SPCB authorised Recycler
4	CCR Platformi ng Process Unit	Spent Adsorbent	0.6	31.2	Net GAS Chloride Treaters Adsorbents	To TSDF/ Disposed to SPCB authorised Recycler
5	CCR Platformi ng Process Unit	Spent Adsorbent	4.25	1.8	Fuel gas Chloride Adsorbent	To TSDF/ Disposed to SPCB authorised Recycler
6	CCR Platformi ng Process Unit	Spent adsorbent	0.05	1.26	LPG Chloride Treatment Adsorbent	To TSDF/ Disposed to SPCB authorised Recycler
7	CCR Platformi ng Process Unit	Spent Adsorbent	10.2	33.26	Debutanizer feed Chloride Treater	To TSDF/ Disposed to SPCB authorised Recycler
8	INDMAX FCC	Spent Catalyst	50	839.5	Indmax equilibrium catalyst (E-cat) is withdrawn from Indmax FCC unit.	To TSDF/ Disposed to SPCB authorised Recycler
9	Propylen e Recover y unit	Spent adsorbent	10	20	Adsorbents from Propylene Driers	To TSDF/ Disposed to SPCB authorised Recycler
10	Propylen e Recover	Spent adsorbent	20	11	Adsorbent from Arsine Guard Bed	To TSDF/ Disposed to SPCB

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S. N o.	Plant	Waste category	Quantity (MTPA)		Source of Waste generation	Mode of Disposal/F acility
			Exist ing	Propo sed		
	y unit					authorised Recycler
11	HCU/RH CU Reaction Section	Spent Catalyst	136.5	5.256	Spent catalyst withdrawn from the reactors	To TSDF/ Disposed to SPCB authorised Recycler
12	UOP Naphtha Hydrotreating Process Unit	Spent Catalyst	1.4	4.5	Spent Catalyst from Reactor	To TSDF/ Disposed to SPCB authorised Recycler
13	PENEX	Spent Catalyst	1.4	2.96	Spent Catalyst From Reactor A	Disposed to SPCB authorised Recycler
14	PENEX	Spent Catalyst	10.25	1.48	Spent Catalyst From Reactor B	Disposed to SPCB authorised Recycler
15	PENEX	Spent Catalyst	5.125	0.987	Spent Catalyst From Reactor C	Disposed to SPCB authorised Recycler
16	PENEX	Spent Catalyst	4	0.312	Spent Catalyst from Methanator Reactor	Disposed to SPCB authorised Recycler
17	PENEX	Spent Adsorbent	4	0.45	Makeup Gas Chloride Treater	To TSDF/ Disposed to SPCB authorised Recycler
18	PENEX	Spent Molecular Sieve	7	3.25	Makeup Gas Driers	To TSDF/ Disposed to SPCB authorised Recycler
19	PENEX	Spent Molecular Sieve	1.19	0.595	Penex Feed Driers	To TSDF/ Disposed to SPCB authorised

2810

S. N o.	Plant	Waste category	Quantity (MTPA)		Source of Waste generation	Mode of Disposal/F acility
			Exist ing	Propo sed		
						Recycler
20	VGOHDT	REACTOR SPENT CATALYST	NA	500	VGO REACTOR/ DIESEL OPOLISHING REACTOR	To TSDF/ Disposed to SPCB authorised Recycler
21	CDWU	Spent Catalyst	NA	3.762	HCR Reactor	Disposed to SPCB authorised Recycler
22	CDWU	Spent Catalyst	NA	3.864	DW Reactor	Disposed to SPCB authorised Recycler
23	CDWU	Spent Catalyst	NA	3.621	HDF Reactor	Disposed to SPCB authorised Recycler
24	SR LPG Treater	Spent Catalyst	NA	3.250	Spent Catalyst from Reactor	To TSDF/ Disposed to SPCB authorised Recycler
25	SR LPG Treater	Spent Grading Bed Catalyst	NA	0.15	Spent Grading Bed Catalyst from Reactor	To TSDF/ Disposed to SPCB authorised Recycler
26	HGU (Note-1)	Spent Catalyst	4.5	1.583	Spent Catalyst from Hydrogenatio n Reactor	To TSDF/ Disposed to SPCB authorised Recycler
27	HGU (Note-1)	Spent Catalyst	63	21	Spent Catalyst from Predesuffuriza tion Reactor A/B (Dechlorinatio n)	To TSDF/ Disposed to SPCB authorised Recycler
28	HGU (Note-1)	Spent Catalyst	18.12	505.2	Spent Catalyst from Predesuffuriza tion Reactor	To TSDF/ Disposed to SPCB authorised

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S. N o.	Plant	Waste category	Quantity (MTPA)		Source of Waste generation	Mode of Disposal/F acility
			Exist ing	Propo sed		
					A/B (Removal of Sulfur compound)	Recycler
29	HGU (Note-1)	Spent Catalyst	19	6.387	Spent Catalyst from Desulfurization Reactor (Removal of Sulfur compound)	To TSDF/ Disposed to SPCB authorised Recycler
30	HGU (Note-1)	Spent Catalyst	8	2.667	Spent Catalyst from Desulfurization Reactor (Deep Desulfurization)	To TSDF/ Disposed to SPCB authorised Recycler
31	HGU (Note-1)	Spent Catalyst	25	9.4	Spent Catalyst from Prereformer A/B	To TSDF/ Disposed to SPCB authorised Recycler
32	HGU (Note-1)	Spent Catalyst	8	5.883	Spent Catalyst from Reformer	To TSDF/ Disposed to SPCB authorised Recycler
33	HGU (Note-1)	Spent Catalyst	30	10.107	Spent Catalyst from High Temp Shift Reactor	To TSDF/ Disposed to SPCB authorised Recycler
34	HGU (Note-1)	Spent Catalyst	24	16.883	Spent Catalyst from Low Temp Shift Reactor	To TSDF/ Disposed to SPCB authorised Recycler
35	HGU (Note-1)	Catalyst Support Material (Ceramic balls)	16	5.6	Spent Support Material from Reactors, Prereformer, Reformer & Shift Reactors	To TSDF/ Disposed to SPCB authorised Recycler
36	HGU (Note-1)	Catalyst Support	28	9.79	Spent Support Material from	To TSDF/ Disposed to

2812

S. N o.	Plant	Waste category	Quantity (MTPA)		Source of Waste generation	Mode of Disposal/F acility
			Exist ing	Propo sed		
		Material (Aluminium balls)			Reactors,Prer eformer, Reformer & Shift Reactors	SPCB authorised Recycler
37	HGU /PSA (Note-1)	Spent Adsorbent	250	51.938	Spent Adsorbent from PSA	To TSDF/ Disposed to SPCB authorised Recycler
38	SRU	Spent Catalyst	36.8	53.5	Claus reactors	To TSDF/ Disposed to SPCB authorised Recycler
39	TGTU	Spent Catalyst	15	11.34	Reactor	To TSDF/ Disposed to SPCB authorised Recycler
40	SRU/TGTU	Catalyst Support Material (Ceramic/al umina balls)	8	11.4	Claus and TGTU reactors	To TSDF/ Disposed to SPCB authorised Recycler

Note-1: All data for HGU are preliminary for proposed case. Data given has been prorated from BS VI Panipat HGU data. Data shall be confirmed after getting data from the selected

Details of Certified compliance report submitted by RO, MoEF&CC officials done on 10-05-2021 and the compliance of EC recommendations was certified. Status of compliance is Partially Complied. ATR has been submitted to RO, MoEF&CC on 07.05.2021 depicting compliance.

During deliberations EAC sought the following information/commitments from PP:

- i. In the new proposed facility, RLNG & FG (Fuel Gas) will be fired in furnaces & boilers in normal operations and liquid fuel (S < 0.5%) will be fired in case of emergency/ non availability of RLNG. Additional SO_x emission from these new proposed facilities shall be 647 Kg/hr.
- ii. IOCL shall comply with the policy of Government on Green H₂.

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- iii. Two Sulphur Recovery Units (having capacity 465 TPD for each unit) shall be installed in the proposed expansion project.
- iv. Joint committee formed by Hon'ble NGT visited PRPC on 06.01.2021 for verification of compliance of NGT recommendations. Joint committee submitted the compliance report with respect to the NGT recommendations on 15.02.2021. Based on the compliance report given by the joint committee, OA 738/2018 has been disposed off by Hon'ble NGT on 22.03.2021.
- v. The project shall conform to ZLD

PP has agreed to the above conditions and submitted the desired information as sought above; EAC found it to be in order and recommended the proposal for grant of EC. However, ZLD was not covered in the undertaking.

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 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.

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 found the additional information submitted by the project proponent to be satisfactory and addressing the issues raised by the Committee. 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.

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

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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.

The EAC, after detailed deliberations, recommended the project for grant of environmental clearance, subject to compliance of terms and conditions as under, and general terms of conditions at Annexure:-

- (i). The project shall conform to ZLD.
- (ii). 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.
- (iii). The treated effluent of 4.2 KLPD shall be sent for deep sea discharge through diffuser recommended by NIO.
- (iv). The National Emission Standards for Petroleum Oil Refinery issued by the Ministry vide G.S.R. 186(E) dated 18th March, 2008 and G.S.R.595(E) dated 21st August, 2009 as amended from time to time, shall be followed.
- (v). Volatile organic compounds (VOCs)/Fugitive emissions shall be controlled at 99.997% with effective chillers/modern technology. For emission control and management, use of FG/NG in heater as fuel, adequate stack height, use of Low NOX burners in heater & boiler, continuous stack monitoring, Sulphur recovery plant, etc. shall be installed/ensured.
- (vi). Total water requirement is 1,62,864 m³/day of which fresh water requirement of 98880 m³/day will be met from Western Yamuna Canal. Necessary permission in this regard shall be obtained from the concerned regulatory authority.
- (vii). Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.
- (viii). Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm, and solvent transfer to be done through pumps.
- (ix). Process organic residue and spent carbon, if any, shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF.
- (x). Fly ash should be stored separately as per CPCB guidelines so that it should not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing along with the storm water. Direct exposure of workers to fly ash & dust should be avoided. The ash from boiler shall be sold to brick manufacturers/cement industry.

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- (xi). The company shall undertake waste minimization measures as below: -
 - a. Metering and control of quantities of active ingredients to minimize waste.
 - b. Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.
 - c. Use of automated filling to minimize spillage.
 - d. Use of Close Feed system into batch reactors.
 - e. Venting equipment through vapour recovery system.
 - f. Use of high pressure hoses for equipment clearing to reduce wastewater generation.
- (xii). The green belt of 5-10 m width shall be developed in the total project area, mainly along the plant periphery, in downward wind direction, and along road sides etc. The project proponent shall ensure 33% greenbelt area vis-à-vis the project area through afforestation in the degraded area. The Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.
- (xiii). As per the Ministry's OM dated 30.09.2020 superseding the OM dated 01.05.2018 regarding the Corporate Environmental Responsibility, and as per the action plan proposed by the project proponent to address the socio-economic and environmental issues in the study area, the project proponent, as committed, shall provide education funds in technical training centers/ support in nearby village's schools, support in health care facilities, drinking water supply and funds for miscellaneous activities like solar street lights, battery, solar panel etc., in the nearby villages. The action plan shall to be completed within time as proposed.
- (xiv). For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.
- (xv). The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Firefighting system shall be as per the norms.
- (xvi). Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises. In case of the treated effluent to be utilized for irrigation/gardening, real time monitoring system shall be installed at the ETP outlet.
- (xvii). Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.

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- (xviii). Process safety and risk assessment studies shall be further carried out using advanced models, and the mitigating measures shall be undertaken/implemented accordingly.
- (xix). The PP should improve the efficiency of ETP Plant and the water discharge should be as per prescribed CPCB Norms. They should also install 24x7 hours monitoring system (of the discharge) and the same should be connected to the server of SCPB/CPCB.

22nd October, 2021 (Friday)

Agenda No. 42.20

Grain Base fuel ethanol unit of 190 KLD, 6 MW Co- generation power plant By product: 145 TPD of CO2 Generation & 97 TPD of DDGS by M/s. Zircon Advance Fuels Pvt. Ltd. Located at Khasara No. 282, 283, 284, 285 Village- Kundla Agar, Teh. Agar, Dist. Agar-Malwa, Madhya Pradesh - Consideration of Environment Clearance.

[IA/MP/IND2/231111/2021, J-11011/424/2021-IA-II(I)]

The Project Proponent and the accredited Consultant M/s. Creative Enviro Services, Bhopal (MP), made a detailed presentation on the salient features of the project and informed that:

The proposal is for environmental clearance to the project for Grain Base fuel ethanol unit of 190 KLD, 6 MW Co- generation power plant By product: 145 TPD of CO2 Generation & 97 TPD of DDGS by M/s. Zircon Advance Fuels Pvt. Ltd. Located at Khasara No. 282, 283, 284, 285 Village- Kundla Agar, Teh. Agar, Dist. Agar-Malwa, Madhya Pradesh.

As per the MoEF&CC Notification S.O. 2339(E), dated 16th June, 2021, a special provision in the EIA Notification, 2006-(Schedule 5 (ga), Category B2) is made, wherein for all applications made for Grain based distilleries with Zero Liquid Discharge producing ethanol; solely to be used for Ethanol Blended Petrol Programme of the Government of India shall be considered under B2 Category and appraised at Central Level by Expert Appraisal Committee (EAC) with condition that the project proponent shall file a notarized affidavit that ethanol produced from proposed project shall be used completely for EBP Programme.

Standard ToR and public Hearing conduction is not applicable as the project falls under category B2 as per OM dated 16th June, 2021. It was informed that no litigation is pending against the project.

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The details of products and capacity are as under:

Sr No	Product Details	Existing Quantity	Proposed Quantity	Total Quantity
1.	Fuel Ethanol	Nil	190 KLD of Fuel Ethanol	190 KLD of Fuel Ethanol
2	Co generation of Power	Nil	6 MW	6 MW
3	DDGS	Nil	97 TPD	97 TPD

The acquired land area is 11.768 ha with proposed built-up area of 27000 sq mtrs. Green belt will be developed in area of 33 % i.e. 4.0 hact of area with 8000 number of trees within 02 years of time. The estimated project cost is Rs 175.2722 Crores. Total capital cost for environmental measures is proposed as Rs 1720 Lacs. The recurring cost (operation and maintenance) will be about Rs 92 Lacs per annum. Total Employment will be 100 persons as direct & 130 persons as indirect after the commissioning of project. Industry proposes to allocate Rs. 351 Lacs (2.0% of project cost) towards Corporate Environment Responsibility (CER).

There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. lies within 10 km distance. No protected forest are reported in the study area. No Major River is flowing within distance of 10 km from the site.

Total water requirement is estimated to be 4170 KLD and after recycling & reuse of 3168 KLD of water, net fresh water requirement is estimated to be 1002 KLD, which will be supplied by Water Resource Department of Govt. of MP from Pipliya Kumar Dam. Spent wash of 1460 TPD will be treated through Multi Effect Evaporator with thermal recompression for thin slops evaporation and followed by CPU. The plant will be based on zero liquid discharge concept.

Power requirement for the project will 4566 KWH and will be met from Co-generation unit of 6 MW and MPSEB. 02 DG sets of 1010 KVA is proposed and will have Stack height of 30mt as per CPCB norms and will be used as standby during power failure. Unit will have 01 boilers of 50 TPH, which will be coal and husk fired. ESP with a stack having height of 46 mt will be installed for controlling the Particulate emissions (within statutory limit of 115 mg/nm³) for proposed boiler.

Details of Process emissions generation and its management:

Details of Process emissions generation and its management w.r.t. fuel ethanol plant.

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PM, SO₂, NO_x will be generated from the fuel combustion. Following measures are proposed for implementation:

- ESP shall be provided at stack of boiler to control the emission below 50 mg per cubic meter.
- Adequate stack height of 46 mt for boiler shall be provided for better dispersion.
- Dust collectors system shall be provided at various material transfer points.
- Online continuous monitoring system shall be provided for stack of boiler.
- Development of green belt shall be carried out in consultation with forest department.
- Dense phase conveying system for ash handling shall be provided to prevent the fugitive emission.
- Provision of cover over coal conveyors belt along with dust suppression system.
- Provision of dust mask for workers and instruction of compulsory use.
- It is proposed to use low sulphur coal in the boiler.
- CO₂ generated during the fermentation process will be collected by utilizing CO₂ Scrubbers.

Details of Solid waste/ Hazardous waste generation and its management

Detail Of By Products / Solid/Hazardous Waste And Management			
Type Of Waste	Quantity	Storage	Utilization/ Disposal
DDGS - (by product)	97 TPD	Covered shed	Sold as Cattle Feed, Poultry & Fisheries
Boiler ash	19 TPD	Silo	Brick making or land filling
ETP sludge	60 KGD		As Manure
Waste papers/Boxes	1.5-2 TPD	Covered shed	to recyclers
Used Oil	< 500 Lit /Year	HDPE drums in covered shed	Given to re-cycler authorized by MPPCB/MoEF
Spent Resin from DM Plant	<50Kg/Yr	HDPE drums in covered shed	Given to re-cycler authorized by MPPCB/MoEF

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As per OM dated 16th June, 2021, PP has submitted self-certification in the form of affidavit declaring that the proposed capacity of 190 KLD will be for manufacturing of fuel ethanol only.

During deliberations EAC sought the following information/commitments from PP:

- PP shall utilize fresh water 3.9 KL/KL ethanol.
- PP shall install 10% of the total power requirement from solar power.
- PP shall not utilize fuel as a coal.
- Brick manufacturing unit will be installed within the plant premises for utilization of fly ash.
- 15% of the total plant area will be reserved for parking.
- Development of greenbelt to be completed along with commissioning of the project.
- Company to construct a storage pond of 60 days capacity and the accumulated water to be used as fresh water thereby reducing fresh water consumption.
- The proposed budget allocate Rs. 3.51 Crores towards CER and it shall be used for construction/up-gradation of school building with provision of facilities e.g. Class rooms, playground, Laboratory, Library, Computer class, toilets, Drinking Water Facilities, solar light etc. for villagers free of cost.

PP has submitted the desired information as sought above and EAC found it to be in order and recommended the proposal for grant of EC.

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 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.

The Committee noted that the EMP report is in compliance of the PFR. The Committee 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.

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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.

The EAC, after detailed deliberations, **recommended** the project for grant of environmental clearance, subject to compliance of terms and conditions as under, and general terms of conditions at Annexure: -

- (i). As per OM dated 16th June, 2021, project falls in category B2 and the proposed capacity of 190 KLD shall be only be used for fuel ethanol manufacturing as per self-certification in form of an affidavit by the Project Proponent. Provided that subsequently if it is found that the ethanol, produced based on the EC granted as per this dispensation, is not being used completely for EBP Programme, or if ethanol is not being produced, or if the said distillery is not fulfilling the requirements based on which the project has been appraised as category B2 project, the EC shall stand cancelled.
- (ii). 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.
- (iii). 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.
- (iv). Total fresh water requirement shall not exceed 750 KLD (3.9 KL/KL) for any kind of raw material used and shall be met from Pipliya Kumar Dam. Prior permission shall be obtained from the concerned regulatory authority/CGWA in this regard, and renewed from time to time. No ground water recharge shall be permitted within the premises.
- (v). The spent wash shall be concentrated and dried to form DDGS to be used as cattle feed. Brick manufacturing unit will be installed within the plant premises for utilization of fly ash.
- (vi). CO₂ generated from the process shall be bottled/made solid ice and utilized/sold to authorized vendors.

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- (vii). Occupational Health Centre for surveillance of the worker's health shall be set up. The health data shall be used in deploying the duties of the workers. All workers & employees shall be provided with required safety kits/mask for personal protection.
- (viii). Training shall be imparted to all employees on safety and health aspects of chemicals handling. Safety and visual reality training shall be provided to employees.
- (ix). The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Firefighting system shall be as per the norms.
- (x). Process organic residue and spent carbon, if any, shall be sent to Cement other suitable industries for its incinerations. ETP sludge, process inorganic & evaporation salt shall be disposed of to the TSDF.
- (xi). The company shall undertake waste minimization measures as below
(a) Metering and control of quantities of active ingredients to minimize waste; (b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes. (c) Use of automated filling to minimize spillage. (d) Use of Close Feed system into batch reactors. (e) Venting equipment through vapour recovery system. (f) Use of high pressure hoses for equipment clearing to reduce wastewater generation.
- (xii). The green belt of at least 5-10 m width shall be developed in nearly 33% of the total project area, mainly along the plant periphery. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department. Records of tree canopy shall be monitored through remote sensing map.
- (xiii). PP proposed to allocate Rs. 3.51 Crores towards CER and it shall be used for construction/up-gradation of school building with provision of facilities e.g. Class rooms, playground, Laboratory, Library, Computer class, toilets, Drinking Water Facilities, solar light etc. for villagers free of cost.
- (xiv). There shall be adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products as per CPCB norms and no parking to be allowed outside on public places.
- (xv). Storage of raw materials shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions.
- (xvi). Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall

install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.

- (xvii). A separate Environmental Management Cell (having qualified person with Environmental Science/Environmental Engineering/specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.

Agenda No. 42.21

Grain Base fuel ethanol unit of 120 KLD, 1.8 MW Co- generation power plant By product : 90 TPD of CO2 Generation & 65 TPD of DDGS by M/s. Great Galleon Ventures Limited located at Khasara No. 280/2, village-Sejwaiya Tehsil- Dhar Dist.- Dhar Madhya Pradesh - Consideration of Environment Clearance.

[IA/MP/IND2/231983/2021, J-11011/418/2021-IA-II(I)]

The Project Proponent and the accredited Consultant M/s. Creative Enviro Services, Bhopal (MP), made a detailed presentation on the salient features of the project and informed that:

The proposal is for environmental clearance to the project for Grain Base fuel ethanol unit of 120 KLD, 1.8 MW Co- generation power plant By product : 90 TPD of CO2 Generation & 65 TPD of DDGS by M/s. Great Galleon Ventures Limited located at Khasara No. 280/2, village-Sejwaiya Tehsil- Dhar Dist.- Dhar Madhya Pradesh.

As per the MoEF&CC Notification S.O. 2339(E), dated 16th June, 2021, a special provision in the EIA Notification, 2006-(Schedule 5 (ga), Category B2) is made, wherein for all applications made for Grain based distilleries with Zero Liquid Discharge producing ethanol; solely to be used for Ethanol Blended Petrol Programme of the Government of India shall be considered under B2 Category and appraised at Central Level by Expert Appraisal Committee (EAC) with condition that the project proponent shall file a notarized affidavit that ethanol produced from proposed project shall be used completely for EBP Programme.

Standard ToR and public Hearing conduction is not applicable as the project falls under category B2 as per OM dated 16th June, 2021. It was informed that no litigation is pending against the project.

The details of products and capacity are as under:

Sr No	Product Details	Existing Quantity	Proposed Quantity	Total Quantity
1.	Fuel Ethanol	Nil	120 KLD of fuel ethanol	120 KLD of fuel Ethanol
2	Co generation of Power	Nil	1.8 MW	1.8 MW
3	DDGS	Nil	65 TPD	65 TPD

The acquired land area is 6.82 ha with proposed built-up area of 23500 sq mtrs. Green belt will be developed in area of 33 % i.e. 2.3 ha of area with 4600 number of trees within 02 years of time. The estimated project cost is Rs 6500 Lacs. Total capital cost for environmental measures is proposed as Rs 2136.44 Lacs. The recurring cost (operation and maintenance) will be about Rs 78.66 Lacs per annum. Total Employment will be 50 persons as direct & 25 persons as indirect after the commissioning of project. Industry proposes to allocate Rs. 160 Lacs (2.5% of project cost) towards Corporate Environment Responsibility.

There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. lies within 10 km distance. No protected forest are reported in the study area. Major River Chabal is flowing at a distance of 6.25 km in north direction.

Total water requirement is estimated to be 1426 KLD and after recycling & reuse of 966 KLD of water, net fresh water requirement is estimated to be 460 KLD (3.8 KI per KI) which will be supplied by DMIC Pithampur Jal Prabandhan Limited, Pithampur Dist Dhar (MP). Spent wash of 585 TPD will be treated through Multi Effect Evaporator with thermal recompression for thin slops evaporation and followed by CPU. The plant will be based on zero liquid discharge concept.

Power requirement for the project will 1800 KWH and will be met from Co-generation unit of 1.8 MW and MPSEB. Unit will have 01 boilers of 20 TPH, which will be coal and husk fired. ESP with a stack having height of 42 mt will be installed for controlling the Particulate emissions (within statutory limit of 115 mg/Nm³) for proposed boiler.

Details of Process emissions generation and its management:

Details of Process emissions generation and its management w.r.t. fuel ethanol plant.

PM, SO₂, NO_x will be generated from the fuel combustion. Following measures are proposed for implementation:

- ESP shall be provided at stack of boiler to control the emission below 50 mg per cubic meter.
- Adequate stack height of 42 mt for boiler shall be provided for better dispersion.
- Low Sulphur Coal Shall be Used having Sulphur content less than 0.4%.

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- Dust collectors system shall be provided at various material transfer points.
- Online continuous monitoring system shall be provided for stack of boiler
- Development of green belt shall be carried out in consultation with forest department.
- Dense phase conveying system for ash handling shall be provided to prevent the fugitive emission.
- Provision of cover over coal conveyors belt along with dust suppression system.
- Provision of dust mask for workers and instruction of compulsory use.
- It is proposed to use low sulphur coal in the boiler.
- CO₂ generated during the fermentation process will be collected by utilizing CO₂ Scrubbers.

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

Detail Of By Products / Solid/Hazardous Waste And Management			
Type Of Waste	Quantity	Storage	Utilization/ Disposal
DDGS - (by product)	65 TPD	Covered shed	Sold as Cattle Feed, Poultry & Fisheries
Boiler ash	30TPD	Silo	Brick making or land filling within the plant premises
ETP sludge	0.1MT/DAY	Drying Beds	Will be used as Manure
Used Oil	< 100 lit per year	HDPE drums in covered shed	Given to re-cycler authorized by MPPCB/MoEF
Spent Resin from DM Plant	<50Kg/Yr	HDPE drums in covered shed	Given to re-cycler authorized by MPPCB/MoEF

As per OM dated 16th June, 2021, PP has submitted self-certification in the form of affidavit declaring that the proposed capacity of 120 KLD will be for manufacturing of fuel ethanol only.

During deliberations EAC sought the following information/commitments from PP:

- Commitment towards compliance of zero discharge for existing and proposed units.
- Development of greenbelt to be completed along with commissioning of the project.
- 15% of the total plant area will be reserved for parking.

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- Company to construct a storage pond of 60 days capacity and the accumulated water to be used as fresh water thereby reducing fresh water consumption.
- Brick manufacturing unit will be installed within the plant premises for utilization of fly ash.
- PP shall not utilize fuel as a coal.
- The proposed budget of Rs. 1.60 Crores towards CER activities to be increased to Rs. 2.0 Crores and it shall be used for construction/up-gradation of school building with provision of facilities e.g. Class rooms, playground, Laboratory, Library, Computer class, toilets, Drinking Water Facilities, solar light etc. for villagers free of cost

PP has submitted the desired information as sought above and EAC found it to be in order and recommended the proposal for grant of EC.

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 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.

The Committee noted that the EMP report is in compliance of the PFR. The Committee 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.

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.

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The EAC, after detailed deliberations, **recommended** the project for grant of environmental clearance, subject to compliance of terms and conditions as under, and general terms of conditions at Annexure: -

- (i). As per OM dated 16th June, 2021, project falls in category B2 and the proposed capacity of 120 KLD shall be only be used for fuel ethanol manufacturing as per self-certification in form of an affidavit by the Project Proponent. Provided that subsequently if it is found that the ethanol, produced based on the EC granted as per this dispensation, is not being used completely for EBP Programme, or if ethanol is not being produced, or if the said distillery is not fulfilling the requirements based on which the project has been appraised as category B2 project, the EC shall stand cancelled.
- (ii). 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.
- (iii). 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.
- (iv). Total water requirement is estimated to be 1426 KLD and after recycling & reuse of 966 KLD of water, net fresh water requirement is estimated to be 460 KLD (3.8 KI per KI) which will be supplied by DMIC Pithampur Jal Prabandhan Limited, Pithampur Dist Dhar (MP). Prior permission shall be obtained from the concerned regulatory authority/CGWA in this regard, and renewed from time to time. No ground water recharge shall be permitted within the premises.
- (v). The spent wash shall be concentrated and dried to form DDGS to be used as cattle feed. Brick manufacturing unit will be installed within the plant premises for utilization of fly ash.
- (vi). CO₂ generated from the process shall be bottled/made solid ice and utilized/sold to authorized vendors.
- (vii). Occupational Health Centre for surveillance of the worker's health shall be set up. The health data shall be used in deploying the duties of the workers. All workers & employees shall be provided with required safety kits/mask for personal protection.
- (viii). Training shall be imparted to all employees on safety and health aspects of chemicals handling. Safety and visual reality training shall be provided to employees.

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- (ix). The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Firefighting system shall be as per the norms.
- (x). Process organic residue and spent carbon, if any, shall be sent to Cement or any other suitable industries for its incinerations. ETP sludge, process inorganic & evaporation salt shall be disposed of to the TSDF.
- (xi). The company shall undertake waste minimization measures as below
(a) Metering and control of quantities of active ingredients to minimize waste; (b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes. (c) Use of automated filling to minimize spillage. (d) Use of Close Feed system into batch reactors. (e) Venting equipment through vapour recovery system. (f) Use of high pressure hoses for equipment clearing to reduce wastewater generation.
- (xii). The green belt of at least 5-10 m width shall be developed in nearly 33% of the total project area, mainly along the plant periphery. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department. Records of tree canopy shall be monitored through remote sensing map.
- (xiii). PP proposed to allocate Rs. 2.0 crores towards CER and it shall be used for construction/up-gradation of school building with provision of facilities e.g. Class rooms, playground, Laboratory, Library, Computer class, toilets, Drinking Water Facilities, solar light etc. for villagers free of cost.
- (xiv). There shall be adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products as per CPCB norms and no parking to be allowed outside on public places.
- (xv). Storage of raw materials shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions.
- (xvi). Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.
- (xvii). A separate Environmental Management Cell (having qualified person with Environmental Science/Environmental Engineering/specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.

Agenda No. 42.22

Expansion of Grain based Distillery 120 KLPD to 250 KLPD & Co-Generation Power Plant from 3.5 to 5.55 MW by new installation 130 KLPD Grain based Ethanol plant by M/s. RSL Distilleries Private Limited located at Village Chandrao, Tehsil Indri, District Karnal, Haryana - Consideration of Environment Clearance

[IA/HR/IND2/233126/2011, J-11011/209/2011-IA-II(I)]

The Project Proponent and the accredited Consultant M/s. J.M. EnviroNet Pvt. Ltd., made a detailed presentation on the salient features of the project and informed that:

The proposal is for environmental clearance to the project for Expansion of Grain based Distillery 120 KLPD to 250 KLPD & Co-Generation Power Plant from 3.5 to 5.55 MW by new installation 130 KLPD Grain based Ethanol plant by M/s. RSL Distilleries Private Limited located at Village Chandrao, Tehsil Indri, District Karnal, Haryana.

All Distillery projects are listed at S. No. 5 (g) of Schedule of Environment Impact Assessment (EIA) and as per as per the EIA Notification 2006 and amendment vide Notification S.O. 345(E), dated the 17th January, 2019, S.O. 750(E), dated the 17th February, 2020, S.O. 980 (E) dated 02nd March, 2021 and S.O 2339(E) dated 16.06.2021 the proposal is to be appraised as B2 category and appraised at Central Level by Expert Appraisal Committee (EAC) with condition that the project proponent shall file a notarized affidavit that ethanol produced from proposed project shall be used completely for EBP Programme.

Standard ToR and public Hearing conduction is not applicable as the project falls under category B2 as per OM dated 2nd March, 2021 & 16th June, 2021. It was informed that no litigation is pending against the project.

M/s. RSL Distilleries Pvt. Ltd. has obtained Environmental clearance from MoEFCC vide F. No. J-11011/209/2011-IA-II(I) dated 10th September, 2013 for 120 KLPD Grain Based Distillery Plant & 3.5 MW Co-generation Power Plant at Village Chandrao, Tehsil Indri, District Karnal, Haryana.

The details of products and capacity are as under:

Particulars	Capacity			Remarks
	Existing	Additional	Total after expansion	
Grain based Distillery	120 KLPD	130 KLPD	250 KLPD	Additional increased 130 KLPD capacity will
Product	Extra Neutral Alcohol/Rectified	Ethanol (Biofuel)		

	Spirit/ Ethanol			be Ethanol (Biofuel) only
By Product	DWGS/DDGS and CO2	DDGS and CO2		
Co-generation Power Plant	3.5 MW	2.05 MW	5.55 MW	-
IMFL/CL Bottling Plant	80 lakh cases per annum	NIL	80 lakh cases per annum	No Change

Existing land area is 9.11 ha (22.5 acres), No additional land is required for the expansion, as the same will be done within the existing plant premises. Industry has already developed greenbelt in an area of 33% i.e. 3.1 ha (7.5 acres) out of total area of the project. The estimated expansion project cost is Rs. 40 Crores. Total capital cost earmarked towards environmental pollution control measures is Rs. 2.0 Crores and the Recurring cost (operation and maintenance) will be about Rs. 0.2 Crores / annum. No. of working days will be 350 days/annum. Total Employment will be 200 persons during operational phase after expansion. Industry proposes to allocate Rs. 80 Lakhs (2.0% of total project cost) towards Corporate Environment Responsibility (CER).

There are No National Parks, Reserved Forests (RF) / Protected Forests (PF), Wildlife Sanctuaries, Biosphere Reserves, Tiger/ Elephant Reserves, Wildlife Corridors etc. within 10 km radius. Dhanaura Escape & Nala (Adjacent in South direction), Prani Nadi (~1.5 km in East direction), Augmentation Canal (~2.5 km in NW direction), Yamuna River (~3.0 km in SE direction), Rakshi Nala (~5.5 km in NNW direction), Budhi Nadi (~6.0 km in East direction), Hanauri Drain (~6.5 km in WSW direction), Western Yamuna Canal (~6.5 km in NW direction), Khurdban Drain (~7.0 km in NNW direction) & Khera Drain (~7.5 km in WSW direction) are the water bodies available within 10 km radius.

Existing fresh water requirement is 730 KLPD and the additional fresh water requirement for expansion will be 610 KLPD. Hence, the total fresh water requirement after expansion will be 1340 KLPD which will be sourced from ground water. Effluent (MEE Condensate, blow down & others) of existing (507 m³/day) & Additional (544 m³/day) will be treated through state of art ETP/CPU. A full-fledged state of art ETP/CPU (Capacity 1200 KLPD) is already in place to treat waste water generated at the plant premises. The plant will be based on Zero Liquid discharge system.

The power requirement for the existing plant is 3.5 MW. Additional power

requirement for expansion project will be 2.05 MW. Total requirement after expansion will be 5.55 MW which will be sourced from 5.55 MW Co-Generation Power Plant. 1 x 700 KVA & 1 x 500 KVA DG sets are already present for emergency backup and no additional D.G set will be installed of expansion. Stack height (7 m) is provided as per CPCB norms. Existing power and steam requirement of the plant is being met by 35 TPH Biomass / Rice Husk / Paddy straw fired boiler having ESP as air pollution control device. As a part of expansion, the existing boiler capacity will be sufficient for steam. The unit proposes capacity enhancement of cogeneration power plant from 3.5 to 5.55 MW by modification & efficiency improvement in turbine. ESP with a stack of height of 50 meter has been installed with the existing boiler (35 TPH) for controlling the particulate emissions within the statutory limit of 50 mg/Nm³.

Details of process emissions generation and its management:

CO₂ plant has already been installed in the existing unit for collection of CO₂ generated (191 TPD) during Fermentation Process and the same will be expanded for proposed expansion.

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

- Solid waste from the Grain based operations generally comprises of fibres and proteins in the form of DDGS (115 TPD), which will be ideally used as Cattle Feed.
- Ash (35 TPD) from the boiler is being /will be given to nearby brick manufacturers.
- Used oil (1.0 KL /annum) generated from the plant machinery/ gear boxes as hazardous waste is being/will be sold out to the CPCB authorized recycler.

Certified Compliance report of Existing EC obtained from Integrated Regional Office, MoEFCC, Chandigarh vide F. No: 4-1005/2011-RO(NZ)/588-589 dated 16.09.2021.

As per OM dated 16th June, 2021, PP has submitted self-certification in the form of affidavit declaring that the proposed capacity from 120 KLPD to 250 KLPD will be for manufacturing of fuel ethanol only.

During deliberation EAC sought the following commitments from PP:

- The capacity of rainwater storage tank should be of 60 days.
- No coal to be used as fuel in boiler.
- 15% area to be reserved for truck parking inside the plant premises.
- Proposed budget for social developmental activities to be increased to Rs. 1.0 Crore and to be spent on providing solar power to the nearby schools and villages. The company will provide solar power

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to the nearby areas to the tune of 10% of total power consumption of the unit in form of solar lights/solar panels etc. The social developmental activities to be completed along with the commissioning of the project.

- Ash to be transferred in covered vehicles to the nearby brick manufacturers.

PP agreed to the above conditions and submitted an undertaking in compliance of the above.

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 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.

The Committee noted that the EMP report is in compliance of the PFR. The Committee 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.

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.

The EAC, after detailed deliberations, **recommended** the project for grant of environmental clearance, subject to compliance of terms and conditions as under, and general terms of conditions at Annexure: -

- (i). As per OM dated 16th June, 2021, project falls in category B2 and the proposed capacity from 120 KLPD to 250 KLPD shall be only be used for fuel ethanol manufacturing as per self-certification in form of an

affidavit by the Project Proponent. Provided that subsequently if it is found that the ethanol, produced based on the EC granted as per this dispensation, is not being used completely for EBP Programme, or if ethanol is not being produced, or if the said distillery is not fulfilling the requirements based on which the project has been appraised as category B2 project, the EC shall stand cancelled.

- (ii). 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.
- (iii). 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.
- (iv). Existing fresh water requirement is 730 KLPD and the additional fresh water requirement for expansion will be 610 KLPD. Hence, the total fresh water requirement after expansion will be 1340 KLPD which will be sourced from ground water. Prior permission shall be obtained from the concerned regulatory authority/CGWA in this regard, and renewed from time to time.
- (v). The spent wash shall be concentrated and dried to form DDGS to be used as cattle feed. Brick manufacturing unit shall be installed within plant for utilization of fly ash.
- (vi). CO₂ generated from the process shall be bottled/made solid ice and utilized/sold to authorized vendors.
- (vii). Occupational Health Centre for surveillance of the worker's health shall be set up. The health data shall be used in deploying the duties of the workers. All workers & employees shall be provided with required safety kits/mask for personal protection.
- (viii). Training shall be imparted to all employees on safety and health aspects of chemicals handling. Safety and visual reality training shall be provided to employees.
- (ix). The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Firefighting system shall be as per the norms.
- (x). Process organic residue and spent carbon, if any, shall be sent to Cement other suitable industries for its incinerations. ETP sludge, process inorganic & evaporation salt shall be disposed of to the TSDF.
- (xi). The company shall undertake waste minimization measures as below
 - (a) Metering and control of quantities of active ingredients to minimize

waste; (b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes. (c) Use of automated filling to minimize spillage. (d) Use of Close Feed system into batch reactors. (e) Venting equipment through vapour recovery system. (f) Use of high pressure hoses for equipment clearing to reduce wastewater generation.

- (xii). The green belt of at least 5-10 m width shall be developed in nearly 33% of the total project area, mainly along the plant periphery. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department. Records of tree canopy shall be monitored through remote sensing map.
- (xiii). PP proposed to allocate Rs. 1.0 crores for CER and it shall be spent on installation of solar power to the villages nearby.
- (xiv). There shall be adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products as per CPCB norms and no parking to be allowed outside on public places.
- (xv). Storage of raw materials shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions.
- (xvi). Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.
- (xvii). A separate Environmental Management Cell (having qualified person with Environmental Science/Environmental Engineering/specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.

Agenda No. 42.23

Proposed 150 KLPD grain based distillery along with 4.0 MW Cogeneration power plant by M/s. Betul Biofuels Pvt. Ltd. located at village: Bodi Junavani , Tehsil and District Betul, Madhya Pradesh - Consideration of Environment Clearance.

[IA/MP/IND2/226867/2021, J-11011/372/2021-IA-II(I)]

The Project Proponent and the accredited Consultant M/s. Ampl Environ Pvt. Ltd., made a detailed presentation on the salient features of the project and informed that:

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The proposal is for environmental clearance to the project for Proposed 150 KLPD grain based distillery along with 4.0 MW Cogeneration power plant by M/s. Betul Biofuels Pvt. Ltd. located at village: Bodi Junavani, Tehsil and District Betul, Madhya Pradesh.

As per the MoEF&CC Notification S.O. 2339(E), dated 16th June, 2021, a special provision in the EIA Notification, 2006-(Schedule 5 (ga), Category B2) is made, wherein for all applications made for Grain based distilleries with Zero Liquid Discharge producing ethanol; solely to be used for Ethanol Blended Petrol Programme of the Government of India shall be considered under B2 Category and appraised at Central Level by Expert Appraisal Committee (EAC) with condition that the project proponent shall file a notarized affidavit that ethanol produced from proposed project shall be used completely for EBP Programme.

Standard ToR and public Hearing conduction is not applicable as the project falls under category B2 as per OM dated 16th June, 2021. It was informed that no litigation is pending against the project.

The details of products and capacity are as under:

Unit	Capacity	Product
Grain Based Ethanol Plant	150 KLPD	Product -Ethanol (Fuel) By Product - DDGS & CO2
CO- Generation Plant	4.0 MW	Power

Total project area is 11.0 Acres for proposed project. Industry will develop greenbelt in an area of 33% i.e. 3.63 acres out of total area of the project. The estimated project cost is Rs. 110 Crores. Total capital cost earmarked towards environmental pollution control measures is Rs. 6.09 Crores and the Recurring cost (operation and maintenance) will be about Rs. 1.0 Crores / annum. No. of working days will be 330 days/annum. Total Employment will be 150 persons (Permanent 90 & temporary 60) during operation phase. Industry proposes to allocate INR 2.3 Crores of total project cost towards Corporate Environment Responsibility (CER).

No National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/ Elephant Reserves, Wildlife Corridors etc. lies within 10 km radius. Tapi Reserved Forest – 0.28 km – SW, Bodi Reserved Forest – 2.12 km – NNE, Kund Reserved Forest – 4.81 km – NW and Bor Nadi – 6.28 km – SW, Tank near Kumhali – 6.36 km – NE, Pond near Jin – 8.47 km – N , Machna River – 8.64 km – E, Pond near Kund Reserved Forest – 8.70 km – NW, Tapi River – 9.44 – S are the water bodies found within 10 km radius.

One Time Total water requirement for the project will be 4039 KLD which will be further reduced through recycling & reuse to 3126 KLD.

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555 KLD will be fresh water demand for distillery plant @3.7KL/KL of Ethanol. The total fresh water demand for proposed project will be 913 KLD which will be sourced from ground water. The applications for permission of withdrawal of ground water has been submitted to CGWA. Effluent will be treated through state of art PCTP/Effluent Treatment Plant (Bio tower, clarifiers, ACF). The plant will be based on Zero Liquid discharge system.

Power requirement for Ethanol plant will be 3.44 MW, which will be sourced from the 4.0 MW Co-generation Power Plant. Unit will be having D.G. Sets of 1 x 1000 KVA which will be used as standby during power failure. Stack height (9 m) will be provided as per CPCB norms. Proposed Boiler of 30 TPH capacity with ESP as Air Pollution Control Equipment will be installed with a stack height of 70 m for controlling the particulate emissions within the statutory limit of 50 mg/Nm³.

Details of Process emissions generation and its management:

CO₂ (82 TPD) generated during the fermentation process will be collected and sold to authorized vendors.

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

- Solid waste from the Grain based operations generally comprises of fibres and proteins in the form of DDGS (105 TPD), which will be ideally used as Cattle, poultry & fish feed ingredients.
- Ash (35 TPD) generated from boiler will be supplied to brick manufacturers.
- Used oil & grease (0.5 KL/Annum) generated from plant machinery/gear boxes as hazardous waste will be sold out to the CPCB authorized recyclers.

As per OM dated 16th June, 2021, PP has submitted self-certification in the form of affidavit declaring that the proposed capacity of 150 KLD will be for manufacturing of fuel ethanol only.

During deliberations EAC sought the following information/commitments from PP:

- a) Brick manufacturing unit will be installed within the plant premises for utilization of fly ash.
- b) 15% of the total plant area will be reserved for parking.
- c) Development of greenbelt to be completed along with commissioning of the project.
- d) OHS fund to be increased to Rs. 50 Lakhs per annum.

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- e) Company to construct a storage pond of 60 days capacity and the accumulated water to be used as fresh water thereby reducing fresh water consumption.
- f) The proposed budget to be spent on social development activities to be increased Rs. 2.5 crores and to be spent on solar power and providing drinking water facilities.
- g) Out of total power requirement 10 % shall be met from renewable energy
- h) Further, EAC directed that PP shall submit land conversion document for industrial use and is in possession of the company.

PP has submitted the desired information except commitment (e).

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 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.

The Committee noted that the EMP report is in compliance of the PFR. The Committee 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.

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.

The EAC, after detailed deliberations, **recommended** the project for grant of environmental clearance, subject to compliance of terms and conditions as under, and general terms of conditions at Annexure: -

- (i). As per OM dated 16th June, 2021, project falls in category B2 and the proposed capacity of 150 KLPD shall be only be used for fuel ethanol manufacturing as per self-certification in form of an affidavit by the Project Proponent. Provided that subsequently if it is found that the ethanol, produced based on the EC granted as per this dispensation, is not being used completely for EBP Programme, or if ethanol is not being produced, or if the said distillery is not fulfilling the requirements based on which the project has been appraised as category B2 project, the EC shall stand cancelled.
- (ii). 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.
- (iii). 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.
- (iv). The total fresh water demand for proposed project will be 913 KLD which will be sourced from ground water. Prior permission shall be obtained from the concerned regulatory authority/CGWA in this regard, and renewed from time to time. No ground water recharge shall be permitted within the premises. Company shall construct a storage pond of 60 days capacity and the accumulated water to be used as fresh water thereby reducing fresh water consumption.
- (v). The spent wash shall be concentrated and dried to form DDGS to be used as cattle feed. Brick manufacturing unit will be installed within the plant premises for utilization of fly ash.
- (vi). CO₂ generated from the process shall be bottled/made solid ice and utilized/sold to authorized vendors.
- (vii). Occupational Health Centre for surveillance of the worker's health shall be set up. The health data shall be used in deploying the duties of the workers. All workers & employees shall be provided with required safety kits/mask for personal protection.
- (viii). Training shall be imparted to all employees on safety and health aspects of chemicals handling. Safety and visual reality training shall be provided to employees.
- (ix). The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Firefighting system shall be as per the norms.

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- (x). Process organic residue and spent carbon, if any, shall be sent to Cement or any other suitable industries for its incinerations. ETP sludge, process inorganic & evaporation salt shall be disposed of to the TSDF.
- (xi). The company shall undertake waste minimization measures as below
(a) Metering and control of quantities of active ingredients to minimize waste; (b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes. (c) Use of automated filling to minimize spillage. (d) Use of Close Feed system into batch reactors. (e) Venting equipment through vapour recovery system. (f) Use of high pressure hoses for equipment clearing to reduce wastewater generation.
- (xii). The green belt of at least 5-10 m width shall be developed in nearly 33% of the total project area, mainly along the plant periphery. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department. Records of tree canopy shall be monitored through remote sensing map.
- (xiii). PP proposed to allocate Rs. 2.5 crores towards CER and it shall be used for installation of solar power, upgradation of schools and for providing drinking water for villagers free of cost.
- (xiv). There shall be adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products as per CPCB norms and no parking to be allowed outside on public places.
- (xv). Storage of raw materials shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions.
- (xvi). Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.
- (xvii). A separate Environmental Management Cell (having qualified person with Environmental Science/Environmental Engineering/specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.

Agenda No. 42.24

Expansion of Grain Based Distillery from 25 KLPD to 60 KLPD by M/s. Adlers Bioenergy Ltd. located at Sy. No. 284 (B), Village Gaurgaon, Taluka Kallamb, District Osmanabad, Maharashtra -

Consideration of Environment Clearance. [The project is under violation category].

[IA/MH/IND2/230734/2010, EC(MR)-2009/290/CR.57/TC.1]

As per directions of Madras High Court vide Writ Petition(MD) No. 11757 of 2021 and WMP(MD) No. 9239 of 2021 dated 15.07.2021 there has been an interim stay for considering proposals of violation category.

Accordingly, the proposal was returned in present form.

Agenda No. 42.25

On shore Oil & Gas exploration in Deomali PEL area in Tirap and Changlang Districts by M/s Oil India Limited (NEF PROJECT) located at Districts Tirap and Changlang, Arunachal Pradesh - Consideration of Environment Clearance reg.

[IA/AR/IND2/56550/2013, J-11011/98/2013-IA II (I)]

The PP/consultant were absent for the appraisal of the proposal. EAC has informed that if the proposal has been pending just for submitting required clearances the same may checked by the ministry and if found sufficient, it is recommended as per earlier recommendation. In this regard PP has submitted Stage-I FC but NBWL clearance was not obtained as mentioned in the earlier deliberations of the 12th EAC meeting held during 23rd -24th August, 2016.

In view of the above, EAC **recommended** this proposal, subject to clearance from NBWL if applicable.

ANNEXURE**GENERAL CONDITIONS FOR ENVIRONMENTAL CLEARANCE**

- (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, ZillaParishad/Municipal Corporation, Urban local Body and the local NGO, if any, from

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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.

List of the Expert Appraisal Committee (Industry-2) members participated during Video Conferencing (VC) meeting

S. No.	Name and Address	Designation
1.	Dr. J. P. Gupta	Chairman
2.	Sh. R.K. Singh	Member
3.	Dr. Y.V. Rami Reddy	Member
4.	Dr. T. Indrasena Reddy	Member
5.	Sh. S. C. Mann	Member
6.	Dr. T. K. Joshi	Member
7.	Dr. J. S. Sharma	Member
8.	Sh. Dinabandhu Gouda, CPCB	Member
9.	Sh. Ashok Kr. Pateshwary, Director, MoEFCC	Member Secretary
MoEFCC		
10.	Dr. Mahendra Phulwaria	Scientist 'C'
11.	Sh. Kanaka Teja	Research Assistant

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File No. J-11011/1251/2007 - IA II (I)
 Government of India
 Ministry of Environment, Forest & Climate Change
 Impact Assessment Division

Annexure-R2

Indira Paryavaran Bhawan,
 Jor Bagh Road, New Delhi-110003

Dated: December 4th, 2023

To

M/s OIL INDIA LIMITED,
 Shri. Ajit Chandra Haloi, CGM (HSE),
 Safety & Environment Department,
 Duliajan, Dibrugarh, Assam-786602.

Sub: Onshore Oil & Gas development drilling and production in Dumduma Pengeri Area in Tinsukia District under PMLs namely Mechaki PML, Borhapjan PML, Dumduma PML and Digboi PML Tinsukia Assam by M/s OIL INDIA LIMITED- Consideration of Environment Clearance reg.

Sir,

This has reference to your online proposal no. IA/AS/IND2/220363/2007, dated 11th October, 2021 for environmental clearance to the above-mentioned project. The project was presented by the project proponent/consultant to the EAC (Industry-2) during meeting 20th - 22nd October in the Ministry.

2. Upon examination, it was noted that the proposed area and diversion involved falls under the critical elephant habitat and corridor which connects the two States Assam and Arunachal Pradesh. Further, it was also noted that there is an ongoing court case in compliance to Hon'ble NGT Judgement dated 08.12.2017 in Original Application No. 19 of 2014 filed in Dr. Kashmira Kakati vs UoI & Ors. for protection of elephant population in the country and to protect elephant corridors or elephant reserves.

3. M/s. Coal India Ltd. (which was one of the respondents in OA No. 19/2014) filed the C.A No. 9710-9711/2018 in Supreme Court of India, wherein, it approached the Court against certain directions on Hon'ble NGT Judgement dated 08.12.2017. Hon'ble Supreme Court vide order dated 10.08.2022 ordered the Ministry to file status report regarding the steps taken for implementation of directions given by the National Green Tribunal vide its order dated 08.12.2017. Accordingly, a committee was constituted by the Ministry and the report dated 04.01.2023 was submitted to Hon'ble Supreme Court. In the final Order, dated 27.04.2023, passed by the Hon'ble Supreme Court in C.A. No. 9710-9711/2018, it was held that since the compliance reports have been filed by the stakeholders and also put on record, therefore the matter will be remitted back to the Tribunal along with the compliance reports as a part of the record in O.A. No. 19/2014 on the file of the Tribunal and the Tribunal will look into the matter afresh. The matter was thus, remitted back to the Tribunal.

4. As per order of Hon'ble NGT dated 24.07.2023 it was alleged by the counsel

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of the Applicant i.e., Dr. Kashmira Kakati, that the compliances have not been made by the Respondents and the directions contained in the Order dated 08.12.2017 passed by the Tribunal have not been reported to be complied till date and the counsel for respondents have asked for some time to file reply/compliance affidavit/objection/status report.

5. In view of the above, you are requested to approach the Ministry after final outcome of the ongoing court case. Meanwhile, you are requested to submit compliance to observation of Ministry's committee report dated 04.01.2023.

/

(Dr. Vimal Kumar Hatwal)
Scientist-'E'

Copy to:

1. The Director, Project Elephant Division, Indira Paryavaran bhawan, MoEF&CC.
2. IA Monitoring Cell, MoEF&CC.

Vimal
04/12/2023

(Dr. Vimal Kumar Hatwal)
Scientist-'E'
E-mail: vk.hatwal@gov.in

F. No. IA- J-11011/1251/2007-IA II (I) **Annexure-R3**
Government of India
Ministry of Environment, Forest and Climate Change
(I.A. Division)

Indira Paryavaran Bhavan
Jor Bagh Road, Aliganj
New Delhi-110 003

Dated: December 4th, 2023

Sub: Show Cause Notice to QCI/NABET accredited EIA Consultant, M/s ERM India Pvt. Ltd for concealment of court case under EIA Notification, 2006 - reg.

Ref: Application for proposal IA/AS/IND2/220363/2007, dated 11th October, 2021 for environmental clearance.

WHEREAS, M/s Oil India Limited has submitted final EIA/EMP report prepared by QCI/NABET accredited EIA Consultant, M/s ERM India Pvt. Ltd (NABET certificate no. NABET/EIA/1922/RA 0177) requesting for environmental clearance to the project Onshore Oil & Gas development drilling and production in Dumduma Pengeri Area in Tinsukia District under PMLs namely Mechaki PML, Borhapjan PML, Dumduma PML and Digboi PML Tinsukia Assam by M/s Oil India Limited.

2. WHEREAS, the EIA/EMP report for the project was presented by the project proponent/consultant to the EAC (Industry-2) during meeting 20th - 22nd October in the Ministry, wherein EAC recommended the project for grant of Environmental Clearance.

3. WHEREAS, it has been noted that M/s ERM India Pvt. Ltd did not provide the complete information related to ongoing court case in compliance to Hon'ble NGT Judgement dated 08.12.2017 in Original Application No. 19 of 2014 filed in Dr. Kashmira Kakati vs UoI & Ors. for protection of elephant population in the country and to protect elephant corridors or elephant reserves.

4. WHEREAS, based on the above it is also observed that the QCI/NABET accredited EIA Consultant, M/s ERM India Pvt. Ltd has failed in its duty to assist the EAC/ Ministry in taking a considered decision.

5. Now, therefore, in view of the above, it is directed to submit your response as to why this Ministry shall not blacklist you from participating in the EIA process at the Centre or in the State for all EC/CRZ clearances under EIA Notification, 2006 and/or CRZ Notification 2011.

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6. In your response, it may also be clearly stated whether a personal hearing is required before a final order is passed by this Ministry. It may also be noted that if no response is received within 30 days, appropriate orders, as may be deemed fit, will be passed and issued under the circumstances of the case without any further notice to you.

7. This issues with the approval of Competent Authority.

(Dr. Vimal Kumar Hatwal)
Scientist-'E'

To

M/s. ERM India Pvt. Ltd.,
Building 10, Tower B, 3rd Floor,
DLF Cyber City Gurgaon 122002.
Email: debanjan.bandyopadhyay@erm.com

Copy to:

1. M/s OIL INDIA LIMITED, Shri. Ajit Chandra Haloi, CGM (HSE), Safety & Environment Department, Duliajan, Dibrugarh, Assam-786602.
1. The C.E.O., NABET Secretariat, National Accreditation Board for Education and Training (NABET), ITPI Building, 6th Floor, 4-A, Ring Road, IP Estate, New Delhi- 110002. Email: nabet@qcin.org, ceo.nabet@qcin.org
2. Guard File.
3. IA Monitoring Cell, MoEF&CC.
4. Website of MoEF&CC.

(Dr. Vimal Kumar Hatwal)
Scientist-'E'
E-mail: vk.hatwal@gov.in

Neelam
05/12/23



3rd Floor, Building.10B,
DLF Cyber City
Gurgaon, NCR - 122002

Telephone: +91 124 4170300
Email: india@erm.com
www.erm.com

Annexure-R4

By Email/Courier

The Director,
I.A. Division,
Ministry of Environment, Forest & Climate
Change,
Indira Paryavaran Bhavan,
Jor Bagh Road,
New Delhi - 110003.

DATE

January 03, 2024

COPY TO:

1. The C.E.O., NABET Secretariat,
National Accreditation Board for Education and Training (NABET),
ITPI Building, 6th Floor,
4-A, Ring Road,
IP Estate,
New Delhi- 110002.

Email: nabet@qcin.org, ceo.nabet@qcin.org

2. Oil India Limited,
Shri. Ajit Chandra Haloi, CGM (HSE),
Safety & Environment Department,
Duliajan,
Dibrugarh- 786602,
Assam.

SUB: REPLY TO THE SHOW CAUSE NOTICE DATED DECEMBER 04, 2023
ISSUED BY THE MINISTRY OF ENVIRONMENT, FOREST & CLIMATE
CHANGE (I.A. DIVISION) ("**MOEF**") BEARING NO. F. NO. IA- J-
11011/1251/2007-IA II (I) ("**SHOW CAUSE NOTICE**").

REF: 1. SHOW CAUSE NOTICE DATED DECEMBER 4, 2023 ISSUED BY THE
MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE BEARING
NO. F. NO. IA- J-11011/1251/2007-IA II (I)

2. LETTER DATED DECEMBER 21, 2023 ISSUED BY ERM TO THE SHOW
CAUSE NOTICE ("**HOLDING RESPONSE**").

E-159/242/2024/CR
04/01/24

Dir (IA) (VSH)
35/12/23
04/01/24

Registered office
ERM India Private Limited
B-1/1770, Vasant Kunj
New Delhi - 110 070

Registered number: 55-68804 India
GST registration:
05AAACE1502C1ZL
CIN: U74899DL1995PTC068804

Offices worldwide



A member of
the
ERM Group



DATE
January 03, 2024

REFERENCE

Dear Sir,

We, ERM India Private Limited ("**ERM**"), refer to above mentioned Show Cause Notice, *inter alia*, seeking a response from ERM in relation to the Environmental Clearance granted to Oil India Limited ("**OIL**") *vide* proposal bearing no. IA/AS/IND2/220363/2007 dated October 11, 2021 ("**EC**"). We further refer to our Holding Response requesting for additional time to respond to the Show Cause Notice. We submit as under our response to the above referred Show Cause Notice.

1. ERM was appointed as the Environmental Impact Assessment ("**EIA**") consultant organization by OIL for conducting the EIA study for obtaining EC under the EIA Notification, 2006 for Onshore Oil & Gas development drilling and production in Dumduma-Pengeri Area in Tinsukia District under PMLs namely Mechaki PML, Borhapjan PML, Dumduma PML and Digboi PML Tinsukia located in Assam ("**Project**").
2. The Terms of Reference ("**ToR**") for conducting the EIA study for the Project were issued by the MOEF on June 01, 2018 to OIL. It is pertinent to note that OIL did not disclose/mention the existence of any litigation proceedings in its Form I dated April 11, 2018 as submitted on April 20, 2018 on MOEF portal, while applying for the issuance of the ToR. Subsequently, even at the time of preparation of the EIA Report, OIL did not disclose any Court orders/directions/pending litigation proceedings against the Project to ERM.
3. ERM had sought information and inputs regarding the factual details from OIL for the submissions made for obtaining the EC. These clarifications were sought from OIL during EIA preparation and at the stage of submission of Form II as an application for the EC.
4. Attention is drawn to the responses by OIL to Sr. No. 24 of Form I as an application for ToR. OIL had stated "No" as a response to "Whether there is any litigation pending against the project and/or land in which the project is propose to be set up?". Further, for Sr. No 41 of the ToR compliance specifically there was a mention that "*No litigation is pending against the project*". Also, Form II Sr. No 36 required information on whether there are any court cases pending against the Project and or land in which the Project is proposed to be setup, which was disclosed as "No" by OIL. It is pertinent to point out that the representatives of OIL had to disclose details of any litigation pending and/or judgment/directions/orders against the Project, as per the terms of the ToR and the onus to disclose such orders/directions was on OIL.
5. However, no disclosure regarding the NGT's Order/directions against the Project was provided by OIL to ERM. Therefore, ERM cannot be made liable for the failure of OIL to disclose/apprise ERM of the NGT orders/directions.
6. It may be noted that the representatives of OIL simply stated that there was no litigation pending against the Project at the stage of Form I, and the same was reiterated in drafts of Form II, EIA Report, and presentation that were also sent to them prior to submission to the EAC.



DATE
January 03, 2024

REFERENCE

7. In light of the above, ERM did not have any knowledge or information of any orders/ directions having been passed against the Project, due to OIL's failure to disclose the same to ERM. Consequently, ERM should not be made liable for any omission, inadvertent or otherwise, on the part of OIL.
8. MOEF *vide* the Show Cause Notice issued to ERM, has raised a query to ERM, the response to which is tabulated below.

Query	Response
<p>It has been noted that ERM did not provide the complete information related to ongoing court case in compliance to Hon'ble NGT judgement dated December 08, 2017 in original Application No. 19 of 2014 filed in Dr. Kashmira Kakati vs UoI & Ors. For protection of elephant population in the country and to protect elephant corridors or elephant reserves.</p> <p>Based on the above, it is also observed that the QCI/ NABET accredited EIA consultant, ERM has failed in its duty to assist the EAC/ MOEF in taking a considered decision.</p>	<p>The Project was appraised by the EAC- Industry 2 of MOEF meeting held during October 20-22, 2021 and the EAC recommended the Project for grant of EC. The minutes of the meeting issued by EAC (Industry-2) of MOEF dated November 01, 2021 covered the presence of wildlife corridor as following:</p> <p><i>"There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves etc. within 10 km of the well locations or production installations. Bogapani elephant corridor is located within 1 km of the proposed well. Buri Dehing River is flowing through southeastern portion of the Block".</i></p> <p>OIL prepared and submitted an application for issuance of ToR to conduct EIA studies for EC by submitting filled in Form I, pre-feasibility report, .kml files and Project maps to MOEF on April 20, 2018.</p> <p>In response to the application by OIL, MOEF issued ToR on June 01, 2018 for conducting the EIA studies.</p> <p>After receipt of ToR, OIL provided Project related information including the application submitted for the Project, i.e., filled in Form I, prefeasibility report, and Project maps. Information of any pending/ongoing court case was not presented by OIL in Form I (a copy of the signed Form I dated April 11, 2018, as submitted by OIL is enclosed herewith).</p> <p>Even at the time of preparation of EIA report and preparation and submission of Form II, the OIL representatives merely mentioned/informed ERM that there were no pending or ongoing court cases against the Project (a copy of the submitted covering letter for document submission to MOEF is enclosed herewith).</p> <p>Further, prior to submission of the EIA Report and other documents on the PARIVESH portal, confirmation was sought from OIL wherein Entry 41 of the response to the ToR specifically mentioned that <i>"No litigation is pending against the project"</i>. Even at this stage there was no</p>



DATE
January 03, 2024

REFERENCE

Query	Response
	<p>information/ correction/ communication received from OIL in respect of any orders/ directions received from the NGT.</p> <p>It pertinent to mention that based on OIL's representation as contained in Form I and confirmation provided by OIL's representatives that there was no pending/ongoing court case against the Project as indicated by OIL, accordingly, the EIA report mentions no pending/ongoing court case against the Project. Therefore, there was no concealment or suppression of information by ERM.</p> <p>Please note that the obligation to disclose any pending Court cases/ litigation proceedings against OIL (including any orders/directions against the Project) to ERM, rests entirely upon OIL and unless a clear and complete disclosure has been made by OIL to ERM, no liability ought to be cast upon ERM.</p>

9. We trust the above response clarifies ERM's position and the Show Cause Notice may please be set aside/ disposed of. Nonetheless, should you require any further information or clarifications, we request for a personal hearing, and you may please inform us of the date for such an in-person hearing.
10. This reply is without prejudice to the rights and remedies of ERM, which are expressly reserved, and nothing stated herein shall be regarded as an admission of liability and, or a waiver of ERM's rights and remedies.

We remain committed to delivering quality EIA studies and assistance in preparation of EIA reports.

Thanking you.
Yours Sincerely,

Santoshkumar Kulkarni
(Partner & Head Capital Projects Delivery)



- Encl.:** 1. Copy of Form 1 dated April 11, 2018 submitted by OIL to MOEF as application for Terms of Reference.
2. Copy of Covering Letter dated June 19, 2021 for submitted as an application for the EC along with Form II and required documents to MOEF.

APPENDIX - 1**FORM - I****(I) Basic Information:**

SL.No.	Item	Details
1	Name of the project	Onshore Oil & Gas development drilling and production in Dumduma-Pengeri area in Tinsukia District under PMLs namely Mechaki PML, Borhapan PML , Dumduma PML and Digboi PML.
2	Sl. No. in the schedule	1(b)
3	Proposed capacity/area/length tonnage to be handled/command area/lease area/number of wells to be drilled	27 onshore drilling wells to be drilled, 3 Nos. of production installations and assorted Oil & Gas flowlines/delivery lines (from 50mm to 300mm NB) of total length 100km.
4	New/Expansion/Modernization	Expansion
5	Existing Capacity/ Area etc.	876 Sq.km. of project area
6	Category of Project i.e. "A" or "B"	"A"
7	Does it attract the general condition? If yes, please specify.	No
8	Does it attract the specific condition? If yes, please specify	-
9	Location :	
	Plot/Survey/Khasra No.	
	Village	
	Tehsil	Dumduma
	District	Tinsukia
	State	Assam
10	Nearest Railway station/airport along with distance in kms.	Dumduma Railway station (in dumdum), Tinsukia Junction Railway station - 24.9 Km (approx) , Duliajan Railway Station - 45.4 Km (approx.) & Digboi Railway Station - 27.2 Kms (approx) from Dumduma. Dibrugarh Airport-64.2Kms (approx.)

11	Nearest town, city, district Head Quarters along with distance in kms.	Tinsukia 26.6 kms(approx.), Digboi – 27 Kms (approx.) and Margherita – 44 Kms(approx.)
12	Village Panchayats, Zilla Parishad, Municipal Corporation, Local body (complete postal addresses with telephone nos. to be given)	Doomdooma Panchayat Zila parishad: Tinsukia Tinsukia Municipal Corporation GNB Rd, Tinsukia, Assam 786125
13	Name of the applicant	Ajaya Kumar Acharya
14	Registered Address	Safety & Environment Department OIL INDIA LIMITED DULIAJAN - 786602
15	Address for correspondence:	
	Name	Sri Utpal Bora
	Designation (Owner/Partner/CEO)	Chairman & Managing Director
	Address	SB Tower, Plot no. 1A/1, 6 th Floor, Sector 16 A , Noida- UP
	Pin Code	201301
	E-mail	oilindia@oilindia.in
	Telephone No.	0120-2419000
	Fax No.	0120-2488310
16	Details of Alternative Sites examined, if any, location of these sites should be shown on a topo sheet	Not Applicable
17	Interlinked Projects	F. No. J-11011/1251/2007 - IA II (I), Dated 1st November, 2011
18	Whether separate application of interlinked project has been submitted?	Already EC available
19	If yes, date of submission	Not Applicable
20	If no, reason	Not Applicable
21	Whether the proposal involves Approval/clearance under: If yes, details of the same and their status to be given. (a) The Forest (Conservation) Act, 1980? (b) The Wildlife (Protection) Act, 1972?	Applicable. Not Applicable. Not Applicable.

	(c) The C.R.Z. Notification, 1991?	
22	Whether there is any Government Order/Policy relevant/relating to the site?	No
23	Forest land involved (hectares)	No
24	Whether there is any litigation pending against the project and/or land in which the project is propose to be set up? (a) Name of the Court (b) Case No. (c) Orders/directions of the court, if any and its relevance with the proposed project.	No

(II) Activity:

1. Construction, operation or decommissioning of the Project involving actions, which will cause physical changes in the locality (topography, land use, changes in water bodies, etc.)

Sl. No	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
1.1	Permanent or temporary change in land use, land cover or topography including in intensity of land use (with respect to local land use plan).	Yes	For drilling locations: Temporary. Land will be used for drilling the development well and subsequent to completion of the well, a well head will be available to which pipelines will be connected to flow the well to nearby production installation. For production set up: There will be permanent change in land cover.
1.2	Clearance of existing land, vegetation and buildings?	Yes	Approximate 3 hectare for each drilling location and around 4.0 to 7.0 hectares for each production installation

1.3	Creation of new land uses?	Yes	Establishment for production.
1.4	Pre-construction investigations e.g. bore houses, soil testing?	No	Not Applicable
1.5	Construction works?	Yes	Civil Construction of temporary drilling pads pits etc for drilling location. For production establishment /process plant, civil construction of office, etc. as per requirement.
1.6	Demolition Works?	Yes	Demolition work of civil structures may be required in case of restoration work in the drilling locations.
1.7	Temporary sites used for construction works or housing of construction workers?	Yes	Within the acquired land, temporary construction of sheds/portable bunk house will be done.
1.8	Above ground building, structures or earthworks including linear structures, cut and fill or excavations.	Yes	As indicated in Sl.No.1.5
1.9	Underground works including mining or tunneling?	Yes	Drilling of wells.
1.10	Reclamation works?	No	
1.11	Dredging?	No	
1.12	Offshore structures?	No	
1.13	Production and manufacturing processes?	Yes	Production set up /process plant as per requirement will be set up.
1.14	Facilities for storage of goods or materials?	Yes	Small godowns for temporary storage of well equipment / production materials, etc. will be constructed.
1.15	Facilities for treatment or disposal of solid waste or liquid effluents?	Yes	ETP will be available for treatment of liquid effluents for drilling wells. Formation water will be disposed into

			underground structures within a depth of below 1000 to 1500 metres and overlain with cap rock. Drill cuttings generated will be stored in impervious pits within the drill site. Solid waste generated in production installations will be disposed/treated.
1.16	Facilities for long term housing of operational workers?	No	
1.17	New road, rail or sea traffic during construction or operation?	Yes	Construction of roads may be required for approaching the installations.
1.18	New road, rail, air waterborne or other transport infrastructure including new or altered routes and stations, ports, airports etc?	No	
1.19	Closure or diversion of existing transport routes or infrastructure leading to changes in traffic movements?	No	
1.20	New or diverted transmission lines or pipelines?	No	
1.21	Impoundment, damming, culverting, realignment or other changes to the hydrology of watercourses or aquifers?	No	
1.22	Stream crossing?	Yes	May be required wherever applicable.
1.23	Abstraction or transfers of water from ground or surface waters?	Yes	Approx. 50 KLPD for drilling wells and 20 KLPD of ground water/surface for production installations

1.24	Changes in water bodies or the land surface affecting drainage or run-off?	No	Not expected
1.25	Transport of personnel or materials for construction, operation or decommissioning?	Yes	Transport of field personnel and materials shall be done during the operations
1.26	Long-term dismantling or Decommissioning or restoration works?	No	
1.27	Ongoing activity during Decommissioning which could have an impact on the environment?	No	
1.28	Influx of people to an area in either temporarily or permanently?	Yes	Temporary movement of personnel during drilling operations and regular movement of personnel for operating the production installations.
1.29	Introduction of alien species?	No	
1.30	Loss of native species or genetic diversity?	No	
1.31	Any other actions?	No	

2. Use of Natural resources for construction or operation of the Project (such as land, water, materials or energy, especially any resources which are non-renewable or in short supply):

Note: It may be noted that drilling and testing of each well is likely to take around 4 months in normal operational conditions/circumstances. So, natural resources requirement will be very much temporary and minimal in drilling phase. For production installations land will be required.

Sl. No.	Information/Checklist Confirmation	Yes/No	
2.1	Land especially undeveloped or agricultural land (ha)	Yes	For production installation around 4 to 7 hectares of land will be required and for drilling around 3 ha per well will be required.
2.2	Water (expected source & competing users) unit: KLPD	Yes	Tube wells will be installed for ground water drawals @ 50 KLPD per day and 20 klpd for production installation. In case of availability of surface water nearby, source of water usage will be done accordingly.
2.3	Minerals (MT)	No	
2.4	Construction material -stone, aggregates and/soil(expected source-MT)	Yes	For construction of Sheds, office building etc. as mentioned in para 1.5, some quantity of building materials like sand, aggregates etc. will be used.
2.5	Forests and timber (Unit- MT)	Yes	
2.6	Energy including electricity and fuels (source, competing users) Unit: fuel (MT), energy (MW)	Yes	Drilling installation: DG sets will be used to meet the requirement of power of nearly 1200 KW using nearly 3.5 KLPD of HSD for drilling and other operations. Production

			installations: 216 KW (Fuel Consumption: around 1500 SCUM of Natural Gas per day).
2.7	Any other natural resources (use appropriate standard units)	No	

3. Use, storage, transport, handling or production of substances or materials, which could be harmful to human health or the environment or raise concerns about actual or perceived risks to human health.

Sl. No.	Information/Checklist Confirmation	Yes/No	
3.1	Use of substance or materials, which are hazardous (as per MSIHC rules) to human health or the environment (flora, fauna, and water supplies)	No	
3.2	Changes in occurrence of disease or affect disease vectors (e.g. insect or water borne diseases)	No	
3.3	Affect the welfare of people e.g. by changing living condition?	No	
3.4	Vulnerable groups of people who could be affected by the project e.g. hospital patients, children, the elderly etc.,	No	
3.5	Any other causes	No	

4. Production of solid wastes during construction or operation or decommissioning (MT/month)

Sl. No.	Information/Checklist Confirmation	Yes/No	
4.1	Spoil, overburden or mine wastes	No	
4.2	Municipal waste (domestic and or commercial wastes)	Yes	Domestic waste generated by nearly 10 persons in each production installation and around 120 persons in drilling wells working for 2-3 months will be discharged in pits. No commercial waste will be discharged from any of the installations
4.3	Hazardous wastes (as per Hazardous Waste Management Rules)	No	Tank bottom sludge while cleaning the crude oil tanks. The cleaning of crude oil storage tanks are carried out once in five

			Years. Total tank bottom sludge expected to be generated in five Years from the tanks of production installations will be kept in secured, covered, impermeable concrete sludge Pit before safe disposal.
4.4	Other industrial process wastes	No	
4.5	Surplus product	No	
4.6	Sewage sludge or other sludge from effluent treatment	Yes	Will be bio-remediated.
4.7	Construction or demolition wastes	No	
4.8	Redundant machinery or Equipment	No	
4.9	Contaminated soils or other materials	No	
4.10	Agricultural wastes	No	
4.11	Other solid wastes	Yes	Drill cuttings of underground rocks and solids in water based mud used for drilling will be stored in impervious pits within the drilling site

5. Release of pollutants or any hazardous, toxic or noxious substances to air (Kg/hr)

Sl.No.	Information/Checklist Confirmation	Yes/No	
5.1	Emissions from combustion of fossil fuels from stationary or mobile sources	Yes	Exhaust gases generated due to combustion of nearly 3.5 KLPD of HSD will be discharged from mobile DG sets with stacks of appropriate heights in drilling wells. In production installations exhaust gases generated due to combustion of Natural gas and HSD, will be discharged from the Generating sets, Crude Oil Despatch Pump sets,

			Gas compressors, boilers etc. through exhaust gas stacks of appropriate heights.
5.2	Emissions from production processes	Yes	Minimal quantity of very low pressure Natural gas generated during crude oil production process, will only be flared in the production installations.
5.3	Emissions from materials handling including storage or transport	No	
5.4	Emissions from construction activities including plant and equipment	No	
5.5	Dust or odours from handling of materials including construction materials, sewage and waste	No	
5.6	Emissions from incineration of waste	No	
5.7	Emissions from burning of waste in open air (e.g. slash materials, construction debris)	No	
5.8	Emissions from any other sources	No	

6. Generation of Noise and Vibration, and Emissions of Light and Heat:

Sl. No.	Information/Checklist Confirmation	Yes/No	
6.1	From operation of equipment e.g. engines, ventilation plant, crushers	Yes	Noise will be generated due to operation of DG sets drilling site but the same will be limited as per the statutory requirement. (75 dBA). For production installations along with gensets noise will be generated due to running of Crude Oil Despatch Pump sets, Gas compressors, Formation water

			pumps, Boilers, etc. but the same will be limited to 75 dBA. Acoustic gensets will be used in the installations.
6.2	From industrial or similar processes	No	
6.3	From construction or demolition	No	
6.4	From blasting or piling	No	
6.5	From construction or operational traffic	Yes	
6.6	From lighting or cooling systems	No	
6.7	From any other sources	Yes	Flaring of minimal quantity of very low pressure natural gas produced during crude oil production process in the production installations will generate heat depending upon the quantity to be flared.

7. Risks of contamination of land or water from releases of pollutants into the ground or into sewers, surface waters, groundwater, coastal waters or the sea:

Sl. No.	Information/Checklist Confirmation	Yes/No	
7.1	From handling, storage, use or spillage of hazardous materials	No	
7.2	From discharge of sewage or other effluents to water or the land (expected mode and place of discharge)	Yes	Drilling discharge will be stored in impervious pits within the well site. Formation water will be disposed into underground structures within a depth of below 1000 to 1500 metres and overlain with cap rock. Drill cuttings generated

			will be stored in impervious pits within the drill site.
7.3	By deposition of pollutants emitted to air or into the land or into water	No	-
7.4	From any other sources	No	-
7.5	Is there a risk of long term build up of pollutants in the environment from these sources?	No	-

8. Risk of accidents during construction or operation of the Project, which could affect human health or the environment.

Sl. No.	Information/Checklist Confirmation	Yes/No	
8.1	From explosions, spillages, fires etc from storage, handling, use or production of hazardous substances	Yes	<p>Minor spill of HSD from tanker unloading and leaking valves, lines and storage tanks. Blow outs during drilling resulting in Violent/uncontrolled escape of hydrocarbons may occur. Blow out preventer and other mitigative measures will be in place as per industry practice & statutory/ OISD norms.</p> <p>Release of H₂S if any will be controlled and neutralized by injecting scavenging chemicals and other methods.</p> <p>For production installation, minor spillage of crude oil and fire risk due to storage and handling of crude oil in tanks will be taken care of by adequate Fire safety measures in each installation as per statutory norms.</p>
8.2	From any other causes	No	
8.3	Could the project be affected by natural disasters causing environmental damage (e.g. floods, earthquakes, landslides, cloud burst etc)?	Yes	<p>In case of very severe natural disaster there may be spillage of crude oil from damaged tanks and equipment.</p> <p>However, adequate measures will be</p>

			taken for safety of men & materials and protection of environment during & after the occurrence of the disaster
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9. Factors which should be considered (such as consequential development) which could lead to environmental effects or the potential for cumulative impacts with other existing or planned activities in the locality.

Sl.No.	Information/Checklist Confirmation	Yes/No	
9.1	Lead to development of supporting, facilities, ancillary development or development stimulated by the project which could have impact on the environment e.g. <ul style="list-style-type: none"> • Supporting infrastructure (roads, power supply, waste or waste water treatment, etc.) • Housing development • Extractive industries • Other 	Yes	Construction of production installation will require considerable amount of infrastructure like construction/development of roads, supply of various materials, consumables etc. This will encourage ancillary industries and generate direct and indirect employment
9.2	Lead to after-use of the site, which could have impact on the environment	Yes	Production Installations will be of permanent nature with minimal likelihood of future use of the site for other purpose.
9.3	Set a precedent for later developments	Yes	If considered necessary, more drilling wells and production installations of similar nature may be set up within the block area.
9.4	Have cumulative effects due to Proximity to other existing or planned projects with similar effects	No	

(III) Environmental Sensitivity

Sl.	Areas	Name/Identity
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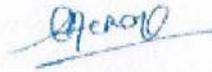
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No.			
1	Areas protected under international conventions, national or local legislation for their ecological, landscape, cultural or other related value	No	
2	Areas which are important or sensitive for ecological reasons - wetlands water courses or other water bodies, coastal zone, biospheres, mountains, forests.	No	
3	Areas used by protected, important or sensitive species of flora or fauna for breeding, nesting, foraging, over wintering, migration	No	
4	Inland, coastal, marine or underground waters	No	
5	States, national boundaries	No	
6	Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas.	No	
7	Defence Installation	-	
8	Densely populated or built- up area.	No	
9	Areas occupied by sensitive man made land uses (Hospitals, Schools, Places of worship, Community facilities)	No	Suitable distance will be maintained as per the norms in case of requirement
10	Areas containing important, high quality or scarce resources (ground water resources, surface resources, forestry, agriculture, fisheries, tourism, minerals)	No	
11	Areas already subjected to pollution or environmental damage (those where existing legal environmental standards are exceeded.)	No	
12	Areas susceptible to natural hazard which could cause the project to present environmental problems (earthquakes, subsidence, landslides,	No	

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erosion, flooding or extreme or adverse climatic conditions).		
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(A. K. Acharya)
Chief General Manager (HSE)
Joint Officer (EC/F/C/NBWL)
OIL INDIA LIMITED

Date: 11/04/2018

Place: Duliajan

(A.K.Acharya)
General Manager (HSE)
Oil India Limited
P.O. Duliajan
Dist.: Dibrugarh (Assam)
PIN-786602

Signature of the applicant
With name and full address
(Project Proponent/Authorized Signatory)

1(b):STANDARD TERMS OF REFERENCE FOR CONDUCTING ENVIRONMENT IMPACT ASSESSMENT STUDY FOR OFFSHORE AND ONSHORE OIL AND GAS EXPLORATION, DEVELOPMENT AND PRODUCTION PROJECTS AND INFORMATION TO BE INCLUDED IN EIA/EMP REPORT

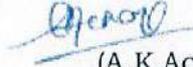
1. Executive summary of a project.
2. Project description, project objectives and project benefits.
3. Cost of project and period of completion.
4. Site details within 1 km of the each proposed well, any habitation, any other installation/activity, flora and fauna, approachability to site, other activities including agriculture/land, satellite imagery for 10 km area. All the geological details shall be mentioned in the Topo sheet of 1:40000 scale, superimposing the well locations and other structures of the projects. Topography of the project site.
5. Details of sensitive areas such as National Park, Wildlife sanctuary and any other eco-sensitive area alongwith map indicating distance.
6. Approval for the forest land from the State/Central Govt. under Forest (Conservation) Act, 1980, if applicable.
7. Recommendation of SCZMA/CRZ clearance as per CRZ Notification dated 6th January, 2011 (if applicable).
8. Distance from nearby critically/severely polluted area as per Notification, if applicable. Status of moratorium imposed on the area.
9. Does proposal involve rehabilitation and resettlement? If yes, details thereof.
10. Environmental considerations in the selection of the drilling locations for which environmental clearance is being sought. Present any analysis suggested for minimizing the foot print giving details of drilling and development options considered.
11. Baseline data collection for air, water and soil for one season leaving the monsoon season in an area of 10 km radius with centre of Oil Field as its centre covering the area of all proposed drilling wells.
12. Climatology and Meteorology including wind speed, wind direction, temperature rainfall relative humidity etc.
13. Details of Ambient Air Quality monitoring at 8 locations for PM2.5, PM10, SO2, NOx, CO, VOCs, Methane and non-methane HC.
14. Soil sample analysis (physical and chemical properties) at the areas located at 5 locations.
15. Ground and surface water quality in the vicinity of the proposed wells site.
16. Measurement of Noise levels within 1 km radius of the proposed wells.
17. Vegetation and land use; flora/fauna in the block area with details of endangered species, if any.
18. Incremental GLC as a result of DG set operation, flaring etc.
19. Potential environmental impact envisaged during various stages of project activities such as site activation, development, operation/ maintenance and decommissioning.

20. Actual source of water and 'Permission' for the drawl of water from the Competent Authority. Detailed water balance, wastewater generation and discharge.
21. Noise abatement measures and measures to minimize disturbance due to light and visual intrusions.
22. Details on wastewater generation, treatment and utilization /discharge for produced water/ formation water, cooling waters, other wastewaters, etc. during all project phases.
23. Details on solid waste management for drill cuttings, drilling mud and oil sludge, produced sand, radioactive materials, other hazardous materials, etc. including its disposal options during all project phases.
24. Disposal of spent oil and lube.
25. Storage of chemicals and diesel at site. Hazardous material usage, storage and accounting.
26. Commitment for the use of water based mud (WBM) only
27. Oil spill emergency plans for recovery/ reclamation.
28. H2S emissions control.
29. Produced oil/gas handling, processing and storage/transportation.
30. Details of control of air, water and noise pollution during production phase.
31. Measures to protect ground water and shallow aquifers from contamination.
32. Whether any burn pits being utilised for well test operations.
33. Risk assessment and disaster management plan for independent reviews of well-designed construction etc. for prevention of blow out. Blowout preventer installation.
34. Environmental management plan.
35. Total capital and recurring cost for environmental control measures.
36. Emergency preparedness plan.
37. Decommissioning and restoration plans.
38. Documentary proof of membership of common disposal facilities, if any.
39. Details of environmental and safety related documentation within the company including documentation and proposed occupational health and safety Surveillance Safety Programme for all personnel at site. This shall also include monitoring programme for the environmental.
40. A copy of Corporate Environment Policy of the company as per the Ministry's O.M. No. J-11013/41/2006-IA.II (I) dated 26th April, 2011 available on the Ministry's website.
41. Any litigation pending against the project and or any direction/order passed by any court of law against the project. If so details thereof.

"I hereby give undertaking that the data and information given in the application and enclosures are true to the best of my knowledge and belief and I am aware that if any part of the data and information submitted is found to be false or misleading at any stage, the project will be rejected and clearance given, if any to the project will be revoked at our risk and cost."

Date: 11/04/2018

Place: Duliajan


(A.K.Acharya)
General Manager (HSE)
Oil India Limited
P.O. Duliajan
Dist.: Dibrugarh (Assam)
PIN-786602

(A. K. Acharya)
Chief General Manager (HSE)
Nodal Officer (EC/FC/NBWL)
OIL INDIA LIMITED

Signature of the applicant
With name and full address
(Project Proponent/Authorized Signatory)



ऑयल इंडिया लिमिटेड
(भारत सरकार का उद्यम)
Oil India Limited
(A Government of India Enterprise)

Ref: S&E/E-43(14)/774

Dated : 19.06.2021

To
The Director,
IA (II) Division,
Ministry of Environment, Forest & Climate Change,
Indira Paryavaran Bhawan,
JorBagh Road,
New Delhi - 110 003

Subject: Application seeking Environmental Clearance (EC) for proposed EIA Study for "Onshore Oil & Gas Development drilling and production in Dumduma-Pengeri Area in Tinsukia District under PMLs namely Mechaki PML, Borhapan PML, Dumduma PML and Digboi PML".

Reference: Approved ToR: No. IA-J-11011/1251/2007 - IA II (I) dated 01 Jun 2018

Sir,

Oil India Ltd. (OIL) intends to carry out Onshore Oil & Gas Development drilling and production in Dumduma-Pengeri Area in Tinsukia District under PMLs namely Mechaki PML, Borhapan PML, Dumduma PML and Digboi PML.

The Ministry of environment, Forest and Climate Change (MoEF&CC) issued Standard ToR for conducting EIA study vide No. IA-J-11011/1251/2007 - IA II (I) dated 01 Jun 2018. The Environmental Impact Assessment (EIA) study has been conducted as per prescribed standard ToR through NABET accredited consultant M/s ERM India Pvt. Ltd. Public Hearings for the project have been conducted in Tinsukia district by State Pollution Control Board, Assam.

We are herewith enclosing the following documents for your perusal and necessary action.

- (i) Form II and attachments
- (ii) EIA-EMP Report
- (iii) Copy of approved ToR
- (iv) Copy of Risk Assessment Report
- (v) Copy of Public Hearing minutes
- (vi) Copy of Authorization letter
- (vii) Copy of Compliance of Previous Environment Clearance from Regional Office, Shillong

View above, we are submitting the online application for grant of Environmental Clearance to carry out the proposed activities mentioned above.

Thanking you,

Yours faithfully,
Oil India Limited

Sarbeswar Basumatary
Sarbeswar Basumatary

Chief General Manager (HSE)&
Nodal Officer (EC, FC, NBWL)
For Resident Chief Executive

Nodal Officer (EC/FC/NBWL)
OIL INDIA LIMITED

Enclosures: As above



सत्यमेव जयते

Government of India
Ministry of Environment, Forest and Climate Change
IA Division
(Industrial Projects - 2)



Minutes of EAC (Industry-2) Meeting meeting Industrial Projects - 2 held from 06/05/2025 to 07/05/2025

Date: 13/05/2025

MoM ID: EC/MOM/EAC/626017/4/2025
Agenda ID: EC/AGENDA/EAC/626017/4/2025
Meeting Venue: N/A
Meeting Mode: Virtual
Date & Time:

06/05/2025	10:30 AM	05:30 PM
07/05/2025	10:30 AM	05:30 PM

1. Opening remarks

The Chairman made hearty welcome to the Committee members and appreciated the efforts of the Committee. After opening remarks, the Chairman opened the EAC meeting for further deliberations.

2. Confirmation of the minutes of previous meeting

The EAC, having taken note that final minutes were issued after incorporating comments received from the EAC members on the minutes of its Meeting (ID: EC/AGENDA/EAC/760105/4/2025) held on 16th – 17th April, 2025, conducted through Video Conferencing (VC).

Member Secretary informed the Members of the EAC that they may declare their conflict of interest before appraisal of any proposal and recuse from the meeting and the same shall be explicitly recorded in the Minutes of the meeting. Further, it was also informed that in case it is revealed later that in spite of the conflict of interest the Member had participated in the appraisal of the proposal, the responsibility for the same lies with the concerned Member and it may result in removal from the membership of EAC. After welcoming the Committee Members, discussion on each of the agenda items was taken up ad-seriatim. Dr. Kakasaheb Konde recused himself from the meeting before the deliberation of the proposal agenda no. 10.

3. Details of proposals considered by the committee

Day 1 -06/05/2025

3.1. Agenda Item No 1:

		m cleaning			al as per Hazardous Waste Rules, 2016
2	Waste Oil (Slop Oil)	Well work over, crude storage tank bottom cleaning	HW, Sch-I, Cat. 4.3	0.50 to 1	Waste oil will be sent CPCB authorized Recyclers
3	ETP Sludge	ETP operation	HW, Sch-I, Cat. 34.2	1 to 2	Sent to TSDF site for disposal
4	Used Oil / Spent Oil	D. G. sets maintenance and other misc.	HW, Sch-I, Cat 5.1	1 KL/year	It will be sent CPCB authorized Recyclers
5	Oil Contaminated Filters, Cottons, Rags, Gloves, Etc.	Misc. maintenance	HW, Sch-I, Cat. 3.3	0.30	It will be sent CPCB authorized Recyclers
6	Waste / Residues Containing Oil	Well work over	HW, Sch-I, Cat. 5.2	0.50 KL/year	Disposal as per Hazardous Waste Rules, 2016
7	Spent Chemicals	Well work over	--	0.60	Disposal as per Hazardous Waste Rules, 2016
8	Spent Carbon	ETP / STP / Septic tank	HW, Sch-I, Cat. 36.2	3.00	Disposal as per Hazardous Waste Rules, 2016
9	Discarded Containers / Barrels / Liners Contaminated With Hazardous Waste	Well work over	HW, Sch-I, Cat. 33.1	50 to 100 nos./year	Collection, Storage, Transportation and Sold to Registered Recyclers
Solid / Non-Hazardous Waste					
10	Domestic Waste	Employees working in the premises	MSW	2.5 kg/day	It shall be segregated in dry and wet waste. Dry waste will be
					disposed to bin of nagarpalika / municipal corporation door to door collection system and wet waste will be allowed to OWC to convert it bio-degradable waste into manure
11	STP Sludge	STP operation	--	0.50	Collection, Storage, Utilize as a manure within EPU area

Capital cost and recurring cost of EMP are given below:**During Drilling:**

S r. N o.	Description	Capital Cost (INR) in Crores/Well Drilling	Recurring Cost (INR) in Crores/Well Drilling
1.	Air Quality Management	0.0080	--
2.	Noise Quality	0.0045	--
3.	Surface and Ground Water Quality	0.0080	--
4.	Soil Quality	0.0075	--
5.	Hazardous Waste Management	0.0350	--
6.	Greenbelt / Plantation	0.0070	--
7.	Firefighting System*	0.0150	--
8.	Occupational Health & Safety	0.0150	--
Sub Total-1		0.1000	--
7.	EMP cost for wastewater treatment		
	Installation of Mobile ETP	It is short term exploratory drilling activity and only for short period of time i.e. 60 days, so permanent installation of ETP is not feasible. Mobile ETP would be deployed at drilling site on rental basis.	Operation and Maintenance of ETP – 0.03 Crores
	Installation of Mobile STP	It is short term exploratory drilling activity and only for short period of time i.e. 60 days, so permanent installation of STP is not feasible. Mobile STP would be deployed at drilling site on rental basis.	Operation and Maintenance of STP – 0.0075 Crores
Sub Total-2		--	0.0375
8.	Cost for Solving Water Logging Issue at Well No. 12**	0.00077	0.000015
Total		0.10077	0.037515

Note:

* During the drilling activity, approximately 0.50 Crores will be spent on the fire-fighting equipment systems and safety d

S r. N o.	Description	Capital Cost (INR) in Crores/Well Drilling	Recurring Cost (INR) in Crores/Well Drilling
<p>uring drilling operations. The said cost is included in the drilling cost. ** Total Rs. 5.00 Lakhs (Rs. 0.0769 Lakhs per well drilling * 65 Wells) as a capital cost will be spend for solving water logging issue at well no. 12 and Rs. 0.10 Lakhs (Rs. 0.0015 Lakhs per well drilling * 65 Wells) as a recurring cost is allocated for the same.</p>			

During Early Production:

S r. N o.	Particulars	Capital Cost (INR) in Crores/EP U	Recurring Cost (INR) in Crores/Annum/EPU
1.	Air Quality Management	0.0070	0.0040
2.	Noise Quality	0.0030	0.0020
3.	Surface and Ground Water Quality	0.0060	0.0035
4.	Soil Quality	0.0050	0.0020
5.	Hazardous Waste Management	0.0250	0.0070
6.	Greenbelt / Plantation	0.0100	0.0020
7.	Firefighting System	0.3000	0.0150
8.	Occupational Health & Safety	0.0300	0.0500
Sub Total-1		0.3860	0.0855
7.	EMP cost for wastewater treatment		
	Installation of ETP	Operation and Maintenance of ETP – 0.08 Crores	0.0480
	Installation of STP	Operation and Maintenance of STP – 0.03 Crores	0.0100
Sub Total-2		0.1100	0.0580
Total		0.4960	0.1435

Details of Extended EMP with proposed activities and budgetary allocation:

S r. N o.	Particular	Description	Villages	Unit (Numbers)	Unit Cost (in Lakhs I NR)	Yearwise Budget (In Lakhs)					Total in Lakhs
						1	2	3	4	5	
1	Infrastructure	Contribution in renovation work like playground, sport equipments, paver blocks in anganwadi and primary school, etc.	Kanbha, Bakrol Bujrang, Bhavda, Kujad, Dhamatwan	05 schools	25.00	25.00	25.00	25.00	25.00	25.00	125.00
2		Provision of RO Plant (capacity: 1000 liter/day) with five year AMC for drinking purpose in school	Kanbha, Bakrol Bujrang, Bhavda	03 schools	30.00	18.00	18.00	18.00	18.00	18.00	90.00
3		Installation of Solar Street light (with Solar Panel Capacity of 80 W) along with O&M on public utility buildings and internal street road	Kanbha, Bakrol Bujrang, Bhavda, Kujad, Dhamatwan, Kuha, Ranodra, Vadod, Gatrada, Singarva	564 no. of street light	0.50	60.00	60.00	60.00	51.00	51.00	282.00
4		Construction / strengthening of road at nearby villages	Kanbha, Bakrol Bujrang, Bhavda	03 locations	50.00	30.00	30.00	30.00	30.00	30.00	150.00
5	Environment	Tree plantation with tree guard, development of nursery and distribution of tree saplings	Kanbha, Bakrol Bujrang, Bhavda, Kubadthal, Vanch, Gatrada, Kujad, Vadod	7800 no. of trees with guard	1000 per sapling	20.00	20.00	15.00	15.00	8.00	78.00
6	Skill Development	Skill base training programme for youth by the way of ITI and equivalent course	Bakrol Bujrang, Singarva, Kujad, Vadod, Vanch	05 locations	40.00	40.00	40.00	40.00	40.00	40.00	200.00
7	Education	Donation in school like computers, books for library, projector for digital learn	Gatrada, Bakrol Bujrang, Bhavda, Vadod, Dhamatwan	15 classrooms	5.00	15.00	15.00	15.00	15.00	15.00	75.00

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. The EAC, after detailed deliberations, **recommended** the project for grant of environmental clearance, subject to compliance of terms and conditions as under, and general terms of conditions at Annexure: -

3.1.5. Recommendation of EAC

Recommended

3.1.6. Details of Environment Conditions

3.1.6.1. Specific

Off-shore and onshore oil and gas exploration, development and production

1. The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry.
2. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented.
3. As committed no drilling activities shall be carried out within 500 m from the water bodies, schools, habitations, historical/heritage monuments recognised by Archaeological Survey of India. The project proponent shall prepare a site specific conservation plan and wildlife management plan in case of the presence of Schedule-1 species in the study area, as applicable to the project, and submit to Chief Wildlife Warden for approval. The recommendations shall be implemented in consultation with the State Forest/Wildlife Department in a time bound manner.
5. Total fresh water requirement shall not exceed 15 m³/day per each drilling well location and will be met from local tankers. Prior permission shall be obtained from the concerned regulatory authority.
6. Each drilling location shall display a board indicating the well number, as specified in this Environmental Clearance. The implementation status of the project shall be submitted to the Regional Office along with the six-monthly compliance report.
7. During drilling phase, effluent of 3.50 KLD/well quantity shall be treated through Mobile ETP and treated water shall be reused for drilling/washing purpose. During production phase, produced water of 30 – 50 KLD/EPU quantity shall be treated in produced water treatment facility of 100 KLD capacity of ETP at EPU-1. Treated produced water shall be disposed of by re-injection in abandoned well at a minimum depth of 1000 meter. SELAN shall ensure that suspended solids and oil & grease content in treated water shall be less than 100 mg/l and less than 10 mg/l respectively before re-injected in to the abandoned well. Produced water generated shall be treated with in 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. Sewage shall be treated in the 2 KLD mobile STP during drilling phase and 5 KLD mobile STP during production phase and the treated water shall be used for dust suppression, landscape, etc.
8. There shall be separate storm water channel and rainwater shall not be allowed to mix with waste water. Alternatively, if possible, pit less drilling be practiced instead of above.
9. During production, storage and handling, the fugitive emission of methane, if any, shall be monitored using Infra-red camera/ appropriate technology.
10. The project proponent also to ensure trapping/storing of the CO₂ generated, if any, during the process and handling.
11. Approach road shall be paved to minimize generation of suspended dust.

12. 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. PP shall replace the old Diesel Gensets with new Sets complying with the latest norms of DG sets notified by CPCB.

13. 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.

14. Drill cuttings separated from drilling fluid shall be adequately washed and disposed in HDPE lined pit. Waste mud shall be tested for hazardous contaminants and disposed according to HWMH Rules, 2016. No effluent/drilling mud 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. Industry shall obtain membership of TSDF site before obtaining CTO and shall dispose the hazardous waste generated at drill site to TSDF approved by GPCB. The chemical additives used for the preparation of DF should have low toxicity as per mysid toxicity or toxicity test. The chemicals used should be bio degradable. Barite used in preparation of drilling fluid (DF) shall not contain $Hg > 1 \text{ mg/kg}$ and $Cd > 3 \text{ mg/kg}$. Total material acquired for preparation of drill site must be restored after completion of drilling operation leaving no waste material at site.

15. 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.

16. Gas produced during testing shall be flared with appropriate flaring device as prescribed by the CPCB. The flare shall be designed as per good oil field practices and OISD guidelines. The stack height of 30 m shall be provided as per the regulatory requirements and emission from the stacks will meet MOEFCC/CPCB guidelines.

17. 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.

18. The project proponent shall develop a contingency plan for H_2S release including all necessary aspects from evacuation to resumption of normal operations. The workers shall be provided with personal H_2S detectors in locations of high risk of exposure along with self-containing breathing apparatus.

19. Blow Out Preventer system shall be installed to prevent well blowouts during drilling operations.

20. 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.

21. PP proposed to allocate Rs. 10.0 Crores towards extended EMP which shall be spent as submitted as per plan. Further, all the proposed activities under extended EMP shall be completed before the commissioning of the plant in consultation with District Administration. All the commitments made in Public Hearing shall be completed within the timeline as per action plan submitted.

22. No lead acid batteries shall be utilized in the project/site.

23. 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.

24. Oil content in the drill cuttings shall be monitored and report & shall sent to the Ministry's Regional Office.

25. 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.

26. 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 MoEF&CC 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.

27. Greenbelt of at least 5-10 m width shall be developed in 300 m^2 (33.33% of EPU) with tree density @ 2500 trees per hectare, mainly along the plant periphery in each EPU site. Indigenous species shall only be planted as part of greenbelt and non-indigenous / alien species shall be replaced with native species. No

	<p>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. 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. Trees shall be planted in the Green Belt under the campaign #Plant4Mother # and uploaded on the MeriLiFE portal (https://merilife.nic.in/)</p>
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3.1.6.2. Standard

1(b)	Off-shore and onshore oil and gas exploration, development and production
General Conditions	
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.
2.	The energy source for lighting purpose shall be preferably LED based, or advanced having preference in energy conservation and environment betterment.
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).
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.
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.
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.
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.
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.
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.
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.
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 to this project.

3.2. Agenda Item No 2:

3.2.1. Details of the proposal

Lube Modernization & Bottom Up-Gradation Project at Mumbai Refinery, Mahul, Mumbai Suburban district, Maharashtra by M/s HPCL by hindustan petroleum corporation limited located at MUMBAI SUBURBAN, MAHARASHTRA			
Proposal For		Fresh EC	
Proposal No	File No	Submission Date	Activity (Schedule Item)
IA/MH/IND2/526155/2025	J-11011/413/2014-IA II (I)	04/04/2025	Petroleum refining industry (4(a))

3.2.2. Project Salient Features

The Project Proponent and the accredited Consultant M/s. Engineers India Limited (NABET Certificate No. NABET/EIA/24-27/RA0359; validity upto 23/05/2027) made a detailed presentation on the salient features of the project and informed that the proposal is for Environmental Clearance of Lube Modernization and Bottom Upgradation project at Mumbai Refinery, B.D. Patil Marg, Mahul, Mumbai-Suburban district, Maharashtra by M/s Hindustan Petroleum Corporation Limited (HPCL).

All project/activity are listed at S.N. 4(a) - Petroleum Refining Industry of Schedule of Environment Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC).

The details of unit capacities and product pattern as under:

Unit Capacities

Units	Capacity in (KTPA)
Existing 9.5 MMTPA Refinery	
CDU/VDU-I	6000
CDU/VDU-II	3500
Naphtha Splitter Unit (NSU)	1222
Naphtha Hydro Treater (NHT)/ Isomerization	325
NHT/Continuous Catalytic Reformer (CCR)	735.6
Prime G+	618
New Fluidized Catalytic Cracking Unit (FCCU)	1277

Old Fluidized Catalytic Cracking Unit (FCCU)	950
Diesel Hydro Desulphurization Unit (DHDS)	2270
Diesel Hydro Treater Unit (DHT)	1300 (Diesel) + 1000 (VGO)
Propane De-asphalting Unit (PDA)	755
Hydrogen Generation Unit (HGU)	65
Proposed Modernization Units	
Integrated Hydrocracker Catalytic De-Waxing Unit (IHCD)	550
Solvent De-asphalting Unit (SDA)	850
Refinery Off-Gas (ROG) Pressure Swing Adsorption (PSA) Unit	16.8 TPD
Sour Water Stripper Unit (SWS)	17 TPH
Amine Regeneration Unit (ARU)	74 TPH

Associated facilities such as utility plants, power plant, tankages and dispatch terminal shall be installed, commensurate with above process capacities.

Product Pattern:

Sl. No.	Particulars	Slate after EC (TPA)	Slate post LMBU (TPA)
Raw material			
1	KUWAIT CRUDE	4000000	-
2	ARAB LIGHT	2000000	1825000
3	BOMBAY HIGH	3500000	3500000
4	BASRAH MEDIUM	-	3500000
5	Das Blend Crude	-	675000
	TOTAL CRUDE	95,00,000	95,00,000
6	RLNG	24000	288000
	Total FEED	95,24,000	97,88,000
Products			
1	LPG	542000	450000
2	HEXANE / SOL	30000	30000
3	SOLVENT	8500	9000

4	BS-VI MS	1683000	1696000
5	LAN	156300	362000
6	SCN	96000	96000
7	MTO	48000	50000
8	SKO	52000	42000
9	BS-VI DIESEL	3442000	3505000
10	ATF	600000	600000
11	HP DAK SOL	-	1000
12	HF HSD	-	2000
13	LDO	-	109000
14	RPO	-	40000
15	150 N Gr-II	76000	80000
16	500 N Gr-II	92000	31000
17	Spindle Oil Gr-II	32000	70000
18	Spindle Oil Gr-I	15000	18000
19	Spindle Oil - 90N	-	26000
20	150 N Gr-I	70000	68000
21	500 N Gr-I	100000	120000
22	Bright Stock	50000	54000
23	IO-100	15000	12000
24	2 CST GR II	-	112000
25	4 CST GR III	-	96000
26	6 CST GR III	-	42000
27	8 CST GR III	-	36000
22	IFO	969000	169000
23	Bitumen	780000	1073000
24	Fuel & Loss	606000	724000

26	Sulfur	61000	65000
		9523800	9788000

MoEF&CC has issued Environmental Clearance to the existing refinery capacity from 7.5 to 9.5 MMTPA vide File No. J-11011/413/2014-IA II (I) dated 31/01/2017. Certified Compliance report of existing ECs has been obtained from Integrated Regional Office, Nagpur vide File No. EC-2527/RON/2024-NGP/13448 dated 13/08/2024.

The present proposal is submitted as per Ministry's OM dated 11.04.2022 issued for granting of Environmental Clearance under para 7(ii)(a) of EIA notification 2006. It was informed by PP that there is no litigation pending against the proposal.

Public hearing is exempted for as per the OM dated 11.04.2022 issued by MoEF&CC under Scenario I (Projects which involve modernization/change of product mix without increase in production capacity but with increase in pollution load).

Total plant area after expansion will remain same as 139.55 Ha. No additional land will be acquired for the modernization project as the same will be done within existing plant premises. Out of the total refinery area (139.55 Ha), 15.59 Ha green area is already developed inside the refinery, HPCL has carried out 12.37 Ha plantation outside of the refinery and Green belt in 18.95 Ha outside refinery is proposed making this total of 46.91 Ha.

HPCL has approached Regional Forest Officer at Kalyan & Thane for the remaining 18.95 Ha for Green Belt development, in view of non-availability of land within Refinery premises. Forest Department has conveyed that this will be executed through a tri-partite agreement between HPCL, Forest Department & the respective third parties (M/s. Lahs Pratishtan and M/s. Savali) within 6 months. The estimated project cost is Rs. 5460.19 Crores and completion schedule of 36 months. Capital cost of EMP would be Rs. 48.7 Crores and recurring cost for EMP would be Rs. 1.95 Crores per annum. Industry proposes to allocate Rs. 3.50 Crores towards extended EMP. Total Employment after modernization will be 180 persons as direct (80) & indirect (100).

There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors within 10 km distance. There are no Reserve forests/protected forests within 10 km distance. Mithi river is located at a distance of 5 Km in North-west direction of the refinery.

Ambient air quality monitoring was concentrations carried out at 8 locations during March to June 2023 and the baseline data indicates the ranges of as: PM₁₀ (72.1-76.5 g/m³), PM_{2.5} (31.3-35.0 g/m³), SO₂ (13.5-14.5 g/m³) and NO₂ (24.5-25.5 g/m³). AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would 15.1 g/m³ and 31.7 g/m³ with respect to SO₂ and NO_x. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

Total 538 m³/hr of fresh water shall be met from the already approved quantity and additional water requirement of 136 m³/hr for proposed modernization project shall be met from treated STP water from BMC there by reducing the fresh water resource. A new Tertiary Treatment Plant of capacity 6 MLD has been considered to treat the treated sewage from BMC to produce DM Water. Existing effluent generation from refinery is 179 m³/hr which is treated through Effluent Treatment Plant (300 m³/hr capacity). Total effluent generation from refinery will be 201 m³/hr including 22 m³/hr from proposed modernization which will be treated through Integrated Effluent Treatment Plant in the refinery. Domestic waste water will be treated in existing STP having 600 m³/day capacity. The Sea cooling water blowdown from the cooling system i.e. 80354 CMD shall be discharged into Sea. Industry shall make arrangements for monitoring temperature of sea cooling water at the outlet point.

Total power requirement of refinery post modernization will be 125 MW (Existing 106 MW + 11.7 MW for SDA & Lobs project + ~ 2.5 MW for ROG-PSA + 4.38 MW for Tertiary Treatment Plant) which will be sourced from internal captive power plant and State Grid. Three (03) numbers of CFBC boilers with capacity 140 TPH, 140 TPH & 125 TPH already installed in the refinery. Two Heat Recovery Steam Generators (HRSG) of capacity 20 & 60 TPH are used to generate HP steam. There are no additional boilers proposed in the modernization project. There is no additional DG sets envisaged for the project and existing DG sets back-up will be utilized.

Details of Process emissions generation and its management:

The SO_x emission of the existing refinery is 12.6 TPD. There will be no additional SO_x emission from the refinery modernization project. However, below mitigation measures will be followed to control the process emissions:

- Use of Low Sulphur Heavy Stock (LSHS) typically containing 0.5 wt % Sulphur as liquid fuel Oil in Heaters/Furnaces and Boilers to control SO₂ emissions from the stacks/chimneys. New furnaces are not designed for FO firing.
- Desulphurized sweet gas with 50 ppm of Sulphur is used as fuel in boilers/ heaters to minimize SO₂ emissions.
- Maximization of Natural gas to be used as fuel in Boilers and Heaters.
- All the furnaces are high efficiency furnaces by design wherein flue gases heat is recovered back to furnaces/heaters in the most optimum manner using pre-heaters. High operational efficiency helps in reduction of fuel consumption thus reducing pollutants emissions namely SO₂ and NO_x in the environment.
- Fluidized Catalytic Cracker Units (FCCU) at HPCL Mumbai Refinery has installed a grass root Flue Gas Scrubbing Unit (FGSU). The FCC units in Mumbai Refinery are the very few FCC units in the country which have this technology. The FGSU treats the flue gases to remove SO_x & SPM by more than 90% thereby resulting in

2.0	Noise Environment	
2.1	Development of Green Belt	Included in 1.1
2.2	Ear Plugs, Ear Muff, Soft Sponge	10.0
2.3	OHC staff for noise monitoring	20.0
2.4	Noise Monitoring	10.0
3.0	Water Environment	
3.1	Rain water harvesting pits (Maintenance)	10.0
3.2	Water Quality Monitoring	10.0
3.3	IETP Maintenance	30.0
3.4	TTP Maintenance	15.0
4.0	Land Environment	
4.1	Solid Hazardous Waste Management	20.0
5.0	Biological Environment	
5.1	Development of Green Belt	Included in 1.1
	Total Amount	195.0

Details of Extended EMP with proposed activities and budgetary allocation:

S. No.	Proposed Activities	Implementation of Extended EMP for Social and Infrastructure development on the basis of physical targets				Allocated Budget (In Lakhs)
		Year 1	Year 2	Year 3	Year 4	
1.	Skill Development for Local Youth and Women at Vasi Naka and Gavanpada villages, Kurla tehsil (Organising Training programmes for Women Driver-4 wheelers, Women Office Assistant)	20.0	20.0	20.0	20.0	80.0
2.	Distribution of Fishnet material to fishermen at Trombay and Mahul villages	30.0	20.0	10.0	10.0	70.0
3.	Improvement of Healthcare Facilities (Distribution of Dialysis machine to Suphala Trust, Chembur)	20.0	15.0	15.0	10.0	60.0
4.	Providing infrastructure facilities in local schools (Digital smart boards to schools)	15.0	20.0	20.0	10.0	65.0

	at Vasi Naka, Mankhurd, Trombay, Chembur villages)					
5.	Support in Social Infrastructure projects in surrounding areas (Garden Renovation at Gavan village, Kurla tehsil, Solar lighting at Vasi Naka & Mankhurd villages)	10.0	20.0	10.0	-	40.0
6.	Solid waste management in nearby areas (transportation of wastes from Gavanpada, Mahul village areas, Kurla tehsil)	10.0	10.0	15.0	-	35.0
Total Expense (Rs. in Lakhs)						350.0
Total Expense (Rs. in Crores)						3.5

The proposal was earlier considered by the EAC (IND-2) in its meeting held on 31/01/2025, wherein the EAC returned the proposal in its present form due to the desired certain requisite information/inputs. Information desired by the EAC and responses submitted by the project proponent are as under:

Sl. No.	ADS Query	Reply from Project Proponent
1.	PP shall submit carbon balance for the entire process.	<p>Fired Heaters are the major sources of carbon emission in an oil refinery. With GoI's vision to achieve Net zero and to minimize carbonaceous emissions across all sectors, maximisation of operational efficiency of fired equipment is an important initiative. In line with this prime mandate, it has been ensured that efficiency of all furnaces in this project has been maximised to the best extent possible, keeping in mind the practical limitations as well as ensuring equipment life.</p> <p>The refinery crude processing capacity will remain same as 9.5 MMTPA. Addition of Solvent De-Asphalting (SDA) unit and Integrated Hydrocracker and Catalytic Dewaxing (IHCD) unit is being proposed in this project. The carbon emission to the environment from new stacks are tabulated below.</p> <p>The fuel efficiencies of the furnaces in proposed project are noted below along with their corresponding carbon emissions for the worst-case scenario (corresponding to Natural Gas firing where the carbon emissions are expected to be maximum in compared to other fuel gas for this project).</p> <hr/> <p>Following effective measures were employed to reduce the carbon emissions for this Project:</p> <ul style="list-style-type: none"> • The highest duty heater in this project is the Hot Oil heater of SDA unit. It was ensured that this heater is designed to minimize the fuel consumption and thereby, reduce the carbon emissions through employing of Air Preheater system. A PH system is a time-tested and proven measure for effective reduction of carbon emission. • Insulation and refractories in design of the furnaces have been optimised to minimize the heat loss across the furnace walls. Minimization of heat loss increases the furnace efficiency with corresponding reduction in furnace carbon emissions. • Reasonable fouling factors have been considered in design of furnaces which ensures that the level of efficiency shall be effectively maintained even after prolonged period of operation. • CO analysers shall be installed which will monitor on the un-combusted hydrocarbons and thus, will alert the operator in case of loss of carbon-rich fuel material. • For IHCD unit heaters, elaborate finned tube convection sections have been designed which ensures that the high value flue gas heat from the radiant section is not wasted, rather, transferred into the refinery network through generation and superheating of MP steam. MP steam is a costly and useful commodity and generation of MP steam in the IHCD furnaces helps in offsetting the steam require

		<p>ment from the overall refinery network.</p> <ul style="list-style-type: none"> • In SDA unit, Thermic Fluid is being used as heating media for process heating and heat tracing of Bitumen pipe lines. Further, electrical heat tracing will be used in offsites instead of steam tracing. Switching to thermic fluid/electrical heat tracing offers environmental benefits by reduction in CO2 emissions by 9186 Tons/Annum. • Refinery Off-gas Pressure Swing Adsorption (ROG-PSA) is being implemented in the project which would recover additional Hydrogen to the tune of ~6 KT PA from Refinery off gases, thereby resulting in reduction of CO2 emission by 47000 Tons/Annum. • With the implementation of above initiatives we would be able to recover approx. 0.056 MMT CO2e per annum, which is ~72% of emitted CO2. 																														
<p>2.</p>	<p>EAC noted that incremental GLCs after the proposed project shall be 15.1 µg/m³ and 31.7 µg/m³ for SO₂ and NO_x respectively which are on the higher side. In this regard, EAC suggested the project proponent to submit the measures taken to curtail the same.</p>	<p>As advised by EAC committee during EC meeting dated Jan 31, 2025 the SO_x and NO_x Emissions from the project were critically reviewed and further minimized by considering use of modern low NO_x burners in furnace and optimizing furnace stack height thereby resulting in reduction of GLC of SO_x and NO_x as tabulated below:</p> <table border="1" data-bbox="472 703 1455 1088"> <thead> <tr> <th rowspan="3">Name of Pollutants</th> <th>Baseline Concentration</th> <th colspan="2">Incremental Concentration</th> <th colspan="2">Resultant ground level concentrations (GLC) Value</th> <th rowspan="3">Allowable Limit as per NAAQS</th> </tr> <tr> <th rowspan="2">in µg/m³</th> <th colspan="2">in µg/m³</th> <th colspan="2">in µg/m³</th> </tr> <tr> <th>Previous</th> <th>Now</th> <th>Previous</th> <th>Now</th> </tr> </thead> <tbody> <tr> <td>SO₂</td> <td>14.5</td> <td>0.626</td> <td>0.554</td> <td>15.126</td> <td>15.054</td> <td>80</td> </tr> <tr> <td>NO_x</td> <td>25.5</td> <td>6.26</td> <td>4.44</td> <td>31.76</td> <td>29.94</td> <td>80</td> </tr> </tbody> </table>	Name of Pollutants	Baseline Concentration	Incremental Concentration		Resultant ground level concentrations (GLC) Value		Allowable Limit as per NAAQS	in µg/m ³	in µg/m ³		in µg/m ³		Previous	Now	Previous	Now	SO ₂	14.5	0.626	0.554	15.126	15.054	80	NO _x	25.5	6.26	4.44	31.76	29.94	80
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<p>3.</p>	<p>PP shall submit the photographs of sensors placed to detect SO_x emissions. PP shall also submit SOP followed for shutting down the plant in case of tripping of Sulphur Recovery Unit.</p>	<p>At HPCL MR, there are 4 number of SRU's each having a capacity of processing 65 TPD of Acid Gas. During present operation, out of the 4 SRU's, one train is spare. Considering the scenario of non-availability of spare SRU train and tripping of any one of running trains, shut down of process units generating H₂S will be initiated and a safe operating procedure is followed to reduce H₂S generation. The major steps are as follows:</p> <ol style="list-style-type: none"> 1. Take Diesel Hydrotreating units on internal circulation and cut off feed to these units. 2. Take Lube Iso-De-waxing unit (LOUP unit) on internal circulation. 3. In above units, all reactors temperature to be positively brought down below 200 Deg C to avoid H₂S generation. Follow MPT criteria wherever applicable. 4. Cut off FCC feed to avoid H₂S, NH₃ generation through sour water. Proceed with normal unit shutdown. 5. Actions 1,2 and 3 will ensure Amine Regeneration Unit and Sour water stripping Unit will not receive Rich Amine and H₂S, NH₃ rich streams from Diesel Hydrotreating, Lube Iso-dewaxing and FCC's. 6. Switch over SRU trains to fuel gas mode. 7. Crude throughput to be reduced accordingly. 8. Units to remain on internal circulation till the issues in SRU are rectified and SRU unit comes back into service. <p>Photographs of sensors installed on SRU stack is submitted.</p>																														
<p>4.</p>	<p>PP shall provide the total fuel used in refinery and the split of FG & FO.</p>	<p>Low Sulphur Refinery Fuel gas, Natural Gas (RLNG), Low Sulphur fuel oil (LSHS) is being used as fuel in furnaces. Naphtha and Natural Gas (RLNG) is used as fuel in Captive Power Plant (CPP) and H₂ generation unit. Fuel consumption details for FY 2023-24 are as follows:</p> <table border="1" data-bbox="491 1984 1436 2089"> <thead> <tr> <th>Fuel type</th> <th>Quantity (MT)</th> <th>Percentage (%)</th> </tr> </thead> <tbody> <tr> <td>Naphtha</td> <td>45746</td> <td>8.7%</td> </tr> <tr> <td>LSHS</td> <td>162741</td> <td>31.2%</td> </tr> </tbody> </table>	Fuel type	Quantity (MT)	Percentage (%)	Naphtha	45746	8.7%	LSHS	162741	31.2%																					
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5.	PP shall submit the measures taken to control fugitive emissions of VOCs.	<p>In order to minimize the fugitive emissions, the following measures are already in place in refinery:</p> <ul style="list-style-type: none"> Ø Minimum number of flanges, valves, etc. Ø High grade gasket material for packing Ø Usage of pumps with Double Mechanical seals for light hydrocarbon services Ø Provisions of floating roof storage tanks Ø Provision of seals in the drains and manholes Ø Petroleum storage tanks are complying to roof requirements as stated in MoE F&CC G.S.R. 186(E) dated March 18, 2008, for minimizing emissions. Ø Hydrocarbon samplings are done in a closed loop system. Ø Refinery IETP is already having the activated charcoal adsorption system for capturing and treatment of VOC. Ø Leak Detection & Repair (LDAR) survey is carried out routinely to minimize fugitive emissions. Ø Hydrocarbon flare is connected to Recovery Gas Compressors for maximizing recovery of vent gases. Ø Vapor Recovery Unit (VRU) is installed in MR-II Tank Truck loading gantry for recovery of hydrocarbon vapor during loading. 																						
6.	PP shall submit the details of ZLD being maintained in the industry.	<p>HPCL Mumbai Refinery Integrated Effluent Treatment Plant (IETP) is equipped with Primary, Secondary and Tertiary treatment (Ultrafiltration followed by RO) for maximizing Recycle of treated water back to Process unit. Approx. 75% of treated water is recycled back to process unit mainly to DM plant. R.O. reject from IETP unit is also recycled back as Fire Water make up. HPCL Mumbai Refinery being a coastal refinery uses Sea Water for all process cooling requirement and as make-up source for Fire Water. Sea Water has TDS of >35,000 mg/L while the IETP RO Reject has TDS ~6000-8000 mg/L. Hence it may be seen that the Sea Cooling Water blowdown effluent is the only discharge out of Refinery.</p>																						
7.	PP shall submit the unit wise break-up of total project cost for Modernisation and Bottoms Upgradation (LMBU) project.	<p>The total project cost is ₹ 5460.19 Crore. The detail cost breakup as submitted to EAC as per DFR for the proposed project is as follows:</p> <table border="1"> <thead> <tr> <th>Unit/Facility</th> <th>Capex (₹ Crore)</th> </tr> </thead> <tbody> <tr> <td>SDA (850 KTPA)</td> <td>369.84</td> </tr> <tr> <td>Integrated Hydrocracker Catalytic Dewaxing (550 KTPA)</td> <td>1301.89</td> </tr> <tr> <td>ARU & SWS</td> <td>143.88</td> </tr> <tr> <td>ROG-PSA</td> <td>115.00</td> </tr> <tr> <td>Utilities & Offsites</td> <td>805.56</td> </tr> <tr> <td>EPCM/PMC fee/License fees/ BDEP fee</td> <td>623.45</td> </tr> <tr> <td>Proprietary equipment & Catalyst</td> <td>357.96</td> </tr> <tr> <td>Other miscellaneous</td> <td>1742.61</td> </tr> <tr> <td>Total Project Cost</td> <td>5460.19</td> </tr> </tbody> </table>			Unit/Facility	Capex (₹ Crore)	SDA (850 KTPA)	369.84	Integrated Hydrocracker Catalytic Dewaxing (550 KTPA)	1301.89	ARU & SWS	143.88	ROG-PSA	115.00	Utilities & Offsites	805.56	EPCM/PMC fee/License fees/ BDEP fee	623.45	Proprietary equipment & Catalyst	357.96	Other miscellaneous	1742.61	Total Project Cost	5460.19
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8.	PP shall recheck the stack height, raw data for ambient air quality monitoring and incremental increase in pollution load.	<p>As advised by EAC during the meeting to explore increase in stack height; the stack height of SDA was increased from 60 m to 65 m to reduce SOx and NOx emissions. Raw data for ambient air quality monitoring was checked and found correct. There will be marginal increase in pollution load in terms of SOx and NOx emission. But the SOx emission will be within the EC stipulated condition i.e. 12.6 TPD.</p>																						
9.	PP shall submit the details of ETP.	<p>Integrated Effluent Treatment Plant (IETP) at HPCL Mumbai Refinery is a state-of-the-art unit having Primary Treatment section (API, TPI, DAF), Secondary treatment section (SBR & MBR unit) followed by Tertiary Treatment (Reverse Osmosis) for maximum recovery. Final treated effluent (permeate) is recycled back as Demineralisation (DM) plant feed</p>																						

		for Steam generation. RO Reject effluent from the plant meets the quantitative and qualitative limits of parameters as stipulated in Refinery 2008 standard. This effluent is recycled back as make up to fire water sump.																														
10.	PP shall submit point-wise compliance table for Ministry's OM dated 11.04.2022 regarding expansion under para 7 (ii)(a).	<p>Compliance to the MoEFCC OM dated 11th April 2022 to qualify the proposed project under clause no. 7(ii)(a) of EIA Notification, 2006 is given below.</p> <table border="1"> <thead> <tr> <th>S. No.</th> <th>Granting EC under Clause no. 7(ii)(a) – OM dated 11/04/2022</th> <th>Compliance</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>The project should have gone through the public hearing process, at least once for its existing EC capacity.</td> <td>The Public Hearing was carried out on 13/05/2016 during expansion of Mumbai refinery capacity from 7.5 to 9.5 MMTPA.</td> </tr> <tr> <td>2.</td> <td>There should not be changed in category of the project from B2 to B1 or A due to proposed modernisation or expansion.</td> <td>The proposed project is category A project. 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14.	PP shall submit clarification for the projected values of SO ₂ and NO _x as given in EIA report submitted for expansion in capacity from 7.5 to 9.5 MTPA as there is no change in emission load of SO ₂ and NO _x .	<p>After post modernisation (Lube expansion and Bottoms up-gradation project), the total crude processing capacity remained at 9.5 MMTPA as per Mumbai Refinery Expansion (MREP) Environmental Clearance. The total SO_x emission from the refinery post modernisation as per MREP EC was limited to 12.6 TPD. The emission will remain same i.e. 12.6 TPD post modernisation project. The detailed SO_x and NO_x emission from different stacks is given below.</p> <table border="1"> <thead> <tr> <th rowspan="2">Existing & Proposed Stacks</th> <th rowspan="2">Stack Nos.</th> <th colspan="2">Post Lube Modernization Project</th> </tr> <tr> <th>SO₂ (TPD)</th> <th>NO_x (TPD)</th> </tr> </thead> <tbody> <tr> <td>FR APS Furnace (11-F-1)</td> <td>S1</td> <td>1.14</td> <td>0.00</td> </tr> <tr> <td>FR VPS, Furnace (24-F-1001)</td> <td>S2</td> <td>0.98</td> <td>0.00</td> </tr> <tr> <td>FR APS, Furnace (11- F-2)</td> <td>S3</td> <td>0.97</td> <td>0.10</td> </tr> <tr> <td>Old FCCU, Furnace (14- F-1)</td> <td>S4</td> <td>0.34</td> <td>0.03</td> </tr> <tr> <td>Old FCCU, Regenerator- FGSU</td> <td>S5</td> <td>0.00</td> <td>0.04</td> </tr> <tr> <td>FRE APS, Furnace (31- F-1)</td> <td>S6</td> <td>1.26</td> <td>0.13</td> </tr> <tr> <td>FRE VPS, Furnace (32- F-1)</td> <td>S7</td> <td>0.43</td> <td>0.10</td> </tr> <tr> <td>DHDS, Furnace (71- F-01)</td> <td>S8</td> <td>0.01</td> <td>0.14</td> </tr> <tr> <td>H2, Reformer (73-F-02)</td> <td>S9</td> <td>0.02</td> <td>0.002</td> </tr> <tr> <td>Old SRU Incinerator (75-F-01)</td> <td>S10</td> <td>0.00</td> <td>0.01</td> </tr> <tr> <td>PDS Furnace (73-F-01)</td> <td>S11</td> <td>0.00</td> <td>0.001</td> </tr> <tr> <td>Boiler (SG-10/11)</td> <td>S12</td> <td>2.54</td> <td>1.45</td> </tr> <tr> <td>Boiler (SG-12)</td> <td>S13</td> <td>1.36</td> <td>0.99</td> </tr> <tr> <td>New FCCU, Furnace (114F-3001)</td> <td>S14</td> <td>0.01</td> <td>0.01</td> </tr> <tr> <td>New FCCU, Regenerator- FGSU</td> <td>S15</td> <td>0.00</td> <td>0.10</td> </tr> <tr> <td>NSU Furnace (101-F-1001)</td> <td>S16</td> <td>0.03</td> <td>0.27</td> </tr> <tr> <td>CCR Inter Heater (102F-1001 & 102 F-2003/2004)</td> <td>S17</td> <td>0.02</td> <td>0.09</td> </tr> <tr> <td>CCR, Interheater 1 & Charge Heater (102F-2001/ 2002)</td> <td>S18</td> <td>0.03</td> <td>0.11</td> </tr> <tr> <td>ISOM NhdT Heater (103F-1001)</td> <td>S19</td> <td>0.00</td> <td>0.01</td> </tr> <tr> <td>Prime G+ Furnace (105F-1001)</td> <td>S20</td> <td>0.00</td> <td>0.04</td> </tr> <tr> <td>DHT Furnace (700F-1001/ 1002)</td> <td>S21</td> <td>1.02</td> <td>0.42</td> </tr> <tr> <td>DHT New SRU Incinerator (704F-4001)</td> <td>S22</td> <td>0.01</td> <td>0.03</td> </tr> <tr> <td>CPP Gas Turbine (GTG-3)</td> <td>S23</td> <td>0.02</td> <td>0.002</td> </tr> <tr> <td>CPP Gas Turbine (GTG-4)</td> <td>S24</td> <td>0.01</td> <td>0.11</td> </tr> <tr> <td>CPP Gas Turbine (GTG-5)</td> <td>S25</td> <td>0.04</td> <td>0.13</td> </tr> </tbody> </table>	Existing & Proposed Stacks	Stack Nos.	Post Lube Modernization Project		SO ₂ (TPD)	NO _x (TPD)	FR APS Furnace (11-F-1)	S1	1.14	0.00	FR VPS, Furnace (24-F-1001)	S2	0.98	0.00	FR APS, Furnace (11- F-2)	S3	0.97	0.10	Old FCCU, Furnace (14- F-1)	S4	0.34	0.03	Old FCCU, Regenerator- FGSU	S5	0.00	0.04	FRE APS, Furnace (31- F-1)	S6	1.26	0.13	FRE VPS, Furnace (32- F-1)	S7	0.43	0.10	DHDS, Furnace (71- F-01)	S8	0.01	0.14	H2, Reformer (73-F-02)	S9	0.02	0.002	Old SRU Incinerator (75-F-01)	S10	0.00	0.01	PDS Furnace (73-F-01)	S11	0.00	0.001	Boiler (SG-10/11)	S12	2.54	1.45	Boiler (SG-12)	S13	1.36	0.99	New FCCU, Furnace (114F-3001)	S14	0.01	0.01	New FCCU, Regenerator- FGSU	S15	0.00	0.10	NSU Furnace (101-F-1001)	S16	0.03	0.27	CCR Inter Heater (102F-1001 & 102 F-2003/2004)	S17	0.02	0.09	CCR, Interheater 1 & Charge Heater (102F-2001/ 2002)	S18	0.03	0.11	ISOM NhdT Heater (103F-1001)	S19	0.00	0.01	Prime G+ Furnace (105F-1001)	S20	0.00	0.04	DHT Furnace (700F-1001/ 1002)	S21	1.02	0.42	DHT New SRU Incinerator (704F-4001)	S22	0.01	0.03	CPP Gas Turbine (GTG-3)	S23	0.02	0.002	CPP Gas Turbine (GTG-4)	S24	0.01	0.11	CPP Gas Turbine (GTG-5)	S25	0.04	0.13
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FR VPS, Furnace (24-F-1001)	S2	0.98	0.00																																																																																																									
FR APS, Furnace (11- F-2)	S3	0.97	0.10																																																																																																									
Old FCCU, Furnace (14- F-1)	S4	0.34	0.03																																																																																																									
Old FCCU, Regenerator- FGSU	S5	0.00	0.04																																																																																																									
FRE APS, Furnace (31- F-1)	S6	1.26	0.13																																																																																																									
FRE VPS, Furnace (32- F-1)	S7	0.43	0.10																																																																																																									
DHDS, Furnace (71- F-01)	S8	0.01	0.14																																																																																																									
H2, Reformer (73-F-02)	S9	0.02	0.002																																																																																																									
Old SRU Incinerator (75-F-01)	S10	0.00	0.01																																																																																																									
PDS Furnace (73-F-01)	S11	0.00	0.001																																																																																																									
Boiler (SG-10/11)	S12	2.54	1.45																																																																																																									
Boiler (SG-12)	S13	1.36	0.99																																																																																																									
New FCCU, Furnace (114F-3001)	S14	0.01	0.01																																																																																																									
New FCCU, Regenerator- FGSU	S15	0.00	0.10																																																																																																									
NSU Furnace (101-F-1001)	S16	0.03	0.27																																																																																																									
CCR Inter Heater (102F-1001 & 102 F-2003/2004)	S17	0.02	0.09																																																																																																									
CCR, Interheater 1 & Charge Heater (102F-2001/ 2002)	S18	0.03	0.11																																																																																																									
ISOM NhdT Heater (103F-1001)	S19	0.00	0.01																																																																																																									
Prime G+ Furnace (105F-1001)	S20	0.00	0.04																																																																																																									
DHT Furnace (700F-1001/ 1002)	S21	1.02	0.42																																																																																																									
DHT New SRU Incinerator (704F-4001)	S22	0.01	0.03																																																																																																									
CPP Gas Turbine (GTG-3)	S23	0.02	0.002																																																																																																									
CPP Gas Turbine (GTG-4)	S24	0.01	0.11																																																																																																									
CPP Gas Turbine (GTG-5)	S25	0.04	0.13																																																																																																									

3. 2. 3. D e l i b e r a t i o n s b y t h e c o			NMP-I Furnace (F-201/202)	S26	0.39	0.10												
			NMP-II Furnace (F-3201/3202)	S27	0.39	0.09												
			NMP-III Furnace (F-4201/4202)	S28	0.39	0.15												
			LR PDA Furnace (F-4101)	S29	0.28	0.04												
			LR IOH Furnace (F-401)	S30	0.03	0.02												
			LOUP Furnace (99F-01/02/03)	S31	0.01	0.07												
			Hydrocarbon Flare (Burning shall be Smokeless)	S32	0.00	0.00												
			Prime G+ Furnace (105-F-5001)	S33	0.00	0.03												
			NHGU PDS Furnace (173- F-1101)	S34	0.03	0.05												
			PNHGU Reformer (173- F-1211)	S35	0.67	0.28												
			NEW IN IHCD/SDA PROJECT		0.01	0.09												
			NEW IN IHCD/SDA PROJECT		0.01	0.07												
			NEW IN IHCD/SDA PROJECT		0.02	0.13												
					12.47	5.43												
15.	PP shall submit details of furnaces where stack height has been adjusted to reduce incremental increase of SO ₂ and NO _x .	There are three number of stacks proposed for the SDA & Lobs upgradation project. In our earlier EIA report, the stack height for two heaters of Lobs project is 65 m and stack height of SDA heater is 60 m. The stack height of SDA heater is increased to 65 m to reduce the SO ₂ and NO _x emission. Also refer our response to query no. 2 and 8 above. Details of furnaces from proposed project is given below.	<table border="1"> <thead> <tr> <th>Unit</th> <th>Furnace Tag</th> <th>Stack Height</th> </tr> </thead> <tbody> <tr> <td>SDA</td> <td>201-F-1001</td> <td>65 m</td> </tr> <tr> <td>IHCD</td> <td>202-F-1001 and 202-F-1101 (two heaters with common stack)</td> <td>65 m</td> </tr> <tr> <td>IHCD</td> <td>202-F-2001 and 202-F-2101 (two heaters with common stack)</td> <td>65 m</td> </tr> </tbody> </table>				Unit	Furnace Tag	Stack Height	SDA	201-F-1001	65 m	IHCD	202-F-1001 and 202-F-1101 (two heaters with common stack)	65 m	IHCD	202-F-2001 and 202-F-2101 (two heaters with common stack)	65 m
Unit	Furnace Tag	Stack Height																
SDA	201-F-1001	65 m																
IHCD	202-F-1001 and 202-F-1101 (two heaters with common stack)	65 m																
IHCD	202-F-2001 and 202-F-2101 (two heaters with common stack)	65 m																
16.	PP shall provide sulphur content in Fuel gas.	The H ₂ S content in Refinery Fuel Gas is generally in the range of 100 ppmw max.																
17.	PP shall submit a clarification for utilization of 25% of permeate from R.O. for cooling along with R.O. rejects.	Refer response to query no. 6 above, 25% of the treated water (RO Reject) is recycled back as Fire water makeup as a substitute of Sea Water as the TDS of IETP RO reject water is much lower compared to Sea Water TDS.																

Committee in previous meetings

N/A

3.2.4. Deliberations by the EAC in current meetings

During deliberations, following issues were discussed:

Fuel type	Existing Refinery	Post LMBU
	Percentage (%)	
Naphtha	8.7%	0.0%
Fuel Oil	31.2%	30.4%

Fuel Gas	60.1%	69.6%
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The committee was satisfied with the response provided by PP on above information. Further, Committee desired to submit the above information in writing. Accordingly, PP has submitted the desired information and EAC found the information/commitments satisfactory.

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 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. 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 Extended EMP 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.

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.

The EAC, after detailed deliberations, **recommended** the project for grant of environmental clearance, subject to compliance of terms and conditions as under, and general terms of conditions at Annexure: -

3.2.5. Recommendation of EAC

Recommended

3.2.6. Details of Environment Conditions

3.2.6.1. Specific

Petroleum refining industry

1. 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.
2. Usage of Naptha shall be phased out within 2 years of grant of EC.
3. The National Emission Standards for Petroleum Oil Refinery issued by the Ministry vide G.S.R. 186(E) dated 18th March, 2008 and G.S.R.595(E) dated 21st August, 2009 as amended from time to time, shall be followed.
4. Volatile organic compounds (VOCs)/Fugitive emissions shall be controlled at 99.997% with effective chillers/modern technology. For emission control and management, use of FG/NG in heater as fuel, adequate stack height, use of Low NOX burners in heater & boiler, continuous stack monitoring, Sulphur recovery plant, etc. shall be installed/ensured.
7. Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.

8. Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm, and solvent transfer to be done through pumps.
9. Process organic residue and spent carbon, if any, shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF.
10. Fly ash should be stored separately as per CPCB guidelines so that it should not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing along with the storm water. Direct exposure of workers to fly ash & dust should be avoided. The ash from boiler shall be sold to brick manufacturers/cement industry.
11. The company shall undertake waste minimization measures as below:
 - a. Metering and control of quantities of active ingredients to minimize waste.
 - b. Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.
 - c. Use of automated filling to minimize spillage.
 - d. Use of Close Feed system into batch reactors.
 - e. Venting equipment through vapour recovery system.
 - f. Use of high-pressure hoses for equipment clearing to reduce wastewater generation.
12. Out of total project area 159.55 ha, Industry has developed greenbelt in 15.59 ha (11.2 %). Further, 12.37 ha (8.9 %) has been developed outside the refinery and Industry has proposed development of additional 18.95 ha (13.6 %) outside the refinery. Existing and proposed greenbelt shall be densified @ 2500 trees per hectare, 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. 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. Trees shall be planted in the Green Belt under the campaign #Plant4Mother# and uploaded on the MeriLiFE portal (<https://merilife.nic.in/>).
13. State Pollution Control Board shall not issue the Consent to Operate (CTO) under Air (Prevention and Control of Pollution) Act and Water (Prevention and Control of Pollution) Act till the project proponent developed the additional 18.95 ha (13.6 %) greenbelt outside the refinery.
14. PP proposed to allocate Rs. 3.50 Crores towards extended EMP which shall be spent as submitted as per plan. Further, all the proposed activities under extended EMP shall be completed before the commissioning of the plant in consultation with District Administration. All the commitments made in Public Hearing shall be completed within the timeline as per action plan submitted.
15. For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.
16. The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Firefighting system shall be as per the norms.
17. Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises. In case of the treated effluent to be utilized for irrigation/gardening, real time monitoring system shall be installed at the ETP outlet.
18. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
19. Process safety and risk assessment studies shall be further carried out using advanced models, and the mitigating measures shall be undertaken/implemented accordingly.
20. The PP should improve the efficiency of ETP Plant and the water discharge should be as per prescribed CPCB Norms. They should also install 24x7 hours monitoring system (of the discharge) and the same should be connected to the server of SCPB/CPCB.

	21. 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 12 th 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.
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3.2.6.2. Standard

4(a)	Petroleum refining industry
General Conditions	
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.
2.	The energy source for lighting purpose shall be preferably LED based, or advanced having preference in energy conservation and environment betterment.
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).
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.
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.
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.
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.
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.
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.

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.
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 to this project.

3.3. Agenda Item No 3:

3.3.1. Details of the proposal

Establishment of Cane Juice/Molasses/Grain based Multi feed Distillery of capacity 400 KLPD with 10000 TCD Sugar Plant, 30 MW Cogeneration unit and 7 MW Captive Power plant from Incineration Boiler, Located at Sy nos. 406/2, 406/3, 406/4, 409/1, 409/2, 409/3, 409/4, 409/5, 411/1, 411/3, 413/1, 413/3, 413/4, 413/5, 413/6, 413/7, 413/8, 413/9, 413/10, 413/11, 414/1, 414/2, 415/6, 415/8, 416/7, Hippargi Village, Nelogi Hobli, Jewargi Taluk, Kalaburagi District by M/s Madhuvan Sugars PVT LTD by MADHUVAN SUGARS PRIVATE LIMITED located at KA LABURAGI,KARNATAKA			
Proposal For		Fresh ToR	
Proposal No	File No	Submission Date	Activity (Schedule Item)
IA/KA/IND2/531106/2025	IA-J-11011/131/2025-IA-II	07/04/2025	Distilleries (5(g))

3.3.2. Project Salient Features

The Project Proponent and the accredited Consultant M/s Ultratech Environmental Consultancy & Laboratory (NABET Certificate No. NABET/EIA/24-27/RA 0378 validity 10.06.2028) made a detailed presentation on the salient features of the project and informed that the proposal is for terms of reference (ToR) for the project Establishment of Cane Juice/Molasses/Grain based Multi feed Distillery of capacity 400 KLPD with 10000 TCD Sugar Plant, 30 MW Cogeneration unit and 7 MW Captive Power plant from Incineration Boiler, Located at Sy nos. 406/2, 406/3, 406/4, 409/1, 409/2, 409/3, 409/4, 409/5, 411/1, 411/3, 413/1, 413/3, 413/4, 413/5, 413/6, 413/7, 413/8, 413/9, 413/10, 413/11, 414/1, 414/2, 415/6, 415/8, 416/7, Hippargi Village, Nelogi Hobli, Jewargi Taluk, Kalaburagi District by M/s Madhuvan Sugars Pvt. Ltd.

All project activities / products are listed at 5(j) sugar, 1(d) Thermal power and '5(g)' Distilleries of Schedule of Environment Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC).

The details of products and capacity as under:

Sr. No.	Unit	Quantity
1	Sugar Unit (TCD)	10000
2	Cogeneration (MW)	30
3	Distillery	
	Ethanol/RS/ENA (KLPD)	400
4	Captive Power generation through incineration boiler (MW)	7.0

It was informed by PP that no litigation is pending against the proposal.

Total land area required is 3,73,626.01 Sq m. Greenbelt will be developed in total area of 1,23,296.58 Sq m, i.e., ~33% of total project area. The estimated project cost is INR 476.54 crores. Total Employment will be 300.

Total land of 373626.01 sq. m. is under possession of the M/s Madhuvan Sugars Pvt. Ltd.

3.3.3. Deliberations by the committee in previous meetings

N/A

3.3.4. Deliberations by the EAC in current meetings

During deliberations, EAC discussed following issues:
Accordingly, the proposal was returned in present form.

3.3.5. Recommendation of EAC

Returned in present form

3.4. Agenda Item No 4:

3.4.1. Details of the proposal

Capacity Expansion of Naphtha Cracker Unit Phase-II (NCU-II), Capacity Expansion of Poly- Propylene (PP) Unit and Setting up a New Pre- Compounded High Density Poly Ethylene (HDPE) Unit at Panipat Naphtha Cracker Complex by INDIAN OIL CORPORATION LTD located at PANIPAT,HARYANA

Proposal For		Fresh EC	
Proposal No	File No	Submission Date	Activity (Schedule Item)
IA/HR/IND2/532180/2025	IA-J-11011/306/2020-I A-II(I)	09/04/2025	Petro-chemical complexes (industries based on processing of petroleum fractions) (5(c))

3.4.2. Project Salient Features

The Project Proponent and the accredited Consultant M/s. ABC Techno Labs India Pvt Ltd. (NABET certificate no. NABET/EIA/2225/RA0290 and validity Nov16, 2025) made a detailed presentation on the salient features of the project and informed that the proposal is for environmental clearance to the project proposed Capacity Expansion of Naphtha Cracker Unit Phase-II (NCU-II), Capacity Expansion of Poly-Propylene (PP) Unit and Setting up a New Pre-Compounded High Density Poly Ethylene (HDPE) Unit at Panipat Naphtha Cracker Complex, Haryana by M/s. Indian Oil Corporation Limited, Panipat Refinery.

All Petro-chemical complexes (industries based on processing of petroleum fractions & natural gas and/or reforming to aromatics) are listed at S.N. 5 (c) of Schedule of Environment Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC).

The details of products and capacity as under:

S l. N o	Plant/Equipment/ Facility	Units	Existing Configur ation	Proposed Configu ration	After Expans ion	Remark
1	C4 Hydrogenation Unit (KT	480	0	480	Capacity in te

S l. N o	Plant/Equipment/ Facility	Units	Existing Configur ation	Proposed Configu ration	After Expans ion	Remark
	C4HU)	A				Capacity in terms of product
2	Butadiene Extraction Unit (BDEU)	KT A	138	15	153	Capacity in terms of product
3	Pyrolysis Gasoline Hydrogenation Unit (PGHU)	KT A	720	0	720	Capacity in terms of product
4	Benzene Extraction Unit (BEU)	KT A	248	40	288	Capacity in terms of product
5	Polypropylene Unit (PPU)	KT A	600	166	766	Capacity in terms of product. Additional 450 KTA PP plant is under construction phase.
6	HDPE Unit	KT A	351	200	551	Capacity in terms of product
7	Swing Unit (LLDPE/HDPE)	KT A	350	0	350	Capacity in terms of product
8	Butene-1 UNIT	KT A	20	0	20	Capacity in terms of product
9	Naphtha Cracker Unit (NCU)	KT A	947	200	1147	Capacity in terms of product
10	Mono Ethylene Glycol (MEG)	KT A	425	0	425	Capacity in terms of product
11	Catalyst Manufacturing	KT A	1500	0	1500	Capacity in terms of product

Ministry/SEIAA has issued Environmental Clearance to the existing capacity vide File No. IA-J-11011/306/2020-IA-II (I) dated 30th January 2023. Certified Compliance report of existing EC has been obtained from Integrated Regional Office, MoEFCC Chandigarh vide File no- 5-01/2018/ENV/eFile dated 04.11.2024. Action Taken Report has been submitted to IRO, MOEFCC, dated November 18,2024 for partial compliances and non-compliances.

Standard Terms of Reference have been obtained vide F. No. J-11011/106/2012-IA.II (I) dated 26th April, 2022. It was informed that there is no litigation pending against the project. Public Hearing for the proposed project had been

conducted by the Pollution Control Board on 08.08.2024 at Panipat Naphtha Cracker Complex, Haryana chaired by Dr. Pankaj, IAS, Additional Deputy Commissioner, Panipat, Haryana.

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

S L N o	Issue in brief	Action plan in brief	Budget allocated and timeline
Issue of public hearing during PH interaction			
1	<p>Shri Kashmir, Baholi</p> <p>He stated that, the Baholi dera is located in approx. 22 acres area which is very near to boundary wall of refinery.</p> <p>•The people are in great misery due to pollution and have submitted various complaints but no action has been taken. There is no proper drainage system.</p> <p>•IOCL should procure our land and we will shift to another place. It is also offered to IOCL to provide same area of land elsewhere in the nearby village. IOCL had procured Baholi village land and rehabilitated Baholi village away except 22 acres of residential area (Baholi Dera) very near to refinery.</p> <p>•He request the administration to resolve grievance and relocate the residents to new location. It is also requested that their 22 acres land may be acquired by the Government.</p>	<p>Response:</p> <p>•Project Proponent replied that IOCL officials have already visited this 22-acre residential area and informed the respective representative that land acquisition by IOCL is under process and asked the interested person to upload their land data on the E-Bhumi Portal developed by Haryana Government for procurement. Monthly meetings are being held by a High-Power Committee under the chairmanship of Chief Secretary, Government of Haryana on this issue. The Haryana Government will finalise the rates of the land. Then IOCL will start land acquisition through the Haryana Government's E-Bhumi Portal.</p> <p>•This process has already been communicated to the people of Dera Baholi during a visit by an IOCL official. IOCL does not procure any private land directly and acquire land through government process.</p> <p>Action Plan:</p> <p>•Haryana Govt. is required to finalize the rate of the land. Once the rate is finalized, IOCL will initiate procurement process through Haryana Government.</p>	<p>Budget: NA Timeline: NA</p>
2.	<p>Shri Kashmir, Baholi</p> <p>•IOCL has recently acquired a land of 300 Acre with price of 2.2 Crores per acre. We have quoted the land price of 1.8 Crore which is 40 Lacs less. We have also requested to Chief Secretary to acquire our 22 Acre land.</p>	<p>Response:</p> <p>ADC, Panipat replied that</p> <p>•The grievances are noted and stated that there is a condition on the land portal that 70% of the land owners of a particular area must agree to the sale of their land. If all the people agree to the sale, then government can go ahead. Since the request is already uploaded in the E-Bhumi Portal, the same will be follow-up by the DLR office. The second point is about pollution. ADC Panipat stated that all the grievances related to pollution shall be resolved on priority. IOCL will also nominate Nodal Officer for prompt action on pollution related grievances.</p> <p>Action Plan:</p>	<p>Budget: NA Timeline: NA</p>

		<ul style="list-style-type: none"> Project Proponent mentioned that they are in touch with DLR office for further proceedings with respect to. land procurement as per procedure of IOCL and Haryana Govt. Panipat Refinery & Petrochemical Complex is committed to comply with all the rules and regulations related to pollution control. All the environmental parameters are being maintained within prescribed limits. Panipat Refinery & Petrochemical complex has planted 8.94 lakhs of trees saplings since inception in surrounding areas. 	
3.	<p>Shri Bhupender Singh, Baholi</p> <ul style="list-style-type: none"> What is the distance of residential area/village from 48% green belt area of IOCL. Our land is 300-400 meter away from the IOCL and may be acquired by IOCL for green belt. IOCL found non-complying for last 5 years as sample was exceeding the prescribed norms in NGT report 	<p>Response:</p> <p>The Project Proponent replied that</p> <ul style="list-style-type: none"> The Green Belt is located within 5 kilometers of plant premises. If any other land is available, then IOCL is ready to do the plantation. If the Green Belt area is more than 5 km away, MoEF&CC will not accept the same. IOCL will acquire the land through government process once the rates are finalized by the government on E-Bhumi Portal. RO-HSPCB replied that the refinery has already deposited Environment Compensation for the past violation found in the NGT report for restoration plan which will be utilized for development of surrounding areas/villages. If there are any suggestions like tree plantation or other development activities same may be shared with Regional Office <p>Action Plan:</p> <ul style="list-style-type: none"> Once Haryana Govt. finalizes the rate of the land, IOCL will initiate procurement process through Haryana Government. 	<p>Budget: NA Timeline: NA</p>
4	<p>Shri Surender Rathi, Baljattan</p> <ul style="list-style-type: none"> As IOCL has acquired panchayat land of Village Baljattan, what steps IOCL is planning to take up for the development of Village Baljattan. 	<p>Response:</p> <p>Project Proponent replied that,</p> <ul style="list-style-type: none"> IOCL will provide an amount of Rs. 10 lakhs per acre to the panchayat for the developmental work of the village and nearby villages. <p>Action Plan:</p> <ul style="list-style-type: none"> Panipat Refinery will provide Lump sum amount of Rs. 10 Lakhs per acre to the Panchayat for the developmental work of the nearby villages, as conveyed during meeting with Hon'ble Chief Minister (Haryana) 	<p>Budget: INR 180 Lacs will be allocated for various developmental works under proposed project. Timeline: 5 years</p>
5	<p>Shri Narender Rathi, Sarpanch, Baljattan</p>	<p>Response:</p> <p>Project Proponent replied that,</p>	<p>Budget: NA Timeline: NA</p>

	<p>What are the employment opportunity for the residents of village Baljattan and nearby villages.</p> <p>All the nearby villages of Khandra, Baljattan, Assan, Baholi, whose land has been acquired by IOCL wants co-operation from IOCL for the development work of villages</p>	<p>Around 250 people are to be permanently employed in the upcoming 03 Nos of projects. Further, apart from permanent employment, indirect employment is always available with nearby villages.</p> <p>The ADC replied that,</p> <p>IOCL should maintain transparency for the funds transfer to the village panchayat and should keep all the detail in the Public Domain in consultation with the Sarpanch of the nearby villages. Further, the Sarpanch can submit proposal for any skill centre or development work. The District Administration will ensure that same work is taken up by the IOCL under CSR</p> <p>Action Plan:</p> <p>As central PSU, Panipat Refinery and Petrochemical Complex (PRPC) will provide employment to around 250 people in the upcoming new 03 nos. projects as per prevailing recruitment policy of IOCL and Supreme Court guideline. In addition to above, indirect employment is always available with nearby villages.</p> <p>With regards to development, Panipat Refinery will ensure maintaining transparency for the funds transfer to the village panchayat and shall keep all the details in the public Domain in consultation with the sarpanch of the nearby villages. Further, proposal, if any, received from the sarpanch of nearby village, will be considered for implementation as per procedures and guidelines of IOCL</p>	
6	<p>Sarpanch, Baholi Village</p> <p>That there is no cooperation in the IOCL side for the development of village Baholi. I had requested IOCL many times but no steps has been taken by IOCL for the betterment of village. Two day back, the waste is dump on the road from the 2 G Ethanol Plant which cause problem to the nearby residents.</p> <p>Gas is released by IOCL due to which all the crops become red. What steps has been taken by IOCL in this regard.</p> <p>In Baholi, sewage line is choked. Application is submitted to District Administration and IOCL, but nothing has been done yet. IOCL has deposited required amount in the account of</p>	<p>Response:</p> <p>ADC, Panipat directed RO PCB and IOCL to ensure that no waste is dump in the village lands. RO PCB to take action against the violators who has dumped the waste on the village land within one week.</p> <p>The ADC, Panipat directed CMO Panipat to organized health checkup camp in the nearby villages within 7 days. If there is any violation on part of IOCL then strict action will be taken.</p> <p>Project Proponent stated that as far as the work on the sewerage line is concerned, a portion of the line is still occupied by the villagers, who are not allowing the work to be completed. Project Proponent also informed that at the sewerage line has already been cleaned. Further, health camps are organized in the 14 surrounding villages. ADC Panipat assure that matter will be taken up and said amount will be released in the Gram Panchayat account.</p> <p>Action Plan:</p> <p>IOCL, Panipat Refinery & Petrochemical Complex (PRPC) is already organizing health camps in the 14 nos. surrounding villages.</p>	<p>Budget: INR 40 Lacs (included in total CER cost)</p> <p>Timeline: 5 years</p>

	<p>DC, Panipat which is yet to be released in the account of Gram Panchayat Baholi.</p>	<p>Also, in future, PRPC will organize health camps for welfare of the people of nearby villages.</p> <p>Currently one Mobile Medical Unit is operating in nearby village once a fortnight. This Mobile unit has one Doctor & paramedical staff with basic medicines.</p>	
7	<p>Sarpanch, Singhipura-Sithana Village</p> <p>He mentioned that,</p> <p>Pollution is at the alarming condition. For the age group of 5-70 respiratory problem has increased and use of inhalers is common now a days. After 2007, this problem started as the numbers of the plants in IOCL has increased. No action has been taken by IOCL</p>	<p>Response:</p> <p>The ADC Panipat replied that,</p> <p>Joint action is to be taken in this regard by the Gram Panchayat and IOCL. Gram Panchayat to ensure no stubble burning. IOCL to implement its AC. II measure. District Administration will release the fund deposited by the IOCL to the concerned Gram Panchayat for the development works.</p> <p>The project proponent replied that,</p> <p>In the nearby villages like Baholi, Sithana Singpura, Baljattan etc, lot of development works have been carried out. Last year, a project to supply drinking water to the neighboring villages was implemented. An SS tank and an RO machine were installed for drinking water supply.</p> <p>Action Plan:</p> <p>Panipat Refinery & Petrochemical Complex (PRPC) is already monitoring ambient air quality in real time basis through the online analyzers installed in various ambient air quality monitoring stations installed in and around PRPC.</p>	<p>Budget: NA Timeline: NA</p>
8	<p>Shri Bhupinder Singh, Regional Officer, HSPCB, Panipat</p> <p>RO HSPCB Panipat suggestions with respect to the subject mentioned new upcoming projects: -</p> <p>Online Monitoring Device installed by the upcoming 3 Nos projects and same is to be connected with CPCB and HSPCB server.</p> <p>Project Proponent is to comply with the CAQM directions for DGS sets and C&D sites.</p> <p>Unit to install Leakage Detector to avoid any kind of accident.</p>	<p>Response:</p> <p>Project Proponent is to comply with the suggestions of RO, PCB.</p> <p>Action Plan:</p> <p>Panipat Refinery & Petrochemical Complex (PRPC) will ensure installation of Online monitoring devices at the relevant locations of all the upcoming 3 nos. project. The same will be connected with CPCB and HSPCB online portals. PRPC will comply with the CAQM directions as and when issued.</p> <p>Leakage detectors will be installed at the relevant locations of all the upcoming 3 nos. project.</p>	<p>Budget: NA Timeline: NA</p>

No written complaint/ grievance/ objection/ representation was received.

Total plant area after expansion will be 211 Ha (existing plant area 211 Hectares and additional land required 0 Hectares for proposed capacity expansion) which is under possession of the company and converted to industrial use/ No additional land will be acquired for the expansion project as the same will be done within existing plant premises. Greenbelt is developed in 85 Hectares i.e. 40% of the total plant area has already been developed as greenbelt plantation outside the battery limit & and the same will be maintained under greenbelt & plantation in and around plant premises. The estimated project cost is Rs.7912 Crores. Capital cost of EMP would be Rs.77.85 Crores and recurring cost for EMP would be Rs. 7.65 Crores per annum. Industry proposes to allocate Rs. 1.8 Crores towards extended EMP (Corporate Environment Responsibility). Total Employment will be 50 nos persons as direct & indirect for the proposed project.

There are No national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance. Western Yamuna Canal is at a distance of 1.9 Km for which NOC has been obtained from State Irrigation Department vide letter no. Q0Q2023G483 dated 18th July 2023.

Ambient air quality monitoring was carried out at 8 locations during 15th Feb 2023 to 12th May 2023 and the baseline data indicates the ranges of concentrations as: PM₁₀ (32 -82 g/m³), PM_{2.5} (21-48 g/m³), SO₂ (5-17 g/m³) and NO_x (12-29 g/m³). AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.01 µg/m³, 0.21 µg/m³ and 0.151 µg/m³ with respect to PM₁₀, SO₂ and NO_x. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

Total water requirement will be 83,724 CMD (fresh water requirement is 76,344 CMD and recycled water is 7,380 CMD) which will be met from "MUNAK regulator on Western Yamuna Canal". NOC has been obtained from irrigation department vide letter no. Q0Q2023G483 dated 18th July 2023 and validity - Nil. Additional Effluent of 1200 CMD quantity will be treated through proposed new Effluent Treatment Plant of capacity 3600 KLPD. STP of capacity NIL 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.

Total power requirement after proposed expansion will be 173 MW which will be sourced from State Power Network. NOC for power requirement from State Grid has been obtained vide letter no. Nil dated Nil. 5 TPH Regasified Liquefied Natural Gas (RLNG) fired Incinerator will be installed. APCE "Scrubber followed by Water Scrubber" with a stack of height of 60 m will be installed for controlling the VOC.

Details of Process emissions generation and its management:

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

Solid Waste details and disposal methods:

Sl. No.	Name of waste	Source of generation	Disposal Method	Estimated Quantity
1	Domestic Waste	Canteen Waste	In line with municipal solid waste disposal guidelines	16.66 TPA
2	Waste paper and plastic packaging material	Store	Respective Authorized recyclers	21 TPA
3	Electrical and electronic wastes	Maintenance of electrical and electronic equipment	Authorized recyclers	30 TPA
4	Used lead-acid batteries	From UPS for instrument power supply	Exchanged against supply of new batteries	7 TPA

Hazardous waste details

Sl. No.	Name of Waste	Category	Source of generation	Existing Generation	Proposed Generation	Total Generation	Disposal Methodology
1	Spent Catalyst (PGH U-PyGas hydrolysis Unit)	1.6	NCU Process	78 MT in 05 years	20 MT in 05 years	98 MT in 05 years	To Authorized Recycler
2	Spent Catal	1.6	NCU Process	80 MT in 03	20 MT in 03	100 MT in 03	To Authorized

Sl. No.	Name of Waste	Category	Source of generation	Existing Generation	Proposed Generation	Total Generation	Disposal Methodology
	yst (Acetylene converter)			years	years	years	Recycler
3	Spent Catalyst (C4HU Bed)	1.6	NCU Process	14 MT in 03 years	4 MT in 03 years	18 MT in 03 years	To Authorized Recycler
4	Spent Catalyst (MAPD Reactor)	1.6	NCU Process	18 MT in 07 years	5 MT in 07 years	23 MT in 07 years	To Authorized Recycler
5.	HDPE (New)	1.6	HDPE processes	0	52.85 MT/Annum	52.85 MT/Annum	To Authorized Recycler
6	PP Spent Oil	1.3	PP unit	5 MT/Month	1.5 MT/Month	6.5 MT/Month	To Authorized Recycler
7	ETP Sludge	1.3	ETP	60 MT/Month	30 MT/Month	90 MT/Month	To TSDF Operator

If greenfield project, Total land of 15.8 Hectares is under possession of the company and land use conversion has been completed vide asset no. 10000002 dated 04.12.2001.

Capital cost and recurring cost of EMP are given below:

Sl. No	Description	Capital cost (lakhs INR)	Recurring cost after expansion (lakhs INR per annum)
1	Stack and ambient air monitoring station package	50	20
2	New ETP with ZLD system	7700	600
3	Rain water harvesting measures	6	5
4	Environment Monitoring, stack monitoring and Management	14.64	26.72
5	Solid and Hazardous Waste Management (Membership & Facility development) cost	--	5
6	Occupational Health & Safety budget	15	8
7	Green Belt	--	100
	Grand Total	7785.64	764.72

Details of Extended EMP with proposed activities and budgetary allocation:

Sl. No	Proposed Activities	Unit (Number)	Unit Cost (In Lacs INR)	Proposed Budget (INR Lacs)

1	Infrastructure creation in Govt. school of nearby vil lages	5	10	50	
2	Classroom construction of nearby Govt. schools	5	12	60	
3	Medical Infrastructure creation in nearby Communi ty Health Centre of nearby villages	2	20	40	
4	Construction of drain system in nearby villages	10	2	20	
5	Promoting Eco-friendly behaviour through use of S olar Energy in 2 schools	2	5	10	
Total				180	

3.4.3. Deliberations by the committee in previous meetings

N/A

3.4.4. Deliberations by the EAC in current meetings

During deliberations, following issues were discussed:
Accordingly, the proposal was returned in present form.

3.4.5. Recommendation of EAC

Returned in present form

3.5. Agenda Item No 5:

3.5.1. Details of the proposal

Amendment in Existing Environment Clearance letter dated 13th August, 2019 w.r.t change in production capac ity of Fibre (VSF & Excel) at Village: Kumarapatnam, Taluka: Ranebennuru, District: Haveri, Karnataka by M/s. Grasim Industries Limited by GRASIM INDUSTRIES LIMITED located at HAVERI,KARNATAKA			
Proposal For		Amendment in EC	
Proposal No	File No	Submission Date	Activity (Schedule Item)
IA/KA/IND2/533416/2025	IA-J-11011/371/2006-IA II (I)	09/04/2025	Manmade fibers manufacturi ng (5(d))

3.5.2. Project Salient Features

The proposal is for amendment in the Environmental Clearance granted by the Ministry vide letter no. IA-J-11011/371/2006-IA II (I) dated 13th August, 2019 for the project Proposed Expansion of Fibre Plant, Pulp Plant, Captive Power Plant and setting up Excel Fibre Plant at Village: Kumarapatnam, Taluka: Ranebennur, District: Haveri, Karnataka by M/s. Grasim Industries Limited (GIL).

The project proponent has requested for amendment in the EC with the details are as under:

S. No.	Product	UOM	Existing EC Granted Capacity {As per EC dated 13 th Aug., 2019}	Proposed Amendment	Total Capacity After Amendment	Remarks
A.	Main Products					
1.	Viscose Staple Fibre	TPA	1,75,200	(-) 18250	1,56,950	Reduction in capacity by 50 TPD / 18250 TPA
2.	Excel Fibre (Solvent Spun Cellulosic Fibre)	TPA	36,500	(+) 18250	54,750	Increase in capacity by 50 TPD / 18250 TPA
3.	RG Pulp	TPA	1,48,800	No change	1,48,800	No Change
4.	CPP	MW	50	No change	50	No Change
B.	Associated Products					
	Sulphuric Acid*	TPA	1,50,220	(-) 4220	1,46,000	Reduction in capacity
	Carbon-di-Sulphide*	TPA	28,730	(-) 2993	25,375	Reduction in capacity
	Recovery Boiler	MW	20	No change	20	No Change
C.	By- Product					
	Anhydrous Sodium Sulphate*	TPA	1,38,410	(-) 144	1,23,992	Reduc

S. No.	Product	UOM	Existing EC Granted Capacity {As per EC dated 13 th Aug., 2019}	Proposed Amendment	Total Capacity After Amendment	Remarks
				18		tion in capacity
Note: *EC is not required as per EIA Notification, 2006; as amended from time to time.						

Details of the other amendment required in EC letter corresponding to the proposed amendment are as under:

S. No.	Para of EC issued by MoEF&CC	Description {As per EC dated 13 th Aug., 2019}	To be revised/ read as	Justification/ reasons
1.	Point No. 2, Page no. 1	The Ministry of Environment, Forest and Climate Change has examined the proposal for environmental clearance to the project for expansion of Fibre Plant from 87,600 to 1,75,200 TPA, Pulp Plant from 74,400 to 1,48,800 TPA, Captive Power Plant from 20 to 50 MW and setting up Excel Fibre Plant of capacity 36,500 TPA at Village: Kumarapatnam, Taluka: Ranebennur, District: Haveri (Karnataka) by M/s. Grasim Industries Ltd. in an area of 431.36 ha at Village Kumarapatnam, Taluka Ranebennur, District Haveri (Karnataka).	The Ministry of Environment, Forest and Climate Change has examined the proposal for environmental clearance to the project for expansion of <i>Viscose Staple Fibre Plant from 87,600 to 1,56,950 TPA</i> , RG Pulp Plant from 74,400 to 1,48,800 TPA, Captive Power Plant from 20 to 50 MW and setting up <i>Excel Fibre Plant of capacity 54,750 TPA</i> at Village: Kumarapatnam, Taluka: Ranebennur, District: Haveri (Karnataka) by M/s. Grasim Industries Ltd. in an area of 431.36 ha at Village Kumarapatnam, Taluka Ranebennur, District Haveri (Karnataka).	Looking to the new generating demand of the market for special type of fibres with higher tenacity which can work on high-speed machines, impart different feel, look, etc. GIL has carried out extensive research and put in lot of efforts, which is spread over lost many years, and have been successful in developing New Solvent Spinning Process for production of Cellulosic Fibre.
2.	Point no. 4, Line no. 3, Page no. 2	The estimated project cost is Rs. 2550 Crores. Total capital cost earmarked towards environmental pollution control measures is Rs. 600 crores and the recurring cost (O&M) will be Rs. 6 crores per annum.	The estimated project cost is <i>Rs. 2669 Crores</i> . Total capital cost earmarked towards environmental pollution control measures is Rs. 600 crores and the recurring cost (O&M) will be Rs. 6 crores per annum.	Increase in Excel Fibre Capacity in lieu of reduction in VSF capacity.
3.	Point no. 6, 1 st Para, Page no. 2	Total fresh water requirement is estimated to be 97,200 cum/day which will be reduced to 87,480 cum/day, proposed to be met from Tungabhadra River.	Total fresh water requirement is estimated to be <i>84,680 cum/day</i> , proposed to be met from Tungabhadra River.	Reduction in VSF capacity.
4.	Point no. 6, 2 nd Para, Page no. 2	Effluent of 72,468 cum/day generated from industrial operations shall be treated in the existing ETPs by enhancing their capacities, and the treated effluent	Effluent of <i>69,921 cum/day</i> generated from industrial operations shall be treated in the existing ETPs by enhancing its capacity, and the treated effluent will	Reduction in VSF capacity.

		ent will be discharged to Tungabhadra River.	ll be discharged to Tungabhadra River.	
5.	Point no. 10, Page no. 2	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 to the project for Expansion of Fibre Plant from 87,600 to 1,75,200 TPA, Pulp Plant from 74,400 to 1,48,800 TPA, Captive Power Plant from 20 to 50 MW and setting up Excel Fibre Plant of capacity 36,500 TPA by M/s. Grasim Industries Ltd. at Village Kumarapatnam, Taluka Ranebennur, District Haveri (Karnataka),	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 to the project for <i>Expansion of Viscose Staple Fibre from 87,600 to 1,56,950 TPA</i> , RG Pulp Plant from 74,400 to 1,48,800 TPA, Captive Power Plant from 20 to 50 MW and setting up <i>Excel Fibre Plant of capacity 54,750 TPA</i> by M/s. Grasim Industries Ltd. at Village Kumarapatnam, Taluka Ranebennur, District Haveri (Karnataka),	Looking to the new generating demand of the market for special type of fibres with higher tenacity which can work on high-speed machines, impart different feel, look etc., GIL has carried out extensive research and put in lot of efforts, which is spread over lost many years, and have been successful in developing New Solvent Spinning Process for production of Cellulosic Fibre.
6.	Point no. 10, Condition (ii i), Page no. 3	The treated effluent Of 72448 cum/day shall conform the standards prescribed under the Environment (Protection) Rules, 1986 for discharge into the Tungabhadra River. Necessary permission for discharge shall be obtained from the concerned regulatory authority.	The treated effluent Of 69,921 cum/day shall conform the standards prescribed under the Environment (Protection) Rules, 1986 for discharge into the Tungabhadra River. Necessary permission for discharge shall be obtained from the concerned regulatory authority.	Reduction in VSF capacity.
7.	Point no. 10, Condition (vi i), Page no. 3	Total fresh water requirement shall not exceed 87,480 cum/day proposed to be met from Tungabhadra River. Prior permission in this regard shall be obtained from the concerned regulatory authority.	Total fresh water requirements shall not exceed 84,680 cum/day proposed to be met from Tungabhadra River. Prior permission in this regard shall be obtained from the concerned regulatory authority.	Reduction in VSF capacity.

3.5.3. Deliberations by the committee in previous meetings

N/A

3.5.4. Deliberations by the EAC in current meetings

During deliberations following issues were emerged:

After detailed deliberations, EAC **recommended** the proposal for amendment in EC. However, all other terms and conditions stipulated in existing EC vide letter no. IA-J-11011/371/2006-IA II (I) dated 13th August, 2019 shall remain unchanged.

3.5.5. Recommendation of EAC

Recommended

3.5.6. Details of Environment Conditions

3.5.6.1. Specific

Manmade fibers manufacturing	
1.	NA

3.6. Agenda Item No 6:

3.6.1. Details of the proposal

Expansion of sugarcane crushing capacity from 5000 TCD to 15000 TCD to produce sugarcane syrup/Crystal sugar, Cogeneration plant of 30 MW and Expansion of distillery from 200 KLPD to 500 KLPD with multi feedstock (Sugar syrup/B / C - Heavy Molasses/ Grain) to produce Ethanol/ENA and Captive power plant from 7.5 MW to 13 MW by M/s. Mellbro Sugars Pvt. Ltd. by mellbro sugars private limited located at BAGALKOTE,KARNAT AKA			
Proposal For		Fresh EC	
Proposal No	File No	Submission Date	Activity (Schedule Item)
IA/KA/IND2/533451/2025	J-11011/380/2017-IA-II(I)	09/04/2025	Distilleries (5(g))

3.6.2. Project Salient Features

<p>PP has requested through email on 02.05.2025 to excuse them from the meeting as the CCR for the proposed project has been expired.</p> <p>In view of the above, EAC suggested to return the proposal in present form.</p>
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3.6.3. Deliberations by the committee in previous meetings

N/A

3.6.4. Deliberations by the EAC in current meetings

<p>In view of the above, EAC suggested to return the proposal in present form.</p> <p>Accordingly, the proposal was returned in present form.</p>
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3.6.5. Recommendation of EAC

Returned in present form

3.7. Agenda Item No 7:

3.7.1. Details of the proposal

Proposed 150 KLD Grain based Fuel Ethanol Distillery Plant under EBP program at Village & P.O. - Gorla, Tehsil – Matanhail District – Jhajjar, Haryana by M/s K2 Ethanol Pvt. Ltd. by k2 ethanol pRIVATE limited located at JHAJJAR,HARYANA			
Proposal For		Amendment in ToR	
Proposal No	File No	Submission Date	Activity (Schedule Item)
IA/HR/IND2/513507/2024	IA-J-11011/103/2025-IA-II	15/04/2025	Distilleries (5(g))

3.7.2. Project Salient Features

The proposal is for amendment in the Terms of Reference (ToR) granted by the SEAC Haryana vide letter no. SIA/HR/IND2/497063/2024 dated 19.10.2024 for the proposed 150 KLD Grain based Fuel Ethanol Distillery Plant under EBP program at Village & P.O. - Gorla, Tehsil – Matanhail, District – Jhajjar, Haryana by M/s K2 Ethanol Pvt. Ltd.

The project proponent has requested for amendment in Terms of Reference with the details are as under:

Sr. No.	Para of earlier ToR issued by MOEF & CC	Details as per earlier ToR	To be revised	Justification/reason
1.	Change in plot area	61555 sqm	44000 sqm	-
	Reduction in quantum of industrial effluents generated	852 KLD	849 KLD	-
	Reduction in quantum of fresh water required	716 KLD	652 KLD	-
	Proposed Green Belt area	20313 sqm [33% of plot area]	14520 sqm [33% of plot area]	-
	Boiler Details – •No. of boiler & capacity •Fuel	•1 @ 35 TPH •Biomass and/or coal	•1 working +1 standby @ 35 TPH each •Biomass only	-

3.7.3. Deliberations by the committee in previous meetings

N/A

3.7.4. Deliberations by the EAC in current meetings

During deliberations, EAC discussed following issues:

3.7.5. Recommendation of EAC

Returned in present form

3.8. Agenda Item No 8:

3.8.1. Details of the proposal

Environment Clearance for Proposed 1 MMTPA Bio Fuel Complex Located Near Kajurda Village, Taluka Khambhaliya, District Dev Bhumi Dwarka, Gujarat by M/s. Essar Future Energy Limited by ESSAR FUTURE ENERGY LIMITED located at DEVBHUMI DWARKA, GUJARAT			
Proposal For		Fresh ToR	
Proposal No	File No	Submission Date	Activity (Schedule Item)
IA/GJ/IND2/534414/2025	IA-J-11011/152/2025-IA-II	18/04/2025	Petroleum refining industry (4(a))

3.8.2. Project Salient Features

The Project Proponent and the accredited Consultant M/s. Kadam Environmental Consultants (NABET certificate no. NABET/EIA/2326/RA 0303, Issued on 11-10-2023, valid up to 19-03-2026) made a detailed presentation on the salient features of the project and informed that the proposal is for Terms of Reference (TOR) to the project "Proposed 1 MMTPA Bio Fuel Complex Located Near Village Kajurda, Taluka Khambhaliya, District Dev Bhumi Dwarka, State Gujarat" by M/s. Essar Future Energy Limited.

All project activities / products are listed at S.N. 4(a) Petroleum Refining Industry of Schedule of Environment Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC).

The details of products and capacity as under:

Sr.No.	Product Name	Quantity TPA
1	Sustainable Aviation Fuel	9,31,682
2	Hydrotreated Vegetable Oil	
3	Naphtha	71,254
	Total	10,02,936

It was informed by PP that no litigation is pending against the proposal.

Total land area required is 84.736 hectares. Greenbelt will be developed in total area of 27.9609 hectares i.e., ~33% of total project area. The estimated project cost is INR 5100 Crores. Capital cost and recurring cost for EMP will be determined during detailed EIA Study. Industry proposes to allocate Cost towards Extended EMP (Corporate Environment Responsibility) Will be determined during detailed EIA Study. Total Employment will be as under:

◆ During Operation Phase (Permanent – 150 & Contract – 200)

◆ During Construction Phase (Permanent – 100 & Contract – 2000)

There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, and Wildlife Corridors etc. within 10 km distance. Reserve Forests/Protected Forests: Reserved Forest at distance of 3.24 km in WSW direction. There is no National Parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance. Marine National Park/ Marine Sanctuary is located at 10.22 km in NNW direction. The project site is located 45.92 Km from notified ESZ (Barda Wildlife Sanctuary). Conservation plan for schedule I species reported if any will be submitted in EIA study. Water bodies: Sinhan Talav is at a distance of 2.11Km in SW direction, Sinhan River is at distance of 2.80 Km in WSW direction, Phuljar River is at distance of 7.83 Km in ENE direction, Ghi River is at distance of 10.36 Km in WSW direction and Arabian Sea at a distance of 8.10 km in NW direction.

Ambient air quality monitoring has been carried out at 10 locations. Baseline AAQ results and AAQ modelling study for point source emissions indicating the maximum incremental GLCs after proposed project will be included in EIA report.

Total fresh water requirement will be 3200 CMD which will be met from Essar Power Gujarat Limited (EPGL). For which, willingness letter from M/s EPGL will be provided in EIA report. Effluent of 1769 CMD quantity will be treated through Effluent Treatment Plant of capacity 2040 KLPD. STP of capacity 30 KLPD will be installed to treat 25 CMD 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.

Power requirement will be 20 MW and will be met from grid of Pashchim Gujarat Vij Company Limited. NOC for power requirement from State Grid will be obtained and included in EIA report. 50 TPH Natural Gas fired boiler will be installed. APCE such as Low NOx Burner, Usage of clean Fuel, adequate stack/vent height will be provided to meet applicable norms prescribed by GPCB/CPCB/MOE&F. 1.5 MVA Gas Gen set will be used as standby during power failure and stack height (30 m) will be provided. Further details of all flue gas stacks with mitigation measures will be incorporated in EIA Report

Details of process emissions and its management:

- All Process vents will be routed through flare system for complete combustions.
- Best available engineering practices shall be followed during project design and detailed engineering of the proposed complex including best operating techniques to monitor and control of fugitive emissions.
- Sensors for detecting leakages will be provided at strategic locations.
- A Leak Detection and Repair (LDAR) program will be implemented for monitoring and immediate control of fugitive emissions.

Details of Solid waste, Hazardous & other waste generation and its management: Waste Hierarchy principles will be adopted for effective waste management.

- Chemical sludge from wastewater treatment plant, Spent Catalyst, Spent clay containing oil (Spent Earth), Oil sludge or emulsion (Gum), Spent Adsorbent, MEE Salt, Used / Spent Oil, Empty barrels/ containers/ liners contaminated with hazardous chemicals/ wastes, Contaminated cotton rags or other cleaning materials, Contaminated Insulation Waste will be generated and will be disposed off as per Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016

- STP sludge will be generated and will be used as manure in landscaping/ greenbelt

Total land of 84.736 Hectares is under possession of the M/s. Essar Power Gujarat Limited (EPGL). The willingness letter for land allotment from EPGL has been obtained vide letter dated 12/02/2025.

The proposed project is outside CRZ area based on GCZMP map as per CRZ notification 2011.

3.8.3. Deliberations by the committee in previous meetings

N/A

3.8.4. Deliberations by the EAC in current meetings

During deliberations, EAC discussed following issues:

Accordingly, the proposal was deferred for want of above additional information. Above all additional information shall be submitted online to the PARIVESH portal for further consideration by EAC.

3.8.5. Recommendation of EAC

Deferred for ADS

Day 2 -07/05/2025

3.1. Agenda Item No 1:

3.1.1. Details of the proposal

Application for Amendment in Environmental Clearance for a reduction in the total plot area of M/s Shri Ambalika Sugar Pvt. Ltd. located at Village Baradgaon Sudrik, Ambalika Nagar, A/P Jagdamba Factory, Taluka Karj

at, District Ahmednagar, Maharashtra. by SHRI AMBALIKA SUGAR PRIVATE LIMITED located at AHMED NAGAR, MAHARASHTRA			
Proposal For		Amendment in EC	
Proposal No	File No	Submission Date	Activity (Schedule Item)
IA/MH/IND2/523627/2025	J-11011-35-2014-IA-II-I	21/04/2025	Distilleries (5(g))

3.1.2. Project Salient Features

The proposal is for amendment in the Environmental Clearance granted by the Ministry vide letter no. dated 01/12/2020 for the project Amendment in environmental clearance granted for Expansion of Distillery unit from 60 KLPD to 150 KLPD & Sugar unit from 7500 TCD to 12000 TCD located at Village Ambika Nagar, A/P Jagdamaba Factory, Taluka Karjat, District Ahmednagar, Maharashtra by M/s Shri Ambalika Sugar Pvt. Ltd.

S.N.	Particular	Existing in sq.m.	% of Existing Plot area	Proposed after the amendment in sq.m.	% of Proposed Plot area
1	Plot area	1275317.81	-	688000	-
2	Built-up (Ground coverage area)	209497.3	16.43%	189299.03	27.51%
3	Greenbelt area	465655.04	36.51%	227040	33%
4	Parking area	135361.88	10.61%	68800	10.0%
5	Area under the road	153250.74	12.01%	93135.16	13.54%
6	Open Space	311552.85	24.43%	109725.81	15.94 %

The project proponent has requested for amendment in the EC with the details are as under:

S. No.	Para of EC issued by MoEF&C	Details as per the EC	To be revised/ read as	Justification/ reasons
1.	Paragraph 2	Area: 1275317.81 Sq.m.	Area: 688000 Sq.m.	The remaining 5,87,317.811 sq. m. land parcel was on the based-on agreement for sale, which could not be executed because it's a Class II land which cannot be further converted into Industrial land
2.	Paragraph 4	Greenbelt area 503619 sq.m.	Greenbelt area 227040 sq.m.	Reduction in plot area will reduce the greenbelt area as well
3	Paragraph 6	Water requirement: 5760 CMD	Water requirement: 4274.31 CMD	Reduction in greenbelt will result in water consumption of greenbelt as well

3.1.3. Deliberations by the committee in previous meetings

N/A

3.1.4. Deliberations by the EAC in current meetings

During deliberations, following issues were discussed:

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

After detailed deliberations, EAC **recommended** the proposal for amendment in EC as below with the following additional conditions:

- PP shall allocate 10% of the land area for parking facilities.
- PP shall maintain 33% greenbelt of the revised plot area. Tree saplings selected for the plantation should be of sufficient height, preferably 6-ft shall be planted in greenbelt area. The budget earmarked for the plantation shall be kept in a separate account and should be audited annually. The PP shall annually submit the audited statement along with proof of activities viz. photographs (before & after with geo-location date & time), details of expert agency engaged, details of species planted, number of species planted, survival rate, density of plantation etc. to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.
- PP shall maintain grassland in the area that was excluded from the notified Eco-Sensitive Zone (ESZ) to ensure continuous habitat for the Great Indian Bustard (GIB) is preserved.

However, all other terms and conditions stipulated in existing EC vide letter no. IA-J-11011/371/2006-IA II (I) dated 13th August, 2019 shall remain unchanged.

3.1.5. Recommendation of EAC

Recommended

3.1.6. Details of Environment Conditions

3.1.6.1. Specific

Distilleries

- | | |
|----|--|
| 1. | <ul style="list-style-type: none"> • PP shall allocate 10% of the land area for parking facilities. • PP shall maintain 33% greenbelt of the revised plot area. Tree saplings selected for the plantation should be of sufficient height, preferably 6-ft shall be planted in greenbelt area. The budget earmarked for the plantation shall be kept in a separate account and should be audited annually. The PP shall annually submit the audited statement along with proof of activities viz. photographs (before & after with geo-location date & time), details of expert agency engaged, details of species planted, number of species planted, survival rate, density of plantation etc. to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year. • PP shall maintain grassland in the area that was excluded from the notified Eco-Sensitive Zone (ESZ) to ensure continuous habitat for the Great Indian Bustard (GIB) is preserved. |
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3.2. Agenda Item No 2:

3.2.1. Details of the proposal

Expansion of sugarcane juice/sugar syrup/ molasses based distillery unit from 60 KLPD to 500 KLPD . by THE

MALEGAON SAHAKARI SAKHAR KARKHANA LTD located at PUNE, MAHARASHTRA			
Proposal For		Fresh ToR	
Proposal No	File No	Submission Date	Activity (Schedule Item)
IA/MH/IND2/534718/2025	IA-J-11011/148/2025-IA-II	22/04/2025	Distilleries (5(g))

3.2.2. Project Salient Features

The Project Proponent and the accredited Consultant M/s Vasantdada Sugar Institute, Pune (NABET certificate no. NABET/EIA/24-27/RA 0336 and validity up to 14th March, 2027) made a detailed presentation on the salient features of the project and informed that the proposal is for grant of Terms of Reference to the project of expansion of sugarcane juice/ sugar syrup/ molasses based distillery from 60 to 500 KLPD located at Shivnagar Village Malegaon Bk., Tehsil Baramati, District Pune, State Maharashtra by M/s The Malegaon Sahakari Sakhar Karkhana Limited.

All distillery projects are listed at S.N. 5(g) of Schedule of Environment Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC).

S. No.	Product/by- product	Existing quantity (KLD)	Proposed quantity (KLD)	Total quantity (KLD)
1	Rectified spirit/ Extra Neutral Alcohol/Ethanol	60	440	500
2	Fusel oil	0.3	2.3	2.6

Existing industry is operational on the basis of Consent to Operate because it was operational at existing capacity since 1993. Thus, Environmental Clearance was not applicable. Latest CTO (air and water) has been issued on 31/10/2019 and is valid till 31/08/2024. Application for renewal of the consent is under process at MPCB.

PP informed that there is no litigation pending against the proposal.

Total land area is 66.8 hectares. Greenbelt will be developed in total area of 22.89 - hectares i.e., 34 % of total project area. The estimated project cost is Rs. 241.02 Crores. Capital cost of EMP would be Rs. 52.01 Crores and recurring cost for EMP would be Rs.1.45 Crores per annum. Industry proposes to allocate Rs. 1.81 Crores towards Extended EMP (Corporate Environment Responsibility). Total Employment will be 38 persons as direct and 40-50 persons as indirect. There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance. Reserve forests: Pandare at a distance of 5.5 km in North west direction. The Mayureshwar wildlife sanctuary, is at a distance of 36 Km in northwest direction from project site. Water bodies: Nira river is at a distance of 7.0 Km in south direction.

Ambient air quality monitoring was carried out at 08 locations during 01/03/2024 to 31/05/2024 and the baseline data indicates the ranges of concentrations as: PM₁₀ (57.39 – 74.85 µg/m³), PM_{2.5} (33.23 – 41.63 µg/m³), SO₂ (8.35 - 15.83 µg/m³) and NO₂ (21.55- 32.09 µg/m³). AAQ modelling study will be carried out and included in the EIA report.

Total water requirement after expansion will be 1008 CMD which will be met from Nira Left Bank Canal and excess condensate from sugar unit. Existing effluent generation is 360 CMD which is treated through Condensate Polishing Unit of capacity 700 CMD. After proposed expansion, effluent generation will be around 3177 CMD which will be treated through proposed/upgraded Condensate Polishing Unit of capacity 3500 CMD). Domestic waste water will be treated in STP (Capacity of STP in 600 KLD). The plant will be based on Zero Liquid discharge system and treated effluent/water is being/will not be discharged outside the factory premises.

Total power requirement of distillery after expansion will be 9.54 MW which will be sourced from existing 35 MW co-generation power plant. Existing unit has 80 + 40 TPH bagasse & biogas fired boiler. Existing ESP with a stack of height of 76 m is used with the existing boiler for controlling the particulate emissions within the statutory limit of 150 µg/m³. Industry has 625 KVA 2 DG set which will be used as standby during power failure and stack height (5 m) will be provided as per CPCB norms to the proposed DG sets.

Details of Process emissions generation and its management:

- Air emissions will be mainly due to burning of bagasse in conventional boiler of 80 TPH & 40 TPH during season and 40 TPH during off-season. Existing stack of height of 76 m with ESP is used for controlling the particulate emissions

- Bagasse and ash will be handled mechanically through closed conveyors.
- Bagasse will be stored in closed yard and to control fugitive dust during loading/unloading and its transfer, dust suppression system will be installed.
- Greenbelt enhancement proposed for the distillery which is an additional measure for the control of air emissions.
- DG set of adequate capacity with adequate stack height and acoustic enclosures will be provided.

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

S. No.	Waste	Quantity (TPA)	Disposal
1	Yeast sludge (dry)	100-120	Organic - Mixed into soil/ Used as soil conditioner
2	Ash from boilers	2,900 to 3,000	Potash rich - Mixed into soil/ Used as soil conditioner
3	Distillery CPU Sludge	70-80	Organic - Mixed into soil/ Used as soil conditioner

The project is a brown field project. The factory is holding 66.8 Ha of land. The land is already under the possession of factory. The capacity upgradation/ enhancement activity will be done on the existing and new land which available near to the existing unit and already own by factory. EAC found the information satisfactory.

Capital Cost and Recurring cost of EMP are given below:

S. No.	Particulars	Capital cost (Rs. in Lakhs)	Recurring cost (Rs in Lakhs)	
			Maintenance	Monitoring
	Standalone multiple effect BMSW evaporation with stripper column	1770.00	35.00	-
	Biogas plant including civil costs	742.25	10.00	
	Spent-wash storage lagoon	124.00	02.00	-
	Spray Dryer with granulation system including storage area construction	1115.00	20.00	
	Condensate polishing unit (Additional for proposed expansion)	750.00	10.00	-
	Molasses storage tank (One unit – for odour control)	380.00	02.00	
	Environmental monitoring and management for distillery unit (Including existing and proposed unit)	40.00	-	15.00
	Greenbelt development for distillery unit (Including existing and proposed unit)	230.00	3.00	-
	Rainwater harvesting for distillery unit (Including existing and proposed unit)	50.00	3.00	-
	Salaries and wages for EMP (Additional in proposed expansion)	-	60.00	-

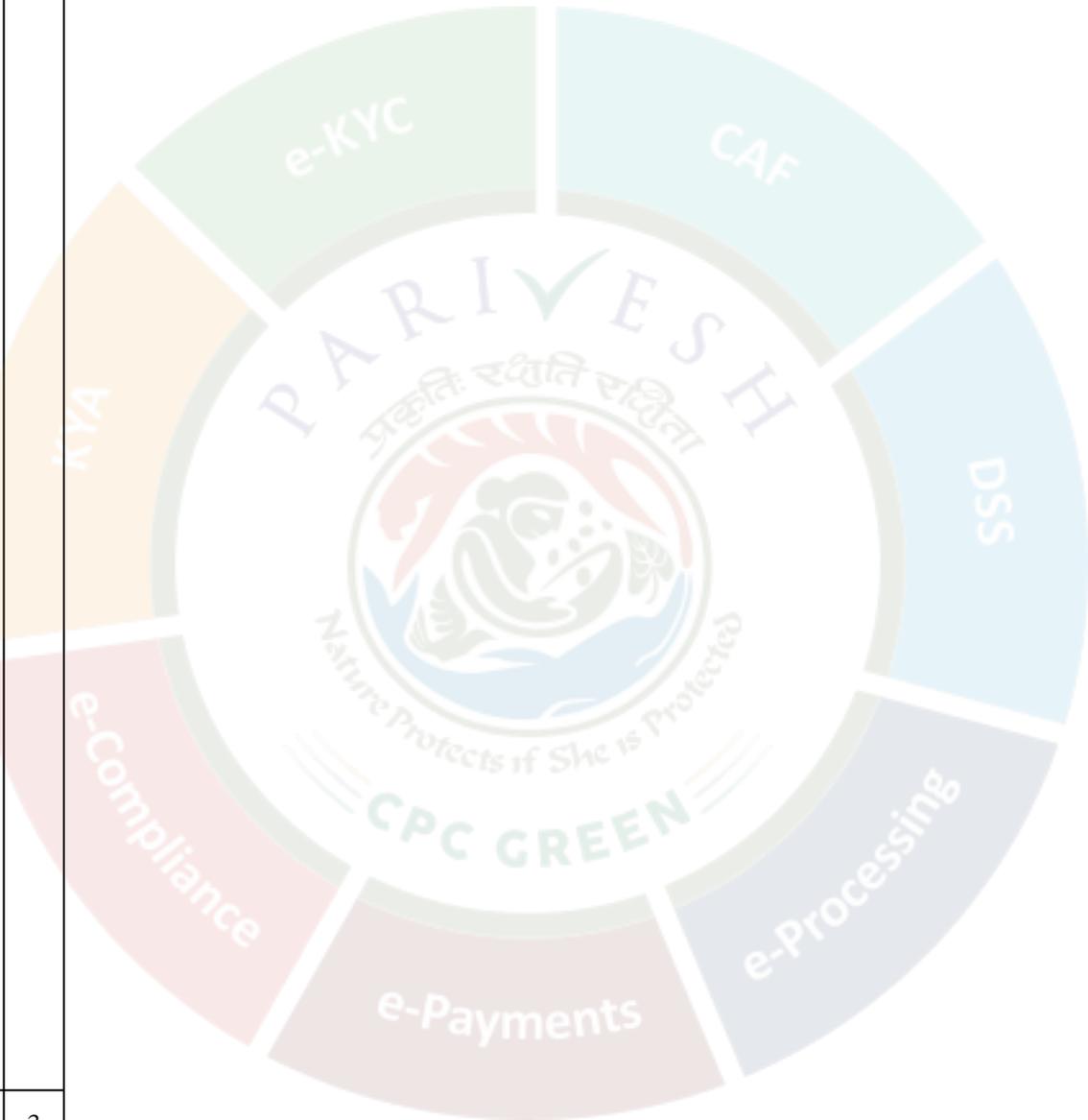
Total	5201.25	145.00	15.00
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Details of Extended EMP with proposed activities and budgetary allocation:

S. No.	Proposed activity	Proposed Budget (Rs. in Lakhs)
52	Provision of software system in local school	52



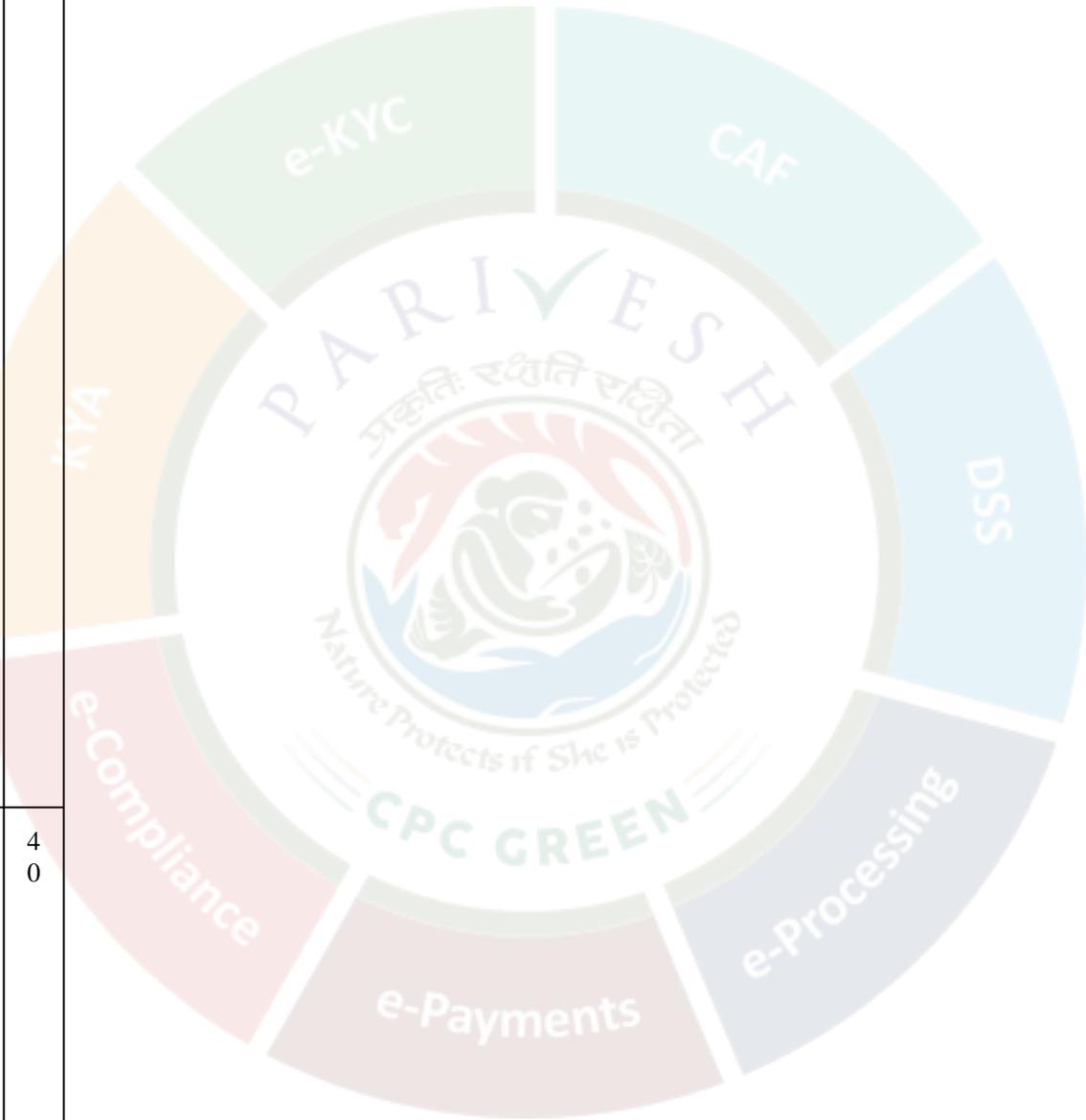
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	Pr o v i s i o n o f c l e a n	3 5



drinking water facility in local schools and villages

Infrastucture Development

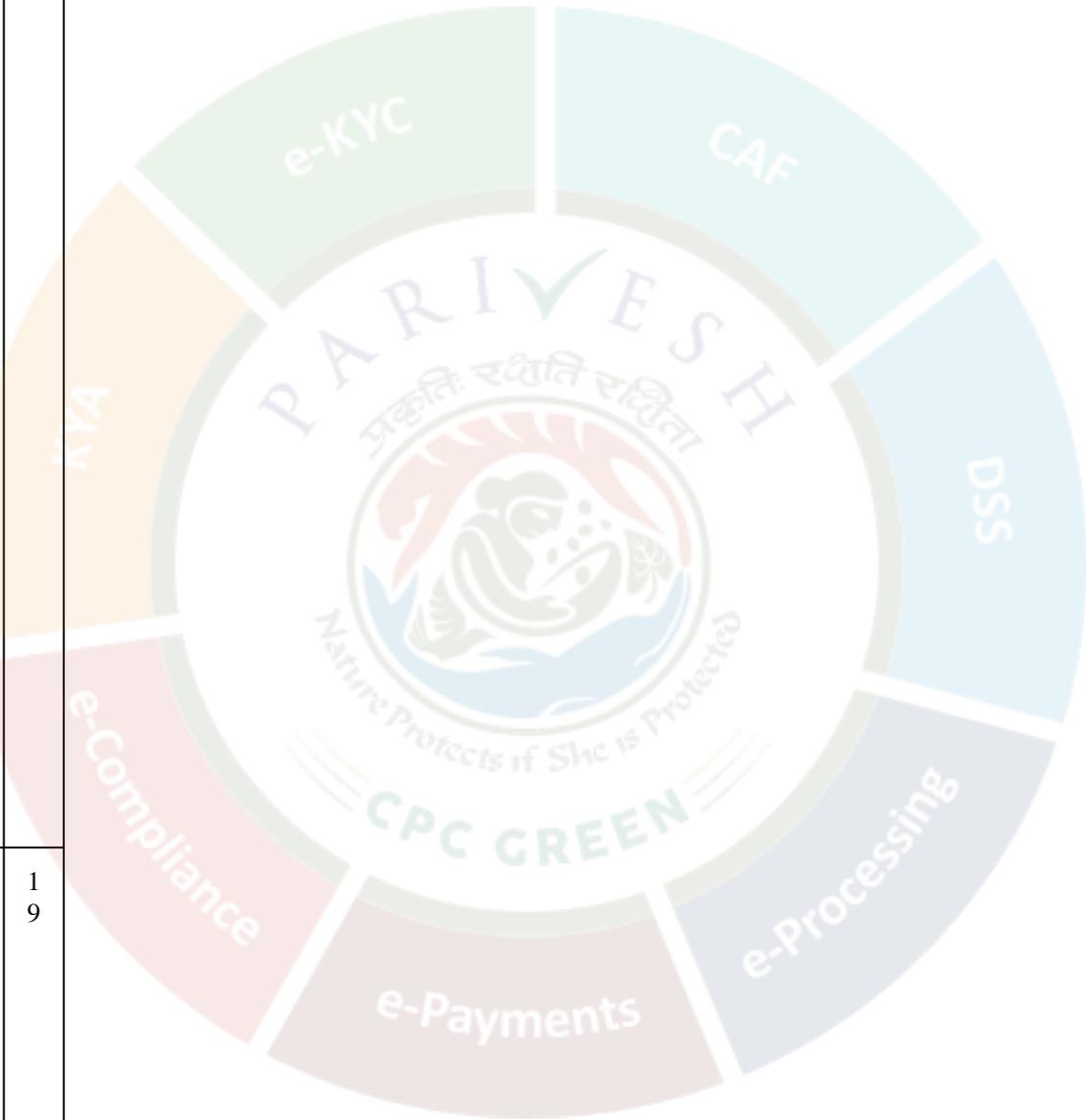
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t/ Maintenance (E.g. Road, canal maintenance, etc)

Other activities for maintenance

19



g so ci al a n d c ul tu ra l h ar m o n y		
T o t al	1 8 1	

3.2.3. Deliberations by the committee in previous meetings

N/A

3.2.4. Deliberations by the EAC in current meetings

During deliberations, EAC discussed following issues:

After deliberations, the Committee **recommended** the project proposal for prescribing specific ToRs along with Public Hearing and CCR for undertaking detailed EIA and EMP study in addition to the standard ToR applicable for Activity '5(g)' Distilleries:

1. Fresh Baseline data shall be collected w.r.t AAQ for the one non-monsoon season at 8 ambient air quality locations for primary pollutants like PM₁₀, PM_{2.5}, SO₂, NO₂ & CO including ozone.
2. PP shall submit action plan to phase out bio-composting activities in the existing unit. Action plan to restore land used for bio composting for development of the green belt.
3. PP shall keep 15% of the total project area dedicated for parking purpose and ensure multiple entry gates for vehicles rather than single gate.
4. PP shall strengthen the approach road as per IRC norms. PP shall submit traffic management plan.
5. Risk assessment study shall be carried out of hazardous chemical storage.
6. PP should submit time bound action plan for development of green belt covering 33% of the proposed plant area by the time they submit the application for Environmental Clearance.
7. Provision of ETP for treating distillery effluent and CPU for sugar unit shall be made. Filter press shall be provided for sludge management replacing sludge drying beds.
8. EIA/EMP report shall include details such as (i) Details of advertisements for Public Hearing (ii) Copy of forwarding letter of SPCB to MoEF&CC (iii) Legible copy of public hearing proceedings duly signed by the presiding officer (iv) Attendance sheets (v) Action plan to address the issues raised during existing public consultation (vi) Copy of written grievances/submissions if any.
9. PP shall obtain CCR for the existing distillery. PP shall ensure that ash collection silos are installed in close

proximity to the ESP. PP shall submit an assessment report detailing the reduction in pollution load resulting from the implementation of the new advanced technology.

10. PP shall allocate additional funds for the development of storage tanks for rainwater harvesting.

3.2.5. Recommendation of EAC

Recommended

3.2.6. Details of Terms of Reference

3.2.6.1. Specific

Distilleries

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|----|--|
| 1. | <ol style="list-style-type: none"> 1. Fresh Baseline data shall be collected w.r.t AAQ for the one non-monsoon season at 8 ambient air quality locations for primary pollutants like PM₁₀, PM_{2.5}, SO₂, NO₂ & CO including ozone. 2. PP shall submit action plan to phase out bio-composting activities in the existing unit. Action plan to restore land used for bio composting for development of the green belt. 3. PP shall keep 15% of the total project area dedicated for parking purpose and ensure multiple entry gates for vehicles rather than single gate. 4. PP shall strengthen the approach road as per IRC norms. PP shall submit traffic management plan. 5. Risk assessment study shall be carried out of hazardous chemical storage. 6. PP should submit time bound action plan for development of green belt covering 33% of the proposed plant area by the time they submit the application for Environmental Clearance. 7. Provision of ETP for treating distillery effluent and CPU for sugar unit shall be made. Filter press shall be provided for sludge management replacing sludge drying beds. 8. EIA/EMP report shall include details such as (i) Details of advertisements for Public Hearing (ii) Copy of forwarding letter of SPCB to MoEF&CC (iii) Legible copy of public hearing proceedings duly signed by the presiding officer (iv) Attendance sheets (v) Action plan to address the issues raised during existing public consultation (vi) Copy of written grievances/submissions if any. 9. PP shall obtain CCR for the existing distillery. PP shall ensure that ash collection silos are installed in close proximity to the ESP. PP shall submit an assessment report detailing the reduction in pollution load resulting from the implementation of the new advanced technology. 10. PP shall allocate additional funds for the development of storage tanks for rainwater harvesting. |
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3.2.6.2. Standard

5(g)	Distilleries
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Executive Summary

1.	Executive Summary
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Introduction

1.	Details of the EIA Consultant including NABET accreditation
2.	Information about the project proponent
Project Description	
1.	Cost of project and time of completion.
2.	Products with capacities for the proposed project.If expansion project, details of existing products with capacities and whether adequate land is available for expansion, reference of earlier EC if any.
3.	List of raw materials required and their source along with mode of transportation.
4.	Other chemicals and materials required with quantities and storage capacities
5.	Details of Emission, effluents, hazardous waste generation and their management. Requirement of water, power, with source of supply, status of approval, water balance diagram, man-power requirement (regular and contract)
6.	Process description along with major equipments and machineries, process flow sheet (quantitative) from raw material to products to be provided.
7.	Hazard identification and details of proposed safety systems.
8.	<p>Expansion/modernization proposals:</p> <p>a. Copy of all the Environmental Clearance(s) including Amendments thereto obtained for the project from MOEF/SEIAA shall be attached as an Annexure. A certified copy of the latest Monitoring Report of the Regional Office of the Ministry of Environment and Forests as per circular dated 08th June, 2022 on the status of compliance of conditions stipulated in all the existing environmental clearances including Amendments shall be provided. In addition, status of compliance of Consent to Operate for the ongoing /existing operation of the project from SPCB shall be attached with the EIA-EMP report.</p> <p>b. In case the existing project has not obtained environmental clearance, reasons for not taking EC under the provisions of the EIA Notification 1994 and/or EIA Notification 2006 shall be provided. Copies of Consent to Establish/No Objection Certificate and Consent to Operate (in case of units operating prior to EIA Notification 2006, CTE and CTO of FY 2005-2006) obtained from the SPCB shall be submitted. Further, compliance report to the conditions of consents from the SPCB shall be submitted.</p>
Site Details	
1.	Location of the project site covering village, Taluka/Tehsil, District and State, Justification forselecting the site, whether other sites were considered.
2.	A toposheet of the study area of radius of 10 km and site location on 1:50,000/1:25,000 scale on an A3/A2 sheet. (including all eco-sensitive areas and environmentally sensitive places)
3.	Co-ordinates (lat-long) of all four corners of the site. Google map-Earth downloaded of the project site. Layout maps indicating existing unit as well as proposed unit indicating storage area, plant area, greenbelt area, utilities etc. If located within an Industrial area/Estate/Complex, layout of Industrial Area indicating location of unit within the Industrial area/Estate.
4.	Photographs of the proposed and existing (if applicable) plant site. If existing, show photographs of plantation/greenbelt, in particular.
5.	Land use break-up of total land of the project site (identified and acquired), government/ private - agricultural, forest, wasteland, water bodies, settlements, etc shall be included. (not required for industrial area).

6.	A list of major industries with name and type within study area (10km radius) shall be incorporated.
7.	Details of Drainage of the project up to 5km radius of study area. If the site is within 1 km radius of any major river, peak and lean season river discharge as well as flood occurrence frequency based on peak rainfall data of the past 30 years. Details of Flood Level of the project site and maximum Flood Level of the river shall also be provided. (mega green field projects).
8.	Status of acquisition of land. If acquisition is not complete, stage of the acquisition process and expected time of complete possession of the land.
9.	R&R details in respect of land in line with state Government policy.
Forest and wildlife related issues (if applicable):	
1.	Permission and approval for the use of forest land (forestry clearance), if any, and recommendations of the State Forest Department. (if applicable)
2.	Land use map based on High resolution satellite imagery (GPS) of the proposed site delineating the forestland (in case of projects involving forest land more than 40 ha).
3.	Status of Application submitted for obtaining the stage I forestry clearance along with latest status shall be submitted.
4.	The projects to be located within 10 km of the National Parks, Sanctuaries, Biosphere Reserves, Migratory Corridors of Wild Animals, the project proponent shall submit the map duly authenticated by Chief Wildlife Warden showing these features vis-à-vis the project location and the recommendations or comments of the Chief Wildlife Warden-thereon
5.	Wildlife Conservation Plan duly authenticated by the Chief Wildlife Warden of the State Government for conservation of Schedule I fauna, if any exists in the study area
6.	Copy of application submitted for clearance under the Wildlife (Protection) Act, 1972, to the Standing Committee of the National Board for Wildlife.
Environmental Status	
1.	Determination of atmospheric inversion level at the project site and site-specific micrometeorological data using temperature, relative humidity, hourly wind speed and direction and rainfall.
2.	AAQ data (except monsoon) at 8 locations for PM10, PM2.5, SO2, NOX, CO and other parameters relevant to the project shall be collected. The monitoring stations shall be based CPCB guidelines and take into account the predominant wind direction, population zone and sensitive receptors including reserved forests.
3.	Raw data of all AAQ measurement for 12 weeks of all stations as per frequency given in the NAQQM Notification of Nov. 2009 along with - min., max., average and 98% values for each of the AAQ parameters from data of all AAQ stations should be provided as an annexure to the EIA Report.
4.	Surface water quality of nearby River (100m upstream and downstream of discharge point) and other surface drains at eight locations as per CPCB/MoEF&CC guidelines.
5.	Whether the site falls near to polluted stretch of river identified by the CPCB/MoEF&CC, if yes give details.
6.	Ground water monitoring at minimum at 8 locations shall be included.
7.	Noise levels monitoring at 8 locations within the study area.

8.	Soil Characteristic as per CPCB guidelines.
9.	Traffic study of the area, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.
1 0.	Detailed description of flora and fauna (terrestrial and aquatic) existing in the study area shall be given with special reference to rare, endemic and endangered species. If Schedule- I fauna are found within the study area, a Wildlife Conservation Plan shall be prepared and furnished.
1 1.	Socio-economic status of the study area.
Impact and Environment Management Plan	
1.	Assessment of ground level concentration of pollutants from the stack emission based on site specific meteorological features. In case the project is located on a hilly terrain, the AQIP Modeling shall be done using inputs of the specific terrain characteristics for determining the potential impacts of the project on the AAQ. Cumulative impact of all sources of emissions (including transportation) on the AAQ of the area shall be assessed. Details of the model used and the input data used for modeling shall also be provided. The air quality contours shall be plotted on a location map showing the location of project site, habitation nearby, sensitive receptors, if any.
2.	Water Quality modeling - in case of discharge in water body
3.	Impact of the transport of the raw materials and end products on the surrounding environment shall be assessed and provided. In this regard, options for transport of raw materials and finished products and wastes (large quantities) by rail or rail-cum road transport or conveyor cum- rail transport shall be examined.
4.	A note on treatment of wastewater from different plant operations, extent recycled and reused for different purposes shall be included. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the prescribed standards of discharge under E(P) Rules.
5.	Details of stack emission and action plan for control of emissions to meet standards.
6.	Measures for fugitive emission control
7.	Details of hazardous waste generation and their storage, utilization and management. Copies of MOU regarding utilization of solid and hazardous waste in cement plant shall also be included. EMP shall include the concept of waste-minimization, recycle/reuse/recover techniques, Energy conservation, and natural resource conservation.
8.	Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 2009. A detailed plan of action shall be provided.
9.	Action plan for the green belt development plan in 33 % area i.e. land with not less than 1,500 trees per ha. Giving details of species, width of plantation, planning schedule etc. shall be included. The green belt shall be around the project boundary and a scheme for greening of the roads used for the project shall also be incorporated.
1 0.	Action plan for rainwater harvesting measures at plant site shall be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources.
Occupational health	
1.	Plan and fund allocation to ensure the occupational health & safety of all contract and casual workers.
2.	Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any

	other ocular defect) ECG, during pre placement and periodical examinations give the details of the same. Details regarding last month analyzed data of above mentioned parameters as per age, sex, duration of exposure and department wise.
3.	Details of existing Occupational & Safety Hazards. What are the exposure levels of hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved.
4.	Annual report of health status of workers with special reference to Occupational Health and Safety.
Corporate Environment Policy	
1.	Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
2.	Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
3.	What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.
4.	Does the company have system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism shall be detailed in the EIA report.
Details regarding infrastructure facilities such as sanitation, fuel, restroom etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase.	
1.	null
Enterprise Social Commitment (ESC)	
1.	Adequate funds (at least 2.5 % of the project cost) shall be ear marked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan shall be included. Socio-economic development activities need to be elaborated upon.
2.	Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof shall also be included. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, details there of and compliance/ATR to the notice(s) and present status of the case.
3.	A tabular chart with index for point wise compliance of above TOR.
Specific Conditions	
1.	List of existing distillery units in the study area along with their capacity and sourcing of raw material.
2.	Number of working days of the distillery unit.
3.	Details of raw materials such as molasses/grains, their source with availability.
4.	Details of the use of steam from the boiler.
5.	Surface and Ground water quality around proposed spent wash storage lagoon, and compost yard.

6.	Plan to reduce spent wash generation within 6-8 KL/KL of alcohol produced.
7.	Proposed Effluent treatment system for molasses/grain based distillery (spent wash, spent lees, condensate and utilities) as well as domestic sewage and scheme for achieving zero water conservation.
8.	Proposed action to restrict fresh water consumption within 10 KL/KL of alcohol production.
9.	Details about capacity of spent wash holding tank, material used, design consideration. No. of peizometers to be proposed around spent wash holding tank.
1 0.	Details of solid waste management including management of boiler ash, yeast, etc. Details of incinerated spent wash ash generation and its disposal.
1 1.	Details of bio-composting yard (if applicable).
1 2.	Action plan to control odour pollution.
1 3.	Arrangements for installation of continuous online monitoring system (24x7 monitoring device)
1 4.	If Sugar and distillery will have integrated effluent treatment facilities. Details regarding the same.

3.3. Agenda Item No 3:

3.3.1. Details of the proposal

Onshore Oil & Gas Development & Production (96 developmental drilling wells) in Dibrugarh, Sibsagar and Charaideo Districts under Moran, Moran Extension, Dholiya and Dumduma (Part-A) PMLs along with One Secondary Tank Farm at Moran at Charaideo District, Assam by OIL INDIA LIMITED located at DIBRUGARH, ASSAM			
Proposal For		Fresh ToR	
Proposal No	File No	Submission Date	Activity (Schedule Item)
IA/AS/IND2/529971/2025	IA-J-11011/151/2025-I A-II	26/04/2025	Off-shore and onshore oil and gas exploration, development and production (1(b))

3.3.2. Project Salient Features

The project proponent and the accredited consultant M/s. Hubert Enviro Care Systems (p) Limited (NABET certificate no. NABET/EIA/24-27/RA 0335 dated 25.06.2024 valid till 31.03.2027) made a detailed presentation on the salient features of the project and informed that the proposal is to obtain environmental clearance for the project Onshore Oil & Gas Development & Production (96 developmental drilling wells) in Dibrugarh, Sibsagar and Charaideo Districts under Moran, Moran Extension, Dholiya and Dumduma (Part-A) PMLs along with One Secondary Tank Farm at Moran in Charaideo District, Assam by M/s. Oil India Limited.

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

The details of product and capacity as under:

S.No.	Well Name	Latitude	Longitude
19	NEC-19	27° 5'35.75"N	94°59'10.17"E
20	NEC-20	27° 5'35.34"N	94°59'28.64"E
21	NEC-21	27° 5'22.31"N	94°58'59.82"E
22	NEC-22	27° 5'9.95"N	94°59'9.05"E
23	NEC-23	27° 5'39.87"N	94°59'57.68"E
24	NEC-24	27° 5'41.31"N	95° 0'19.20"E
25	NEC-25	27° 5'11.74"N	95° 0'24.34"E
26	NEC-26	27° 5'17.14"N	94°59'51.57"E
27	NEC-27	27° 3'43.82"N	95° 7'1.27"E
28	NEC-28	27° 3'7.62"N	95° 0'13.48"E
29	NEC-29	27° 0'47.50"N	95° 6'18.63"E
30	NEC-30	27° 1'32.98"N	95° 8'32.38"E
31	NEC-31	27° 4'50.28"N	95° 3'29.06"E
32	NEC-32	27° 4'4.11"N	95° 2'40.25"E
33	NEC-33	27° 4'26.42"N	95° 3'33.32"E
34	NEC-34	27° 4'44.37"N	95° 3'47.21"E
35	NEC-35	27° 4'13.54"N	95° 3'11.14"E
36	NEC-36	27° 5'12.72"N	95° 3'57.20"E
37	NEC-37	27° 5'11.91"N	95° 4'15.92"E
38	NEC-38	27° 5'17.81"N,	95° 4'27.04"E
39	NEC-39	27° 5'35.26"N	95° 4'51.24"E
40	NEC-40	27° 6'39.48"N	95° 3'19.23"E
41	NEC-41	27° 7'18.22"N	95° 3'46.32"E
42	NEC-42	27° 7'37.71"N	95° 4'2.85"E
43	NEC-43	27° 6'52.22"N	95° 3'48.97"E
44	NEC-44	27° 0'55.19"N	95° 3'44.94"E

S.No.	Well Name	Latitude	Longitude
45	NEC-45	27° 1'12.59"N	95° 4'13.67"E
46	NEC-46	27° 0'45.34"N	95° 3'50.84"E
47	NEC-47	27° 0'49.29"N	95° 4'28.22"E
48	NEC-48	27° 2'32.41"N	95° 9'38.45"E
49	NEC-49	27° 2'7.13"N	95° 9'50.34"E
50	NEC-50	27° 2'14.63"N	95° 9'0.56"E
51	NEC-51	27° 2'1.91"N	95° 9'27.31"E
52	NEC-52	27° 8'3.47"N	94°43'24.50"E
53	NEC-53	27° 5'13.82"N	94°43'0.41"E
54	NEC-54	27° 5'3.08"N	94°43'33.66"E
55	NEC-55	27°10'1.18"N	94°49'49.16"E
56	NEC-56	27° 9'36.95"N	94°49'43.51"E
57	NEC-57	27° 9'36.81"N	94°50'44.01"E
58	NEC-58	27°10'0.95"N	94°59'34.53"E
59	NEC-59	27°10'0.91"N	94°57'21.45"E
60	NEC-60	27° 9'33.87"N	94°59'41.09"E
61	NEC-61	27°15'3.92"N	95° 4'59.45"E
62	NEC-62	27°15'29.36"N	95° 7'40.17"E
63	NEC-63	27°14'15.95"N	95° 9'10.29"E
64	NEC-64	27°15'21.37"N	95°10'43.62"E
65	NEC-65	27°15'35.14"N	95° 8'17.41"E
66	NEC-66	27°14'22.98"N	95° 7'9.45"E
67	NEC-67	27°14'12.52"N	95° 5'2.78"E
68	EC-1	27° 8'33.82"N	94°43'48.39"E
69	EC-2	27° 8'35.15"N	94°46'44.59"E
70	EC-3	27° 6'29.87"N	94°42'46.65"E

S.No.	Well Name	Latitude	Longitude
71	EC-4	27° 5'16.94"N	94°43'46.43"E
72	EC-5	27°10'16.44"N	94°57'40.23"E
73	EC-6	27° 8'29.64"N	94°56'18.78"E
74	EC-7	27° 9'44.95"N	94°57'4.91"E
75	EC-8	27° 7'50.00"N	94°46'59.01"E
76	EC-9	27°10'19.81"N	94°53'28.42"E
77	EC-10	27°12'27.81"N	94°46'51.74"E
78	EC-11	27° 1'19.13"N	94°59'31.02"E
79	EC-12	27° 5'4.88"N	95° 0'0.76"E
80	EC-13	27° 0'31.26"N	95° 6'14.30"E
81	EC-14	27° 0'43.28"N	95° 3'5.13"E
82	EC-15	27° 4'4.72"N	95° 5'53.54"E
83	EC-16	27° 3'22.79"N	95° 7'31.39"E
84	EC-17	26°59'49.96"N	95° 5'39.11"E
85	EC-18	27° 1'10.05"N	95° 8'10.32"E
86	EC-19	27° 1'53.18"N	95° 4'20.99"E
87	EC-20	27° 0'16.09"N	95° 6'41.90"E
88	EC-21	27° 0'22.26"N	95° 6'27.85"E
89	EC-22	27° 9'40.34"N	95° 5'53.78"E
90	EC-23	27°13'51.70"N	94°56'52.79"E
91	EC-24	27° 9'30.36"N	95° 0'32.10"E
92	EC-25	27°15'13.19"N	95° 0'44.04"E
93	EC-26	27°13'30.22"N	94°48'6.32"E
94	EC-27	27° 9'23.44"N	94°50'43.85"E
95	EC-28	27° 5'21.27"N	94°47'4.00"E
96	EC-29	27°15'27.56"N	94°47'16.87"E

Coordinates of STF production setup location

Production Setup		
S.No	Latitude N	Longitude E
1	27° 8' 33.47"	94° 53' 43.92"
2	27° 8' 38.35"	94° 53' 52.97"
3	27° 8' 36.03"	94° 53' 54.39"
4	27° 8' 37.83"	94° 53' 58.09"
5	27° 8' 34.55"	94° 54' 0.03"
6	27° 8' 35.28"	94° 54' 1.49"
7	27° 8' 33.48"	94° 54' 2.3"
8	27° 8' 24.96"	94° 53' 48.24"

Coordinates of Existing Block location

Dholiya PML		
S.No	Latitude N	Longitude E
1	27° 13' 40.008"	94° 53' 4.992"
2	27° 16' 59.988"	95° 2' 14.559"
3	27° 18' 0.0"	95° 4' 60.0"
4	27° 16' 45.0"	95° 7' 8.0"
5	27° 17' 30.0"	95° 9' 30.0"
6	27° 16' 45.0"	95° 11' 30.0"
7	27° 16' 0.115"	95° 10' 29.999"
8	27° 15' 44.995"	95° 5' 44.879"
9	27° 13' 60.0"	95° 1' 60.0"
10	27° 13' 10.992"	95° 1' 54.984"
11	27° 11' 60.0"	94° 58' 29.999"
12	27° 10' 58.0"	94° 55' 6.0"
Dumduma(Part-A) PML		
1	27° 13' 59.875"	95° 1' 59.879"

2	27° 15' 44.995"	95° 5' 44.879"
3	27° 16' 0.115"	95° 10' 29.999"
4	27° 16' 45.0"	95° 11' 30.0"
5	27° 17' 54.0"	95° 14' 30.0"
6	27° 16' 59.813"	95° 15' 42.221"
7	27° 16' 24.0"	95° 14' 10.5"
8	27° 15' 52.895"	95° 13' 33.509"
9	27° 15' 10.0"	95° 12' 42.5"
10	27° 14' 18.0"	95° 13' 45.0"
11	27° 14' 0.005"	95° 13' 27.92"
12	27° 14' 0.0"	95° 13' 0.0"
13	27° 13' 30.589"	95° 13' 0.0"
14	27° 12' 20.33"	95° 11' 52.316"
15	27° 13' 0.0"	95° 10' 30.0"
16	27° 11' 50.0"	95° 9' 25.0"
17	27° 12' 50.606"	95° 7' 58.804"
18	27° 14' 11.142"	95° 7' 30.717"
19	27° 13' 46.416"	95° 6' 39.405"
20	27° 14' 12.115"	95° 6' 2.879"
21	27° 12' 46.08"	95° 1' 58.079"
22	27° 13' 10.992"	95° 1' 54.984"
Moran PML		
1	27° 18' 29.88"	94° 49' 12.0"
2	27° 17' 0.013"	94° 50' 24.27"
3	27° 16' 59.999"	94° 47' 60.0"
4	27° 13' 59.999"	94° 47' 60.0"
5	27° 13' 44.904"	94° 49' 59.999"

6	27° 13' 46.204"	94° 52' 59.999"
7	27° 10' 58.001"	94° 55' 5.999"
8	27° 11' 60.0"	94° 58' 30.0"
9	27° 13' 10.992"	95° 1' 54.984"
10	27° 8' 9.96"	95° 3' 5.04"
11	27° 6' 50.375"	95° 0' 46.217"
12	27° 8' 15.889"	94° 59' 41.035"
13	27° 6' 50.216"	94° 58' 3.702"
14	27° 5' 48.685"	94° 58' 58.289"
15	27° 5' 25.742"	94° 58' 18.584"
16	27° 6' 10.073"	94° 56' 5.953"
17	27° 7' 37.92"	94° 53' 3.84"
18	27° 6' 43.92"	94° 51' 7.92"
19	27° 5' 56.04"	94° 49' 37.92"
20	27° 5' 27.96"	94° 48' 35.64"
21	27° 4' 59.88"	94° 47' 33.0"
22	27° 4' 23.16"	94° 45' 1.08"
23	27° 4' 22.08"	94° 42' 32.04"
24	27° 5' 36.96"	94° 42' 9.0"
25	27° 8' 39.84"	94° 43' 41.16"
26	27° 9' 24.84"	94° 46' 51.96"
27	27° 8' 18.024"	94° 49' 59.93"
28	27° 10' 50.16"	94° 47' 60.0"
29	27° 10' 50.16"	94° 45' 0.0"
30	27° 16' 0.12"	94° 46' 59.88"
Moran Extension PML		
1	27° 12' 46.08"	95° 1' 58.079"

2	27° 14' 12.115"	95° 6' 2.879"
3	27° 13' 46.42"	95° 6' 39.405"
4	27° 13' 14.464"	95° 5' 32.075"
5	27° 12' 1.254"	95° 6' 17.274"
6	27° 12' 50.608"	95° 7' 58.813"
7	27° 11' 50.0"	95° 9' 25.0"
8	27° 10' 18.013"	95° 10' 22.041"
9	27° 8' 41.277"	95° 11' 22.285"
10	27° 8' 5.23"	95° 10' 0.0"
11	27° 8' 60.0"	95° 9' 60.0"
12	27° 8' 60.0"	95° 7' 0.0"
13	27° 8' 0.0"	95° 7' 0.0"
14	27° 8' 0.0"	95° 5' 60.0"
15	27° 6' 60.0"	95° 6' 0.001"
16	27° 6' 39.961"	95° 9' 15.706"
17	27° 7' 44.516"	95° 11' 57.865"
18	27° 6' 22.5"	95° 12' 49.5"
19	27° 1' 48.986"	95° 15' 32.353"
20	27° 2' 13.097"	95° 14' 6.976"
21	27° 2' 9.341"	95° 11' 35.015"
22	26° 58' 50.379"	95° 6' 43.048"
23	26° 56' 0.2"	95° 1' 55.246"
24	26°54'46.79"	94°58'57.43"
25	26°55'22.41"	94°58'4.32"
26	26° 59' 34.018"	94° 58' 3.512"
27	26° 59' 54.736"	94° 58' 58.323"
28	27° 5' 12.46"	94° 58' 58.323"

29	27° 5' 25.742"	94° 58' 18.585"
30	27° 5' 48.686"	94° 58' 58.287"
31	27° 6' 50.376"	95° 0' 46.215"
32	27° 8' 9.96"	95° 3' 5.039"

It was informed by PP that no litigation is pending against the project.

The Proposed project includes onshore Oil & Gas development wells in Dibrugarh, Sibsagar and Charaideo Districts under Moran PML, Moran Extension PML, Dholiya and Dumduma (Part-A) PML Block and Secondary Tank Farm in Moran PML Block. The area is located in the western part of OIL's operational area in Upper Assam Basin, to the west and northwest of Moran Oilfield and extends upto ONGC operated area of Panidehing in the west. Oil has obtained the PML Grant of Moran PML as F.No.0-12012/60/2000-OGn/D-IV dated on August 8th2001, for an area of 429.42 Sq.km for Twenty Years in Dibrugarh and Sivsagar district. Later The Re-grant of Moran PML F. No PEM.95/2016/63 dated on 09.03.2017 for Further 20 years up to 17.12.2041. Oil has obtained the Re-grant of Consolidated PML F.No.13012(12)/7/2021-EXPL-PNG(E-37407) of the blocks (Dholiya, Dumduma, Moran Extn) was signed between GoI & OIL on August 27, 2021. The Validity of the PML is extended up to 31.12.2040. The estimated project cost is Rs. 1993.76 Crores. Capital cost and recurring cost for EMP will be allocated during EIA stage based on the impacts. Extended EMP will be allocated based on outcome of public hearing requirements.

There are No national parks, notified Reserve Forest, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 1km radial distance from each well (96nos). There is no water bodies present within 500m radial distance from each well (96 nos). The nearest wildlife sanctuaries named Panidehing Bird Sanctuary ESZ at a shortest distance 0.2km(W) from the Block (Moran PML) and at a shortest distance 0.62km(W) from the nearest well (NEC 52), 0.95km(W) from the well(NEC 13),0.90km(W) from the well (NEC-14), 0.96km (W) from the well (NEC-12) and 1.13 km(W) from the well (EC-1). There is No Eco-sensitive Zone within 1km radial distance from each well (91 nos). The Reserve Forest named Droi RF present within the Moran PML Block, the Reserve Forest named Abhaypur RF, Sapekhati RF present within the Moran Extension PML Block. There is no Reserve Forest present within 1km radial distance from each well (96 nos). Inter State Boundary - AS-AR-NL Inter State Boundary present at the end of Moran Extension PML Block.

The total water requirement during drilling phase will be 25 KLD/well which will be met by Tanker/Ground Water from nearby source. Effluent of 9KLD quantity will be treated in Mobile ETP of 50 KLD and reused for Mud Preparation. Septic tank/Soak Pit will be used in Drill site for Domestic purpose. During Production phase, Total water requirement is 320 KLD, which will be met by Ground Water, out of this 316 KLD will be fresh water and 4 KLD will be recycled water.

Produced Water Management:

Two-phase separation (oil + formation water) will occur during processing in STF Moran. Following the separation process, the formation water will be produced and treated in the proposed Secondary Tank Farm (STF) in Moran with a Common ETP capacity of 2MLD and sent to CTF Moran for disposal via existing disposal wells.

Proposed Power requirement during drilling Phase will be 3930 KW which will be sourced from Diesel Generators having capacity 3x1310KW. Proposed Power requirement for production Phase in STF will be 0.6MW, out of that 0.4MW of power can be sourced in-house from the Moran Power Station and remaining 0.2MW sourced from GEG of capacity 3 x 125kVA DG set and stack height as per CPCB guidelines will be provided.

Details of Process emissions generation and its management:

The source of emissions will be only from Diesel Generator only. The Stack height will be stack as per CPCB guidelines will be provided.

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

In Drilling Site, 0.194TPA/well of Organic Municipal Solid Waste and 0.129 TPA/well of Inorganic Municipal solid waste will be generated in Construction Phase and 6.208TPA/well of Organic Municipal Solid Waste and 4.131 TPA/well of Inorganic Municipal solid waste will be generated in Drilling Phase in which the Organic Waste will be disposed to local municipal bins via local vendors & Inorganic waste will Proper segregation and storage of recyclable waste in a designated bins onsite. Recyclables will be periodically sold to local waste recyclers.

In proposed Production Site(STF), 16.75TPA of Organic Municipal Solid Waste and 11.16 TPA of Inorganic Municipal solid waste will be generated in Construction Phase and 7.884TPA/well of Organic Municipal Solid Waste and 5.256 TPA/well of Inorganic Municipal solid waste will be generated in Production Phase, In which the Organic Waste will be Will be disposed to local municipal bins via local vendors & Inorganic waste will Proper segregation and storage of recyclable waste in a designated bins onsite. Recyclables will be periodically sold to local waste recyclers.

Hazardous Waste Generation- (In Drilling Site):

Hazardous Waste Generation- (In STF- Moran):

3.3.3. Deliberations by the committee in previous meetings

N/A

3.3.4. Deliberations by the EAC in current meetings

During deliberations, following issues were discussed:

After deliberations, the Committee **recommended** the project proposal for prescribing following specific ToRs along with public hearings in the Dibrugarh, Sibsagar and Charaideo Districts for undertaking detailed EIA and EMP study in addition to the standard ToR applicable for the project.

3.3.5. Recommendation of EAC

Recommended

3.3.6. Details of Terms of Reference**3.3.6.1. Specific****Off-shore and onshore oil and gas exploration, development and production**

1.

3.3.6.2. Standard1(b) **Off-shore and onshore oil and gas exploration, development and production****Executive Summary**

1. Executive Summary

Introduction

1. Details of the EIA Consultant including NABET accreditation

2. Information about the project proponent

Project Description

1. Cost of project and time of completion.

2. Products with capacities for the proposed project.If expansion project, details of existing products with capacities and whether adequate land is available for expansion, reference of earlier EC if any.

3. List of raw materials required and their source along with mode of transportation.

4. Other chemicals and materials required with quantities and storage capacities

5. Details of Emission, effluents, hazardous waste generation and their management. Requirement of water, power,

	with source of supply, status of approval, water balance diagram, man-power requirements (regular and contract)
6.	Process description along with major equipments and machineries, process flow sheet (quantitative) from raw material to products to be provided.
7.	Hazard identification and details of proposed safety systems.
8.	Expansion/modernization proposals: <ul style="list-style-type: none"> a. Copy of all the Environmental Clearance(s) including Amendments thereto obtained for the project from MOEF/SEIAA shall be attached as an Annexure. A certified copy of the latest Monitoring Report of the Regional Office of the Ministry of Environment and Forests as per circular dated 08th June, 2022 on the status of compliance of conditions stipulated in all the existing environmental clearances including Amendments shall be provided. In addition, status of compliance of Consent to Operate for the ongoing /existing operation of the project from SPCB shall be attached with the EIA-EMP report. b. In case the existing project has not obtained environmental clearance, reasons for not taking EC under the provisions of the EIA Notification 1994 and/or EIA Notification 2006 shall be provided. Copies of Consent to Establish/No Objection Certificate and Consent to Operate (in case of units operating prior to EIA Notification 2006, CTE and CTO of FY 2005-2006) obtained from the SPCB shall be submitted. Further, compliance report to the conditions of consents from the SPCB shall be submitted.
Site Details	
1.	Location of the project site covering village, Taluka/Tehsil, District and State, Justification for selecting the site, whether other sites were considered.
2.	A toposheet of the study area of radius of 10 km and site location on 1:50,000/1:25,000 scale on an A3/A2 sheet. (including all eco-sensitive areas and environmentally sensitive places)
3.	Co-ordinates (lat-long) of all four corners of the site. Google map-Earth downloaded of the project site. Layout maps indicating existing unit as well as proposed unit indicating storage area, plant area, greenbelt area, utilities etc. If located within an Industrial area/Estate/Complex, layout of Industrial Area indicating location of unit within the Industrial area/Estate.
4.	Photographs of the proposed and existing (if applicable) plant site. If existing, show photographs of plantation/greenbelt, in particular.
5.	Land use break-up of total land of the project site (identified and acquired), government/ private - agricultural, forest, wasteland, water bodies, settlements, etc shall be included. (not required for industrial area).
6.	A list of major industries with name and type within study area (10km radius) shall be incorporated.
7.	Details of Drainage of the project up to 5km radius of study area. If the site is within 1 km radius of any major river, peak and lean season river discharge as well as flood occurrence frequency based on peak rainfall data of the past 30 years. Details of Flood Level of the project site and maximum Flood Level of the river shall also be provided. (mega green field projects).
8.	Status of acquisition of land. If acquisition is not complete, stage of the acquisition process and expected time of complete possession of the land.
9.	R&R details in respect of land in line with state Government policy.
Forest and wildlife related issues (if applicable):	
1.	Permission and approval for the use of forest land (forestry clearance), if any, and recommendations of the State Forest Department. (if applicable)

2.	Land use map based on High resolution satellite imagery (GPS) of the proposed site delineating the forestland (in case of projects involving forest land more than 40 ha).
3.	Status of Application submitted for obtaining the stage I forestry clearance along with latest status shall be submitted.
4.	The projects to be located within 10 km of the National Parks, Sanctuaries, Biosphere Reserves, Migratory Corridors of Wild Animals, the project proponent shall submit the map duly authenticated by Chief Wildlife Warden showing these features vis-à-vis the project location and the recommendations or comments of the Chief Wildlife Warden-thereon
5.	Wildlife Conservation Plan duly authenticated by the Chief Wildlife Warden of the State Government for conservation of Schedule I fauna, if any exists in the study area
6.	Copy of application submitted for clearance under the Wildlife (Protection) Act, 1972, to the Standing Committee of the National Board for Wildlife.
Environmental Status	
1.	Determination of atmospheric inversion level at the project site and site-specific micrometeorological data using temperature, relative humidity, hourly wind speed and direction and rainfall.
2.	AAQ data (except monsoon) at 8 locations for PM10, PM2.5, SO2, NOX, CO and other parameters relevant to the project shall be collected. The monitoring stations shall be based CPCB guidelines and take into account the predominant wind direction, population zone and sensitive receptors including reserved forests.
3.	Raw data of all AAQ measurement for 12 weeks of all stations as per frequency given in the NAQQM Notification of Nov. 2009 along with - min., max., average and 98% values for each of the AAQ parameters from data of all AAQ stations should be provided as an annexure to the EIA Report.
4.	Surface water quality of nearby River (100m upstream and downstream of discharge point) and other surface drains at eight locations as per CPCB/MoEF&CC guidelines.
5.	Whether the site falls near to polluted stretch of river identified by the CPCB/MoEF&CC, if yes give details.
6.	Ground water monitoring at minimum at 8 locations shall be included.
7.	Noise levels monitoring at 8 locations within the study area.
8.	Soil Characteristic as per CPCB guidelines.
9.	Traffic study of the area, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.
10.	Detailed description of flora and fauna (terrestrial and aquatic) existing in the study area shall be given with special reference to rare, endemic and endangered species. If Schedule- I fauna are found within the study area, a Wildlife Conservation Plan shall be prepared and furnished.
11.	Socio-economic status of the study area.
Impact and Environment Management Plan	
1.	Assessment of ground level concentration of pollutants from the stack emission based on site specific meteorological features. In case the project is located on a hilly terrain, the AQIP Modeling shall be done using inputs of the specific terrain characteristics for determining the potential impacts of the project on the AAQ.

	Cumulative impact of all sources of emissions (including transportation) on the AAQ of the area shall be assessed. Details of the model used and the input data used for modeling shall also be provided. The air quality contours shall be plotted on a location map showing the location of project site, habitation nearby, sensitive receptors, if any.
2.	Water Quality modeling - in case of discharge in water body
3.	Impact of the transport of the raw materials and end products on the surrounding environment shall be assessed and provided. In this regard, options for transport of raw materials and finished products and wastes (large quantities) by rail or rail-cum road transport or conveyor cum- rail transport shall be examined.
4.	A note on treatment of wastewater from different plant operations, extent recycled and reused for different purposes shall be included. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the prescribed standards of discharge under E(P) Rules.
5.	Details of stack emission and action plan for control of emissions to meet standards.
6.	Measures for fugitive emission control
7.	Details of hazardous waste generation and their storage, utilization and management. Copies of MOU regarding utilization of solid and hazardous waste in cement plant shall also be included. EMP shall include the concept of waste-minimization, recycle/reuse/recover techniques, Energy conservation, and natural resource conservation.
8.	Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 2009. A detailed plan of action shall be provided.
9.	Action plan for the green belt development plan in 33 % area i.e. land with not less than 1,500 trees per ha. Giving details of species, width of plantation, planning schedule etc. shall be included. The green belt shall be around the project boundary and a scheme for greening of the roads used for the project shall also be incorporated.
10.	Action plan for rainwater harvesting measures at plant site shall be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources.
Occupational health	
1.	Plan and fund allocation to ensure the occupational health & safety of all contract and casual workers.
2.	Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations give the details of the same. Details regarding last month analyzed data of above mentioned parameters as per age, sex, duration of exposure and department wise.
3.	Details of existing Occupational & Safety Hazards. What are the exposure levels of hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved.
4.	Annual report of health status of workers with special reference to Occupational Health and Safety.
Corporate Environment Policy	
1.	Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
2.	Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in

	the EIA.
3.	What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.
4.	Does the company have system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism shall be detailed in the EIA report.
Details regarding infrastructure facilities such as sanitation, fuel, restroom etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase.	
1.	null
Enterprise Social Commitment (ESC)	
1.	Adequate funds (at least 2.5 % of the project cost) shall be ear marked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan shall be included. Socio-economic development activities need to be elaborated upon.
2.	Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof shall also be included. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, details there of and compliance/ATR to the notice(s) and present status of the case.
3.	A tabular chart with index for point wise compliance of above TOR.
Specific Terms	
1.	Executive summary of the project.
2.	No. of exploratory wells for which environmental clearance is accorded and No. of new wells proposed during expansion. Status and No. of the wells which are completed and closed.
3.	Project Description and Project Benefits
4.	Cost of project and period of completion.
5.	Employment to be generated.
6.	Distance from coast line.
7.	Details of sensitive areas such as coral reef, marine water park, sanctuary and any other ecosensitive area
8.	Recommendation of SCZMA/CRZ clearance as per CRZ Notification dated 6th January, 2011 (if applicable).
9.	Details on support infrastructure and vessel in the study area
10.	Climatology and meteorology including wind speed, wave and currents, rainfall etc.
11.	Details on establishment of baseline on the air quality of the areas immediately affected by the exploratory drilling and also particularly with reference to hydrogen sulphide, sulphur xide, NOx and background levels of hydrocarbons and VOCs.
1	Details on estimation and computation of air emissions (such as nitrogen oxides*, sulphur oxides*, carbon

2.	monoxide*, hydrocarbons*, VOCs*, etc.) resulting from flaring, DG sets, combustors, etc. during all project phases
1 3.	Base line data collection for surface water for one season leaving the monsoon season within 1 km for each exploratory wells, particularly in respect of oil content in the water sample sediments sample.
1 4.	Fisheries study w.r.t. benthos and marine organic material and coastal fisheries.
1 5.	Source of fresh water. Detailed water balance, waste water generation and discharge.
1 6.	Noise abatement measures and measures to minimize disturbance due to light and visual intrusions in case of project site closed to the coast.
1 7.	Procedure for handling oily water discharges from deck washing, drainage systems, bilges etc.
1 8.	Procedure for preventing spills and spill contingency plans.
1 9.	Procedure for treatment and disposal of produced water
2 0.	Procedure for sewage treatment and disposal and also for kitchen waste disposal.
2 1.	Details on solid waste management for drill cuttings, drilling mud and oil sludge, produced sand, radioactive materials, other hazardous materials, etc. including its handling and disposal options during all project phases.
2 2.	Storage of chemicals on site.
2 3.	Commitment for the use of water based mud (WBM) and synthetic oil based mud in special case.
2 4.	Details of blowout preventer Installation.
2 5.	Risk assessment and mitigation measures including whether any independent reviews of well design, construction and proper cementing and casing practices will be followed.
2 6.	Handling of spent oils and oil from well test operations.
2 7.	H2S emissions control plans, if required.
2 8.	Details of all environment and safety related documentation within the company in the form of guidelines, manuals, monitoring programmes including Occupational Health Surveillance Programme etc.
2 9.	Restoration plans and measures to be taken for decommissioning of the rig and restoration of onshore support facilities on land.
3 0.	Documentary proof for membership of common disposal facilities, if required.

3 1.	Any litigation pending against the project or any directions/order passed by any Court of Law against the project. If so, details thereof.
3 2.	Total capital and recurring cost for environmental pollution control measures.

3.4. Agenda Item No 4:

3.4.1. Details of the proposal

Proposed New Distillery of 120 KLD capacity consisting of B-Heavy Molasses with provision to use Grain for production of Ethanol along with 3.0 MW cogeneration power plant at Village Narar, Tehsil Kaithal District Kaithal, Haryana. by THE KAITHAL CO-OPERATIVE SUGAR MILLS LTD located at KAITHAL,HARYANA			
Proposal For		Fresh EC	
Proposal No	File No	Submission Date	Activity (Schedule Item)
IA/HR/IND2/535606/2025	IA-J-11011/397/2023-IA-II(I)	29/04/2025	Distilleries (5(g))

3.4.2. Project Salient Features

S. No	Unit	Product/by-product	Existing Quantity	Proposed Quantity	Total Quantity
1	KLD	Fuel Grade Ethanol	0	120	120
2	MW	Cogeneration power	0	3	3
S. No	Issues in Brief		Action plan		Budget allocated along with Timeline
	Mr. Singh praises the effort of CMO Mrs. Renu as she is associated with the village in the last 25 years and doing a great work. He also Praises M D of Kaithal Sugar Mill for the project and said that in year 2018 Prime Minister Shree Narendra Modi ji has given permission to this project. He also stated that in every agitation which he attained for any other reason he saw that framer always supported for this project. Further he asked to the respected members present in the public hearing for organizing the camps for better production of Sugarcane in the villages fall		The project proponent thanked his appreciation and support for the project.		-

	<p>s around the 10 km radius project area, as the production of the sugarcane is decreased in recent years. If the production of sugarcane will be increased it will be good for the project.</p>		
	<p>Mr. Karamveer welcomed the ADC mam, MD Kaithal Sugar Mill along with other respected members present in the public hearing. He also welcomed the project and said that the villages (such as Sega, Sergarh, Geong, Narad, Pilni and Mundari etc.) which comes within 10 Km radius of the project site mainly engaged in the production of wheat and sugarcane and their fields are very much productive. He stated that although he supports the project but before commencement of the project we should talk to the farmer of respected villages and explain them about the project by conducting the awareness camp in order to avoid any kind of agitation as farmer did at the time of Highway construction and Canal construction. He also stated that it is good that there is no any court case pending regarding the project and asked that where will be plant established in the district. Mr. Karamveer also offered 20 acres of land for the project in his village</p>	<p>Project proponent explained that land of proposed project will be inside the premises of Kaithal sugar mill as they already have 150 acres of land out of which the project will be established in 20 acres of land. She also stated that no land will be acquired for the project from the farmer for the said project.</p> <p>Also, K K Tiwari, Chief chemist Kaithal Sugar Mills submitted that if the proposed project will be installed outside the premises of sugar mill then it may cause unnecessarily increase the cost of project as project proponent will have to install infrastructure and other equipment which are already installed in the Sugar Mill.</p>	-
	<p>Mr. Kumar asked that how this project is will be beneficial to the local people.</p>	<p>Project proponent stated that during the construction as well after the commencement of the project the requirement of manpower (i.e., 70 and 78 respectively,) will be fulfilled by local people on priority basis.</p> <p>Apart from this project 2 Crore has been given as a corporate environmental Responsibilities which will be spend for the welfare of the nearby villages. In which there is a provision of installation of solar panel, construction of drinking water facilities as well as rain water harvesting will be done in the nearby villages.</p>	<p>Rs. 2 Crore has been assigned as a budget for corporate environmental Responsibilities for 5 years</p>
	<p>He asked that whether the liquor will be manufa</p>	<p>Project proponent clearly spe</p>	-

	ctured under this project.	cified that the ethanol produc e in the project will be directl y sold to Government for the blending in petrol.	
	Sh. Mahavir question about the CSR and what will be scope of employment for the local peopl e in this project.	Project proponent specified t hat the project has kept separ ate provision of CER (i.e., C orporate Environmental resp onsibility) which is 2 Crores and CSR (i.e., Corporate soci al responsibility) which is 1. 5% of total project cost used in the welfare of the nearby v illagers. Regarding the employment o n behalf of project proponent stated that employment priori ty will be given to the local p eople and also stated that the total manpower required for t he project is 70 during constr uction phase and 78 during o peration phase.	Rs. 2 Crore has been assigned as a budget for corporate enviro nmental Responsibil ities. CSR (i.e., Corporate social responsibility) which is 1.5% of tot al project cost used i n the welfare of the nearby villagers for 5 years.
	Shree Ram Niwas questioned that due to the co mmencement of this project is there any possibil ities of water pollution or air pollution in our vil lage.	Project proponent submitted t hat the project is based on Zer o Liquid discharge (ZLD) and no waste water (effluent) will be discharged outside the pre mises. All the waste effluent will be reused/recycled after t reatment through ETP/ZLD Pl ant. In case of air pollution during the construction phase, adequ ate provision for dust suppress ion has been kept in the projec t. The dust produced during th e transportation will be mitiga ted by sprinkling of water. Ap art from this to subsidize the air pollution provision of 50% gr eenbelt has been given in the project. Adequate APCM, s will be ins talled to mitigate air emission during operation phase.	Rs.150 lakh capital c ost and Rs. 40 lakh re curring cost has been kept in point no.1 of EMP budget for mitiga tion of air pollution control and dust supp ression for 5 years. Rs.13 lakh capital cos t and Rs. 3 Lakh recu rring cost has been ke pt in point no.8 of E MP budget for Green belt for 5 years. Rs.40 lakh capital cos t and Rs. 10 lakhs rec urring cost has been k ept in point no.3 of E MP budget for Spent wash treatment and Z LD for 5 years.
	Mrs Sharma stated that what are the provision k ept in the project for mitigation of air pollution during the construction as well the operation ph ase.	Project proponent submitted t hat proper water sprinkling wi ll be done during the construct ion phase to mitigate the air p ollution.	Rs.150 lakh capital c ost and Rs. 40 Lakh r ecurring cost has bee n kept in point no.1 o f EMP budget for mit igation of air pollutio

n control and dust suppression for 5 years.

The water requirement for the first run for project would be 1814.7 KLD, which will be further reduced through recycling of 1345.2 KLD. Hence, fresh water requirement will be 469.3 KLD (4 KL / KL) in Molasses based distillery. The water requirement for the first run for project would be 1895.0 KLD, which will be further reduced through recycling of 1419.1 KLD. Hence, fresh water requirement will be 475.9 KLD (4 KL/ KL) in Grain based distillery. Effluent from sugar mill 1000 KLD (541 KLD condensate water after cooling and 459 KLD from the Plant) will be used in proposed distillery unit after treatment. When sugar mill will not be functional then water requirement will be fulfilled from ground water abstraction. The water consumption per KL of ethanol is estimated 4KL / KL B-heavy molasses and grain respectively. The required water will be taken from proposed borewell.

Effluent generation

S.No.	Item	Capacity	Process	Emission	Management
1	Boiler	30 TPH boiler	3.0 MW power generation process	50 mg/Nm ³	Electrostatic Precipitator 4-field ESP Air handling capacity: ~100,000 Nm ³ /hr

S.No.	Item	Type of waste	Source	Quantity Per Annum	Mode of Disposal
1	Solid waste	Yeast Sludge	Fermentation	7.5 MT/Day	Yeast sludge will be used in incinerator or boiler/bio composting
		Boiler Furnace ash	Boiler	162 Kg/day	Boiler furnace ash will be used as manure/ manufacturing of fly ash brick.
		Garbage	Construction and operation Phase	21 kg/day during construction Phase 39 Kg/day during operation Phase	As per Solid Waste Management Rules, 2016
2	Hazardous waste	Used oil (schedule I, Category 5.1)	DG sets	3.5 KL/year	It will be stored on site and sold to authorized recyclers

S. No	Particulars	Capital Cost In Rs lacs	Annual Recurring Cost in Rs lacs
1	Air pollution control system (ESP/ Bag filter) on 30 TPH low pressure boiler	155	40
2.	Scrubbing system, compressing system, liquefying system and storage for CO ₂ removal	45	15
3.	Treatment system for spent wash,	45	10

	DWGS centrifuge decanter, DDG S dryer for ZLD system		
4.	Condensate Polishing unit for water treatment and recycle	35	10
5.	Rainwater harvesting systems	15	3
6.	Occupational Health Management	5	2
7.	Noise Reduction Systems	4	1
8.	Green Belt Development	13	3
9.	Environment monitoring	-	5
10.	Environment management cell	-	10
11.	Slip road Construction	300	
12.	Compliance of public hearing	The concern raised regarding Air pollution control management, dust suppression, employment generation, ZLD system and waste water treatment and green belt.	Budget for the same is proposed in Point no. 1, 3 & 8.
13.	Conservation Plan	9.5	
14.	CER	200	
15.	Total	826.5	99

Details of Extended EMP with proposed activities and budgetary allocation:

S. No.	Activities	Amount (Rs. in crores)
1.	Infrastructure creation for drinking water supply by providing hand pumps in Kaithal, Mundri & Segga villages	0.10
2.	Cross drainage structure in village roads for better drainage at Kaithal, Mundri & Segga villages	0.20
3.	Providing skills development training like computer education and distribution of books at Government Primary School Kaithal, Mundri & Segga villages	0.20
4.	Farmers' fields Soil testing and advise proper fertilization in Kaithal, Mundri & Segga villages	0.20
5.	Scientific support to local farmers to increase the yield of crop and fodder in Kaithal, Mundri & Segga villages	0.20
6.	Plantation in community areas with native species in consultation with For	0.60

	est Department at Kaithal, Mundri & Segra villages	
7.	Provision of solar panel lights in Kaithal, Mundri & Segra villages	0.50
Total		2.00

3.4.3. Deliberations by the committee in previous meetings

N/A

3.4.4. Deliberations by the EAC in current meetings

<p>During deliberations, following issues were discussed: The committee was satisfied with the response provided by PP on above information. Further, Committee desired to submit the above information in writing. Accordingly, PP has submitted the desired information and EAC found the information/commitments satisfactory. 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 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. 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 Extended EMP 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. 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. The EAC, after detailed deliberations, recommended the project for grant of environmental clearance, subject to compliance of terms and conditions as under, and general terms of conditions at Annexure: -</p>
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3.4.5. Recommendation of EAC

Recommended

3.4.6. Details of Environment Conditions

3.4.6.1. Specific

Distilleries	
1.	1. 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.

2. EC granted for a project on the basis of the submitted documents shall become invalid in case the actual land for the project site turns out to be different from the land considered at the time of appraisal of project. Conversion of land use (CLU) certificate shall be obtained before start of construction activities.

3. NOC from the Concerned Local authority shall be obtained before start of the construction of plant and drawing water from ground water. State Pollution Control Board shall not issue the Consent to Operate (CTO) under Air (Prevention and Control of Pollution) Act and Water (Prevention and Control of Pollution) Act till the project proponent shall obtain such permission.

4. Total fresh water requirement for distillery for fresh water requirement will be 475.9 KLD in Grain based operation and 469.3 KLD in Molasses based operation, which shall be met from ground water. No ground water recharge shall be permitted within the premises. Industry shall construct a rainwater storage pond of adequate capacity and the accumulated water to be used as fresh water thereby reducing freshwater consumption.

5. Spent Wash/stillage shall be sent to the decanter followed by the Multiple Effect Evaporator and dryer to form DDGS. DDGS to be used as cattle feed. The MEE & Drier condensate, spent lees, WTP Rejects, Boiler & Cooling tower blowdowns, washings etc. shall be treated in the 'Condensate Polishing Unit' (CPU). STP shall be installed to treat domestic wastewater. The plant will be based on 'Zero Liquid Discharge' system and no effluent/treated water will be discharged outside factory premises.

6. The spent wash from molasses-based distillery shall be concentrated in MEE and concentrated spent wash shall be incinerated in the incineration boiler. Other lean effluents Spent lees, MEE Condensates and utility effluents shall be treated in the condensate polishing unit (CPU) comprising of three stage RO. No wastewater or treated water from integrated unit of sugar mill and distillery shall be discharged outside the premises and Zero Liquid Discharge shall be maintained for all the units namely sugar, Distillery and Cogen Power Plant. STP shall be installed to treat sewage generated from factory premises.

7. Adequate numbers of ground water quality monitoring stations by providing piezometers around the project area shall be set up considering the ground water hydrogeology. Sampling and trend analysis monitoring must be conducted on monthly basis and report submitted to SPCB and RO- MoEF&CC. The ground water quality monitoring for pH, BOD, COD, Chloride, Sulphate and Total Dissolve Solids shall be monitored and report submitted to the Ministry's Regional Office.

8. Stack height of 60 m along with ESP (99.99 % efficiency) shall be provided to rice husk/baggase fired boiler (30 TPH) for controlling the particulate matter emissions within the statutory limit of 50 mg/Nm^3 . At no time, the emission levels shall exceed the prescribed standards. In the event of failure of any pollution control system adopted by the unit, the respective unit shall not be restarted until the control measures are rectified to achieve the desired efficiency. Performance assessment of pollution control devices/systems will be conducted annually.

9. The DG sets used for power requirements shall comply with the latest CPCB norms.

10. Boiler ash shall be converted to Granules and utilised as manure. Ash generated during grain based operation ash shall be provided to brick manufacturers. PP shall install 10% of the total power requirement in the form of solar power inside plant premises/adjacent/nearby areas.

11. CO₂ generated during the fermentation process will be collected by utilizing CO₂ scrubbers in the proposed bottling plant and sold to beverage industry.

12. PP shall allocate at least Rs. 0.05 Crores proposed as a capital cost and Rs. 0.02 Crore as recurring cost for Occupational Health Safety. Occupational Health Centre for surveillance of the worker's health shall be set up. The health data shall be used in deploying the duties of the workers. All workers & employees shall be provided with required safety kits/mask for personal protection.

13. Training shall be imparted to all employees on safety and health aspects of chemicals handling. Safety and visual reality training shall be provided to employees.

14. The unit shall make arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire-fighting system shall be as per the norms. PESO certificate shall be obtained. Location of ethanol storage tanks shall be placed in such a way that in the event of any fire, accident, explosion or any unforeseen conditions the impact of such event should not go beyond the boundary of the plant, i.e., the risk should be tolerable (acceptable) at the boundary. PP shall adhere to OISD standards specifically OISD-STD-108 & 129.

15. Company shall maintain an Emergency Response Decision support system in such a way so that identification of the detector's network for the location of the leak source and the probable leaked quantity in real-time, followed by modelling of the dispersion of the plume and consequences as forecast is done in advance and thus, no leak accident may go unattended. Accordingly, Risk Mitigation plan shall be in place.

16. Company shall determine the distance of fire hydrant while finalizing its location from ethanol storage tanks or any other hazardous storage substance shall be based on dispersion of Thermal Radiation so that during any unforeseen situation fire hydrant is always available to operate manually.

17. Process organic residue and spent carbon, if any, shall be sent to Cement and other suitable industries for its incinerations. ETP sludge, process inorganic & evaporation salt shall be disposed of to the TSDF.

18. The company shall undertake waste minimization measures as below: (a) Metering and control of quantities of active ingredients to minimize waste, (b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes, (c) Use of automated filling to minimize spillage, (d) Use of Close Feed system into batch reactors, (e) Venting equipment through vapour recovery system, (f) Use of high pressure hoses for equipment clearing to reduce wastewater generation.

23. Continuous online (24x7) monitoring system for stack emissions/effluent shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.

24. A separate Environmental Management Cell (having qualified person with Environmental Science / Environmental Engineering /specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions. EMC head shall report directly to Head of Organization/ Director/CEO as per company hierarchy.

25. 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.

3.4.6.2. Standard

5(g)	Distilleries
General Conditions	
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.
2.	The energy source for lighting purpose shall be preferably LED based, or advanced having preference in energy conservation and environment betterment.
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).
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.
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.
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.
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.
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.
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.
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.
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 to this project.

4. Any Other Item(s)

4.1.1. Details of the proposal

Expansion of Molasses based Distillery from 30 KLPD to 100 KLPD by M/s. Vitthal Corporation Limited located at Vitthalrao Shinde Nagar, Village: Mhaisgaon, Tal.: Madha, Dist.: Solapur, Maharashtra located at Mhaisgaon, Solapur, Maharashtra		
Proposal For		Environment Clearance
Proposal No	File No	
IA/MH/IND2/237847/2019	J- 11011/704/2008- IA II (I)	

4.1.2. Project Salient Features

The proposal was considered by the EAC in its 45th meeting held on 29- 30th November, 2021 in the Ministry, wherein the project proponent and their consultant M/s. Equinox Environments (I) Pvt. Ltd., presented the project. EAC recommended the proposal for grant of EC. However, during processing it has been found that existing EC granted and proposed expansion attracts NBWL clearance. In this regard, competent authority directed PP to submit NBWL clearance. Accordingly, ADS was raised seeking NBWL clearance. However, PP has not submitted NBWL clearance yet.

4.1.3. Deliberations by the EAC in current meetings

During deliberations, following issues were discussed:
Accordingly, the proposal was returned in present form.

4.1.4. Recommendation of EAC

Returned in present form

4.2.1. Details of the proposal

Onshore Oil & Gas development drilling and production in DumdumaPengeri Area in Tinsukia District under PMLs namely Mechaki PML, Borhapjan PML, Dumduma PML and Digboi PML Tinsukia Assam by M/s OIL INDIA LIMITED located at N/A, Tinsukia, Assam		
Proposal For		Environment Clearance
Proposal No	File No	
IA/AS/IND2/220363/2007	J-11011/1251/2007 - IA II (I)	

4.2.2. Project Salient Features

The proposal was considered by the Expert Appraisal Committee (Industry-II) in its 42nd meeting held during 20th - 22nd October, 2021 in the Ministry, wherein the project proponent and their consultant presented the proposal. EAC has recommended the project for grant of EC. However, during processing following major issues were flagged: Concealment of fact that proposed activity area falling under the critical elephant habitat and corridor which connects the two States Assam and Arunachal Pradesh. The proposed diversion is completely falling under the Dihing Patkai Elephant Reserve, Assam and South Arunachal Elephant Reserve, Arunachal Pradesh. Project Elephant Division has also mentioned that the proposed activities (Onshore Oil & Gas development drilling) may adversely impact on elephant conservation and lead to further escalation of the Human Elephant Conflicts. Further, PP has also concealed court case against the proposed area. The detailed chronology of the court case is mentioned below:

“1. Dr. Kashmira Kakati had filed an Original Application No. 19/2014 in the Principal Bench NGT, under section 14 read with 18 of the NGT Act, 2010 with a serious concern for protection of elephant population in the country and to protect elephant corridors or elephant reserves.

2. As per the Application filed, the appellant had alleged that Oil India Limited had released untreated oil processing effluent into the open sludge pits and seepage areas around oil rigs in the Digboi Oil field, which falls within Upper Dihing RF (East Block) and the Dihing Patkai Elephant Reserve. The Application was filed against 13 respondents, including the Government of India, the Government of Assam, IOCL, NHAI, Coal India, Digboi Town Committee, and M/s. Oil India Limited.

3. As per the order dated 08.12.2017 passed by the Hon’ble NGT Bench, certain directions were given, one of which was as follows: “Respondent No. 7 i.e. Oil India Limited to forthwith stop releasing of untreated oil effluent in open sludge pits and seepage areas around oil rigs in the Digboi Oil field which falls within upper Dihing RF (East Block) and the Dihing Patkai Elephant Reserve”.

4. The matter was then taken up in the Hon’ble Supreme Court as C.A. No. 9710-9711/2018, wherein Coal India Limited was the petitioner while Oil India Limited was one of the Respondents along with the Ministry of Environment, Forest and Climate Change and others. As per the order dated 10.08.2022, the Hon’ble Court had ordered the Ministry to file status report regarding the steps taken for implementation of directions given by the National Green Tribunal vide its order dated 08.12.2017. In furtherance of the same, a Committee was constituted.

5. The Committee submitted its report on 04.01.2023 (enclosed) wherein, inter-alia, the following observation was made by the Committee in regards to the directions that had to be followed by OIL India Limited:

- Oil is leaking from underground pipelines in the Reserve forest.
- At several places, oily sludge pits of abandoned wells have been found and natural drains pass through these pits.
- Oil spill have been found in several oil producing wells and Crude Gathering Stations. No fencing had been provided at these well sites.
- More than 800 wells have been drilled since the operation of Burma Oil Company Limited. OIL India Ltd. does not even have the inventories of these abandoned oil wells, let alone treatment of these pits.
- In the three oil sludge remediation sites visited, the remediation has not resulted in complete conversion of oily sludge into biodegradable matter. They do not even maintain the inventors of abandoned oil wells. OIL India Ltd. has been unable to stop the release of untreated oil effluent in open sludge pits and seepage areas around oil rigs in the Digboi Oil field.” The Ministry had filed the compliance affidavit/status report and the same was acknowledged in the Order dated 16.03.2023 passed by the Hon’ble Supreme Court.

6. Furthermore, in the final Order, dated 27.04.2023, passed by the Hon’ble Supreme Court in C.A. No. 9710-9711/2018, it was held that since the compliance reports have been filed by the stakeholders and also put on record, therefore the matter will be remitted back to the Tribunal along with the compliance reports as a part of the record in O.A. No. 19/2014 on the file of the Tribunal. The matter was thus, remitted back to the Tribunal.

4.2.3. Deliberations by the EAC in current meetings

In view of the above, as directed by competent authority ADS was raised vide letter dated 04th December, 2023 to approach the Ministry after the final outcome of the court case. The court case is still under subjudice. The Committee also noted that PP has not complied with observations of Joint Committee.

The EAC agreed with the direction of the competent authority and suggested PP to submit the proposal only after receipt of final outcome of the court case.

Accordingly, the proposal was returned in present form.

4.2.4. Recommendation of EAC

Returned in present form

5. List of Attendees

Sr. No.	Name	Designation	Email ID	Remarks
1	Dr Onkar Nath Tiwari	Member (EAC)	ont***@gmail.com	Present

2	Dr Rahul Ramesh Rao Mungikar	Member (EAC)	rah*****@gmail.com	Present
3	Dr Seshagiri Rao Ambati	Member (EAC)	rao*****@gmail.com	Present
4	Dr Vimal Kumar Hatwal	Scientist E	vk.*****@gov.in	Absent Shri A N Singh (Link Officer) was present.
5	Shri Ashok Pai IFS Retd	Chairman, EAC	kas*****@gmail.com	Present
6	Dr Rajiv Gupta	Member (EAC)	raj**@pilani.bits-pilani.ac.in	Present
7	Om Prakash Singh Rana Retd	Member (EAC)	ran*****@gmail.com	Present
8	Dr Anil Mehta	Member (EAC)	ani*****@gmail.com	Present
9	Shri Parasnath	Member (EAC)	nat*****@gmail.com	Present
10	Dr Sanjay Jain	Member (EAC)	pre*****@bmsurat.ac.in	Absent
11	Representative of Central Ground Water Authority	Member (EAC)	mcg*****@nic.in	Absent
12	Representative of Indian Meteorological Department	Member (EAC)	m.m*****@imd.gov.in	Absent
13	Representative of Vasantdada Sugar Institute	Member (EAC)	ska*****@vsisugar.org.in	Present
14	Dr Ratna Trivedi	Member (EAC)	drr*****@gmail.com	Present

**GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE
(IA DIVISION-INDUSTRY-2 SECTOR)**

Dated: 13.05.2025

**Meeting ID: EC/AGENDA/EAC/626017/4/2025
MINUTES OF MEETING OF THE EXPERT APPRAISAL COMMITTEE
(INDUSTRY-2 SECTOR PROJECTS)
HELD ON 6th – 7th May, 2025**

Venue: Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi-110003 in physical mode.

(i) Opening Remarks by the Chairman: The Chairman made hearty welcome to the Committee members and appreciated the efforts of the Committee. After opening remarks, the Chairman opened the EAC meeting for further deliberations.

(ii) Confirmation of minutes: The EAC, having taken note that final minutes were issued after incorporating comments received from the EAC members on the minutes of its Meeting (ID: EC/AGENDA/EAC/760105/4/2025) held on 16th – 17th April, 2025 conducted through Video Conferencing (VC).

(iii) Member Secretary informed the Members of the EAC that they may declare their conflict of interest before appraisal of any proposal and recuse from the meeting and the same shall be explicitly recorded in the Minutes of the meeting. Further, it was also informed that in case it is revealed later that in spite of the conflict of interest the Member had participated in the appraisal of the proposal, the responsibility for the same lies with the concerned Member and it may result in removal from the membership of EAC. After welcoming the Committee Members, discussion on each of the agenda items was taken up ad-seriatim. Dr. Kakasaheb Konde recused himself from the meeting before the deliberation of the proposal agenda no. 10.

(iv) Details of the proposals considered during the meeting conducted through Video Conferencing (VC), deliberations made and the

recommendations of the Committee are explained in the respective agenda items as under: -

6th May, 2025 (Tuesday)

Agenda No. 01

Drilling of Appraisal cum Development of Additional up to 65 Wells and Setting up of 02 Early Production Units in Existing Bakrol Field in Cambay Basin (Onshore) at District Ahmedabad, Gujarat by M/s Selan Exploration Technology Ltd. (SELAN)-Consideration of Environmental Clearance.

[IA/GJ/IND2/527655/2025, J-11011/26/2011-IA-II(I)]

The Project Proponent and the accredited Consultant M/s. Eco Chem Sales & Services (NABET Certificate No.: NABET/EIA/2326/RA 0292 and Validity: 15th March 2026), Surat, made a detailed presentation on the salient features of the project and informed that the proposal is for environment clearance to the project for Drilling of Appraisal cum Development of Additional up to 65 Wells and Setting up of 02 Early Production Units in Existing Bakrol Field (36 Sq. Km.) in Cambay Basin (Onshore) at District Ahmedabad, Gujarat by M/s Selan Exploration Technology Ltd. (SELAN).

All Onshore and Offshore Oil and Gas Development and Production activities are listed at S. N. 1(b) Schedule of Environment Impact Assessment (EIA) Notification under category 'A' and is appraised at Central Level by Expert Appraisal Committee (EAC).

The proposed project is a brownfield in nature to carryout additional development wells drilling and production from Bakrol Field at Cambay Basin (Onshore) of Ahmedabad District of Gujarat. Geographic location of the block is included within the Survey of India's Topo-Sheet No. F43G9, F43G13, F43A12 and F43A16.

As on December 2022 there are 23 producing wells in the Bakrol Field with average production of about 275 barrels and 22,000 SCM of oil and gas per day respectively. From the date of signing of PSC and taking over of Bakrol field from ONGC in October 1995 till date Bakrol Field has produced nearly 2.75 MMbbls of crude oil and 125 MMSCM of associated natural gas cumulatively.

Now, PP has proposed the following three major activities as part of the Bakrol Field development:

1. Drilling of an additional up to 65 appraisal cum development wells in existing Bakrol Field including well testing / extended well testing (the depth of the appraisal cum development wells will be a minimum of 1600 m, though the company may, based on techno-commercial justification drill to explore commercial viability of deeper hydrocarbon prospects in the existing Bakrol Field).
2. Setting up to 02 No. of Early Production Units (EPUs) / Quick Production Units (QPU) for handling and processing the produced well fluid processing including lying of pipeline.
3. Early production of 30,000 BPD/EPUs (Barrels of Liquid per Day) of Crude Oil and 10 MMSCFD/EPUs of Natural Gas

The details of 65 wells coordinates are as under:

Co-ordinates of proposed additional wells and EPUs for 1(b) projects: Tentative proposed additional wells and EPUs locations are as below:

S. No.	Well Name	Longitude	Latitude	S. No.	Well Name	Longitude	Latitude
1	BK-23#1	22°57'28.95"N	72°44'48.34"E	35	BK-23#35	22°57'33.25"N	72°43'19.03"E
2	BK-23#2	22°57'27.92"N	72°46'24.96"E	36	BK-23#36	22°59'5.54"N	72°43'15.62"E
3	BK-23#3	22°57'31.26"N	72°45'16.82"E	37	BK-23#37	22°59'52.73"N	72°45'50.57"E
4	BK-23#4	22°58'22.99"N	72°44'48.90"E	38	BK-23#38	23° 0'26.53"N	72°46'4.55"E
5	BK-23#5	22°57'42.43"N	72°45'33.99"E	39	BK-23#39	22°59'29.56"N	72°43'18.27"E
6	BK-23#6	22°57'52.80"N	72°45'49.87"E	40	BK-23#40	23° 0'9.11"N	72°45'18.59"E
7	BK-23#7	22°57'45.26"N	72°44'48.74"E	41	BK-23#41	22°59'54.18"N	72°45'12.77"E
8	BK-23#8	22°57'34.22"N	72°46'5.62"E	42	BK-23#42	23° 0'2.17"N	72°46'24.22"E
9	BK-23#9	22°57'41.28"N	72°46'22.27"E	43	BK-23#43	22°58'12.60"N	72°45'1.18"E
10	BK-23#10	22°57'52.25"N	72°46'18.61"E	44	BK-23#44	22°58'20.43"N	72°46'21.47"E
11	BK-23#11	22°58'40.99"N	72°46'22.54"E	45	BK-23#45	22°59'16.89"N	72°45'26.20"E
12	BK-23#12	22°57'40.05"N	72°45'6.91"E	46	BK-23#46	23° 0'6.58"N	72°44'55.60"E
13	BK-23#13	22°58'55.61"N	72°45'40.49"E	47	BK-23#47	22°58'6.21"N	72°43'17.18"E
14	BK-23#14	22°59'4.01"N	72°46'23.07"E	48	BK-23#48	23° 0'24.41"N	72°45'43.16"E
15	BK-23#15	22°58'47.08"N	72°46'2.92"E	49	BK-23#49	23° 0'12.54"N	72°43'18.88"E
16	BK-23#16	22°59'25.45"N	72°46'12.68"E	50	BK-23#50	23° 0'20.74"N	72°44'41.61"E
17	BK-23#17	22°58'21.99"N	72°45'58.17"E	51	BK-23#51	22°57'48.76"N	72°44'28.16"E
18	BK-23#18	22°58'11.66"N	72°45'19.38"E	52	BK-23#52	22°59'29.21"N	72°43'37.13"E
19	BK-23#19	22°58'9.82"N	72°45'43.52"E	53	BK-23#53	22°58'41.79"N	72°43'16.51"E
20	BK-23#20	22°59'11.29"N	72°46'4.38"E	54	BK-23#54	22°59'26.69"N	72°44'55.32"E
21	BK-23#21	22°58'30.92"N	72°45'32.33"E	55	BK-23#55	23° 0'27.57"N	72°45'23.03"E
22	BK-23#22	22°58'29.48"N	72°45'8.80"E	56	BK-23#56	23° 0'25.54"N	72°43'25.37"E
23	BK-23#23	22°58'1.53"N	72°44'36.55"E	57	BK-23#57	22°59'25.01"N	72°45'11.85"E

24	BK-23#24	22°58'0.79"N	72°44'57.51"E	58	BK-23#58	22°58'18.52"N	72°44'33.60"E
25	BK-23#25	22°58'41.55"N	72°45'4.53"E	59	BK-23#59	22°59'45.05"N	72°44'54.84"E
26	BK-23#26	22°58'46.95"N	72°44'33.33"E	60	BK-23#60	22°58'24.06"N	72°44'18.87"E
27	BK-23#27	22°58'33.81"N	72°44'41.31"E	61	BK-23#61	22°59'18.00"N	72°46'30.95"E
28	BK-23#28	22°58'57.43"N	72°44'48.08"E	62	BK-23#62	22°59'34.43"N	72°46'29.56"E
29	BK-23#29	22°59'35.64"N	72°45'53.34"E	63	BK-23#63	23° 0'25.59"N	72°46'27.39"E
30	BK-23#30	22°57'29.73"N	72°45'44.50"E	64	BK-23#64	23° 0'9.23"N	72°46'3.50"E
31	BK-23#31	22°58'44.26"N	72°43'43.67"E	65	BK-23#65	23° 0'6.48"N	72°45'41.39"E
32	BK-23#32	22°59'52.90"N	72°45'35.26"E	--	EPU-1	22°57'41.97"N	72°45'33.50"E
33	BK-23#33	22°59'34.30"N	72°45'30.12"E	--	EPU-2	22°59'25.41"N	72°44'53.54"E
34	BK-23#34	22°59'44.41"N	72°46'18.44"E				

Proposed Well Locations with Geographical Coordinates and distance from sensitive sites:

Well Id	Geographical Co-Ordinates		Road Infrastructure	Railway Line	Forest / Wildlife Sanctuary / National Park	Nearest River / Water bodies	Major Human Establishments etc.	Nearest School	Historical Monuments, Archaeological Site
	Longitude	Latitude							
Wells as per FDP approved by DGH									
BK-23#5	22°57'42.43"N	72°45'33.99"E	Dhamtan to Undrel Village Road: 0.46 km in S	None within 10 km Radius from Well	None within 10 km Radius from Well	Vehlal Branch Canal : 0.83 km in NNW	Undrel Village: 1.38 km in SEE	Undrel Primary School: 1.35 km in SE	None within 10 km Radius from Well
BK-23#9	22°57'41.28"N	72°46'22.27"E	Undrel to Bhavda Village Road: 0.11 km in W	None within 10 km Radius from Well	None within 10 km Radius from Well	Meswo River: 0.91 km in SEE	Undrel Village: 0.65 km in S	Undrel Primary School: 0.80 km in S	None within 10 km Radius from Well
BK-23#12	22°57'40.05"N	72°45'6.91"E	Dhamtan to Undrel Village Road: 0.18 km in SW	None within 10 km Radius from Well	None within 10 km Radius from Well	Vehlal Branch Canal : 0.51 km in NNW	Undrel Village: 2.05 km in SEE	Bhavda Primary School: 2.03 km in NW	None within 10 km Radius from Well
BK-23#23	22°58'1.53"N	72°44'34.23"E	Dhamtan to Kuha Village Road: 0.51 km in SE	None within 10 km Radius from Well	None within 10 km Radius from Well	Vehlal Branch Canal : 0.52 km in SE	Bakrol Bujrang Village: 1.55 km in NNW	Saurabh Vidhyalya, Dhamtan: 2.70 km in SW	None within 10 km Radius from Well
BK-23#24	22°58'09.95"N	72°44'49.18"E	Dhamtan to Kuha Village Road: 0.51 km in SE	None within 10 km Radius from Well	None within 10 km Radius from Well	Vehlal Branch Canal : 0.52 km in SE	Bakrol Bujrang Village: 1.41 km in NW	Bakrol Bujrang Government School: 1.70 km in NW	None within 10 km Radius from Well

Well Id	Geographical Co-Ordinates		Road Infrastructure	Railway Line	Forest / Wildlife Sanctuary / National Park	Nearest River / Water bodies	Major Human Establishments etc.	Nearest School	Historical Monument s, Archaeological Site
	Longitude	Latitude							
BK-23# 26	22°58'46.95"N	72°44'48.64"E	Bakrol Bujarang to Kuha Village Road: 0.35 km in NNW	None within 10 km Radius from Well	None within 10 km Radius from Well	Vehlal Branch Canal : 1.50 km in SE	Bakrol Bujrang Village: 0.60 km in NW	Bakrol Bujrang Government School: 1.12 km in NWW	None within 10 km Radius from Well
BK-23# 51	22°57'48.76"N	72°44'14.47"E	Dhamtanwan to Bhavda / Undrel Village Road: 0.50 km in S	None within 10 km Radius from Well	None within 10 km Radius from Well	Vehlal Branch Canal : 0.51 km in SE	Dhamtanwan Village: 1.45 km in SWW	Saurabha Vidhyalya: 1.93 km in SWW	None within 10 km Radius from Well
BK-23# 54	22°59'26.69"N	72°44'55.32"E	Kujad to Bhavda Village Road: 0.15 km in SW	None within 10 km Radius from Well	None within 10 km Radius from Well	Vehlal Branch Canal : 2.05 km in SEE	Bakrol Bujrang Village: 1.03 km in SW	Jeevandham Public School: 0.74 km in NNW	None within 10 km Radius from Well
BK-23# 60	22°58'24.06"N	72°44'18.87"E	Dhamtanwan to Kujad Village Road (SH-144): 0.59 km in W	None within 10 km Radius from Well	None within 10 km Radius from Well	Vehlal Branch Canal : 1.33 km in SE	Bakrol Bujrang Village: 0.81 km in N	Bakrol Bujrang Government School: 0.88 km in NNW	None within 10 km Radius from Well
BK-23# 61	22°59'10.06"N	72°46'28.75"E	Dhamtanwan to Kuha Village Road: 0.53 km in NWW	None within 10 km Radius from Well	None within 10 km Radius from Well	Vehlal Branch Canal : 0.52 km in NWW	Bhavda Village: 1.51 km in SSW	Bhavda Primary School: 1.77 km in SSW	None within 10 km Radius from Well
Remaining Wells									
BK-23# 1	22°57'36.94"N	72°45'01.52"E	Dhamtanwan to Undrel Village Road: 0.03 km in NW	None within 10 km Radius from Well	None within 10 km Radius from Well	Vehlal Branch Canal : 0.51 km in NW	Undrel Village: 2.18 km in SEE	Undrel Primary School: 2.10 km in SEE	None within 10 km Radius from Well
BK-23# 2	22°57'35.36"N	72°46'28.92"E	Undrel to Bhavda Village Road: 0.28 km in W	None within 10 km Radius from Well	None within 10 km Radius from Well	Mesworo River: 0.69 km in SEE	Undrel Village: 0.49 km in SSW	Undrel Primary School: 0.74 km in SW	None within 10 km Radius from Well
BK-23# 3	22°57'35.81"N	72°45'14.91"E	Dhamtanwan to Undrel Village Road:	None within 10 km Radius	None within 10 km Radius	Vehlal Branch Canal : 0.74	Undrel Village: 1.82 km in SEE	Undrel Primary School: 1.73 km in SEE	None within 10 km Radius from Well

Well Id	Geographical Co-Ordinates		Road Infrastructure	Railway Line	Forest / Wildlife Sanctuary / National Park	Nearest River / Water bodies	Major Human Establishments etc.	Nearest School	Historical Monument s, Archaeological Site
	Longitude	Latitude							
			0.17 km in SW	s from Well	from Well	km in NW			
BK-23#4	22°58'22.99"N	72°44'48.90"E	Gatrad to Undrel Village Road: 0.96 km in SW	None within 10 km Radius from Well	None within 10 km Radius from Well	Vehlal Branch Canal : 0.88 km in SE	Bakrol Bujrang Village: 1.18 km in NW	Bakrol Bujrang Government School: 1.46 km in NW	None within 10 km Radius from Well
BK-23#6	22°57'52.80"N	72°45'49.87"E	Dhamtawan to Undrel Village Road: 0.80 km in S	None within 10 km Radius from Well	None within 10 km Radius from Well	Vehlal Branch Canal : 0.79 km in NNW	Undrel Village: 1.25 km in SE	Bhavda Primary School: 0.95 km in NE	None within 10 km Radius from Well
BK-23#7	22°57'46.11"N	72°45'17.86"E	Dhamtawan to Undrel Village Road: 0.19 km in S	None within 10 km Radius from Well	None within 10 km Radius from Well	Vehlal Branch Canal : 0.51 km in NW	Bhavda Village: 1.67 km in NEE	Bhavda Primary School: 1.80 km in NEE	None within 10 km Radius from Well
BK-23#8	22°57'34.22"N	72°46'5.62"E	Dhamtawan to Undrel Village Road: 0.36 km in SW	None within 10 km Radius from Well	None within 10 km Radius from Well	Meswo River: 1.34 km in E	Undrel Village: 0.52 km in SE	Undrel Primary School: 0.57 km in S	None within 10 km Radius from Well
BK-23#10	22°57'52.25"N	72°46'18.61"E	Undrel to Bhavda Village Road: 0.11 km in W	None within 10 km Radius from Well	None within 10 km Radius from Well	Meswo River: 1.14 km in SE	Undrel Village: 0.96 km in S	Undrel Primary School: 1.13 km in S	None within 10 km Radius from Well
BK-23#11	22°58'40.99"N	72°46'22.54"E	Undrel to Bhavda Village Road: 0.48 km in W	None within 10 km Radius from Well	None within 10 km Radius from Well	Vehlal Branch Canal : 0.79 km in NWW	Bhavda Village: 0.59 km in SSW	Bhavda Primary School: 0.86 km in S	None within 10 km Radius from Well
BK-23#13	22°58'56.23"N	72°45'39.11"E	Kujad to Bhavda Village: 0.16 km in SW	None within 10 km Radius from Well	None within 10 km Radius from Well	Vehlal Branch Canal : 0.51 km in SEE	Bhavda Village: 1.43 km in SE	Bhavda Primary School: 1.63 km in SE	None within 10 km Radius from Well
BK-23#14	22°59'4.01"N	72°46'25.02"E	Dhamtawan to Kuha Village Road:	None within 10 km Radius	None within 10 km Radius	Vehlal Branch Canal : 0.51	Bhavda Village: 1.30 km in SSW	Bhavda Primary School: 1.57 km in SSW	None within 10 km Radius from Well

Well Id	Geographical Co-Ordinates		Road Infrastructure	Railway Line	Forest / Wildlife Sanctuary / National Park	Nearest River / Water bodies	Major Human Establishments etc.	Nearest School	Historical Monument s, Archaeological Site
	Longitude	Latitude							
			0.51 km in NW	s from Well	from Well	km in NWW			
BK-23#15	22°58'47.08"N	72°46'14.89"E	Bhavda Chowkadi to Undrel Village Road: 0.32 km in SW	None within 10 km Radius from Well	None within 10 km Radius from Well	Vehlal Branch Canal : 0.51 km in NWW	Bhavda Village: 0.74 km in S	Bhavda Primary School: 1.00 km in S	None within 10 km Radius from Well
BK-23#16	22°59'28.73"N	72°45'56.36"E	Bakrol to Gatrad Village Road: 0.04 km in S	None within 10 km Radius from Well	None within 10 km Radius from Well	Vehlal Branch Canal : 0.54 km in SSE	Bhavda Village: 2.01 km in SSE	Bhavda Primary School: 2.41 km in SSE	None within 10 km Radius from Well
BK-23#17	22°58'48.38"N	72°45'33.97"E	Kujad to Bhavda Village Road: 0.10 km in NE	None within 10 km Radius from Well	None within 10 km Radius from Well	Vehlal Branch Canal : 0.52 km in SEE	Bhavda Village: 1.40 km in SE	Bhavda Primary School: 1.51 km in SE	None within 10 km Radius from Well
BK-23#18	22°58'26.54"N	72°45'19.38"E	Dhamtan to Kuha Village Road: 0.52 km in SE	None within 10 km Radius from Well	None within 10 km Radius from Well	Vehlal Branch Canal : 0.53 km in SE	Bhavda Village: 1.50 km in E	Bhavda Primary School: 1.59 km in SEE	None within 10 km Radius from Well
BK-23#19	22°58'04.74"N	72°45'50.44"E	Dhamtan to Bhavda Village Road: 0.09 km in S	None within 10 km Radius from Well	None within 10 km Radius from Well	Vehlal Branch Canal : 0.53 km in NW	Bhavda Village: 0.60 km in NEE	Bhavda Primary School: 0.72 km in NE	None within 10 km Radius from Well
BK-23#20	22°59'11.29"N	72°45'54.19"E	Bhavda Chowkdi to Bhavda Village Road: 0.16 km in E	None within 10 km Radius from Well	None within 10 km Radius from Well	Vehlal Branch Canal : 0.51 km in SE	Bhavda Village: 1.72 km in SSE	Bhavda Primary School: 1.94 km in SE	None within 10 km Radius from Well
BK-23#21	22°58'30.92"N	72°45'24.59"E	Dhamtan to Kuha Village Road: 0.50 km in NW	None within 10 km Radius from Well	None within 10 km Radius from Well	Vehlal Branch Canal : 0.51 km in SEE	Bhavda Village: 1.35 km in SEE	Bhavda Primary School: 1.48 km in SEE	None within 10 km Radius from Well
BK-23#22	22°58'29.48"N	72°45'8.80"E	Kujad to Bhavda Village Road: 1.01 km in NW	None within 10 km Radius from Well	None within 10 km Radius from Well	Vehlal Branch Canal : 0.76	Bakrol Bujrang Village: 1.31 km in NW	Bakrol Bujrang Government School:	None within 10 km Radius from Well

Well Id	Geographical Co-Ordinates		Road Infrastructure	Railway Line	Forest / Wildlife Sanctuary / National Park	Nearest River / Water bodies	Major Human Establishments etc.	Nearest School	Historical Monument, Archaeological Site
	Longitude	Latitude							
						km in SE		1.80 km in NW	
BK-23# 25	22°58'41.55"N	72°45'4.53"E	Bakrol Gatrad Village Road: 0.59 km in NNW	None within 10 km Radius from Well	None within 10 km Radius from Well	Vehlal Branch Canal: 1.13 km in SE	Bakrol Bujrang Village: 1.03 km in NWW	Bakrol Bujrang Government School: 1.60 km in NWW	None within 10 km Radius from Well
BK-23# 27	22°58'33.81"N	72°44'41.31"E	Bakrol Gatrad Village Road: 0.69 km in N	None within 10 km Radius from Well	None within 10 km Radius from Well	Vehlal Branch Canal: 1.25 km in SE	Bakrol Bujrang Village: 0.78 km in NW	Bakrol Bujrang Government School: 1.06 km in NW	None within 10 km Radius from Well
BK-23# 28	22°58'57.43"N	72°44'51.86"E	Bakrol Bujarang to Kuha Village Road: 0.05 km in N	None within 10 km Radius from Well	None within 10 km Radius from Well	Vehlal Branch Canal: 1.70 km in SE	Bakrol Bujrang Village: 0.54 km in W	Bakrol Bujrang Government School: 1.22 km in SWW	None within 10 km Radius from Well
BK-23# 29	22°59'35.64"N	72°45'53.34"E	Bhavda Chokdi to Bhavda Village Road: 0.09 km in W	None within 10 km Radius from Well	None within 10 km Radius from Well	Vehlal Branch Canal: 0.73 km in SE	Bakrol Bujrang Village: 2.49 km in SW	Kothiya Primary School: 1.59 km in NE	None within 10 km Radius from Well
BK-23# 30	22°57'34.62"N	72°45'44.50"E	Dhamtawan to Undrel Village Road: 0.25 km in S	None within 10 km Radius from Well	None within 10 km Radius from Well	Vehlal Branch Canal: 1.19 km in NW	Undrel Village: 1.01 km in SE	Undrel Primary School: 0.95 km in SE	None within 10 km Radius from Well
BK-23# 31	22°58'44.26"N	72°43'43.67"E	Bakrol Gatrad Village Road: 0.27 km in NNW	None within 10 km Radius from Well	None within 10 km Radius from Well	Khari River: 0.72 km in NW	Bakrol Bujrang Village: 0.79 km in NE	Bakrol Bujrang Government School: 0.77 km in NE	None within 10 km Radius from Well
BK-23# 32	22°59'52.90"N	72°45'35.26"E	Bhavda Chokdi to Bhavda Village Road: 0.26 km in W	None within 10 km Radius from Well	None within 10 km Radius from Well	Vehlal Branch Canal: 1.45 km in SE	Bakrol Bujrang Village: 2.47 km in SW	Jeevandham Primary School: 1.23 km in W	None within 10 km Radius from Well
BK-23# 33	22°59'34.30"N	72°45'30.12"E	Bakrol to Gatrad Village	None within 10 km Radius	None within 10 km Radius	Vehlal Branch Canal	Bakrol Bujrang Village:	Jeevandham Primary School:	None within 10 km

Well Id	Geographical Co-Ordinates		Road Infrastructure	Railway Line	Forest / Wildlife Sanctuary / National Park	Nearest River / Water bodies	Major Human Establishments etc.	Nearest School	Historical Monuments, Archaeological Site
	Longitude	Latitude							
			Road: 0.44 km in SSE	s from Well	from Well	: 1.29 km in SE	1.94 km in SW	1.19 km in NW	Radius from Well
BK-23# 34	22°59'44.41"N	72°46'09.44"E	Bakrol Bujrang to Kuha Village Road: 0.35 km in S	None within 10 km Radius from Well	None within 10 km Radius from Well	Vehlal Branch Canal : 0.53 km in SEE	Bhavda Village: 2.50 km in S	Kothiya Primary School: 1.09 km in NE	None within 10 km Radius from Well
BK-23# 35	22°57'42.73"N	72°43'19.03"E	Dhamtan to Kujad Village Road (SH-144) (SH-144): 0.41 km in SEE	Barejadi Railway Station: 8.67 km in SW	None within 10 km Radius from Well	Khari River: 0.75 km in W	Dhamtan Village: 0.57 km in SSE	Saurabh Vidhyalya, Dhamtan: 0.71 km in SSW	None within 10 km Radius from Well
BK-23# 36	22°59'06.57"N	72°43'40.54"E	Bakrol Gatrad Village Road: 0.39 km in SSE	None within 10 km Radius from Well	None within 10 km Radius from Well	Khari River: 0.54 km in SWW	Bakrol Bujrang Village: 0.90 km in SEE	Gatrad Primary School: 2.82 km in SEE	None within 10 km Radius from Well
BK-23# 37	22°59'52.73"N	72°45'50.57"E	Bhavda Chokdi to Bhavda Village Road: 0.14 km in E	None within 10 km Radius from Well	None within 10 km Radius from Well	Vehlal Branch Canal : 1.11 km in SE	Bakrol Bujrang Village: 2.74 km in SW	Kothiya Primary School: 1.33 km in NE	None within 10 km Radius from Well
BK-23# 38	23°0'26.53"N	72°46'4.55"E	Ahmedabad Zalod Hwy.: 0.30 km in S	None within 10 km Radius from Well	None within 10 km Radius from Well	Vehlal Branch Canal : 1.33 km in SE	Kubadthal Village: 2.47 km in NNW	Kothiya Primary School: 0.84 km in SE	None within 10 km Radius from Well
BK-23# 39	22°59'37.37"N	72°43'30.97"E	Gatrad to Kujad Village Road: 0.64 km in NEE	None within 10 km Radius from Well	None within 10 km Radius from Well	Khari River: 0.52 km in W	Kujad Village: 1.42 km in NE	Kujad Primary School 1: 1.69 km in NE	None within 10 km Radius from Well
BK-23# 40	23°0'9.11"N	72°45'18.59"E	Ahmedabad Zalod Hwy.: 0.28 km in N	None within 10 km Radius from Well	None within 10 km Radius from Well	Vehlal Branch Canal : 2.13 km in SE	Kujad Village: 1.95 km in W	Jeevandham Public School: 0.95 km in SW	None within 10 km Radius from Well
BK-23# 41	22°59'54.18"N	72°45'12.77"E	Ahmedabad Zalod Hwy.:	None within 10 km Radius	None within 10 km Radius	Vehlal Branch Canal	Kujad Village: 1.90 km in W	Jeevandham Public School:	None within 10 km Radius from Well

Well Id	Geographical Co-Ordinates		Road Infrastructure	Railway Line	Forest / Wildlife Sanctuary / National Park	Nearest River / Water bodies	Major Human Establishments etc.	Nearest School	Historical Monuments, Archaeological Site
	Longitude	Latitude							
			0.73 km in N	s from Well	from Well	: 2.02 km in SEE		0.58 km in W	
BK-23# 42	22°59'59.62"N	72°46'21.69"E	Ahmedabad Zalod Hwy.: 0.45 km in N	None within 10 km Radius from Well	None within 10 km Radius from Well	Vehlal Branch Canal : 0.52 km in SEE	Kuha Village: 2.23 km in E	Kothiya Primary School: 0.52 km in NE	None within 10 km Radius from Well
BK-23# 43	22°58'14.55"N	72°44'58.89"E	Dhamtawan to Kuha Village Road: 0.50 km in SE	None within 10 km Radius from Well	None within 10 km Radius from Well	Vehlal Branch Canal : 0.51 km in SE	Bakrol Bujrang Village: 1.51 km in NW	Bakrol Bujrang Government School: 1.81 km in NW	None within 10 km Radius from Well
BK-23# 44	22°58'52.06"N	72°46'19.80"E	Dhamtawan to Kuha Village Road: 0.55 km in NWW	None within 10 km Radius from Well	None within 10 km Radius from Well	Vehlal Branch Canal : 0.56 km in SE	Bhavda Village: 0.91 km in S	Bhavda Primary School: 1.18 km in SSW	None within 10 km Radius from Well
BK-23# 45	22°59'16.89"N	72°45'26.20"E	Bakrol to Gatrad Village Road: 0.03 km in SSE	None within 10 km Radius from Well	None within 10 km Radius from Well	Vehlal Branch Canal : 1.14 km in SEE	Bakrol Bujrang Village: 1.61 km in SWW	Jeevandham Public School: 1.41 km in NW	None within 10 km Radius from Well
BK-23# 46	23° 0'6.58"N	72°44'55.60"E	Ahmedabad Zalod Hwy.: 0.30 km in N	None within 10 km Radius from Well	None within 10 km Radius from Well	Vehlal Branch Canal : 1.89 km in NW	Kuha Village: 1.34 km in NWW	Jeevandham Public School: 0.50 km in S	None within 10 km Radius from Well
BK-23# 47	22°58'6.21"N	72°43'17.18"E	Dhamtawan to Kujad Village Road (SH-144): 0.74 km in SE	Geratpur Railway Station: 8.90 km in SW	None within 10 km Radius from Well	Khari River: 1.02 km in SWW	Dhamtawan Village: 1.23 km in S	Saurabha Vidhyalya: 1.40 km in S	None within 10 km Radius from Well
BK-23# 48	23° 0'24.41"N	72°45'43.16"E	Ahmedabad Zalod Hwy.: 0.20 km in S	None within 10 km Radius from Well	None within 10 km Radius from Well	Vehlal Branch Canal : 1.85 km in SEE	Kubadthal Village: 2.57 km in N	Kothiya Primary School: 1.40 km in SEE	None within 10 km Radius from Well
BK-23# 49	22°59'59.10"N	72°43'45.53"E	Ahmedabad Zalod Hwy.: 0.25 km in NNE	None within 10 km Radius from Well	None within 10 km Radius from Well	Khari River: 0.52 km in NE	Kujad Village: 0.68 km in N	Kujad Primary School 1: 0.92 km in NW	None within 10 km Radius from Well

Well Id	Geographical Co-Ordinates		Road Infrastructure	Railway Line	Forest / Wildlife Sanctuary / National Park	Nearest River / Water bodies	Major Human Establishments etc.	Nearest School	Historical Monument s, Archaeological Site
	Longitude	Latitude							
BK-23#50	23° 0'20.74"N	72°44'41.61"E	Ahmedabad Zalod Hwy.: 0.13 km in S	None within 10 km Radius from Well	None within 10 km Radius from Well	Khari River: 1.32 km in NWW	Kujad Village: 0.88 km in W	Kujad Primary School 2: 0.89 km in NE	None within 10 km Radius from Well
BK-23#52	22°59'29.21"N	72°43'37.13"E	Dhamtawan to Kujad Village Road (SH-144): 0.93 km in E	None within 10 km Radius from Well	None within 10 km Radius from Well	Khari River: 0.72 km in SWW	Bakrol Bujrang Village: 1.31 km in SE	Bakrol Bujrang Government School: 1.44 km in SE	None within 10 km Radius from Well
BK-23#53	22°58'34.29"N	72°43'18.40"E	Bakrol Bujrang to Gatrad Village Road: 0.30 km in N	Vatwa Railway Station: 9.67 km in SWW	None within 10 km Radius from Well	Khari River: 0.51 km in NNW	Bakrol Bujrang Village: 1.56 km in NEE	Gatrad Primary School: 2.06 km in W	None within 10 km Radius from Well
BK-23#55	23° 0'27.57"N	72°45'23.03"E	Ahmedabad Zalod Hwy.: 0.22 km in S	None within 10 km Radius from Well	None within 10 km Radius from Well	Khari River: 1.96 km in NW	Kujad Village: 2.06 km in W	Motipura Primary School: 1.23 km in NE	None within 10 km Radius from Well
BK-23#56	23° 0'29.01"N	72°43'17.83"E	Ahmedabad Zalod Hwy.: 0.20 km in NE	None within 10 km Radius from Well	None within 10 km Radius from Well	Khari River: 0.52 km in SE	Kanbha Village: 0.72 km in NEE	Kanbha Primary School: 0.86 km in E	None within 10 km Radius from Well
BK-23#57	22°59'25.01"N	72°45'11.85"E	Kujad to Bhavda Village Road: 0.28 km in SW	None within 10 km Radius from Well	None within 10 km Radius from Well	Vehlal Branch Canal: 1.61 km in SEE	Bakrol Bujrang Village: 1.29 km in SW	Jeevandham Public School: 0.97 km in NW	None within 10 km Radius from Well
BK-23#58	22°58'18.52"N	72°44'33.60"E	Dhamtawan to Kujad Village Road (SH-144): 1.04 km in NWW	None within 10 km Radius from Well	None within 10 km Radius from Well	Vehlal Branch Canal: 0.97 km in SE	Bakrol Bujrang Village: 1.05 km in NNW	Bakrol Bujrang Government School: 1.26 km in NW	None within 10 km Radius from Well
BK-23#59	22°59'45.05"N	72°45'09.77"E	Ahmedabad Zalod Hwy.: 0.98 km in N	None within 10 km Radius from Well	None within 10 km Radius from Well	Khari River: 2.60 km in NW	Kujad Village: 1.60 km in NW	Jeevandham Public School: 0.54 km in SWW	None within 10 km Radius from Well
BK-23#62	22°59'38.83"N	72°46'03.33"E	Bakrol Bujrang to Kuha	None within 10 km	None within 10 km	Vehlal Branch	Bakrol Bujrang Village:	Kothiya Primary School:	None within 10 km

Well Id	Geographical Co-Ordinates		Road Infrastructure	Railway Line	Forest / Wildlife Sanctuary / National Park	Nearest River / Water bodies	Major Human Establishments etc.	Nearest School	Historical Monuments, Archaeological Site
	Longitude	Latitude							
			Village Road: 0.25 km in SE	Radius from Well	Radius from Well	Canal : 0.56 km in NW	3.00 km in SW	1.35 km in NE	Radius from Well
BK-23# 63	23° 0'29.24"N	72°46'18.87"E	Ahmedabad Zalod Hwy.: 0.42 km in S	None within 10 km Radius from Well	None within 10 km Radius from Well	Vehlal Branch Canal : 1.00 km in SE	Kuha Village: 2.57 km in SEE	Kothiya Primary School: 0.57 km in SSE	None within 10 km Radius from Well
BK-23# 64	23° 0'9.23"N	72°46'3.50"E	Ahmedabad Zalod Hwy.: 0.19 km in N	None within 10 km Radius from Well	None within 10 km Radius from Well	Vehlal Branch Canal : 1.12 km in SE	Kuha Village: 2.56 km in NNE	Kothiya Primary School: 0.83 km in E	None within 10 km Radius from Well
BK-23# 65	23° 0'6.48"N	72°45'41.39"E	Bhavda Chokdi to Bhavda Village Road: Adjacent	None within 10 km Radius from Well	None within 10 km Radius from Well	Vehlal Branch Canal : 1.57 km in SE	Kujad Village: 2.60 km in NWW	Kothiya Primary School: 1.44 km in ENE	None within 10 km Radius from Well
EPU-1	22°57'41.97"N	72°45'33.50"E	Dhamtan to Undrel Village Road: 0.45 km in S	None within 10 km Radius from Well	None within 10 km Radius from Well	Vehlal Branch Canal : 0.84 km in NW	Bhavda Village: 1.35 km in NE	Undrel Primary School: 1.34 km in SE	None within 10 km Radius from Well
EPU-2	22°59'25.41"N	72°44'53.54"E	Kujad to Bhavda Village Road: 0.09 km in SW	None within 10 km Radius from Well	None within 10 km Radius from Well	Vehlal Branch Canal : 2.06 km in SE	Bakrol Bujrang Village: 0.91 km in SW	Jeevandham Public School: 0.76 km in N	None within 10 km Radius from Well

The ministry has issued Environmental Clearance to the existing capacity for drilling of additional development of 35 wells vide File No. J-11011/26/2011-IA II (I), dated: 15th January 2013 and obtained validity extension in the existing EC for another 1 year up to 14th January 2024 on 12th December 2022. Certified Compliance report of existing EC has been obtained from Integrated Regional Office, MoEF&CC, Gandhinagar, Gujarat, vide File no – J-11/61-2022-IROG NR I/94739/2025, dated: 23/01/2025. As per the CCR report there is no non-compliances and partial compliances conditions.

Standard ToR have been issued by Ministry vide letter F. No. J-11011/26/2011-IA-II(I) dated 10.05.2023. It was informed that no litigation is pending against the project.

Public Hearing for the proposed project had been conducted by the Gujrat Pollution Control Board on 04/10/2024 at Shreeji Party Plot, In Front of Kanbha Bus Station, Kanbha, Swaminarayan Gurukul Road, Tal: Daskroi, Dist: Ahmedabad-382422, which was presided by the Deputy Collector (DC) and Sub Divisional Magistrate (SDM). The main issues raised during the public hearing and their action plan:

Sr. No	Issue in brief	Action plan in brief	Budget allocated and timeline
Issue of public hearing during PH interaction			
1.	<p>Shri Jal Vyas, Sarswati Foundation</p> <p>You have to do 33 percent inbuilt greenbelt, which you will do inside your premises, our organization does the work of greenbelt, so you allot work of greenbelt to us and the best thing is we maintain it for 5 to 10 years. We are also giving you a proposal letter of the same.</p> <p>If you allot us the work of greenbelt which you are going to do, than our organization will give direct employment to the people of local villages. Here, we are maintaining the greenbelt for five to ten years, if any plant dies; we are going to do replantation. So, its goof for the environment.</p>	<p>We have been allocated fund for Environment conservation under the CER activity and accordingly the project proponent has been allocated Rs. 78 lakh rupees under the CER activity then we can work in it.</p>	<p>Rs. 78.00 lakh</p>
2.	<p>Yogeshgiri Shankargiri Goswami,</p>		

Sr. No	Issue in brief	Action plan in brief	Budget allocated and timeline
	<p>Village: Bakrol</p> <p>My house is located at 12 number well, where rain water accumulates a lot, which created a much problems.</p> <p>Industries located around is about 6 feet and 7 feet high. Land has been filled from where earlier rain water used to be passed and height is now around 8 feet so rain water accumulates. We can neither increase the height of well or house nor we can level the land. So efforts should be made to ease the disposal of rain water.</p> <p>This dispute has been going on for two years, my way is from where the rain water accumulates. We have represented Selan for last four years and they don't even raise the road. If there is no road, where should I drive my car? How to take someone out from my house if anyone get sick?</p> <p>In this monsoon there was so much water that it came to my house because my house located near the well.</p>	<p>We have spent almost 6 lakh rupees on it. Also the height of main road is increased by making it concrete road. Many industries are established in backside. Due to that this problem arise and we are going to take the matter in hand.</p> <p>Our trucks and tankers also go to the well, so we have to maintain the road.</p> <p>Further, we have decided to further increase the height of the said road and provide the access road at the same area so there will be easy accessible to nearby connecting road.</p>	<p>Rs. 6.00 Lakh already spend and additional Rs. 5.00 Lakh budget is allocated for solve the water logging issue.</p>

Sr. No	Issue in brief	Action plan in brief	Budget allocated and timeline
	<p>I have made my representation by showing the actual place.</p> <p>What you are presenting here is the cost of the well not for us. You did not do that for us.</p>		

Compliance to the written complaints:

Sr. No.	Issue in brief	Action plan in brief	Budget allocated and timeline
Action Plan to the written complaints			
1.	<p>Pravinbhai P. Sheth Senior Citizen, Technocrat & Environmentalist, Ankleshwar</p>		
	<p>Still. at a glance review of draft EIA, at first instance, we feel, still, there are likely non conformances, might have been ignored / left out the attn. of proponent. So, STILL THERE IS A FURTHER SCOPE to improve it further.</p> <p>WE STRONGLY APPEAL, proponent, to review, EIA at least one more time, in consultation with NABET ACO, / experts, to update draft EIA for an effective presentation, so, that, all LIKELY statutory / technical</p>	<p>We have verified the entire EIA report and content mentioned therein with our environment consultant prior to submission for the public hearing. The report is prepared in line with Appendix-III of the EIA Notification-2006 & as amended thereafter and it covers all the ToR points, statutory requirements and MoEFCC guidelines.</p>	--

	<p>queries / nonconformance, ToR addressing can be taken care, in house, for FINAL EIA, meant for obtaining Environment clearance.</p> <p>We hope, all likely queries, will be sorted out and resolved at the earliest before date of env. public hearing and confirm to us. Still in case if we observe any left out short fall, we will submit it as version 02 for further improvement of final EIA.</p>		
2.	Saraswati Foundation, Kadi		
	<p>It is requested to provide details related to how much capital funds and recurring funds are allocated for the greenbelt.</p>	<p>During drilling phase, an amount of Rs. 0.70 Lakhs/well has been allocated as a capital funds. During early production phase, an amount of Rs. 1.00 Lakhs/EPU has been allocated as a capital funds and Rs. 0.20 Lakhs/EPU has been allocated as recurring funds.</p>	<p>Fund already allocated with EMP. Fund is mentioned herewith.</p>
	<p>It is requested to provide details related to how much funds are allocated for the CSR and CER activities by the company.</p>	<p>As per the MoEFCC OM dated: 1st May 2018 SELAN has allocated adequate Extended EMP budget Rs. 4.55 Crores (i.e. 0.50 % of the project cost of Rs. 910.72 Crores) which will be spend within 5 years of period in nearby 10 km radius villages. During the operation phase, company will provide</p>	<p>Fund already allocated for activities under Extended EMP. Fund will be spent under Infrastructure, Environment, Skill Development, Education related</p>

		funds for the CSR activities as per need base assessment.	activities at nearby villages namely Ranodra, Bakrol Bujrang, Undrel, Kothiya, Dhamtawan, Singarva, Bhavda and Gatrad etc. in 05 years of time.
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Total block area of Bakrol Oil and Gas Field is 36 sq. km. For the construction of well pad (drill site), an area of about 15000 to 20000 sq. m./well location will be required which will be taken on temporary short-term lease basis for drilling of the wells initially. Approx. 900 sq. m. area will be required for each EPS. Greenbelt will be developed in total area of 300.00 sq. m. at each EPU, i.e., 33.33% of the 900.00 m² EPU area. The estimated project cost for proposed expansion project is Rs. 910.72 crores. During drilling phase, capital cost of EMP would be Rs. 10.077 Lakhs/well and recurring cost for EMP would be Rs. 3.7515 Lakhs/well. During production phase, capital cost of EMP would be Rs. 49.60 Lakhs/EPU location and recurring cost for EMP would be Rs. 14.35 Lakhs/EPU/Annum. Industry proposes to allocate Rs. 10.00 Crores towards Extended EMP. Total employment during drilling phase will be 85 persons and during production phase will be 35 persons as direct & indirect.

There are no national parks, wildlife sanctuaries, biosphere reserves, tiger/elephant reserves, wildlife corridors etc. within 10 km distance of the block boundary, hence NBWL is not applicable. There are no reserve & protected forests within 10 km distance of the block boundary, hence Forest Clearance is not applicable. Conservation plan for Schedule-I species has been submitted to Deputy Conservator of Forest, Ahmedabad dated: 19/10/2023 and a Budget of Rs. 0.08 Crores has been earmarked for the same. Khari river passes NW side of the field. Meswo river passes at 390 m in E side of the field. Vehlal branch canal passes at SE side of the field.

Ambient air quality monitoring was carried out at 08 locations during 01st March 2023 to 31st May 2023 and the baseline data indicates the ranges of concentrations as: PM₁₀ (50.4 – 83.0 µg/m³), PM_{2.5} (27.0 – 41.5 µg/m³),

SO₂ (7.2 – 16.7 µg/m³), NO_x (11.0 – 22.4 µg/m³), Ozone (15.8 – 27.8 µg/m³), CO (<1.0 – 1.5 mg/m³), Total VOCs (<0.1 – 0.5 ppm), Hydrocarbon as Methane (<0.1 ppm) and Non-Methane Hydrocarbon (<0.1 ppm). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs during production phase would be 0.0029 µg/m³, 1.89 µg/m³, 5.54 µg/m³ and 0.591 µg/m³ with respect to PM, SO₂, NO_x and CO. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

Total fresh water requirement will be 15 KLD/well during drilling and 13 KLD/EPU during production which will be met from Water Tankers from locally approved/authorized sources. During drilling phase, effluent of 3.50 KLD/well quantity will be treated through Mobile ETP and treated water reuse for washing purpose and during production phase, effluent of 35 – 55 KLD/EPU quantity will be treated through Package Effluent Treatment Plant of capacity 10 KLDP and disposed off by re-injection in abandoned well. There will be 2 KLD mobile STP during drilling phase and 5 KLD mobile STP during production phase and the treated water will be used for dust suppression, landscape, etc. Produce Water will be treated in ETP of capacity 100 KLD before Disposal (as per EPA) and the treated produced water will be disposed off by reinjection in abandoned well.

During drilling phase, the power requirement of drill rig will be met by Diesel Generators (D. G.) of 3 nos. x 1000 KVA (2W + 1S) or 2 nos. x 1850 KVA (1W + 1S) (depending on the rig capacity & rig availability during E&A drilling phase). Additionally, the D. G. Set of capacities, 2 nos. x 350 KVA (1W + 1S) for Camp Site and 2 nos. x 100 KVA (1W + 1S) for Radio Room and 3 nos. x 500 KVA (2W + 1S) at Liquid Mud Plant (LMP), 1 no. x 350 KVA for Diesel Fired Heater-Treater Or IWBH (Induced Water Bath Heater) with Well Testing Set up will be separately installed. During early production phase, the power would be sourced from 1 MW Gas Engine Generator (GEG) which will generate power by using captive Natural Gas as fuel. Additionally, the D. G. Set of capacities, 500 KVA will be installed for Power Back-up and 1 no. X 800 KVA Dual fuel (Diesel/Gas) Fired Heater-Treater Or IWBH (Induced Water Bath Heater), 1 no. x 250 KVA Natural Gas Fired Heater (for TEG Regeneration attached with Dehydration Unit) and 2 nos. X 800 KVA (1W + 1S) for Compressor (Gas Engine Driven) will be separately installed. Adequate stack height (7 - 10 m) as per the D G set capacities will be provided as per CPCB norms to the proposed D G sets.

Details of Process emissions generation and its management:

- There will be no process gas emission from proposed activities.

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

Solid and Hazardous Waste Management & Disposal - During Drilling

Sr. No.	Type / Name of Hazardous Waste	Specific Source of Generation	Category and Schedule as per HW Rules	Quantity (MT/Annum)	Management of HW
Hazardous Waste					
1	Drill Cuttings	Drilling	HW, Sch-I, Cat. 2.1	5 to 10 tons/well	Collection in HDPE lined pit and disposal as per Hazardous Waste Rules, 2016 (Common Hazardous Waste TSDF, HW Processing facility)
2	Drilling Mud containing Oil	Drilling	HW, Sch-I, Cat. 2.3	200 – 300 bbls/well	Collection in HDPE lined pit and disposal as per Hazardous Waste Rules, 2016 (Common Hazardous Waste TSDF, HW Processing facility)
3	Used Oil / Spent Oil	Others	HW, Sch-I, Cat. 5.1	1-2 m ³ /well	Collection, Storage, Transportation and sold to registered re-refiners
4	Sludge containing Oil and other Drilling Waste	Others	HW, Sch-I, Cat. 2.2	1 to 2 tons/well	Collection, storage, transportation and disposal to GPCB authorized TSDF Site or authorized Co-processing facility
5	Spent Chemical	Drilling	HW, Sch-I, Cat. 32.1	0.60 tons/well	Disposal in common hazardous waste TSDF/HW processing facility
6	Wastes or Residues containing Oil	Drilling	HW, Sch-I, Cat. 5.2	0.50 tons/well	Disposal in common hazardous waste TSDF/HW processing facility
7	Empty Barrels / Containers / Liners Contaminated with Hazardous Chemicals /	Drilling	HW, Sch-I, Cat. 33.1	50 nos./well	Will be sent to recyclers

	Wastes				
8	Chemical Sludge from Wastewater Treatment	ETP operation	HW, Sch-I, Cat. 35.3	2 to 3 tons/well	Sent to TSDF site for disposal
Solid / Non-Hazardous Waste					
9	Domestic Waste	Employees working in the premises	MSW	2 kg/day	It shall be segregated in dry and wet waste. Dry waste will be disposed to authorised recyclers and wet waste will be composted in OWC to convert it bio-degradable waste into manure
10	Drill cutting s associated with WBM	Drilling	SW	8 to 10 tons/well	It shall be segregated in dry and wet waste. Dry waste will be disposed to bin of nagarpalika/ municipal corporation door to door collection system and wet waste will be allowed to OWC to convert it bio-degradable waste into manure
11	STP Sludge	STP operation	--	0.25 MT/Well	Collection, Storage, Utilize as a manure

Solid and Hazardous Waste Management & Disposal - During Production Phase from Each EPU

Sr. No.	Type / Name of Hazardous Waste	Specific Source of Generation	Category and Schedule as per HW Rules	Quantity (MT/Annun)	Management of HW
Hazardous Waste					
1	Oily Sludge / Residues	Well work over, crude storage tank bottom cleaning	HW, Sch-I, Cat. 2.2	2 to 3	Collection in HDPE lined pit and disposal as per Hazardous Waste Rules, 2016

2	Waste Oil (Slop Oil)	Well work over, crude storage tank bottom cleaning	HW, Sch-I, Cat. 4.3	0.50 to 1	Waste oil will be sent CPCB authorized Recyclers
3	ETP Sludge	ETP operation	HW, Sch-I, Cat. 34.2	1 to 2	Sent to TSDF site for disposal
4	Used Oil / Spent Oil	D. G. sets maintenance and other misc.	HW, Sch-I, Cat 5.1	1 KL/year	It will be sent CPCB authorized Recyclers
5	Oil Contaminated Filters, Cottons, Rags, Gloves, Etc.	Misc. maintenance	HW, Sch-I, Cat. 3.3	0.30	It will be sent CPCB authorized Recyclers
6	Waste / Residues Containing Oil	Well work over	HW, Sch-I, Cat. 5.2	0.50 KL/year	Disposal as per Hazardous Waste Rules, 2016
7	Spent Chemicals	Well work over	--	0.60	Disposal as per Hazardous Waste Rules, 2016
8	Spent Carbon	STP / Septic tank	HW, Sch-I, Cat. 36.2	3.00	Disposal as per Hazardous Waste Rules, 2016
9	Discarded Containers / Barrels / Liners Contaminated With Hazardous Waste	Well work over	HW, Sch-I, Cat. 33.1	50 to 100 nos./year	Collection, Storage, Transportation and Sold to Registered Recyclers
Solid / Non-Hazardous Waste					
10	Domestic Waste	Employees working in the premises	MSW	2.5 kg/day	It shall be segregated in dry and wet waste. Dry waste will be disposed to bin of nagarpalika / municipal corporation door to door collection system and wet waste will be allowed to OWC to convert it bio-degradable waste into manure
11	STP Sludge	STP operation	--	0.50	Collection, Storage, Utilize as a manure within EPU area

Capital cost and recurring cost of EMP are given below:**During Drilling:**

Sr. No.	Description	Capital Cost (INR) in Crores/Well Drilling	Recurring Cost (INR) in Crores/Well Drilling
1.	Air Quality Management	0.0080	--
2.	Noise Quality	0.0045	--
3.	Surface and Ground Water Quality	0.0080	--
4.	Soil Quality	0.0075	--
5.	Hazardous Waste Management	0.0350	--
6.	Greenbelt / Plantation	0.0070	--
7.	Firefighting System*	0.0150	--
8.	Occupational Health & Safety	0.0150	--
Sub Total-1		0.1000	--
7.	EMP cost for wastewater treatment		
	Installation of Mobile ETP	It is short term exploratory drilling activity and only for short period of time i.e. 60 days, so permanent installation of ETP is not feasible. Mobile ETP would be deployed at drilling site on rental basis.	Operation and Maintenance of ETP – 0.03 Crores
	Installation of Mobile STP	It is short term exploratory drilling activity and only for short period of time i.e. 60 days, so permanent installation of STP is not feasible. Mobile STP would be deployed at drilling site on rental basis.	Operation and Maintenance of STP – 0.0075 Crores
Sub Total-2		--	0.0375
8.	Cost for Solving	0.00077	0.000015

Sr. No.	Description	Capital Cost (INR) in Crores/Well Drilling	Recurring Cost (INR) in Crores/Well Drilling
	Water Logging Issue at Well No. 12**		
Total		0.10077	0.037515

Note:

* During the drilling activity, approximately 0.50 Crores will be spent on the fire-fighting equipment systems and safety during drilling operations. The said cost is included in the drilling cost.

** Total Rs. 5.00 Lakhs (Rs. 0.0769 Lakhs per well drilling * 65 Wells) as a capital cost will be spend for solving water logging issue at well no. 12 and Rs. 0.10 Lakhs (Rs. 0.0015 Lakhs per well drilling * 65 Wells) as a recurring cost is allocated for the same.

During Early Production:

Sr. No.	Particulars	Capital Cost (INR) in Crores/EPU	Recurring Cost (INR) in Crores/Annum/EPU
1.	Air Quality Management	0.0070	0.0040
2.	Noise Quality	0.0030	0.0020
3.	Surface and Ground Water Quality	0.0060	0.0035
4.	Soil Quality	0.0050	0.0020
5.	Hazardous Waste Management	0.0250	0.0070
6.	Greenbelt / Plantation	0.0100	0.0020
7.	Firefighting System	0.3000	0.0150
8.	Occupational Health & Safety	0.0300	0.0500
Sub Total-1		0.3860	0.0855
7.	EMP cost for wastewater treatment		
	Installation of ETP	Operation and Maintenance of ETP – 0.08 Crores	0.0480
	Installation of STP	Operation and	0.0100

Sr. No.	Particulars	Capital Cost (INR) in Crores/EPU	Recurring Cost (INR) in Crores/Annum/EPU
		Maintenance of STP - 0.03 Crores	
Sub Total-2		0.1100	0.0580
Total		0.4960	0.1435

Details of Extended EMP with proposed activities and budgetary allocation:

Sr. No.	Particular	Description	Villages	Unit (Numbers)	Unit Cost (in Lakhs INR)	Yearwise Budget (In Lakhs)					Total in Lakhs
						1	2	3	4	5	
1	Infrastructure	Contribution in renovation work like playground, sport equipments, paver blocks in anganwadi and primary school, etc.	Kanbha, Bakrol Bujrang, Bhavda, Kujad, Dhamatwan	05 schools	25.00	25.00	25.00	25.00	25.00	25.00	125.00
2		Provision of RO Plant (capacity: 1000 liter/day) with five year AMC for drinking purpose in school	Kanbha, Bakrol Bujrang, Bhavda	03 schools	30.00	18.00	18.00	18.00	18.00	18.00	90.00
3		Installation of Solar Street light (with Solar Panel Capacity of 80 W) along with O&M on public utility buildings and internal street road	Kanbha, Bakrol Bujrang, Bhavda, Kujad, Dhamatwan, Kuha, Ranodra, Vadod, Gatrad, Singarva	564 no. of street light	0.50	60.00	60.00	60.00	51.00	51.00	282.00
4		Construction / strengthening of road at nearby villages	Kanbha, Bakrol Bujrang, Bhavda	03 locations	50.00	30.00	30.00	30.00	30.00	30.00	150.00
5	Environment	Tree plantation	Kanbha, Bakrol	7800 no. of trees	1000 per	20.00	20.00	15.00	15.00	8.00	78.00

Sr. No.	Particular	Description	Villages	Unit (Numbers)	Unit Cost (in Lakhs INR)	Yearwise Budget (In Lakhs)					Total in Lakhs
						1	2	3	4	5	
		with tree guard, development of nursery and distribution of tree saplings	Bujrang, Bhavda, Kubadthal, Vanch, Gatrad, Kujad, Vadod	with guard sapling							
6	Skill Development	Skill base training programme for youth by the way of ITI and equivalent course	Bakrol Bujrang, Singarva, Kujad, Vadod, Vanch	05 location	40.00	40.00	40.00	40.00	40.00	40.00	200.00
7	Education	Donation in school like computers, books for library, projector for digital learning, school kits	Gatrad, Bakrol Bujrang, Bhavda, Vadod, Dhamatwan	15 classrooms	5.00	15.00	15.00	15.00	15.00	15.00	75.00
					Total	208.00	208.00	203.00	194.00	187.00	1000.00

The proposal was earlier considered by the EAC (IND-2) in its meeting held on 18/03/2025, wherein the EAC returned the proposal in its present form due to the desired certain requisite information/inputs. Information desired by the EAC and responses submitted by the project proponent are as under:

Sr. No.	ADS by MoEF&CC	Reply of PP
1.	EAC noted that PP has not submitted the letter for DGH approval and Field Development Plan which was desired in the last meeting held on 17.02.2025, therefore, PP shall again asked to submit the required Field development Programme for 65 wells.	Bakrol Field was awarded to SELAN under the first round of Pre-NELP, and a Production Sharing Contract (PSC) was signed between the Government of India (GoI) and SELAN in March 1995. SELAN is having 100% ownership as an operator in the Bakrol Field. We had already submitted the 1 st phase field development plan. After that, EAC meeting held on 18/03/2025 and as per the EAC MoM dated 25/03/2025, EAC asked to submit a letter for DGH approval and

		<p>Field Development Plan.</p> <p>In this regard, DGH vide letter dated 27.03.2026 has sent clarification.</p>
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During deliberations, EAC discussed following issues:

- i. The Committee deliberated upon the clarification issued by DGH vide letter dated 27.03.2025 regarding grant of EC to M/s SETL for Bakrol field. DGH clarified the following:
 "Production Sharing Contract (PSC) of Bakrol field was signed on 13.03.1995. M/s Selan Exploration Technology Ltd. is the operator with 100% Participating Interest. On completion of initial term of 25 years, the PSC was extended w.e.f. 13.03.2020, for a period of 10 years as per the PSC extension policy dt 28.03.2016.
 DGH examines the field development plan (FDP) submitted by the operator, for approval of Management Committee. Latest revised FDP was presented to Management Committee for drilling of 10 numbers of wells. Based on the performance of the field, operator may also submit revised FDP for further drilling activity.
 Operator has applied for EC for drilling of wells for maximization of recovery from the field. Accordingly, DGH will facilitate for further drilling activity, on need basis. The above information may be considered for granting EC for Bakrol field."
- ii. PP shall submit the distances of each proposed wells from the nearest railway line, forest/wildlife sanctuary/national park, nearest river/canal, major human establishments, nearest school, historical monuments, archaeological site, etc. and ensure that proposed wells location are at least 500 m away from the mentioned environment receptors. PP shall also give an undertaking for the same. PP submitted the said information.
- iii. The Committee suggested PP to comply with Central Pollution Control Board guidelines for Stack height of Genset and with the flare stack. For DG Set above 1000KVA, minimum stack height should be 30 m. PP submitted undertaking to comply with the guidelines.
- iv. PP shall increase Extended EMP budget from 9.0 crores to 10.0 crores and submit proposed activities under Extended EMP with monitorable targets and timelines. PP submitted the information.
- v. PP informed that 30.0 to 50.0. KLD/EPU (considering 70% water cut) produced water will be generated during processing of well fluid. The

produced water separated from the well fluid shall be treated and as required will be blended with the ground water and injected back to the reservoir towards mantiang nad formation zone pressure. The produced water will be treated in produced water treatment facility of 100 KLD capacity ETP at EPU-1.

- vi. PP informed that treated produced water will be disposed of by re-injection in abandoned well at a minimum depth of 1000 meter. SELAN will ensure that suspended solids and oil & grease content in treated water will be less than 100 mg/l and less than 10 mg/l respectively before re-injected in to the abandoned well.
- vii. PP shall segregate the domestic solid waste into wet garbage and dry garbage. Dry garbage shall be handed over to authorised recyclers. Wet garbage shall be converted into compost thorough OWC at site. PP submitted membership certificate of Eco Care Infrastructure Pvt. Ltd. Surendranagar for disposal hazardous waste into TSDF.
- viii. PP informed that they will develop 300 sq. m. (33.33% of the EPU's area) area as a greenbelt area at each EPU's site. 100 numbers of native trees will be planted at each EPU's site. Total 200 numbers of trees are proposed to be planted.
- ix. PP informed that EC compliance report for the period of October 2024 and March 2025 on PARIVESH portal.
- x. The project proponent has confirmed that the proposed locations are final and there won't be any change at the time of execution of the project.
- xi. As per application submitted by PP it has been mentioned at Sl. No.14.1.6 of Part A that only 05 wells were drilled out of 35 wells granted. The EC was lapsed on 14th January, 2024.
- xii. As per EIA report, as on December 2022 there are 23 producing wells in the Bakrol Field with average production of about 275 barrels and 22,000 SCM of oil and gas per day respectively. From the date of signing of PSC and taking over of Bakrol field from ONGC in October 1995 till date Bakrol Field has produced nearly 2.75 MMbbls of crude oil and 125 MMSCM of associated natural gas cumulatively.
- xiii. The Committee suggested that the chemical additives used for the preparation of DF should have low toxicity as per mysid toxicity or toxicity test. The chemicals used should be bio degradable. Barite used in preparation of drilling fluid (DF) shall not contain Hg>1 mg/kg and Cd>3mg/kg. Total material acquired for preparation of drill site must be restored after completion of drilling operation leaving no waste material at site.

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

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 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.

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 Extended EMP 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.

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.

The EAC, after detailed deliberations, **recommended** the project for grant of environmental clearance, subject to compliance of terms and conditions as under, and general terms of conditions at Annexure: -

1. The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry.
2. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented.
3. As committed no drilling activities shall be carried out within 500 m from the water bodies, schools, habitations, historical/heritage monuments recognised by Archaeological Survey of India. The project proponent shall prepare a site specific conservation plan and wildlife management plan in case of the presence of Schedule-1 species in the study area, as applicable to the project, and submit to Chief Wildlife Warden for approval. The recommendations shall be implemented in consultation with the State Forest/Wildlife Department in a time bound manner.
4. 30 meter stack height shall be provided to DG set (2x1000KVA). As proposed, 8 meter stack height above the roof top shall be provided to DG set (2x500KVA). 7 meter stack height above the roof top shall be provided to DG set (2x350KVA). 5 meter stack height above the roof top shall be provided to DG set (1x100KVA). 30 meter stack height shall be provided to Gas Engine Generator (1 MW). 9 meter stack height shall be provided to Dual fuel (Diesel/Gas) Fired Heater-Treater or IWBH (Induced Water Bath Heater) (800 kVA). Adequate stack height shall be provided to Natural Gas Fired Heater for TEG regeneration (attached with dehydration unit) (250 kVA) and Compressor (Gas Engine Driven) (800 kVA).
5. Total fresh water requirement shall not exceed 15 m³/day per each drilling well location and will be met from local tankers. Prior permission shall be obtained from the concerned regulatory authority.
6. Each drilling location shall display a board indicating the well number, as specified in this Environmental Clearance. The implementation status

of the project shall be submitted to the Regional Office along with the six-monthly compliance report.

7. During drilling phase, effluent of 3.50 KLD/well quantity shall be treated through Mobile ETP and treated water shall be reused for drilling/washing purpose. During production phase, produced water of 30 – 50 KLD/EPU quantity shall be treated in produced water treatment facility of 100 KLD capacity of ETP at EPU-1. Treated produced water shall be disposed of by re-injection in abandoned well at a minimum depth of 1000 meter. SELAN shall ensure that suspended solids and oil & grease content in treated water shall be less than 100 mg/l and less than 10 mg/l respectively before re-injected in to the abandoned well. Produced water generated shall be treated with in 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. Sewage shall be treated in the 2 KLD mobile STP during drilling phase and 5 KLD mobile STP during production phase and the treated water shall be used for dust suppression, landscape, etc.

8. There shall be separate storm water channel and rainwater shall not be allowed to mix with waste water. Alternatively, if possible, pit less drilling be practiced instead of above.

9. During production, storage and handling, the fugitive emission of methane, if any, shall be monitored using Infra-red camera/ appropriate technology.

10. The project proponent also to ensure trapping/storing of the CO₂ generated, if any, during the process and handling.

11. Approach road shall be paved to minimize generation of suspended dust.

12. 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. PP shall replace the old Diesel Gensets with new Sets complying with the latest norms of DG sets notified by CPCB.

13. 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.

14. Drill cuttings separated from drilling fluid shall be adequately washed and disposed in HDPE lined pit. Waste mud shall be tested for hazardous contaminants and disposed according to HWMH Rules, 2016. No effluent/drilling mud 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. Industry shall obtain membership of TSDF site before obtaining CTO and shall dispose the hazardous waste generated at drill site to TSDF approved by GPCB. The chemical additives used for the preparation of DF should have low toxicity as per mysid toxicity or toxicity test. The chemicals used should be bio degradable. Barite used in preparation of drilling fluid (DF) shall not contain $Hg > 1 \text{ mg/kg}$ and $Cd > 3 \text{ mg/kg}$. Total material acquired for preparation of drill site must be restored after completion of drilling operation leaving no waste material at site.

15. 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.

16. Gas produced during testing shall be flared with appropriate flaring device as prescribed by the CPCB. The flare shall be designed as per good oil field practices and OISD guidelines. The stack height of 30 m shall be provided as per the regulatory requirements and emission from the stacks will meet MOEFCC/CPCB guidelines.

17. 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.

18. The project proponent shall develop a contingency plan for H_2S release including all necessary aspects from evacuation to resumption of normal operations. The workers shall be provided with personal H_2S detectors in locations of high risk of exposure along with self-containing breathing apparatus.

19. Blow Out Preventer system shall be installed to prevent well blowouts during drilling operations.

20. 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.

21. PP proposed to allocate Rs. 10.0 Crores towards extended EMP which shall be spent as submitted as per plan. Further, all the proposed activities under extended EMP shall be completed before the commissioning of the plant in consultation with District Administration. All the commitments made in Public Hearing shall be completed within the timeline as per action plan submitted.

22. No lead acid batteries shall be utilized in the project/site.

23. 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.

24. Oil content in the drill cuttings shall be monitored and report & shall sent to the Ministry's Regional Office.

25. 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.

26. 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 MoEF&CC 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.

27. Greenbelt of at least 5-10 m width shall be developed in 300 m² (33.33% of EPU) with tree density @ 2500 trees per hectare, mainly along the plant periphery in each EPU site. 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. 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. 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/>)

Agenda No. 02

Lube Modernization and Bottom Upgradation project at Mumbai Refinery, B.D. Patil Marg, Mahul, Mumbai-Suburban district, Maharashtra of M/s Hindustan Petroleum Corporation Limited – Consideration of Environmental Clearance.

[IA/MH/IND2/526155/2024, J-11011/413/2014-IA II (I)]

The Project Proponent and the accredited Consultant M/s. Engineers India Limited (NABET Certificate No. NABET/EIA/24-27/RA0359; validity upto 23/05/2027) made a detailed presentation on the salient features of the project and informed that the proposal is for Environmental Clearance of Lube Modernization and Bottom Upgradation project at Mumbai Refinery, B.D. Patil Marg, Mahul, Mumbai-Suburban district, Maharashtra by M/s Hindustan Petroleum Corporation Limited (HPCL).

All project/activity are listed at S.N. 4(a) - Petroleum Refining Industry of Schedule of Environment Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC).

The details of unit capacities and product pattern as under:

Unit Capacities

Units	Capacity in (KTPA)
--------------	---------------------------

Existing 9.5 MMTPA Refinery	
CDU/VDU-I	6000
CDU/VDU-II	3500
Naphtha Splitter Unit (NSU)	1222
Naphtha Hydro Treater (NHT)/ Isomerization	325
NHT/Continuous Catalytic Reformer (CCR)	735.6
Prime G+	618
New Fluidized Catalytic Cracking Unit (FCCU)	1277
Old Fluidized Catalytic Cracking Unit (FCCU)	950
Diesel Hydro Desulphurization Unit (DHDS)	2270
Diesel Hydro Treater Unit (DHT)	1300 (Diesel) + 1000 (VGO)
Propane De-asphalting Unit (PDA)	755
Hydrogen Generation Unit (HGU)	65
Proposed Modernization Units	
Integrated Hydrocracker Catalytic De-Waxing Unit (IHCD)	550
Solvent De-asphalting Unit (SDA)	850
Refinery Off-Gas (ROG) Pressure Swing Adsorption (PSA) Unit	16.8 TPD
Sour Water Stripper Unit (SWS)	17 TPH
Amine Regeneration Unit (ARU)	74 TPH

Associated facilities such as utility plants, power plant, tankages and dispatch terminal shall be installed, commensurate with above process capacities.

Product Pattern:

Sl. No.	Particulars	Slate after EC (TPA)	Slate post LMBU (TPA)
Raw material			
1	KUWAIT CRUDE	4000000	-
2	ARAB LIGHT	2000000	1825000
3	BOMBAY HIGH	3500000	3500000
4	BASRAH MEDIUM	-	3500000
5	Das Blend Crude	-	675000
	TOTAL CRUDE	95,00,000	95,00,000
6	RLNG	24000	288000
	Total FEED	95,24,000	97,88,000
Products			
1	LPG	542000	450000

2	HEXANE / SOL	30000	30000
3	SOLVENT	8500	9000
4	BS-VI MS	1683000	1696000
5	LAN	156300	362000
6	SCN	96000	96000
7	MTO	48000	50000
8	SKO	52000	42000
9	BS-VI DIESEL	3442000	3505000
10	ATF	600000	600000
11	HP DAK SOL	-	1000
12	HF HSD	-	2000
13	LDO	-	109000
14	RPO	-	40000
15	150 N Gr-II	76000	80000
16	500 N Gr-II	92000	31000
17	Spindle Oil Gr-II	32000	70000
18	Spindle Oil Gr-I	15000	18000
19	Spindle Oil - 90N	-	26000
20	150 N Gr-I	70000	68000
21	500 N Gr-I	100000	120000
22	Bright Stock	50000	54000
23	IO-100	15000	12000
24	2 CST GR II	-	112000
25	4 CST GR III	-	96000
26	6 CST GR III	-	42000
27	8 CST GR III	-	36000
22	IFO	969000	169000
23	Bitumen	780000	1073000
24	Fuel & Loss	606000	724000
26	Sulfur	61000	65000
		9523800	9788000

MoEF&CC has issued Environmental Clearance to the existing refinery capacity from 7.5 to 9.5 MMTPA vide File No. J-11011/413/2014-IA II (I) dated 31/01/2017. Certified Compliance report of existing ECs has been obtained from Integrated Regional Office, Nagpur vide File No. EC-2527/RON/2024-NGP/13448 dated 13/08/2024.

The present proposal is submitted as per Ministry's OM dated 11.04.2022 issued for granting of Environmental Clearance under para 7(ii)(a) of EIA notification 2006. It was informed by PP that there is no litigation pending against the proposal.

Public hearing is exempted for as per the OM dated 11.04.2022 issued by MoEF&CC under Scenario I (Projects which involve modernization/change

of product mix without increase in production capacity but with increase in pollution load).

Total plant area after expansion will remain same as 139.55 Ha. No additional land will be acquired for the modernization project as the same will be done within existing plant premises. Out of the total refinery area (139.55 Ha), 15.59 Ha green area is already developed inside the refinery, HPCL has carried out 12.37 Ha plantation outside of the refinery and Green belt in 18.95 Ha outside refinery is proposed making this total of 46.91 Ha. HPCL has approached Regional Forest Officer at Kalyan & Thane for the remaining 18.95 Ha for Green Belt development, in view of non-availability of land within Refinery premises. Forest Department has conveyed that this will be executed through a tri-partite agreement between HPCL, Forest Department & the respective third parties (M/s. Lahs Pratishtan and M/s. Savali) within 6 months. The estimated project cost is Rs. 5460.19 Crores and completion schedule of 36 months. Capital cost of EMP would be Rs. 48.7 Crores and recurring cost for EMP would be Rs. 1.95 Crores per annum. Industry proposes to allocate Rs. 3.50 Crores towards extended EMP. Total Employment after modernization will be 180 persons as direct (80) & indirect (100).

There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors within 10 km distance. There are no Reserve forests/protected forests within 10 km distance. Mithi river is located at a distance of 5 Km in North-west direction of the refinery.

Ambient air quality monitoring was concentrations carried out at 8 locations during March to June 2023 and the baseline data indicates the ranges of as: PM₁₀ (72.1-76.5 µg/m³), PM_{2.5} (31.3-35.0 µg/m³), SO₂ (13.5-14.5 µg/m³) and NO₂ (24.5-25.5 µg/m³). AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would 15.1 µg/m³ and 31.7 µg/m³ with respect to SO₂ and NO_x. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

Total 538 m³/hr of fresh water shall be met from the already approved quantity and additional water requirement of 136 m³/hr for proposed modernization project shall be met from treated STP water from BMC there by reducing the fresh water resource. A new Tertiary Treatment Plant of capacity 6 MLD has been considered to treat the treated sewage from BMC to produce DM Water. Existing effluent generation from refinery is 179 m³/hr which is treated through Effluent Treatment Plant (300 m³/hr

capacity). Total effluent generation from refinery will be 201 m³ /hr including 22 m³/hr from proposed modernization which will be treated through Integrated Effluent Treatment Plant in the refinery. Domestic waste water will be treated in existing STP having 600 m³/day capacity. The Sea cooling water blowdown from the cooling system i.e. 80354 CMD shall be discharged into Sea. Industry shall make arrangements for monitoring temperature of sea cooling water at the outlet point.

Total power requirement of refinery post modernization will be 125 MW (Existing 106 MW + 11.7 MW for SDA & Lobs project + ~ 2.5 MW for ROG-PSA + 4.38 MW for Tertiary Treatment Plant) which will be sourced from internal captive power plant and State Grid. Three (03) numbers of CFBC boilers with capacity 140 TPH, 140 TPH & 125 TPH already installed in the refinery. Two Heat Recovery Steam Generators (HRSG) of capacity 20 & 60 TPH are used to generate HP steam. There are no additional boilers proposed in the modernization project. There is no additional DG sets envisaged for the project and existing DG sets back-up will be utilized.

Details of Process emissions generation and its management:

The SO_x emission of the existing refinery is 12.6 TPD. There will be no additional SO_x emission from the refinery modernization project. However, below mitigation measures will be followed to control the process emissions:

- Use of Low Sulphur Heavy Stock (LSHS) typically containing 0.5 wt % Sulphur as liquid fuel Oil in Heaters/Furnaces and Boilers to control SO₂ emissions from the stacks/chimneys. New furnaces are not designed for FO firing.
- Desulphurized sweet gas with 50 ppm of Sulphur is used as fuel in boilers/ heaters to minimize SO₂ emissions.
- Maximization of Natural gas to be used as fuel in Boilers and Heaters.
- All the furnaces are high efficiency furnaces by design wherein flue gases heat is recovered back to furnaces/heaters in the most optimum manner using pre-heaters. High operational efficiency helps in reduction of fuel consumption thus reducing pollutants emissions namely SO₂ and NO_x in the environment.
- Fluidized Catalytic Cracker Units (FCCU) at HPCL Mumbai Refinery has installed a grass root Flue Gas Scrubbing Unit (FGSU). The FCC units in Mumbai Refinery are the very few FCC units in the country which have this technology. The FGSU treats the flue gases to remove SO_x &

SPM by more than 90% thereby resulting in significant reduction in SO_x & SPM.

- High efficiency cyclone separators in FCCU are installed to reduce emission of particulate matters were by more than 95% of the catalysts is captured.
- Sulphur Block converts and recovers 99.9% of the hydrogen sulfide (H₂S) contained in the feed streams as elemental Sulphur.
- Low NO_x burners in heaters and boilers have been installed for all new furnaces and boilers resulting considerable reduction in NO_x emissions in the environment.
- Online Continuous Emission Monitoring System will be installed with the stack and data will be transmitted to CPCB/SPCB servers.
- Online stack analyzers for monitoring of SO_x, NO_x, CO and PM emissions from furnaces/boilers.
- Installation of internal floating roof with double seals in all Class-A tanks for reduction of fugitive emissions.
- Provision of mechanical seals in all the hydrocarbon pumps for reduction of fugitive emissions.
- LDAR surveys will be carried out periodically.

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

- Used Lubricating oil will be collected in metal drums kept in secured area and will be recycled/disposed through authorized recyclers.
- Discarded containers/barrels/ liners contaminated with hazardous waste - Will be disposed as per Hazardous and other Wastes (Management & Transboundary Movement) Rules, 2016.
- Spent catalyst will be disposed through authorized recyclers.
- Oily chemical sludge will be bio-remediated.

Capital cost and recurring cost of EMP are given below:

The total estimated budget for implementation of EMP is worked out as Rs. 4870 Lakhs towards capital cost and Rs. 195 Lakhs towards recurring cost per annum.

Budget of Environmental Management Plan (Capital Cost)

Sl. No.	Activity	Capital Cost
		(Rupees in

Sl. No.	Activity	Capital Cost Lakhs)
1.0	Air Environment	
1.1	Air quality monitoring	150.0
1.2	Low Nox burner and Stack analyzers	300.0
2.0	Noise Environment	
2.2	Occupational Health Program	10.0
3.0	Water Environment	
3.1	Rain water Harvesting pits	50.0
3.2	Tertiary Treatment Plant	4300.0
4.0	Land Environment	
4.2	Solid waste management	50.0
5.0	Biological Environment	
5.1	Plantation activities	10.0
	Budget for EMP (Capital Cost)	4870.0

Budget of Environmental Management Plan (Recurring Cost per Annum)

Sl. No.	Activity	Recurring Cost in Lakhs per Annum (Rs.)
1.0	Air Environment	
1.1	Maintenance of Green Belt	10.0
1.2	Stack Emissions	10.0
1.3	Ambient Air Monitoring	15.0
1.4	VOC monitoring	15.0
1.5	AMC for Pollution Control Analyzers	20.0
2.0	Noise Environment	
2.1	Development of Green Belt	Included in 1.1
2.2	Ear Plugs, Ear Muff, Soft Sponge	10.0
2.3	OHC staff for noise monitoring	20.0
2.4	Noise Monitoring	10.0
3.0	Water Environment	
3.1	Rain water harvesting pits (Maintenance)	10.0
3.2	Water Quality Monitoring	10.0
3.3	IETP Maintenance	30.0
3.4	TTP Maintenance	15.0

4.0	Land Environment	
4.1	Solid Hazardous Waste Management	20.0
5.0	Biological Environment	
5.1	Development of Green Belt	Included in 1.1
	Total Amount	195.0

Details of Extended EMP with proposed activities and budgetary allocation:

S. No.	Proposed Activities	Implementation of Extended EMP for Social and Infrastructure development on the basis of physical targets				Allocated Budget (In Lakhs)
		Year 1	Year 2	Year 3	Year 4	
1.	Skill Development for Local Youth and Women at Vasi Naka and Gavanpada villages, Kurla tehsil (Organising Training programmes for Women Driver-4 wheelers, Women Office Assistant)	20.0	20.0	20.0	20.0	80.0
2.	Distribution of Fishnet material to fishermen at Trombay and Mahul villages	30.0	20.0	10.0	10.0	70.0
3.	Improvement of Healthcare Facilitates (Distribution of Dialysis machine to Suphala Trust, Chembur)	20.0	15.0	15.0	10.0	60.0
4.	Providing infrastructure facilities in local schools (Digital smart boards to schools at Vasi Naka, Mankhurd, Trombay, Chembur villages)	15.0	20.0	20.0	10.0	65.0
5.	Support in Social Infrastructure projects in surrounding areas (Garden Renovation at Gavan village, Kurla tehsil, Solar lighting at Vasi Naka & Mankhurd villages)	10.0	20.0	10.0	-	40.0
6.	Solid waste management in nearby areas (transportation of wastes	10.0	10.0	15.0	-	35.0

from Gavanpada, Mahul village areas, Kurla tehsil)					
Total Expense (Rs. in Lakhs)					350.0
Total Expense (Rs. in Crores)					3.5

The proposal was earlier considered by the EAC (IND-2) in its meeting held on 31/01/2025, wherein the EAC returned the proposal in its present form due to the desired certain requisite information/inputs. Information desired by the EAC and responses submitted by the project proponent are as under:

Sl. No.	ADS Query	Reply from Project Proponent												
1.	PP shall submit carbon balance for the entire process.	<p>Fired Heaters are the major sources of carbon emission in an oil refinery. With GoI's vision to achieve Net zero and to minimize carbonaceous emissions across all sectors, maximisation of operational efficiency of fired equipment is an important initiative. In line with this prime mandate, it has been ensured that efficiency of all furnaces in this project has been maximised to the best extent possible, keeping in mind the practical limitations as well as ensuring equipment life.</p> <p>The refinery crude processing capacity will remain same as 9.5 MMTPA. Addition of Solvent De-Asphalting (SDA) unit and Integrated Hydrocracker and Catalytic Dewaxing (IHCD) unit is being proposed in this project. The carbon emission to the environment from new stacks are tabulated below.</p> <p>The fuel efficiencies of the furnaces in proposed project are noted below along with their corresponding carbon emissions for the worst-case scenario (corresponding to Natural Gas firing where the carbon emissions are expected to be maximum in compared to other fuel gas for this project).</p> <table border="1"> <thead> <tr> <th>Furnace Tag</th> <th>Unit</th> <th>Calculated Fuel efficiency (%)</th> <th>Carbon Emission (TPD)</th> </tr> </thead> <tbody> <tr> <td>201-F-1001</td> <td>SDA</td> <td>92.0</td> <td>106.5</td> </tr> <tr> <td>202-F-1001 and 202-F-1101</td> <td>IHCD</td> <td>91.0</td> <td>70.3 (total for two heaters)</td> </tr> </tbody> </table>	Furnace Tag	Unit	Calculated Fuel efficiency (%)	Carbon Emission (TPD)	201-F-1001	SDA	92.0	106.5	202-F-1001 and 202-F-1101	IHCD	91.0	70.3 (total for two heaters)
Furnace Tag	Unit	Calculated Fuel efficiency (%)	Carbon Emission (TPD)											
201-F-1001	SDA	92.0	106.5											
202-F-1001 and 202-F-1101	IHCD	91.0	70.3 (total for two heaters)											

		(two heaters with common stack)			
		202-F-2001 and 202-F-2101 (two heaters with common stack)	IHCD	90.9	58.1 (total for two heaters)
		Total			235 TPD (0.078 MMTCO₂e per year)
		<p>Following effective measures were employed to reduce the carbon emissions for this Project:</p> <ul style="list-style-type: none"> • The highest duty heater in this project is the Hot Oil heater of SDA unit. It was ensured that this heater is designed to minimize the fuel consumption and thereby, reduce the carbon emissions through employing of Air Preheater system. APH system is a time-tested and proven measure for effective reduction of carbon emission. • Insulation and refractories in design of the furnaces have been optimised to minimize the heat loss across the furnace walls. Minimization of heat loss increases the furnace efficiency with corresponding reduction in furnace carbon emissions. • Reasonable fouling factors have been considered in design of furnaces which ensures that the level of efficiency shall be effectively maintained even after prolonged period of operation. • CO analysers shall be installed which will monitor on the un-combusted hydrocarbons and thus, will alert the operator in case of loss of carbon-rich fuel material. • For IHCD unit heaters, elaborate finned tube convection sections have been designed which ensures that the high value flue gas heat from the radiant section is not wasted, rather, transferred into the refinery network through generation and superheating of MP steam. MP steam is a costly and useful commodity and 			

		<p>generation of MP steam in the IHCD furnaces helps in offsetting the steam requirement from the overall refinery network.</p> <ul style="list-style-type: none"> • In SDA unit, Thermic Fluid is being used as heating media for process heating and heat tracing of Bitumen pipe lines. Further, electrical heat tracing will be used in offsites instead of steam tracing. Switching to thermic fluid/electrical heat tracing offers environmental benefits by reduction in CO2 emissions by 9186 Tons/Annum. • Refinery Off-gas Pressure Swing Adsorption (ROG-PSA) is being implemented in the project which would recover additional Hydrogen to the tune of ~6 KTPA from Refinery off gases, thereby resulting in reduction of CO2 emission by 47000 Tons/Annum. • With the implementation of above initiatives we would be able to recover approx.0.056 MMT CO2e per annum, which is ~72% of emitted CO2. 																															
<p>2.</p>	<p>EAC noted that incremental GLCs after the proposed project shall be 15.1 µg/m³ and 31.7 µg/m³ for SO₂ and NO_x respectively which are on the higher side. In this regard, EAC suggested the project proponent to submit the measures taken to curtail the same.</p>	<p>As advised by EAC committee during EC meeting dated Jan 31, 2025 the SO_x and NO_x Emissions from the project were critically reviewed and further minimized by considering use of modern low NO_x burners in furnace and optimizing furnace stack height thereby resulting in reduction of GLC of SO_x and NO_x as tabulated below:</p> <table border="1" data-bbox="523 1395 1391 1798"> <thead> <tr> <th rowspan="3">Name of Pollutants</th> <th rowspan="2">Baseline Concentration</th> <th colspan="2">Incremental Concentration</th> <th colspan="2">Resultant ground level concentrations (GLC) Value</th> <th rowspan="2">Allowable Limit as per NAAQS</th> </tr> <tr> <th colspan="2">in µg /m³</th> <th colspan="2">in µg/m³</th> </tr> <tr> <th></th> <th>Previous</th> <th>Now</th> <th>Previous</th> <th>Now</th> <th></th> </tr> </thead> <tbody> <tr> <td>SO₂</td> <td>14.5</td> <td>0.626</td> <td>0.554</td> <td>15.126</td> <td>15.054</td> <td>80</td> </tr> <tr> <td>NO_x</td> <td>25.5</td> <td>6.26</td> <td>4.44</td> <td>31.76</td> <td>29.94</td> <td>80</td> </tr> </tbody> </table>	Name of Pollutants	Baseline Concentration	Incremental Concentration		Resultant ground level concentrations (GLC) Value		Allowable Limit as per NAAQS	in µg /m ³		in µg/m ³			Previous	Now	Previous	Now		SO ₂	14.5	0.626	0.554	15.126	15.054	80	NO _x	25.5	6.26	4.44	31.76	29.94	80
Name of Pollutants	Baseline Concentration	Incremental Concentration			Resultant ground level concentrations (GLC) Value		Allowable Limit as per NAAQS																										
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3.	PP shall submit the photographs of sensors placed to detect SOx emissions. PP shall also submit SOP followed for shutting down the plant in case of tripping of Sulphur Recovery Unit.	<p>At HPCL MR, there are 4 number of SRU's each having a capacity of processing 65 TPD of Acid Gas. During present operation, out of the 4 SRU's, one train is spare. Considering the scenario of non-availability of spare SRU train and tripping of any one of running trains, shut down of process units generating H₂S will be initiated and a safe operating procedure is followed to reduce H₂S generation. The major steps are as follows:</p> <ol style="list-style-type: none"> 1. Take Diesel Hydrotreating units on internal circulation and cut off feed to these units. 2. Take Lube Iso-De-waxing unit (LOUP unit) on internal circulation. 3. In above units, all reactors temperature to be positively brought down below 200 Deg C to avoid H₂S generation. Follow MPT criteria wherever applicable. 4. Cut off FCC feed to avoid H₂S, NH₃ generation through sour water. Proceed with normal unit shutdown. 5. Actions 1,2 and 3 will ensure Amine Regeneration Unit and Sour water stripping Unit will not receive Rich Amine and H₂S, NH₃ rich streams from Diesel Hydrotreating, Lube Iso-dewaxing and FCC's. 6. Switch over SRU trains to fuel gas mode. 7. Crude thru put to be reduced accordingly. 8. Units to remain on internal circulation till the issues in SRU are rectified and SRU unit comes back into service. <p>Photographs of sensors installed on SRU stack is submitted.</p>												
4.	PP shall provide the total fuel used in refinery and the split of FG & FO.	<p>Low Sulphur Refinery Fuel gas, Natural Gas (RLNG), Low Sulphur fuel oil (LSHS) is being used as fuel in furnaces. Naphtha and Natural Gas (RLNG) is used as fuel in Captive Power Plant (CPP) and H₂ generation unit. Fuel consumption details for FY 2023-24 are as follows:</p> <table border="1" data-bbox="531 1675 1394 1843"> <thead> <tr> <th>Fuel type</th> <th>Quantity (MT)</th> <th>Percentage (%)</th> </tr> </thead> <tbody> <tr> <td>Naphtha</td> <td>45746</td> <td>8.7%</td> </tr> <tr> <td>LSHS</td> <td>162741</td> <td>31.2%</td> </tr> <tr> <td>Fuel Gas</td> <td>313263</td> <td>60.1%</td> </tr> </tbody> </table>	Fuel type	Quantity (MT)	Percentage (%)	Naphtha	45746	8.7%	LSHS	162741	31.2%	Fuel Gas	313263	60.1%
Fuel type	Quantity (MT)	Percentage (%)												
Naphtha	45746	8.7%												
LSHS	162741	31.2%												
Fuel Gas	313263	60.1%												
5.	PP shall submit the measures taken to	<p>In order to minimize the fugitive emissions, the following measures are already in place in refinery:</p> <ul style="list-style-type: none"> ➤ Minimum number of flanges, valves, etc. 												

	control fugitive emissions of VOCs.	<ul style="list-style-type: none"> ➤ High grade gasket material for packing ➤ Usage of pumps with Double Mechanical seals for light hydrocarbon services ➤ Provisions of floating roof storage tanks ➤ Provision of seals in the drains and manholes ➤ Petroleum storage tanks are complying to roof requirements as stated in MoEF&CC G.S.R. 186(E) dated March 18, 2008, for minimizing emissions. ➤ Hydrocarbon samplings are done in a closed loop system. ➤ Refinery IETP is already having the activated charcoal adsorption system for capturing and treatment of VOC. ➤ Leak Detection & Repair (LDAR) survey is carried out routinely to minimize fugitive emissions. ➤ Hydrocarbon flare is connected to Recovery Gas Compressors for maximizing recovery of vent gases. ➤ Vapor Recovery Unit (VRU) is installed in MR-II Tank Truck loading gantry for recovery of hydrocarbon vapor during loading. 										
6.	PP shall submit the details of ZLD being maintained in the industry.	<p>HPCL Mumbai Refinery Integrated Effluent Treatment Plant (IETP) is equipped with Primary, Secondary and Tertiary treatment (Ultrafiltration followed by RO) for maximizing Recycle of treated water back to Process unit. Approx. 75% of treated water is recycled back to process unit mainly to DM plant. R.O. reject from IETP unit is also recycled back as Fire Water make up. HPCL Mumbai Refinery being a coastal refinery uses Sea Water for all process cooling requirement and as make-up source for Fire Water. Sea Water has TDS of >35,000 mg/L while the IETP RO Reject has TDS ~6000-8000 mg/L. Hence it may be seen that the Sea Cooling Water blowdown effluent is the only discharge out of Refinery.</p>										
7.	PP shall submit the unit wise break-up of total project cost for Modernisation and Bottoms Upgradation	<p>The total project cost is ₹ 5460.19 Crore. The detail cost breakup as submitted to EAC as per DFR for the proposed project is as follows:</p> <table border="1" data-bbox="528 1787 1394 2072"> <thead> <tr> <th>Unit/Facility</th> <th>Capex (₹ Crore)</th> </tr> </thead> <tbody> <tr> <td>SDA (850 KTPA)</td> <td>369.84</td> </tr> <tr> <td>Integrated Hydrocracker Catalytic Dewaxing (550 KTPA)</td> <td>1301.89</td> </tr> <tr> <td>ARU & SWS</td> <td>143.88</td> </tr> <tr> <td>ROG-PSA</td> <td>115.00</td> </tr> </tbody> </table>	Unit/Facility	Capex (₹ Crore)	SDA (850 KTPA)	369.84	Integrated Hydrocracker Catalytic Dewaxing (550 KTPA)	1301.89	ARU & SWS	143.88	ROG-PSA	115.00
Unit/Facility	Capex (₹ Crore)											
SDA (850 KTPA)	369.84											
Integrated Hydrocracker Catalytic Dewaxing (550 KTPA)	1301.89											
ARU & SWS	143.88											
ROG-PSA	115.00											

	(LMBU) project.	Utilities & Offsites	805.56						
		EPCM/PMC fee/License fees/ BDEP fee	623.45						
		Proprietary equipment & Catalyst	357.96						
		Other miscellaneous	1742.61						
		Total Project Cost	5460.19						
8.	PP shall recheck the stack height, raw data for ambient air quality monitoring and incremental increase in pollution load.	As advised by EAC during the meeting to explore increase in stack height; the stack height of SDA was increased from 60 m to 65 m to reduce SOx and NOx emissions. Raw data for ambient air quality monitoring was checked and found correct. There will be marginal increase in pollution load in terms of SOx and NOx emission. But the SOx emission will be within the EC stipulated condition i.e. 12.6 TPD.							
9.	PP shall submit the details of ETP.	<p>Integrated Effluent Treatment Plant (IETP) at HPCL Mumbai Refinery is a state-of-the-art unit having Primary Treatment section (API, TPI, DAF), Secondary treatment section (SBR & MBR unit) followed by Tertiary Treatment (Reverse Osmosis) for maximum recovery.</p> <p>Final treated effluent (permeate) is recycled back as Demineralisation (DM) plant feed for Steam generation. RO Reject effluent from the plant meets the quantitative and qualitative limits of parameters as stipulated in Refinery 2008 standard. This effluent is recycled back as make up to fire water sump.</p>							
10.	PP shall submit point-wise compliance table for Ministry's OM dated 11.04.2022 regarding expansion under para 7 (ii)(a).	<p>Compliance to the MoEFCC OM dated 11th April 2022 to qualify the proposed project under clause no. 7(ii)(a) of EIA Notification, 2006 is given below.</p> <table border="1"> <thead> <tr> <th>S. No.</th> <th>Granting EC under Clause no. 7(ii)(a) - OM dated 11/04/2022</th> <th>Compliance</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>The project should have gone through the public hearing process, at least once for its existing EC capacity.</td> <td>The Public Hearing was carried out on 13/05/2016 during expansion of Mumbai refinery capacity from 7.5 to 9.5 MMTPA.</td> </tr> </tbody> </table>		S. No.	Granting EC under Clause no. 7(ii)(a) - OM dated 11/04/2022	Compliance	1	The project should have gone through the public hearing process, at least once for its existing EC capacity.	The Public Hearing was carried out on 13/05/2016 during expansion of Mumbai refinery capacity from 7.5 to 9.5 MMTPA.
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1	The project should have gone through the public hearing process, at least once for its existing EC capacity.	The Public Hearing was carried out on 13/05/2016 during expansion of Mumbai refinery capacity from 7.5 to 9.5 MMTPA.							

		2.	There should not be changed in category of the project from B2 to B1 or A due to proposed modernisation or expansion.	The proposed project is category A project. The same will not be changed due to proposed modernisation.
		3.	There is no additional land acquisition or forest diversion involved for the proposed expansion	No additional land is required for proposed modernisation and the same will be coming up in the existing refinery land. No forest land is involved in the project modernisation.
		4.	The proposed expansion shall not be more than 50% of production capacity as mentioned in the prior EC.	This is not applicable.
		5.	Predicted environmental quality parameters arising out of proposed expansion/modernization shall be within the prescribed norms	Yes, the predicted environmental quality parameters arising out of proposed modernization shall be within the prescribed norms.
		6.	The proposed expansion should not result in reduction in the greenbelt area as stipulated in earlier EC	Out of the total refinery area (139.55 Ha), 15.59 Ha green area is already developed inside the refinery and further greenbelt development is not possible due to land constraint. HPCL has carried out 12.37 Ha plantation outside of the refinery.

		7.	The project should have satisfactorily complied the conditions stipulated in the existing ECs.	All conditions stipulated in the existing ECs are satisfactorily complied. IRO-Nagpur has issued certified compliance report vide File No. EC-2527/RON/2024-NGP/13448 dated 13/08/2024.
		8.	Public Consultation shall be undertaken (If applicable) by obtaining response in writing, as per para 7III(ii) (b) of EIA Notification 2006 and its amendments.	This is not applicable.
		9.	Effluent monitoring including air quality monitoring systems as specified in the existing EC, if stipulated should have been installed.	Effluent monitoring including air quality monitoring systems as specified in the existing EC are installed in the refinery premises.
11.	PP shall carry out biodiversity risk assessment for post modernization and upgradation of the plant.	The flora and fauna in the 10 km surrounding areas are assessed and included in EIA study report. Further, HPCL will carry out a detailed biodiversity risk assessment study in the surrounding areas and submit the report to statutory body.		
12.	PP shall submit the plan of hydrogen recovery from Refinery-off Gas Pressure Swing	Refinery Off-Gas (ROG) Pressure Swing Adsorption (PSA) unit for recovery of hydrogen from refinery off-gases. The complete details have been submitted.		

	Adsorption (ROG-PSA) for preventing the hydrogen emission into the atmosphere.																																											
13.	PP shall submit the budget allocation for Extended EMP in tabular form.	The budget allocation for extended EMP has been submitted.																																										
14.	PP shall submit clarification for the projected values of SO ₂ and NO _x as given in EIA report submitted for expansion in capacity from 7.5 to 9.5 MMTPA as there is no change in emission load of SO ₂ and NO _x .	<p>After post modernisation (Lube expansion and Bottoms up-gradation project), the total crude processing capacity remained at 9.5 MMTPA as per Mumbai Refinery Expansion (MREP) Environmental Clearance. The total SO_x emission from the refinery post modernisation as per MREP EC was limited to 12.6 TPD. The emission will remain same i.e. 12.6 TPD post modernisation project. The detailed SO_x and NO_x emission from different stacks is given below.</p> <table border="1"> <thead> <tr> <th rowspan="2">Existing & Proposed Stacks</th> <th rowspan="2">Stack Nos.</th> <th colspan="2">Post Lube Modernization Project</th> </tr> <tr> <th>SO₂ (TPD)</th> <th>NO_x (TPD)</th> </tr> </thead> <tbody> <tr> <td>FR APS Furnace (11-F-1)</td> <td>S1</td> <td>1.14</td> <td>0.00</td> </tr> <tr> <td>FR VPS, Furnace (24-F-1001)</td> <td>S2</td> <td>0.98</td> <td>0.00</td> </tr> <tr> <td>FR APS, Furnace (11- F-2)</td> <td>S3</td> <td>0.97</td> <td>0.10</td> </tr> <tr> <td>Old FCCU, Furnace (14- F-1)</td> <td>S4</td> <td>0.34</td> <td>0.03</td> </tr> <tr> <td>Old FCCU, Regenerator-FGSU</td> <td>S5</td> <td>0.00</td> <td>0.04</td> </tr> <tr> <td>FRE APS, Furnace (31- F-1)</td> <td>S6</td> <td>1.26</td> <td>0.13</td> </tr> <tr> <td>FRE VPS, Furnace (32- F-1)</td> <td>S7</td> <td>0.43</td> <td>0.10</td> </tr> <tr> <td>DHDS, Furnace (71- F-01)</td> <td>S8</td> <td>0.01</td> <td>0.14</td> </tr> <tr> <td>H2, Reformer (73-F-02)</td> <td>S9</td> <td>0.02</td> <td>0.002</td> </tr> </tbody> </table>	Existing & Proposed Stacks	Stack Nos.	Post Lube Modernization Project		SO ₂ (TPD)	NO _x (TPD)	FR APS Furnace (11-F-1)	S1	1.14	0.00	FR VPS, Furnace (24-F-1001)	S2	0.98	0.00	FR APS, Furnace (11- F-2)	S3	0.97	0.10	Old FCCU, Furnace (14- F-1)	S4	0.34	0.03	Old FCCU, Regenerator-FGSU	S5	0.00	0.04	FRE APS, Furnace (31- F-1)	S6	1.26	0.13	FRE VPS, Furnace (32- F-1)	S7	0.43	0.10	DHDS, Furnace (71- F-01)	S8	0.01	0.14	H2, Reformer (73-F-02)	S9	0.02	0.002
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	Old SRU Incinerator (75-F-01)	S10	0.00	0.01
	PDS Furnace (73-F-01)	S11	0.00	0.001
	Boiler (SG-10/11)	S12	2.54	1.45
	Boiler (SG-12)	S13	1.36	0.99
	New FCCU, Furnace (114F-3001)	S14	0.01	0.01
	New FCCU, Regenerator-FGSU	S15	0.00	0.10
	NSU Furnace (101-F-1001)	S16	0.03	0.27
	CCR Inter Heater (102F-1001 & 102F-2003/2004)	S17	0.02	0.09
	CCR, Interheater 1 & Charge Heater (102F-2001/ 2002)	S18	0.03	0.11
	ISOM NhdT Heater (103F-1001)	S19	0.00	0.01
	Prime G+ Furnace (105F-1001)	S20	0.00	0.04
	DHT Furnace (700F-1001/1002)	S21	1.02	0.42
	DHT New SRU Incinerator (704F-4001)	S22	0.01	0.03
	CPP Gas Turbine (GTG-3)	S23	0.02	0.002
	CPP Gas Turbine (GTG-4)	S24	0.01	0.11
	CPP Gas Turbine (GTG-5)	S25	0.04	0.13
	NMP-I Furnace (F-201/202)	S26	0.39	0.10
	NMP-II Furnace (F-3201/3202)	S27	0.39	0.09
	NMP-III Furnace (F-4201/4202)	S28	0.39	0.15
	LR PDA Furnace (F-4101)	S29	0.28	0.04
	LR IOH Furnace (F-401)	S30	0.03	0.02
	LOUP Furnace (99F-01/02/03)	S31	0.01	0.07
	Hydrocarbon Flare (Burning shall be Smokeless)	S32	0.00	0.00
	Prime G+ Furnace (105-F-5001)	S33	0.00	0.03
	NHGU PDS Furnace (173-F-1101)	S34	0.03	0.05
	PNHGU Reformer (173- F-1211)	S35	0.67	0.28

		NEW IN IHCD/SDA PROJECT		0.01	0.09
		NEW IN IHCD/SDA PROJECT		0.01	0.07
		NEW IN IHCD/SDA PROJECT		0.02	0.13
				12.47	5.43
15.	PP shall submit details of furnaces where stack height has been adjusted to reduce incremental increase of SO ₂ and NO _x .	There are three number of stacks proposed for the SDA & Lobs upgradation project. In our earlier EIA report, the stack height for two heaters of Lobs project is 65 m and stack height of SDA heater is 60 m. The stack height of SDA heater is increased to 65 m to reduce the SO ₂ and NO _x emission. Also refer our response to query no. 2 and 8 above. Details of furnaces from proposed project is given below.			
		Unit	Furnace Tag	Stack Height	
		SDA	201-F-1001	65 m	
		IHCD	202-F-1001 and 202-F-1101 (two heaters with common stack)	65 m	
		IHCD	202-F-2001 and 202-F-2101 (two heaters with common stack)	65 m	
16.	PP shall provide sulphur content in Fuel gas.	The H ₂ S content in Refinery Fuel Gas is generally in the range of 100 ppmw max.			
17.	PP shall submit a clarification for utilization of 25% of permeate from R.O. for cooling along with R.O. rejects.	Refer response to query no. 6 above, 25% of the treated water (RO Reject) is recycled back as Fire water makeup as a substitute of Sea Water as the TDS of IETP RO reject water is much lower compared to Sea Water TDS.			

During deliberations, following issues were discussed:

- i. PP shall provide the product slate clarifying crude capacity does not exceeds 9.5 MMTPA. PP informed that products slate will be increased from 9523800 TPA to 9788000TPA, which accounts for 2.77 %

increase.

- ii. PP shall submit details of Green Belt development. Out of total project area 159.55 ha, Industry has developed greenbelt in 15.59 ha (11.2 %). Further, 12.37 ha (8.9 %) has been developed outside the refinery and Industry has proposed development of additional 18.95 ha (13.6 %) outside the refinery
- iii. PP submitted effluent balance chart showing Effluent generation will be increased after LMBU from 179 KLD to 201 KLD. Effluent will be treated in the integrate ETP and treated effluent of 141 KLD will be sent for recycling and reuse. Remaining rejects will be sent to make up water to recirculating sea cooling water/Fire water. The Committee suggested that in case of reuse of treated effluent as cooling water make up, all the parameters (as applicable for treated effluent)shall be monitored and conform to the prescribed standards of CPCB.
- iv. PP shall submit justification on increase in stack height just by 5 m (from 60 m to 65 m) leading to reduction in SO₂ emissions. In this regard, it has been informed that Stack height of 65m proposed satisfies the GLC and other emission limits as well as ensures that the adopted height is higher than that of the surrounding platform. It also ensures that sufficient draft is available inside the furnace for safe operation.
- v. EAC stated that as per Govt. of India instructions, Naphtha as fuel has to be phased out. PP shall phase Naphtha as fuel immediately and share the new fuel mix for HPCL (post LMBU). In this regard, PP has informed that Naphtha is predominantly used as fuel in Gas Turbine Generator (GTGs) and it is proposed to switch over to RLNG over a time span of 2 years, proposed change in Fuel basket for the Refinery complex will be as follows:

Fuel type	Existing Refinery	Post LMBU
	Percentage (%)	
Naphtha	8.7%	0.0%
Fuel Oil	31.2%	30.4%
Fuel Gas	60.1%	69.6%

- vi. PP shall submit proposed activities under Extended EMP with monitorable targets and timelines.

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

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 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.

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 Extended EMP 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.

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.

The EAC, after detailed deliberations, **recommended** the project for grant of environmental clearance, subject to compliance of terms and conditions as under, and general terms of conditions at Annexure: -

1. 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.
2. Usage of Naptha shall be phased out within 2 years of grant of EC.
3. The National Emission Standards for Petroleum Oil Refinery issued by the Ministry vide G.S.R. 186(E) dated 18th March, 2008 and G.S.R.595(E) dated 21st August, 2009 as amended from time to time, shall be followed.
4. Volatile organic compounds (VOCs)/Fugitive emissions shall be controlled at 99.997% with effective chillers/modern technology. For emission control and management, use of FG/NG in heater as fuel, adequate stack height, use of Low NOX burners in heater & boiler, continuous stack monitoring, Sulphur recovery plant, etc. shall be installed/ensured.
5. The total fresh water requirement shall not exceed of 674 m³/hr after post Lube modernization and Bottom upgradation project. Source of raw water shall be treated water from Brihanmumbai Municipal Corporation (BMC). The incremental raw water for the project shall be sourced from BMC in the form of treated sewage water.
6. Post Lube modernization and bottom upgradation project, additional 22 m³/hr of effluent shall be generated. The total flow to IETP post Lube Modernization and Bottom upgradation project shall be 201 m³ /hr. Total effluent of 201 m³ /hr including 22 m³/hr shall be treated through Integrated Effluent Treatment Plant in the refinery and treated effluent of 141 KLD shall be recycled/reused for recirculating sea cooling water/Fire water. Domestic waste water shall be treated in the existing STP having 600 m³/day capacity and treated water shall be reused for horticulture and cooling make up water. The Sea cooling water blowdown from the cooling system i.e. 80354 CMD shall be discharged into Sea. Industry shall make arrangements for monitoring of temperature of Sea cooling water at the outlet point. Necessary permission in this regard shall be obtained from the concerned regulatory authority. In case of reuse of treated effluent as cooling water make up, all the parameters (as applicable for treated effluent)shall be monitored and conform to the prescribed standards.
7. Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.

8. Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm, and solvent transfer to be done through pumps.

9. Process organic residue and spent carbon, if any, shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF.

10. Fly ash should be stored separately as per CPCB guidelines so that it should not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing along with the storm water. Direct exposure of workers to fly ash & dust should be avoided. The ash from boiler shall be sold to brick manufacturers/cement industry.

11. The company shall undertake waste minimization measures as below:

- Metering and control of quantities of active ingredients to minimize waste.
- Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.
- Use of automated filling to minimize spillage.
- Use of Close Feed system into batch reactors.
- Venting equipment through vapour recovery system.
- Use of high-pressure hoses for equipment clearing to reduce wastewater generation.

12. Out of total project area 159.55 ha, Industry has developed greenbelt in 15.59 ha (11.2 %). Further, 12.37 ha (8.9 %) has been developed outside the refinery and Industry has proposed development of additional 18.95 ha (13.6 %) outside the refinery. Existing and proposed greenbelt shall be densified @ 2500 trees per hectare, 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. 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. 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/>).

13. State Pollution Control Board shall not issue the Consent to Operate (CTO) under Air (Prevention and Control of Pollution) Act and Water (Prevention and Control of Pollution) Act till the project proponent developed the additional 18.95 ha (13.6 %) greenbelt outside the refinery.

14. PP proposed to allocate Rs. 3.50 Crores towards extended EMP which shall be spent as submitted as per plan. Further, all the proposed activities under extended EMP shall be completed before the commissioning of the plant in consultation with District Administration. All the commitments made in Public Hearing shall be completed within the timeline as per action plan submitted.

15. For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.

16. The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Firefighting system shall be as per the norms.

17. Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises. In case of the treated effluent to be utilized for irrigation/gardening, real time monitoring system shall be installed at the ETP outlet.

18. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.

19. Process safety and risk assessment studies shall be further carried out using advanced models, and the mitigating measures shall be undertaken/implemented accordingly.

20. The PP should improve the efficiency of ETP Plant and the water discharge should be as per prescribed CPCB Norms. They should also install 24x7 hours monitoring system (of the discharge) and the same should be connected to the server of SCPB/CPCB.

21. 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.

Agenda No. 03

Establishment of Cane Juice/Molasses/Grain based Multi feed Distillery of capacity 400 KLPD with 10000 TCD Sugar Plant, 30 MW Cogeneration unit and 7 MW Captive Power plant from Incineration Boiler, Located at Sy nos. 406/2, 406/3, 406/4, 409/1, 409/2, 409/3, 409/4, 409/5, 411/1, 411/3, 413/1, 413/3, 413/4, 413/5, 413/6, 413/7, 413/8, 413/9, 413/10, 413/11, 414/1, 414/2, 415/6, 415/8, 416/7, Hippargi Village, Nelogi Hobli, Jewargi Taluk, Kalaburagi District by M/s Madhuvan Sugars Pvt. Ltd. – Consideration for Terms of Reference (ToR)

[IA/KA/IND2/531106/2025, IA-J-11011/131/2025-IA-II]

The Project Proponent and the accredited Consultant M/s Ultratech Environmental Consultancy & Laboratory (NABET Certificate No. NABET/EIA/24-27/RA 0378 validity 10.06.2028) made a detailed presentation on the salient features of the project and informed that the proposal is for terms of reference (ToR) for the project Establishment of Cane Juice/Molasses/Grain based Multi feed Distillery of capacity 400 KLPD with 10000 TCD Sugar Plant, 30 MW Cogeneration unit and 7 MW Captive Power plant from Incineration Boiler, Located at Sy nos. 406/2, 406/3, 406/4, 409/1, 409/2, 409/3, 409/4, 409/5, 411/1, 411/3, 413/1, 413/3, 413/4, 413/5, 413/6, 413/7, 413/8, 413/9, 413/10, 413/11, 414/1, 414/2, 415/6, 415/8, 416/7, Hippargi Village, Nelogi Hobli, Jewargi Taluk, Kalaburagi District by M/s Madhuvan Sugars Pvt. Ltd.

All project activities / products are listed at 5(j) sugar, 1(d) Thermal power and '5(g)' Distilleries of Schedule of Environment Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC).

The details of products and capacity as under:

Sr. No.	Unit	Quantity
1	Sugar Unit (TCD)	10000
2	Cogeneration (MW)	30
3	Distillery	
	Ethanol/RS/ENA (KLPD)	400
4	Captive Power generation through incineration boiler (MW)	7.0

It was informed by PP that no litigation is pending against the proposal.

Total land area required is 3,73,626.01 Sq m. Greenbelt will be developed in total area of 1,23,296.58 Sq m, i.e., ~33% of total project area. The estimated project cost is INR 476.54 crores. Total Employment will be 300. Total land of 373626.01 sq. m. is under possession of the M/s Madhuvan Sugars Pvt. Ltd.

During deliberations, EAC discussed following issues:

- EAC noted two extra high voltage 765 KV transmission lines, which are ~270 m apart, are passing over the land area of the proposed project for which EAC suggested PP to drop land area involved width of 18.6 m (9.3 m from each side of the transmission line) high voltage corridor and 22 m (11 m from each side of the transmission line) of maintenance zone making it a total of 40.6 m (20.3 m from each side of the transmission line) from project activities area as there is a safety concern. Therefore, PP shall revise the layout and submit layout superimposed on kml file.
- PP shall provide boundary wall at the both ends of restricted zone.
- PP shall submit NOC from Electricity Board for the proposed project to be established at the proposed site with transmission lines passing over head.
- PP shall exclude the entire area (~15 Ha) encompassing restricted zone from the proposed project and submit revised proposal.

Accordingly, the proposal was returned in present form.

Agenda No. 04

Proposed Capacity Expansion of Naphtha Cracker Unit Phase-II (NCU-II), Capacity Expansion of Poly-Propylene (PP) Unit and Setting up a New Pre-Compounded High Density Poly Ethylene

(HDPE) Unit at Panipat Naphtha Cracker Complex, Haryana by M/s. Indian Oil Corporation Limited-Panipat Refinery & Petrochemical Complex, Panipat, Haryana – Consideration of Environmental Clearance.

[IA/HR/IND2/532180/2025, IA-J-11011/306/2020-IA-II (I)]

The Project Proponent and the accredited Consultant M/s. ABC Techno Labs India Pvt Ltd. (NABET certificate no. NABET/EIA/2225/RA0290 and validity Nov16, 2025) made a detailed presentation on the salient features of the project and informed that the proposal is for environmental clearance to the project proposed Capacity Expansion of Naphtha Cracker Unit Phase-II (NCU-II), Capacity Expansion of Poly-Propylene (PP) Unit and Setting up a New Pre-Compounded High Density Poly Ethylene (HDPE) Unit at Panipat Naphtha Cracker Complex, Haryana by M/s. Indian Oil Corporation Limited, Panipat Refinery.

All Petro-chemical complexes (industries based on processing of petroleum fractions & natural gas and/or reforming to aromatics) are listed at S.N. 5 (c) of Schedule of Environment Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC).

The details of products and capacity as under:

Sl. No	Plant/Equipment / Facility	Units	Existing Configuration	Proposed Configuration	After Expansion	Remark
1	C4 Hydrogenation Unit (C4HU)	KT A	480	0	480	Capacity in terms of product
2	Butadiene Extraction Unit (BDEU)	KT A	138	15	153	Capacity in terms of product
3	Pyrolysis Gasoline Hydrogenation Unit (PGHU)	KT A	720	0	720	Capacity in terms of product
4	Benzene Extraction Unit (BEU)	KT A	248	40	288	Capacity in terms of product
5	Polypropylene Unit (PPU)	KT A	600	166	766	Capacity in terms of product. Additional 450 KTA PP plant is under

Sl. No	Plant/Equipment / Facility	Units	Existing Configuration	Proposed Configuration	After Expansion	Remark
						construction phase.
6	HDPE Unit	KT A	351	200	551	Capacity in terms of product
7	Swing Unit (LLDPE/HDPE)	KT A	350	0	350	Capacity in terms of product
8	Butene-1 UNIT	KT A	20	0	20	Capacity in terms of product
9	Naphtha Cracker Unit (NCU)	KT A	947	200	1147	Capacity in terms of product
10	Mono Ethylene Glycol (MEG)	KT A	425	0	425	Capacity in terms of product
11	Catalyst Manufacturing	KT A	1500	0	1500	Capacity in terms of product

Ministry/SEIAA has issued Environmental Clearance to the existing capacity vide File No. IA-J-11011/306/2020-IA-II (I) dated 30th January 2023. Certified Compliance report of existing EC has been obtained from Integrated Regional Office, MoEFCC Chandigarh vide File no- 5-01/2018/ENV/eFile dated 04.11.2024. Action Taken Report has been submitted to IRO, MOEFCC, dated November 18,2024 for partial compliances and non-compliances.

Standard Terms of Reference have been obtained vide F. No. J-11011/106/2012-IA.II (I) dated 26th April, 2022. It was informed that there is no litigation pending against the project. Public Hearing for the proposed project had been conducted by the Pollution Control Board on 08.08.2024 at Panipat Naphtha Cracker Complex, Haryana chaired by Dr. Pankaj, IAS, Additional Deputy Commissioner, Panipat, Haryana.

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

Sl. No	Issue in brief	Action plan in brief	Budget allocated and timeline
Issue of public hearing during PH interaction			

1	<p>Shri Kashmir, Baholi</p> <p>He stated that, the Baholi dera is located in approx. 22 acres area which is very near to boundary wall of refinery.</p> <p>The people are in great misery due to pollution and have submitted various complaints but no action has been taken. There is no proper drainage system.</p> <p>IOCL should procure our land and we will shift to another place. It is also offered to IOCL to provide same area of land elsewhere in the nearby village. IOCL had procured Baholi village land and rehabilitated Baholi village away except 22 acres of residential area (Baholi Dera) very near to refinery.</p> <p>He request the administration to resolve grievance and relocate the residents to new location. It is also requested that their 22 acres land may be acquired by the Government.</p>	<p>Response:</p> <p>Project Proponent replied that IOCL officials have already visited this 22-acre residential area and informed the respective representative that land acquisition by IOCL is under process and asked the interested person to upload their land data on the E-Bhumi Portal developed by Haryana Government for procurement. Monthly meetings are being held by a High-Power Committee under the chairmanship of Chief Secretary, Government of Haryana on this issue. The Haryana Government will finalise the rates of the land. Then IOCL will start land acquisition through the Haryana Government's E-Bhumi Portal.</p> <p>This process has already been communicated to the people of Dera Baholi during a visit by an IOCL official. IOCL does not procure any private land directly and acquire land through government process.</p> <p>Action Plan:</p> <p>Haryana Govt. is required to finalize the rate of the land. Once the rate is finalized, IOCL will initiate procurement process through Haryana Government.</p>	<p>Budget: NA</p> <p>Timeline: NA</p>
2.	<p>Shri Kashmir, Baholi</p> <p>IOCL has recently acquired a land of 300 Acre with price of 2.2 Crores per acre. We have quoted the land price of 1.8 Crore which is 40 Lacs less. We have also requested to Chief Secretary to acquire our 22 Acre land.</p>	<p>Response:</p> <p>ADC, Panipat replied that</p> <p>The grievances are noted and stated that there is a condition on the land portal that 70% of the land owners of a particular area must agree to the sale of their land. If all the people agree to the sale, then government can go ahead. Since the request is already uploaded in the E-Bhumi Portal, the same will be follow-up by the DLR office. The second point is about pollution. ADC Panipat stated that all the grievances related to pollution shall</p>	<p>Budget: NA</p> <p>Timeline: NA</p>

		<p>be resolved on priority. IOCL will also nominate Nodal Officer for prompt action on pollution related grievances.</p> <p>Action Plan:</p> <p>Project Proponent mentioned that they are in touch with DLR office for further proceedings with respect to. land procurement as per procedure of IOCL and Haryana Govt.</p> <p>Panipat Refinery & Petrochemical Complex is committed to comply with all the rules and regulations related to pollution control. All the environmental parameters are being maintained within prescribed limits. Panipat Refinery & Petrochemical complex has planted 8.94 lakhs of trees saplings since inception in surrounding areas.</p>	
3.	<p>Shri Bhupender Singh, Baholi</p> <p>What is the distance of residential area/village from 48% greenbelt area of IOCL.</p> <p>Our land is 300-400 meter away from the IOCL and may be acquired by IOCL for green belt.</p> <p>IOCL found non-complying for last 5 years as sample was exceeding the prescribed norms in NGT report</p>	<p>Response:</p> <p>The Project Proponent replied that</p> <p>The Green Belt is located within 5 kilometers of plant premises. If any other land is available, then IOCL is ready to do the plantation. If the Green Belt area is more than 5 km away, MoEF&CC will not accept the same.</p> <p>IOCL will acquire the land through government process once the rates are finalized by the government on E-Bhumi Portal.</p> <p>RO-HSPCB replied that the refinery has already deposited Environment Compensation for the past violation found in the NGT report for restoration plan which will be utilized for development of surrounding areas/villages. If there are any suggestions like tree plantation or other development activities same may be shared with Regional Office</p> <p>Action Plan:</p> <p>Once Haryana Govt. finalizes the rate of the land, IOCL will initiate procurement process through Haryana Government.</p>	<p>Budget: NA</p> <p>Timeline: NA</p>
4	<p>Shri Surender Rathi, Baljattan</p> <p>As IOCL has acquired</p>	<p>Response:</p> <p>Project Proponent replied that,</p> <p>IOCL will provide an amount of Rs. 10</p>	<p>Budget: INR 180 Lacs will be allocated for various developmental</p>

	<p>panchayat land of Village Baljattan, what steps IOCL is planning to take up for the development of Village Baljattan.</p>	<p>lakhs per acre to the panchayat for the developmental work of the village and nearby villages.</p> <p>Action Plan:</p> <p>Panipat Refinery will provide Lump sum amount of Rs. 10 Lakhs per acre to the Panchayat for the developmental work of the nearby villages, as conveyed during meeting with Hon'ble Chief Minister (Haryana)</p>	<p>works under proposed project.</p> <p>Timeline: 5 years</p>
5	<p>Shri Narender Rathi, Sarpanch, Baljattan</p> <p>What are the employment opportunity for the residents of village Baljattan and nearby villages.</p> <p>All the nearby villages of Khandra, Baljattan, Assan, Baholi, whose land has been acquired by IOCL wants co-operation from IOCL for the development work of villages</p>	<p>Response:</p> <p>Project Proponent replied that,</p> <p>Around 250 people are to be permanently employed in the upcoming 03 Nos of projects. Further, apart from permanent employment, indirect employment is always available with nearby villages.</p> <p>The ADC replied that,</p> <p>IOCL should maintain transparency for the funds transfer to the village panchayat and should keep all the detail in the Public Domain in consultation with the Sarpanch of the nearby villages. Further, the Sarpanch can submit proposal for any skill centre or development work. The District Administration will ensure that same work is taken up by the IOCL under CSR</p> <p>Action Plan:</p> <p>As central PSU, Panipat Refinery and Petrochemical Complex (PRPC) will provide employment to around 250 people in the upcoming new 03 nos. projects as per prevailing recruitment policy of IOCL and Supreme Court guideline. In addition to above, indirect employment is always available with nearby villages.</p> <p>With regards to development, Panipat Refinery will ensure maintaining transparency for the funds transfer to the village panchayat and shall keep all the details in the public Domain in consultation with the sarpanch of the nearby villages. Further, proposal, if any, received from the sarpanch of nearby village, will be considered for implementation as per procedures and guidelines of IOCL</p>	<p>Budget: NA</p> <p>Timeline: NA</p>

6	<p>Sarpanch, Baholi Village</p> <p>That there is no cooperation in the IOCL side for the development of village Baholi. I had requested IOCL many times but no steps has been taken by IOCL for the betterment of village. Two day back, the waste is dump on the road from the 2G Ethanol Plant which cause problem to the nearby residents.</p> <p>A gas is released by IOCL due to which all the crops become red. What steps has been taken by IOCL in this regard.</p> <p>In Baholi, sewage line is choked. Application is submitted to District Administration and IOCL, but nothing has been done yet. IOCL has deposited required amount in the account of DC, Panipat which is yet to be released in the account of Gram Panchayat Baholi.</p>	<p>Response:</p> <p>ADC, Panipat directed RO PCB and IOCL to ensure that no waste is dump in the village lands. RO PCB to take action against the violators who has dumped the waste on the village land within one week.</p> <p>The ADC, Panipat directed CMO Panipat to organized health checkup camp in the nearby villages within 7 days. If there is any violation on part of IOCL then strict action will be taken.</p> <p>Project Proponent stated that as far as the work on the sewerage line is concerned, a portion of the line is still occupied by the villagers, who are not allowing the work to be completed. Project Proponent also informed that the sewerage line has already been cleaned. Further, health camps are organized in the 14 surrounding villages. ADC Panipat assure that matter will be taken up and said amount will be released in the Gram Panchayat account.</p> <p>Action Plan:</p> <p>IOCL, Panipat Refinery & Petrochemical Complex (PRPC) is already organizing health camps in the 14 nos. surrounding villages.</p> <p>Also, in future, PRPC will organize health camps for welfare of the people of nearby villages.</p> <p>Currently one Mobile Medical Unit is operating in nearby village once a fortnight. This Mobile unit has one Doctor & paramedical staff with basic medicines.</p>	<p>Budget: INR 40 Lacs (included in total CER cost)</p> <p>Timeline: 5 years</p>
7	<p>Sarpanch, Singhipura-Sithana Village</p> <p>He mentioned that,</p> <p>Pollution is at the alarming condition. For the age group of 5- 70 respiratory problem has increased and use of inhalers is common now a days. After 2007, this</p>	<p>Response:</p> <p>The ADC Panipat replied that,</p> <p>Joint action is to be taken in this regard by the Gram Panchayat and IOCL. Gram Panchayat to ensure no stubble burning. IOCL to implement its AC. II measure. District Administration will release the fund deposited by the IOCL to the concerned Gram Panchayat for the development works.</p> <p>The project proponent replied that,</p>	<p>Budget: NA</p> <p>Timeline: NA</p>

	<p>problem started as the numbers of the plants in IOCL has increased. No action has been taken by IOCL</p>	<p>In the nearby villages like Baholi, Sithana Singpura, Baljattan etc, lot of development works have been carried out. Last year, a project to supply drinking water to the neighboring villages was implemented. An SS tank and an RO machine were installed for drinking water supply.</p> <p>Action Plan:</p> <p>Panipat Refinery & Petrochemical Complex (PRPC) is already monitoring ambient air quality in real time basis through the online analyzers installed in various ambient air quality monitoring stations installed in and around PRPC.</p>	
8	<p>Shri Bhupinder Singh, Regional Officer, HSPCB, Panipat</p> <p>RO HSPCB Panipat suggestions with respect to the subject mentioned new upcoming projects: -</p> <p>Online Monitoring Device installed by the upcoming 3 Nos projects and same is to be connected with CPCB and HSPCB server.</p> <p>Project Proponent is to comply with the CAQM directions for DG sets and C&D sites.</p> <p>Unit to install Leakage Detector to avoid any kind of accident.</p>	<p>Response:</p> <p>Project Proponent is to comply with the suggestions of RO, PCB.</p> <p>Action Plan:</p> <p>Panipat Refinery & Petrochemical Complex (PRPC) will ensure installation of Online monitoring devices at the relevant locations of all the upcoming 3 nos. project. The same will be connected with CPCB and HSPCB online portals. PRPC will comply with the CAQM directions as and when issued.</p> <p>Leakage detectors will be installed at the relevant locations of all the upcoming 3 nos. project.</p>	<p>Budget: NA</p> <p>Timeline: NA</p>

No written complaint/ grievance/ objection/ representation was received.

Total plant area after expansion will be 211 Ha (existing plant area 211 Hectares and additional land required 0 Hectares for proposed capacity expansion) which is under possession of the company and converted to industrial use/ No additional land will be acquired for the expansion project as the same will be done within existing plant premises. Greenbelt is developed in 85 Hectares i.e. 40% of the total plant area has already been developed as greenbelt plantation outside the battery limit & and the same

will be maintained under greenbelt & plantation in and around plant premises. The estimated project cost is Rs.7912 Crores. Capital cost of EMP would be Rs.77.85 Crores and recurring cost for EMP would be Rs. 7.65 Crores per annum. Industry proposes to allocate Rs. 1.8 Crores towards extended EMP (Corporate Environment Responsibility). Total Employment will be 50 nos persons as direct & indirect for the proposed project.

There are No national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance. Western Yamuna Canal is at a distance of 1.9 Km for which NOC has been obtained from State Irrigation Department vide letter no. Q0Q2023G483 dated 18th July 2023.

Ambient air quality monitoring was carried out at 8 locations during 15th Feb 2023 to 12th May 2023 and the baseline data indicates the ranges of concentrations as: PM₁₀ (32 -82 µg/m³), PM_{2.5} (21-48 µg/m³), SO₂ (5-17 µg/m³) and NO_x (12-29 µg/m³). AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.01 µg/m³, 0.21 µg/m³ and 0.151 µg/m³ with respect to PM₁₀, SO₂ and NO_x. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

Total water requirement will be 83,724 CMD (fresh water requirement is 76,344 CMD and recycled water is 7,380 CMD) which will be met from "MUNAK regulator on Western Yamuna Canal". NOC has been obtained from irrigation department vide letter no. Q0Q2023G483 dated 18th July 2023 and validity - Nil. Additional Effluent of 1200 CMD quantity will be treated through proposed new Effluent Treatment Plant of capacity 3600 KLPD. STP of capacity NIL 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.

Total power requirement after proposed expansion will be 173 MW which will be sourced from State Power Network. NOC for power requirement from State Grid has been obtained vide letter no. Nil dated Nil. 5 TPH Regasified Liquefied Natural Gas (RLNG) fired Incinerator will be installed. APCE "Scrubber followed by Water Scrubber" with a stack of height of 60 m will be installed for controlling the VOC.

Details of Process emissions generation and its management:

- Energy efficient process design to minimize fuel requirement

- RLNG fuel will be used for internal fuel purpose.
- Super Heaters will be provided with well proven Low NO_x burners to reduce the emissions of Nitrogen Oxides (NO_x).
- Under normal circumstances, there will be no continuous/intermittent point releases of volatile hydrocarbon streams. However, if during start-up/shut down or an emergency any hydrocarbon streams are released, they will be directed to an elevated flare for complete combustion. This will eliminate the possibility of forming an explosive mixture due to sudden release of unburned hydrocarbons to the atmosphere.
- Utilization of sweet fuel gas/RLNG and minimizing use of fuel oil.

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

Solid Waste details and disposal methods:

Sl. No.	Name of waste	Source of generation	Disposal Method	Estimated Quantity
1	Domestic Waste	Canteen Waste	In line with municipal solid waste disposal guidelines	16.66 TPA
2	Waste paper and plastic packaging material	Store	Respective Authorized recyclers	21 TPA
3	Electrical and electronic wastes	Maintenance of electrical and electronic equipment	Authorized recyclers	30 TPA
4	Used lead-acid batteries	From UPS for instrument power supply	Exchanged against supply of new batteries	7 TPA

Hazardous waste details

Sl. No.	Name of Waste	Cate - gory	Source of generati on	Existing Generati on	Proposed Generati on	Total Generati on	Disposal Methodology
1	Spent Catalyst (PGHU-PyGas hydrolysis Unit)	1.6	NCU Process	78 MT in 05 years	20 MT in 05 years	98 MT in 05 years	To Authorized Recycler
2	Spent Catalyst (Acetylene)	1.6	NCU Process	80 MT in 03 years	20 MT in 03 years	100 MT in 03 years	To Authorized Recycler

Sl. No	Name of Waste	Cate - gory	Source of generati on	Existing Generati on	Proposed Generati on	Total Generati on	Disposal Methodology
	converter)						
3	Spent Catalyst (C4HU Bed)	1.6	NCU Process	14 MT in 03 years	4 MT in 03 years	18 MT in 03 years	To Authorized Recycler
4	Spent Catalyst (MAPD Reactor)	1.6	NCU Process	18 MT in 07 years	5 MT in 07 Years	23 MT in 07 years	To Authorized Recycler
5.	HDPE (New)	1.6	HDPE process	0	52.85 MT/Annum	52.85 MT/Annum	To Authorized Recycler
6	PP Spent Oil	1.3	PP unit	5 MT/Month	1.5 MT/Month	6.5 MT/Month	To Authorized Recycler
7	ETP Sludge	1.3	ETP	60 MT/Month	30 MT/Month	90 MT/Month	To TSDF Operator

If greenfield project, Total land of 15.8 Hectares is under possession of the company and land use conversion has been completed vide asset no. 10000002 dated 04.12.2001.

Capital cost and recurring cost of EMP are given below:

Sl. No	Description	Capital cost (lakhs INR)	Recurring cost after expansion (lakhs INR per annum)
1	Stack and ambient air monitoring station package	50	20
2	New ETP with ZLD system	7700	600
3	Rain water harvesting measures	6	5
4	Environment Monitoring, stack monitoring and Management	14.64	26.72
5	Solid and Hazardous Waste Management (Membership & Facility development) cost	--	5
6	Occupational Health & Safety budget	15	8
7	Green Belt	--	100
	Grand Total	7785.64	764.72

Details of Extended EMP with proposed activities and budgetary allocation:

	Proposed Activities			

Sl. No		Unit (Number)	Unit Cost (In Lacs INR)	Proposed Budget (INR Lacs)
1	Infrastructure creation in Govt. school of nearby villages	5	10	50
2	Classroom construction of nearby Govt. schools	5	12	60
3	Medical Infrastructure creation in nearby Community Health Centre of nearby villages	2	20	40
4	Construction of drain system in nearby villages	10	2	20
5	Promoting Eco-friendly behaviour through use of Solar Energy in 2 schools	2	5	10
Total				180

During deliberations, following issues were discussed:

- Parameters of ground water samples collected were not representing the real scenario of the affected area e.g TDS is reported within the range of 160 to 597 mg/L whereas it will be exceedingly higher in the district of Panipat. Flouride content is reported to be within the range of 0.1 mg/L to 0.72 mg/L whereas studies suggest that it will be in the range of 0.5 mg/L to 5.95 mg/L with an average of 1.6 mg/L. In this regard, EAC desired explanation for the discrepancies reported. The consultant informed that the sampling has been done by NABL accredited laboratory. The committee informed the consultant that it's the responsibility of the EIA coordinator to interpret the results before finalizing the EIA/EMP report.
- The EMP/baseline data presented by Consultant reported that Coconut, *Acacia* and *Mangifera indica* (Mango) trees as abundant along with *Aegle marmelos*, *Prosopis cineraria*, *Acacia nilotica*, *Phoenix rupicola*, *Spondias pinnata*, *Chukrasia tabularis*, *Tectona grandis*, *Santalum alba* etc. were tree species recorded in the study area. However, the flora and fauna of the areas would be that of Aravalli region. *Tectona grandis* (Teak) has been shown as endangered species, while in India it is not an endangered species. PP shall recheck and rectify the data reported for biodiversity in EIA Report .
- The EAC opined that the EIA/EMP in its present form is unacceptable. Hence, it was advised to PP to carry out the baseline data afresh for one season (non-monsoon).
- It has been noted that there are several partial/non- compliances were reported in CCR. PP has submitted action taken report. The Committee deliberated upon ATR and found that PP has not taken any

corrective actions and did not submit action plan. They also tried to misguide the committee when asked for clarification. It was also noted that similar issues were encountered in another proposal of the IOCL Panipat refinery in previous meeting also. Such practice results in delay of project proposal. The Committee suggested that the Ministry may take up this matter with the CMD of IOCL. In this regard, EAC desired Closure report from Compliance & Monitoring Division to the CCR.

- PP shall furnish details and status regarding pending legal matter in Hon'ble NGT, Environmental Compensation imposed and Show Cause Notices issued. EAC noted that several environmental concerns regarding drainage systems, emissions and choked sewage lines were raised by the public during public hearing.
- PP shall submit an undertaking that the industry shall be based on Zero Liquid Discharge.
- PP shall submit revised hazardous waste management plan. PP shall segregate municipal solid waste at source and biodegradable fraction to be processed at source using Organic Waste Converters (OWCs) into manure and used in green belt development. Dry garbage shall be sent to authorized recyclers. ETP sludge shall be sent to authorised TSDF.
- PP shall submit the details regarding existing stack, new stacks and pollutants emitted for both the stacks. PP shall also relook into the latest technologies for sulphur control in emissions. PP shall submit sulfur balance.
- PP shall provide thicker greenbelt towards the habitation and include the distance from the habitation along with the thickness of the greenbelt to be provided in the EIA Report. PP shall earmark 33% greenbelt and other units in layout plan.
- PP shall address the issue of foul odour and provide odour control measures.
- PP shall submit an Action Taken Report for the accident occurred in last 3 years. Submit latest safety audit report. Action taken report of the recommendatins suggested in the safety audit report.

Accordingly, the proposal was returned in present form.

Agenda No. 05

Amendment in EC for Proposed Expansion of Fibre Plant, Pulp Plant, Captive Power Plant and setting up Excel Fibre Plant at Village: Kumarapatnam, Taluka: Ranebennur, District Haveri, Karnataka by

M/s Grasim Industries Limited - Consideration for Amendment in Environmental Clearance.

[IA/KA/IND2/533416/2025, IA-J-11011/371/2006-IA-II(I)]

The proposal is for amendment in the Environmental Clearance granted by the Ministry vide letter no. IA-J-11011/371/2006-IA II (I) dated 13th August, 2019 for the project Proposed Expansion of Fibre Plant, Pulp Plant, Captive Power Plant and setting up Excel Fibre Plant at Village: Kumarapatnam, Taluka: Ranebennur, District: Haveri, Karnataka by M/s. Grasim Industries Limited (GIL).

The project proponent has requested for amendment in the EC with the details are as under:

S. No.	Product	UOM	Existing EC Granted Capacity {As per EC dated 13th Aug., 2019}	Proposed Amendment	Total Capacity After Amendment	Remarks
A. Main Products						
1.	Viscose Staple Fibre	TPA	1,75,200	(-) 18250	1,56,950	Reduction in capacity by 50 TPD / 18250 TPA
2.	Excel Fibre (Solvent Spun Cellulosic Fibre)	TPA	36,500	(+) 18250	54,750	Increase in capacity by 50 TPD / 18250 TPA
3.	RG Pulp	TPA	1,48,800	No change	1,48,800	No Change

S. No.	Product	UOM	Existing EC Granted Capacity {As per EC dated 13 th Aug., 2019}	Proposed Amendment	Total Capacity After Amendment	Remarks
4.	CPP	MW	50	No change	50	No Change
B. Associated Products						
1.	Sulphuric Acid*	TPA	1,50,220	(-) 4220	1,46,000	Reduction in capacity
2.	Carbon-di-Sulphide*	TPA	28,730	(-) 2993	25,375	Reduction in capacity
3.	Recovery Boiler	MW	20	No change	20	No Change
C. By- Product						
1.	Anhydrous Sodium Sulphate*	TPA	1,38,410	(-) 14418	1,23,992	Reduction in capacity
<i>Note: *EC is not required as per EIA Notification, 2006; as amended from time to time.</i>						

Details of the other amendment required in EC letter corresponding to the proposed amendment are as under:

S. No.	Para of EC issued by MoEF&CC	Description {As per EC dated 13 th Aug., 2019}	To be revised/ read as	Justification/ reasons
1.	Point No. 2, Page no. 1	The Ministry of Environment, Forest and	The Ministry of Environment, Forest and Climate	Looking to the new generating demand of the

		<p>Climate Change has examined the proposal for environmental clearance to the project for expansion of Fibre Plant from 87,600 to 1,75,200 TPA, Pulp Plant from 74,400 to 1,48,800 TPA, Captive Power Plant from 20 to 50 MW and setting up Excel Fibre Plant of capacity 36,500 TPA at Village: Kumarapatnam, Taluka: Ranebennur, District: Haveri (Karnataka) by M/s. Grasim Industries Ltd. in an area of 431.36 ha at Village Kumarapatnam, Taluka Ranebennur, District Haveri (Karnataka).</p>	<p>Change has examined the proposal for environmental clearance to the project for expansion of <i>Viscose Staple Fibre Plant</i> from 87,600 to 1,56,950 TPA, RG Pulp Plant from 74,400 to 1,48,800 TPA, Captive Power Plant from 20 to 50 MW and setting up <i>Excel Fibre Plant</i> of capacity 54,750 TPA at Village: Kumarapatnam, Taluka: Ranebennur, District: Haveri (Karnataka) by M/s. Grasim Industries Ltd. in an area of 431.36 ha at Village Kumarapatnam, Taluka Ranebennur, District Haveri (Karnataka).</p>	<p>market for special type of fibres with higher tenacity which can work on high-speed machines, impart different feel, look, etc. GIL has carried out extensive research and put in lot of efforts, which is spread over lost many years, and have been successful in developing New Solvent Spinning Process for production of Cellulosic Fibre.</p>
2.	Point no. 4, Line no. 3, Page no. 2	<p>The estimated project cost is Rs. 2550 Crores. Total capital cost earmarked towards</p>	<p>The estimated project cost is Rs. 2669 Crores. Total capital cost earmarked towards</p>	<p>Increase in Excel Fiber Capacity in lieu of reduction in VSF capacity.</p>

		environmental pollution control measures is Rs. 600 crores and the recurring cost (O&M) will be Rs. 6 crores per annum.	environmental pollution control measures is Rs. 600 crores and the recurring cost (O&M) will be Rs. 6 crores per annum.	
3.	Point no. 6, 1 st Para, Page no. 2	Total fresh water requirement is estimated to be 97,200 cum/day which will be reduced to 87,480 cum/day, proposed to be met from Tungabhadra River.	Total fresh water requirement is estimated to be 84,680 cum/day, proposed to be met from Tungabhadra River.	Reduction in VSF capacity.
4.	Point no. 6, 2 nd Para, Page no. 2	Effluent of 72,468 cum/day generated from industrial operations shall be treated in the existing ETPs by enhancing their capacities, and the treated effluent will be discharged to Tungabhadra River.	Effluent of 69,921 cum/day generated from industrial operations shall be treated in the existing ETPs by enhancing its capacity, and the treated effluent will be discharged to Tungabhadra River.	Reduction in VSF capacity.
5.	Point no. 10, Page no. 2	Based on the proposal submitted by the project proponent and recommendations of the EAC (Industry -2),	Based on the proposal submitted by the project proponent and recommendations of the EAC (Industry -2),	Looking to the new generating demand of the market for special type of fibres with higher tenacity which can work

		<p>Ministry of Environment, Forest and Climate change hereby accords environmental clearance to the project for Expansion of Fibre Plant from 87,600 to 1,75,200 TPA, Pulp Plant from 74,400 to 1,48,800 TPA, Captive Power Plant from 20 to 50 MW and setting up Excel Fibre Plant of capacity 36,500 TPA by M/s. Grasim Industries Ltd. at Village Kumarapatnam, Taluka Ranebennur, District Haveri (Karnataka),</p>	<p>Ministry of Environment, Forest and Climate change hereby accords environmental clearance to the project for <i>Expansion of Viscose Staple Fibre from 87,600 to 1,56,950 TPA</i>, RG Pulp Plant from 74,400 to 1,48,800 TPA, Captive Power Plant from 20 to 50 MW and setting up <i>Excel Fibre Plant of capacity 54,750 TPA</i> by M/s. Grasim Industries Ltd. at Village Kumarapatnam, Taluka Ranebennur, District Haveri (Karnataka),</p>	<p>on high-speed machines, impart different feel, look etc., GIL has carried out extensive research and put in lot of efforts, which is spread over lost many years, and have been successful in developing New Solvent Spinning Process for production of Cellulosic Fibre.</p>
6.	Point no. 10, Condition (iii), Page no. 3	<p>The treated effluent Of 72448 cum/day shall conform the standards prescribed under the Environment (Protection) Rules, 1986 for discharge into the Tungabhadra River. Necessary</p>	<p>The treated effluent Of 69,921 cum/day shall conform the standards prescribed under the Environment (Protection) Rules, 1986 for discharge into the Tungabhadra River. Necessary</p>	<p>Reduction in VSF capacity.</p>

		permission for discharge shall be obtained from the concerned regulatory authority.	permission for discharge shall be obtained from the concerned regulatory authority.	
7.	Point no. 10, Condition (vii), Page no. 3	Total fresh water requirement shall not exceed 87,480 cum/day proposed to be met from Tungabhadra River. Prior permission in this regard shall be obtained from the concerned regulatory authority.	Total fresh water requirement shall not exceed 84,680 cum/day proposed to be met from Tungabhadra River. Prior permission in this regard shall be obtained from the concerned regulatory authority.	Reduction in VSF capacity.

During deliberations following issues were emerged:

- EAC desired justification from the project proponent for applying the proposal in amendment instead of para 7 (ii). In this regard, the project proponent has clarified that para 7 (ii) (a) pertains to phase wise expansion in production capacity with increase in pollution load, Further, provisions of para 7 (ii) (b) pertains to increase in production capacity with or without any change in (i) raw material-mix or (ii) product-mix or (ii) quantities within products or (ii) number of products including new products falling in the same category or (iv) configuration of the plant or process or operations in existing area or in areas contiguous to the existing area without increase in pollution load. Para 7 (ii) (c) pertains to changes in configuration after detailed without increase production capacity. So, the instant proposal for change in product mix without increase in production capacity and without increase in pollution load does not fall in any of the scenarios of para 7 (ii).
- The project proponent has informed that addendum to EIA report has been submitted. As per the report all the parameters of pollution load in terms of air, water, solid & hazardous waste etc. are reducing due

to the proposed amendment. EAC found the information satisfactory.

After detailed deliberations, EAC **recommended** the proposal for amendment in EC. However, all other terms and conditions stipulated in existing EC vide letter no. IA-J-11011/371/2006-IA II (I) dated 13th August, 2019 shall remain unchanged.

Agenda No. 06

Expansion of sugarcane crushing capacity from 5000 TCD to 15000 TCD to produce sugarcane syrup/Crystal sugar, Cogeneration plant of 30 MW and Expansion of distillery from 200 KLPD to 500 KLPD with multi feedstock (Sugar syrup/B / C - Heavy Molasses/ Grain) to produce Ethanol/ENA and Captive power plant from 7.5 MW to 13 MW by M/s Mellbro Sugars Pvt. Ltd.– Consideration of Environmental Clearance.

[IA/KA/IND2/533451/2025, J-11011/380/2017-IA-II(I)]

PP has requested through email on 02.05.2025 to excuse them from the meeting as the CCR for the proposed project has been expired.

In view of the above, EAC suggested to return the proposal in present form.

Accordingly, the proposal was returned in present form.

Agenda No. 07

Proposed 150 KLD Grain based Fuel Ethanol Distillery Plant under EBP program at Village & P.O. - Gorla, Tehsil – Matanhail, District – Jhajjar, Haryana by M/s K2 Ethanol Pvt. Ltd. – Consideration for Amendment in Terms of Reference.

[IA/HR/IND2/513507/2024, IA-J-11011/103/2025-IA-II]

The proposal is for amendment in the Terms of Reference (ToR) granted by the SEAC Haryana vide letter no. SIA/HR/IND2/497063/2024 dated 19.10.2024 for the proposed 150 KLD Grain based Fuel Ethanol Distillery Plant under EBP program at Village & P.O. - Gorla, Tehsil – Matanhail, District – Jhajjar, Haryana by M/s K2 Ethanol Pvt. Ltd.

The project proponent has requested for amendment in Terms of Reference with the details are as under:

Sr. No.	Para of earlier ToR issued by MOEF & CC	Details as per earlier ToR	To be revised	Justification/ reason
1.	Change in plot area	61555 sqm	44000 sqm	-
1.	Reduction in quantum of industrial effluents generated	852 KLD	849 KLD	-
2.	Reduction in quantum of fresh water required	716 KLD	652 KLD	-
3.	Proposed Green Belt area	20313 sqm [33% of plot area]	14520 sqm [33% of plot area]	-
4.	Boiler Details – •No. of boiler & capacity •Fuel	•1 @ 35 TPH •Biomass and/or coal	•1 working +1 standby @ 35 TPH each •Biomass only	-

During deliberations, EAC discussed following issues:

- EAC noted that PP has applied the project under 5 (g) distilleries whereas the PFR submitted is for project activity item 5 (ga) Grain based distillery under EBP.
- Further, it was also noted that PP has not reported the presence of Nahar WLS within 10km whereas its located within the distance of 2.5 km.
- EAC, warned PP to submit the proposal afresh with correct information on Parivesh Portal. Further, PP shall also submit confirmation of distance of WLS and its ESZ authenticated from DFO.

Accordingly, the proposal was returned in present form.

Agenda No. 08

Proposed 1 MMTPA Bio Fuel Complex by M/s Essar Future Energy Limited Located Near Kajurda Village, Taluka Khambhaliya, District

Dev Bhumi Dwarka, Gujarat by M/s Essar Future Energy Limited - Consideration for Terms of Reference (TOR).

[IA/GJ/IND2/534414/2025, IA-J-11011/152/2025-IA-II]

The Project Proponent and the accredited Consultant M/s. Kadam Environmental Consultants (NABET certificate no. NABET/EIA/2326/RA 0303, Issued on 11-10-2023, valid up to 19-03-2026) made a detailed presentation on the salient features of the project and informed that the proposal is for Terms of Reference (TOR) to the project "Proposed 1 MMTPA Bio Fuel Complex Located Near Village Kajurda, Taluka Khambhaliya, District Dev Bhumi Dwarka, State Gujarat" by M/s. Essar Future Energy Limited.

All project activities / products are listed at S.N. 4(a) Petroleum Refining Industry of Schedule of Environment Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC).

The details of products and capacity as under:

Sr.No.	Product Name	Quantity TPA
1	Sustainable Aviation Fuel	9,31,682
2	Hydrotreated Vegetable Oil	
3	Naphtha	71,254
	Total	10,02,936

It was informed by PP that no litigation is pending against the proposal.

Total land area required is 84.736 hectares. Greenbelt will be developed in total area of 27.9609 hectares i.e., ~33% of total project area. The estimated project cost is INR 5100 Crores. Capital cost and recurring cost for EMP will be determined during detailed EIA Study. Industry proposes to allocate Cost towards Extended EMP (Corporate Environment Responsibility) Will be determined during detailed EIA Study. Total Employment will be as under:

- During Operation Phase (Permanent – 150 & Contract – 200)
- During Construction Phase (Permanent – 100 & Contract – 2000)

There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, and Wildlife Corridors etc. within 10 km distance. Reserve Forests/Protected Forests: Reserved Forest at distance of 3.24 km in WSW direction. There is no National Parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance. Marine National Park/ Marine Sanctuary is located at 10.22 km in NNW direction. The project site is located 45.92 Km from notified ESZ (Barda Wildlife Sanctuary). Conservation plan for schedule I species reported if any will be submitted in EIA study. Water bodies: Sinhan Talav is at a distance of 2.11Km in SW direction, Sinhan River is at distance of 2.80 Km in WSW direction, Phuljar River is at distance of 7.83 Km in ENE direction, Ghi River is at distance of 10.36 Km in WSW direction and Arabian Sea at a distance of 8.10 km in NW direction.

Ambient air quality monitoring has been carried out at 10 locations. Baseline AAQ results and AAQ modelling study for point source emissions indicating the maximum incremental GLCs after proposed project will be included in EIA report.

Total fresh water requirement will be 3200 CMD which will be met from Essar Power Gujarat Limited (EPGL). For which, willingness letter from M/s EPGL will be provided in EIA report. Effluent of 1769 CMD quantity will be treated through Effluent Treatment Plant of capacity 2040 KLPD. STP of capacity 30 KLPD will be installed to treat 25 CMD 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.

Power requirement will be 20 MW and will be met from grid of Pashchim Gujarat Vij Company Limited. NOC for power requirement from State Grid will be obtained and included in EIA report. 50 TPH Natural Gas fired boiler will be installed. APCE such as Low NOx Burner, Usage of clean Fuel, adequate stack/vent height will be provided to meet applicable norms prescribed by GPCB/CPCB/MOE&F. 1.5 MVA Gas Gen set will be used as standby during power failure and stack height (30 m) will be provided. Further details of all flue gas stacks with mitigation measures will be incorporated in EIA Report

Details of process emissions and its management:

- All Process vents will be routed through flare system for complete combustions.

- Best available engineering practices shall be followed during project design and detailed engineering of the proposed complex including best operating techniques to monitor and control of fugitive emissions.
- Sensors for detecting leakages will be provided at strategic locations.
- A Leak Detection and Repair (LDAR) program will be implemented for monitoring and immediate control of fugitive emissions.

Details of Solid waste, Hazardous & other waste generation and its management: Waste Hierarchy principles will be adopted for effective waste management.

- Chemical sludge from wastewater treatment plant, Spent Catalyst, Spent clay containing oil (Spent Earth), Oil sludge or emulsion (Gum), Spent Adsorbent, MEE Salt, Used / Spent Oil, Empty barrels/ containers/ liners contaminated with hazardous chemicals/ wastes, Contaminated cotton rags or other cleaning materials, Contaminated Insulation Waste will be generated and will be disposed off as per Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016
- STP sludge will be generated and will be used as manure in landscaping/ greenbelt

Total land of 84.736 Hectares is under possession of the M/s. Essar Power Gujarat Limited (EPGL). The willingness letter for land allotment from EPGL has been obtained vide letter dated 12/02/2025.

The proposed project is outside CRZ area based on GCZMP map as per CRZ notification 2011.

During deliberations, EAC discussed following issues:

- PP has informed that with respect to schedule attached to EIA Notification 2006 as amended till date, the proposed project activity covers under 4(a) Petroleum refining industry considering All Projects. There is no specific categorisation of crude oil based refinery in Schedule of EIA Notification 2006 and subsequent amendments and also in "Technical EIA guidance manual for petroleum refinery industry". In addition to that proposed final products are petroleum products similar to the petroleum refinery. The "Technical EIA guidance manual for petroleum refinery Industry"

may be referred. A petroleum refinery provides the most needed fuels for everyday use for industrial, commercial and domestic purposes. Normally, in any refinery, crude oil is processed in Crude Distillation Unit, consisting atmospheric distillation and vacuum distillation columns. The atmospheric column operates at atmospheric pressure and the products obtained from different trays are LPG, Naphtha/Gasoline, Aviation fuel, Turbine fuel/Kerosene and High Speed Diesel. The atmospheric distillation residue is processed in vacuum distillation column, which operates under vacuum to prevent the cracking of higher molecular weight and higher boiling components present in the crude oil. Different grades of vacuum gas oils and short residue were obtained from vacuum column. In addition, various chemical conversion processes viz. catalytic cracking, hydrocracking, thermal cracking, visbreaking, etc.; purification processes viz. hydrodesulphurization, desalting, sulphur recovery, etc.; and utilities & auxiliary facilities viz. water, power, steam, hydrocarbon slop treatment, etc., are also in use in refineries.

- The Committee asked the PP to submit the land possession document or board resolution for the proposed site. In this regard, PP has submitted copy of board resolution dated 05th March, 2025 of EPGL for signing agreement to lease the land for setting of proposed Bio Refinery by Essar Future Energy Limited.
- The Committee noted that as per the board resolution, it is mentioned that Essar Power Energy Limited intends to lease upto 60 ha from its salaya plant site to M/s. Essar Future Energy Ltd subject to approval of Govt of Gujarat. However, as per Form1 and PFR, the land required for the proposed project is 84.73 ha.
- The Committee suggested that PP shall submit the evidence of availability of remaining land or revise the project proposal by considering plot area of 60 ha instead of 84.73 ha.

Accordingly, the proposal was deferred for want of above additional information. Above all additional information shall be submitted online to the PARIVESH portal for further consideration by EAC.

07th May, 2025 (Wednesday)

Agenda No. 09

Expansion of Distillery unit from 60 KLPD to 150 KLPD & Sugar unit from 7500 TCD to 12000 TCD located at Village Ambika Nagar, A/P

Jagdamaba Factory, Taluka Karjat, District Ahmednagar, Maharashtra by M/s Shri Ambalika Sugar Pvt. Ltd.-Consideration for Amendment in Environmental Clearance.

[IA/MH/IND2/523627/2025, J-11011-35-2014-IA-II-I]

The proposal is for amendment in the Environmental Clearance granted by the Ministry vide letter no. dated 01/12/2020 for the project Amendment in environmental clearance granted for Expansion of Distillery unit from 60 KLPD to 150 KLPD & Sugar unit from 7500 TCD to 12000 TCD located at Village Ambika Nagar, A/P Jagdamaba Factory, Taluka Karjat, District Ahmednagar, Maharashtra by M/s Shri Ambalika Sugar Pvt. Ltd.

S.N.	Particular	Existing in sq.m.	% of Existing Plot area	Proposed after the amendment in sq.m.	% of Proposed Plot area
1	Plot area	1275317.81	-	688000	-
2	Built-up (Ground coverage area)	209497.3	16.43%	189299.03	27.51%
3	Greenbelt area	465655.04	36.51%	227040	33%
4	Parking area	135361.88	10.61%	68800	10.0%
5	Area under the road	153250.74	12.01%	93135.16	13.54%
6	Open Space	311552.85	24.43%	109725.81	15.94 %

The project proponent has requested for amendment in the EC with the details are as under:

S. No.	Para of EC issued by MoEF&CC	Details as per the EC	To be revised/ read as	Justification/ reasons
1.	Paragraph 2	Area: 1275317.81 Sq.m.	Area: 688000 Sq.m.	The remaining 5,87,317.811 sq. m. land parcel was on the based-on agreement for sale,

				which could not be executed because it's a Class II land which cannot be further converted into Industrial land
2.	Paragraph 4	Greenbelt area 503619 sq.m.	Greenbelt area 227040 sq.m.	Reduction in plot area will reduce the greenbelt area as well
3	Paragraph 6	Water requirement: 5760 CMD	Water requirement: 4274.31 CMD	Reduction in greenbelt will result in water consumption of greenbelt as well

During deliberations, following issues were discussed:

- PP shall provide a detailed breakdown of the total area of the project site, as presented in the previous Environmental Impact Assessment (EIA) report, and compare it with the new, reduced proposed area.
- PP shall provide a detailed layout of the project site.
- PP shall increase the parking area by 10%.
- Project Proponent (PP) shall use native and indigenous plant species for the development of the green belt. Additionally, the PP shall maintain grassland in the area that was excluded from the notified Eco-Sensitive Zone (ESZ) to ensure continuous habitat for the Great Indian Bustard (GIB) is preserved.
- PP shall install bird diverters to prevent any death of GIB.
- PP shall provide detailed information about the type of Electrostatic Precipitator (ESP) installed and its efficiency.
- PP shall install silos for the storage of fly ash.
- PP shall install an Online Continuous Emission Monitoring System (OCEMS).

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

After detailed deliberations, EAC **recommended** the proposal for amendment in EC as below with the following additional conditions:

- PP shall allocate 10% of the land area for parking facilities.
- PP shall maintain 33% greenbelt of the revised plot area. Tree saplings selected for the plantation should be of sufficient height,

preferably 6-ft shall be planted in greenbelt area. The budget earmarked for the plantation shall be kept in a separate account and should be audited annually. The PP shall annually submit the audited statement along with proof of activities viz. photographs (before & after with geo-location date & time), details of expert agency engaged, details of species planted, number of species planted, survival rate, density of plantation etc. to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

- PP shall maintain grassland in the area that was excluded from the notified Eco-Sensitive Zone (ESZ) to ensure continuous habitat for the Great Indian Bustard (GIB) is preserved.
- PP shall install bird diverters to prevent any death of GIB.
- PP shall instal silo to store flyash.
- Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB servers. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.

However, all other terms and conditions stipulated in existing EC vide letter no. IA-J-11011/371/2006-IA II (I) dated 13th August, 2019 shall remain unchanged.

Agenda No. 10

Expansion of sugarcane juice/ sugar syrup/ molasses-based distillery from 60 to 500 KLPD located at Shivnagar Village Malegaon Bk., Tehsil Baramati, District Pune, Maharashtra by M/s The Malegaon Sahakari Sakhar Karkhana Limited - Consideration of Terms of Reference (ToR).

[IA/MH/IND2/534718/2025, IA- J-11011/148/2025-IA-II(I)]

The Project Proponent and the accredited Consultant M/s Vasantdada Sugar Institute, Pune (NABET certificate no. NABET/EIA/24-27/RA 0336 and validity up to 14th March, 2027) made a detailed presentation on the salient features of the project and informed that the proposal is for grant of Terms of Reference to the project of expansion of sugarcane juice/ sugar syrup/ molasses based distillery from 60 to 500 KLPD located at Shivnagar Village

Malegaon Bk., Tehsil Baramati, District Pune, State Maharashtra by M/s The Malegaon Sahakari Sakhar Karkhana Limited.

All distillery projects are listed at S.N. 5(g) of Schedule of Environment Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC).

S. No.	Product/by- product	Existing quantity (KLD)	Proposed quantity (KLD)	Total quantity (KLD)
1	Rectified spirit/ Extra Neutral Alcohol/Ethanol	60	440	500
2	Fusel oil	0.3	2.3	2.6

Existing industry is operational on the basis of Consent to Operate because it was operational at existing capacity since 1993. Thus, Environmental Clearance was not applicable. Latest CTO (air and water) has been issued on 31/10/2019 and is valid till 31/08/2024. Application for renewal of the consent is under process at MPCB.

PP informed that there is no litigation pending against the proposal.

Total land area is 66.8 hectares. Greenbelt will be developed in total area of 22.89 - hectares i.e., 34 % of total project area. The estimated project cost is Rs. 241.02 Crores. Capital cost of EMP would be Rs. 52.01 Crores and recurring cost for EMP would be Rs.1.45 Crores per annum. Industry proposes to allocate Rs. 1.81 Crores towards Extended EMP (Corporate Environment Responsibility). Total Employment will be 38 persons as direct and 40-50 persons as indirect.

There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance. Reserve forests: Pandare at a distance of 5.5 km in North west direction. The Mayureshwar wildlife sanctuary, is at a distance of 36 Km in northwest direction from project site. Water bodies: Nira river is at a distance of 7.0 Km in south direction.

Ambient air quality monitoring was carried out at 08 locations during 01/03/2024 to 31/05/2024 and the baseline data indicates the ranges of concentrations as: PM₁₀ (57.39 – 74.85 µg/m³), PM_{2.5} (33.23 – 41.63

$\mu\text{g}/\text{m}^3$), SO_2 (8.35 - 15.83 $\mu\text{g}/\text{m}^3$) and NO_2 (21.55- 32.09 $\mu\text{g}/\text{m}^3$). AAQ modelling study will be carried out and included in the EIA report.

Total water requirement after expansion will be 1008 CMD which will be met from Nira Left Bank Canal and excess condensate from sugar unit. Existing effluent generation is 360 CMD which is treated through Condensate Polishing Unit of capacity 700 CMD. After proposed expansion, effluent generation will be around 3177 CMD which will be treated through proposed/upgraded Condensate Polishing Unit of capacity 3500 CMD). Domestic waste water will be treated in STP (Capacity of STP in 600 KLD). The plant will be based on Zero Liquid discharge system and treated effluent/water is being/will not be discharged outside the factory premises.

Total power requirement of distillery after expansion will be 9.54 MW which will be sourced from existing 35 MW co-generation power plant. Existing unit has 80 + 40 TPH bagasse & biogas fired boiler. Existing ESP with a stack of height of 76 m is used with the existing boiler for controlling the particulate emissions within the statutory limit of 150 $\mu\text{g}/\text{m}^3$. Industry has 625 KVA 2 DG set which will be used as standby during power failure and stack height (5 m) will be provided as per CPCB norms to the proposed DG sets.

Details of Process emissions generation and its management:

- Air emissions will be mainly due to burning of bagasse in conventional boiler of 80 TPH & 40 TPH during season and 40 TPH during off-season. Existing stack of height of 76 m with ESP is used for controlling the particulate emissions
- Bagasse and ash will be handled mechanically through closed conveyors.
- Bagasse will be stored in closed yard and to control fugitive dust during loading/unloading and its transfer, dust suppression system will be installed.
- Greenbelt enhancement proposed for the distillery which is an additional measure for the control of air emissions.
- DG set of adequate capacity with adequate stack height and acoustic enclosures will be provided.

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

S.	Waste	Quantity (TPA)	Disposal
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No.			
1	Yeast sludge (dry)	100-120	Organic - Mixed into soil/ Used as soil conditioner
2	Ash from boilers	2,900 to 3,000	Potash rich - Mixed into soil/ Used as soil conditioner
3	Distillery CPU Sludge	70-80	Organic - Mixed into soil/ Used as soil conditioner

The project is a brown field project. The factory is holding 66.8 Ha of land. The land is already under the possession of factory. The capacity upgradation/ enhancement activity will be done on the existing and new land which available near to the existing unit and already own by factory. EAC found the information satisfactory.

Capital Cost and Recurring cost of EMP are given below:

S. No.	Particulars	Capital cost (Rs. in Lakhs)	Recurring cost (Rs in Lakhs)	
			Maintenance	Monitoring
1.	Standalone multiple effect BMSW evaporation with stripper column	1770.00	35.00	-
2.	Biogas plant including civil costs	742.25	10.00	
3.	Spent-wash storage lagoon	124.00	02.00	-
4.	Spray Dryer with granulation system including storage area construction	1115.00	20.00	
5.	Condensate polishing unit (Additional for proposed expansion)	750.00	10.00	-
6.	Molasses storage tank (One unit – for odour control)	380.00	02.00	
7.	Environmental monitoring and management for distillery unit (Including existing and proposed unit)	40.00	-	15.00

8.	Greenbelt development for distillery unit (Including existing and proposed unit)	230.00	3.00	-
9.	Rainwater harvesting for distillery unit (Including existing and proposed unit)	50.00	3.00	-
10.	Salaries and wages for EMP (Additional in proposed expansion)	-	60.00	-
Total		5201.25	145.00	15.00

Details of Extended EMP with proposed activities and budgetary allocation:

S. No.	Proposed activity	Proposed Budget (Rs. in lakhs)
1.	Provision of rooftop solar system in local schools	52
2.	Provision for green belt development in nearby villages	35
3.	Provision of clean drinking water facility in local schools and villages	35
4.	Infrastructure Development/Maintenance (Eg. Road, canal maintenance, etc)	40
5.	Other activities for maintaining social and cultural harmony	19
Total		181

During deliberations, EAC discussed following issues:

- PP shall ensure that ash collection silos are installed in close proximity to the ESP.
- PP shall submit an assessment report detailing the reduction in pollution load resulting from the implementation of the new advanced technology.
- PP shall phase out bio-composting activities, land used for bio composting earlier shall be restored for the developed of the green

belt.

- PP shall allocate additional funds for the development of storage tanks for rainwater harvesting.

After deliberations, the Committee **recommended** the project proposal for prescribing following specific ToRs along with Public Hearing and CCR for undertaking detailed EIA and EMP study in addition to the standard ToR applicable for Activity '5(g)' Distilleries:

1. Fresh Baseline data shall be collected w.r.t AAQ for the one non-monsoon season at 8 ambient air quality locations for primary pollutants like PM₁₀, PM_{2.5}, SO₂, NO₂ & CO including ozone.
2. PP shall submit action plan to phase out bio-composting activities in the existing unit. Action plan to restore land used for bio composting for development of the green belt.
3. PP shall keep 15% of the total project area dedicated for parking purpose and ensure multiple entry gates for vehicles rather than single gate.
4. PP shall strengthen the approach road as per IRC norms. PP shall submit traffic management plan.
5. Risk assessment study shall be carried out of hazardous chemical storage.
6. PP should submit time bound action plan for development of green belt covering 33% of the proposed plant area by the time they submit the application for Environmental Clearance.
7. Provision of ETP for treating distillery effluent and CPU for sugar unit shall be made. Filter press shall be provided for sludge management replacing sludge drying beds.
8. EIA/EMP report shall include details such as (i) Details of advertisements for Public Hearing (ii) Copy of forwarding letter of SPCB to MoEF&CC (iii) Legible copy of public hearing proceedings duly signed by the presiding officer (iv) Attendance sheets (v) Action plan to address the issues raised during existing public consultation (vi) Copy of written grievances/submissions if any.
9. PP shall obtain CCR for the existing distillery. PP shall ensure that ash collection silos are installed in close proximity to the ESP. PP shall submit an assessment report detailing the reduction in pollution load resulting from the implementation of the new advanced technology.

10. PP shall allocate additional funds for the development of storage tanks for rainwater harvesting.

Agenda No. 11

Onshore Oil & Gas Development & Production (96 developmental drilling wells) in Dibrugarh, Sibsagar and Charaideo Districts under Moran, Moran Extension, Dholiya and Dumduma (Part-A) PMLs along with One Secondary Tank Farm at Moran in Charaideo District, Assam M/s Oil India Limited–Consideration of of Terms of Reference (ToR).

[IA/AS/IND2/529971/2025, IA-J-11011/151/2025-IA-II]

The project proponent and the accredited consultant M/s. Hubert Enviro Care Systems (p) Limited (NABET certificate no. NABET/EIA/24-27/RA 0335 dated 25.06.2024 valid till 31.03.2027) made a detailed presentation on the salient features of the project and informed that the proposal is to obtain environmental clearance for the project Onshore Oil & Gas Development & Production (96 developmental drilling wells) in Dibrugarh, Sibsagar and Charaideo Districts under Moran, Moran Extension, Dholiya and Dumduma (Part-A) PMLs along with One Secondary Tank Farm at Moran in Charaideo District, Assam by M/s. Oil India Limited.

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

The details of product and capacity as under:

- M/s Oil India Ltd intends to carry out drilling of 96 wells in the Dibrugarh, Sibsagar and Charaideo Districts under Moran, Moran Extension, Dholiya and some portion of Dumduma (Part-A) PMLs for Oil & Gas production and also set up one Secondary Tank Farm at Moran located in Charaideo district.

S.no.	Description	Unit	Proposed
1	Development Wells	Nos.	96
2	Secondary Tank Farm	Nos.	1

3	Interconnecting Pipelines	For Two Phase Separation (OIL+Formation water)	
Product			
1	Oil	m ³ /day	30 (Per well)
2	Gas	MMSCMD	0.01 (per well)
3	Produced Water	~ Max %	10%
4	Tentative handling Capacity proposed Secondary Tank farm	KLD	12000

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

Coordinates of the Proposed development location (96nos)

S.No.	Well Name	Latitude	Longitude
1	NEC-1	27° 4'42.06"N	94°43'41.55"E
2	NEC-2	27° 4'27.26"N	94°42'37.05"E
3	NEC-3	27° 4'49.52"N	94°43'0.31"E
4	NEC-4	27° 4'27.87"N	94°43'24.53"E
5	NEC-5	27° 4'59.58"N	94°42'48.59"E
6	NEC-6	27° 4'25.95"N	94°42'54.87"E
7	NEC-7	27° 6'18.13"N	94°45'42.77"E
8	NEC-8	27° 6'52.96"N	94°46'59.89"E
9	NEC-9	27° 6'26.88"N	94°45'24.91"E
10	NEC-10	27° 8'50.17"N	94°46'22.24"E
11	NEC-11	27° 8'33.13"N	94°45'37.87"E
12	NEC-12	27° 8'30.84"N	94°43'41.85"E
13	NEC-13	27° 8'15.56"N	94°43'38.10"E
14	NEC-14	27° 8'23.01"N	94°43'37.76"E
15	NEC-15	27°11'13.97"N	94°48'52.13"E
16	NEC-16	27°10'58.63"N	94°48'35.08"E
17	NEC-17	27°10'35.73"N	94°49'6.24"E
18	NEC-18	27°10'22.50"N	94°48'55.73"E
19	NEC-19	27° 5'35.75"N	94°59'10.17"E
20	NEC-20	27° 5'35.34"N	94°59'28.64"E
21	NEC-21	27° 5'22.31"N	94°58'59.82"E
22	NEC-22	27° 5'9.95"N	94°59'9.05"E
23	NEC-23	27° 5'39.87"N	94°59'57.68"E
24	NEC-24	27° 5'41.31"N	95° 0'19.20"E
25	NEC-25	27° 5'11.74"N	95° 0'24.34"E

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S.No.	Well Name	Latitude	Longitude
26	NEC-26	27° 5'17.14"N	94°59'51.57"E
27	NEC-27	27° 3'43.82"N	95° 7'1.27"E
28	NEC-28	27° 3'7.62"N	95° 0'13.48"E
29	NEC-29	27° 0'47.50"N	95° 6'18.63"E
30	NEC-30	27° 1'32.98"N	95° 8'32.38"E
31	NEC-31	27° 4'50.28"N	95° 3'29.06"E
32	NEC-32	27° 4'4.11"N	95° 2'40.25"E
33	NEC-33	27° 4'26.42"N	95° 3'33.32"E
34	NEC-34	27° 4'44.37"N	95° 3'47.21"E
35	NEC-35	27° 4'13.54"N	95° 3'11.14"E
36	NEC-36	27° 5'12.72"N	95° 3'57.20"E
37	NEC-37	27° 5'11.91"N	95° 4'15.92"E
38	NEC-38	27° 5'17.81"N,	95° 4'27.04"E
39	NEC-39	27° 5'35.26"N	95° 4'51.24"E
40	NEC-40	27° 6'39.48"N	95° 3'19.23"E
41	NEC-41	27° 7'18.22"N	95° 3'46.32"E
42	NEC-42	27° 7'37.71"N	95° 4'2.85"E
43	NEC-43	27° 6'52.22"N	95° 3'48.97"E
44	NEC-44	27° 0'55.19"N	95° 3'44.94"E
45	NEC-45	27° 1'12.59"N	95° 4'13.67"E
46	NEC-46	27° 0'45.34"N	95° 3'50.84"E
47	NEC-47	27° 0'49.29"N	95° 4'28.22"E
48	NEC-48	27° 2'32.41"N	95° 9'38.45"E
49	NEC-49	27° 2'7.13"N	95° 9'50.34"E
50	NEC-50	27° 2'14.63"N	95° 9'0.56"E
51	NEC-51	27° 2'1.91"N	95° 9'27.31"E
52	NEC-52	27° 8'3.47"N	94°43'24.50"E
53	NEC-53	27° 5'13.82"N	94°43'0.41"E
54	NEC-54	27° 5'3.08"N	94°43'33.66"E
55	NEC-55	27°10'1.18"N	94°49'49.16"E
56	NEC-56	27° 9'36.95"N	94°49'43.51"E
57	NEC-57	27° 9'36.81"N	94°50'44.01"E
58	NEC-58	27°10'0.95"N	94°59'34.53"E
59	NEC-59	27°10'0.91"N	94°57'21.45"E
60	NEC-60	27° 9'33.87"N	94°59'41.09"E
61	NEC-61	27°15'3.92"N	95° 4'59.45"E
62	NEC-62	27°15'29.36"N	95° 7'40.17"E
63	NEC-63	27°14'15.95"N	95° 9'10.29"E
64	NEC-64	27°15'21.37"N	95°10'43.62"E

S.No.	Well Name	Latitude	Longitude
65	NEC-65	27°15'35.14"N	95° 8'17.41"E
66	NEC-66	27°14'22.98"N	95° 7'9.45"E
67	NEC-67	27°14'12.52"N	95° 5'2.78"E
68	EC-1	27° 8'33.82"N	94°43'48.39"E
69	EC-2	27° 8'35.15"N	94°46'44.59"E
70	EC-3	27° 6'29.87"N	94°42'46.65"E
71	EC-4	27° 5'16.94"N	94°43'46.43"E
72	EC-5	27°10'16.44"N	94°57'40.23"E
73	EC-6	27° 8'29.64"N	94°56'18.78"E
74	EC-7	27° 9'44.95"N	94°57'4.91"E
75	EC-8	27° 7'50.00"N	94°46'59.01"E
76	EC-9	27°10'19.81"N	94°53'28.42"E
77	EC-10	27°12'27.81"N	94°46'51.74"E
78	EC-11	27° 1'19.13"N	94°59'31.02"E
79	EC-12	27° 5'4.88"N	95° 0'0.76"E
80	EC-13	27° 0'31.26"N	95° 6'14.30"E
81	EC-14	27° 0'43.28"N	95° 3'5.13"E
82	EC-15	27° 4'4.72"N	95° 5'53.54"E
83	EC-16	27° 3'22.79"N	95° 7'31.39"E
84	EC-17	26°59'49.96"N	95° 5'39.11"E
85	EC-18	27° 1'10.05"N	95° 8'10.32"E
86	EC-19	27° 1'53.18"N	95° 4'20.99"E
87	EC-20	27° 0'16.09"N	95° 6'41.90"E
88	EC-21	27° 0'22.26"N	95° 6'27.85"E
89	EC-22	27° 9'40.34"N	95° 5'53.78"E
90	EC-23	27°13'51.70"N	94°56'52.79"E
91	EC-24	27° 9'30.36"N	95° 0'32.10"E
92	EC-25	27°15'13.19"N	95° 0'44.04"E
93	EC-26	27°13'30.22"N	94°48'6.32"E
94	EC-27	27° 9'23.44"N	94°50'43.85"E
95	EC-28	27° 5'21.27"N	94°47'4.00"E
96	EC-29	27°15'27.56"N	94°47'16.87"E

Coordinates of STF production setup location

Production Setup		
S.No	Latitude N	Longitude E
1	27° 8' 33.47"	94° 53' 43.92"
2	27° 8' 38.35"	94° 53' 52.97"
3	27° 8' 36.03"	94° 53' 54.39"
4	27° 8' 37.83"	94° 53' 58.09"

5	27° 8' 34.55"	94° 54' 0.03"
6	27° 8' 35.28"	94° 54' 1.49"
7	27° 8' 33.48"	94° 54' 2.3"
8	27° 8' 24.96"	94° 53' 48.24"

Coordinates of Existing Block location

Dholiya PML		
S.No	Latitude N	Longitude E
1	27° 13' 40.008"	94° 53' 4.992"
2	27° 16' 59.988"	95° 2' 14.559"
3	27° 18' 0.0"	95° 4' 60.0"
4	27° 16' 45.0"	95° 7' 8.0"
5	27° 17' 30.0"	95° 9' 30.0"
6	27° 16' 45.0"	95° 11' 30.0"
7	27° 16' 0.115"	95° 10' 29.999"
8	27° 15' 44.995"	95° 5' 44.879"
9	27° 13' 60.0"	95° 1' 60.0"
10	27° 13' 10.992"	95° 1' 54.984"
11	27° 11' 60.0"	94° 58' 29.999"
12	27° 10' 58.0"	94° 55' 6.0"
Dumduma(Part-A) PML		
1	27° 13' 59.875"	95° 1' 59.879"
2	27° 15' 44.995"	95° 5' 44.879"
3	27° 16' 0.115"	95° 10' 29.999"
4	27° 16' 45.0"	95° 11' 30.0"
5	27° 17' 54.0"	95° 14' 30.0"
6	27° 16' 59.813"	95° 15' 42.221"
7	27° 16' 24.0"	95° 14' 10.5"
8	27° 15' 52.895"	95° 13' 33.509"
9	27° 15' 10.0"	95° 12' 42.5"
10	27° 14' 18.0"	95° 13' 45.0"
11	27° 14' 0.005"	95° 13' 27.92"
12	27° 14' 0.0"	95° 13' 0.0"
13	27° 13' 30.589"	95° 13' 0.0"
14	27° 12' 20.33"	95° 11' 52.316"
15	27° 13' 0.0"	95° 10' 30.0"
16	27° 11' 50.0"	95° 9' 25.0"
17	27° 12' 50.606"	95° 7' 58.804"
18	27° 14' 11.142"	95° 7' 30.717"
19	27° 13' 46.416"	95° 6' 39.405"
20	27° 14' 12.115"	95° 6' 2.879"

21	27° 12' 46.08"	95° 1' 58.079"
22	27° 13' 10.992"	95° 1' 54.984"
Moran PML		
1	27° 18' 29.88"	94° 49' 12.0"
2	27° 17' 0.013"	94° 50' 24.27"
3	27° 16' 59.999"	94° 47' 60.0"
4	27° 13' 59.999"	94° 47' 60.0"
5	27° 13' 44.904"	94° 49' 59.999"
6	27° 13' 46.204"	94° 52' 59.999"
7	27° 10' 58.001"	94° 55' 5.999"
8	27° 11' 60.0"	94° 58' 30.0"
9	27° 13' 10.992"	95° 1' 54.984"
10	27° 8' 9.96"	95° 3' 5.04"
11	27° 6' 50.375"	95° 0' 46.217"
12	27° 8' 15.889"	94° 59' 41.035"
13	27° 6' 50.216"	94° 58' 3.702"
14	27° 5' 48.685"	94° 58' 58.289"
15	27° 5' 25.742"	94° 58' 18.584"
16	27° 6' 10.073"	94° 56' 5.953"
17	27° 7' 37.92"	94° 53' 3.84"
18	27° 6' 43.92"	94° 51' 7.92"
19	27° 5' 56.04"	94° 49' 37.92"
20	27° 5' 27.96"	94° 48' 35.64"
21	27° 4' 59.88"	94° 47' 33.0"
22	27° 4' 23.16"	94° 45' 1.08"
23	27° 4' 22.08"	94° 42' 32.04"
24	27° 5' 36.96"	94° 42' 9.0"
25	27° 8' 39.84"	94° 43' 41.16"
26	27° 9' 24.84"	94° 46' 51.96"
27	27° 8' 18.024"	94° 49' 59.93"
28	27° 10' 50.16"	94° 47' 60.0"
29	27° 10' 50.16"	94° 45' 0.0"
30	27° 16' 0.12"	94° 46' 59.88"
Moran Extension PML		
1	27° 12' 46.08"	95° 1' 58.079"
2	27° 14' 12.115"	95° 6' 2.879"
3	27° 13' 46.42"	95° 6' 39.405"
4	27° 13' 14.464"	95° 5' 32.075"
5	27° 12' 1.254"	95° 6' 17.274"
6	27° 12' 50.608"	95° 7' 58.813"

7	27° 11' 50.0"	95° 9' 25.0"
8	27° 10' 18.013"	95° 10' 22.041"
9	27° 8' 41.277"	95° 11' 22.285"
10	27° 8' 5.23"	95° 10' 0.0"
11	27° 8' 60.0"	95° 9' 60.0"
12	27° 8' 60.0"	95° 7' 0.0"
13	27° 8' 0.0"	95° 7' 0.0"
14	27° 8' 0.0"	95° 5' 60.0"
15	27° 6' 60.0"	95° 6' 0.001"
16	27° 6' 39.961"	95° 9' 15.706"
17	27° 7' 44.516"	95° 11' 57.865"
18	27° 6' 22.5"	95° 12' 49.5"
19	27° 1' 48.986"	95° 15' 32.353"
20	27° 2' 13.097"	95° 14' 6.976"
21	27° 2' 9.341"	95° 11' 35.015"
22	26° 58' 50.379"	95° 6' 43.048"
23	26° 56' 0.2"	95° 1' 55.246"
24	26°54'46.79"	94°58'57.43"
25	26°55'22.41"	94°58'4.32"
26	26° 59' 34.018"	94° 58' 3.512"
27	26° 59' 54.736"	94° 58' 58.323"
28	27° 5' 12.46"	94° 58' 58.323"
29	27° 5' 25.742"	94° 58' 18.585"
30	27° 5' 48.686"	94° 58' 58.287"
31	27° 6' 50.376"	95° 0' 46.215"
32	27° 8' 9.96"	95° 3' 5.039"

It was informed by PP that no litigation is pending against the project.

The Proposed project includes onshore Oil & Gas development wells in Dibrugarh, Sibsagar and Charaideo Districts under Moran PML, Moran Extension PML, Dholiya and Dumduma (Part-A) PML Block and Secondary Tank Farm in Moran PML Block. The area is located in the western part of OIL's operational area in Upper Assam Basin, to the west and northwest of Moran Oilfield and extends upto ONGC operated area of Panidehing in the west. Oil has obtained the PML Grant of Moran PML as F.No.0-12012/60/2000-OGn/D-IV dated on August 8th2001, for an area of 429.42 Sq.km for Twenty Years in Dibrugarh and Sivsagar district. Later The Re-grant of Moran PML F. No PEM.95/2016/63 dated on 09.03.2017 for Further 20 years up to 17.12.2041. Oil has obtained the Re-grant of Consolidated PML F.No.13012(12)/7/2021-EXPL-PNG(E-37407) of the blocks (Dholiya,

Dumduma, Moran Extn) was signed between GoI & OIL on August 27, 2021. The Validity of the PML is extended up to 31.12.2040. The estimated project cost is Rs. 1993.76 Crores. Capital cost and recurring cost for EMP will be allocated during EIA stage based on the impacts. Extended EMP will be allocated based on outcome of public hearing requirements.

There are No national parks, notified Reserve Forest, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 1km radial distance from each well (96nos). There is no water bodies present within 500m radial distance from each well (96 nos). The nearest wildlife sanctuaries named Panidehing Bird Sanctuary ESZ at a shortest distance 0.2km(W) from the Block (Moran PML) and at a shortest distance 0.62km(W) from the nearest well (NEC 52), 0.95km(W) from the well(NEC 13),0.90km(W) from the well (NEC-14), 0.96km (W) from the well (NEC-12) and 1.13 km(W) from the well (EC-1). There is No Eco-sensitive Zone within 1km radial distance from each well (91 nos). The Reserve Forest named Diroi RF present within the Moran PML Block, the Reserve Forest named Abhaypur RF, Sapekhati RF present within the Moran Extension PML Block. There is no Reserve Forest present within 1km radial distance from each well (96 nos). Inter State Boundary - AS-AR-NL Inter State Boundary present at the end of Moran Extension PML Block.

The total water requirement during drilling phase will be 25 KLD/well which will be met by Tanker/Ground Water from nearby source. Effluent of 9KLD quantity will be treated in Mobile ETP of 50 KLD and reused for Mud Preparation. Septic tank/Soak Pit will be used in Drill site for Domestic purpose. During Production phase, Total water requirement is 320 KLD, which will be met by Ground Water, out of this 316 KLD will be fresh water and 4 KLD will be recycled water.

Produced Water Management:

Two-phase separation (oil + formation water) will occur during processing in STF Moran. Following the separation process, the formation water will be produced and treated in the proposed Secondary Tank Farm (STF) in Moran with a Common ETP capacity of 2MLD and sent to CTF Moran for disposal via existing disposal wells.

Proposed Power requirement during drilling Phase will be 3930 KW which will be sourced from Diesel Generators having capacity 3x1310KW. Proposed Power requirement for production Phase in STF will be 0.6MW, out of that 0.4MW of power can be sourced in-house from the Moran Power

Station and remaining 0.2MW sourced from GEG of capacity 3 x 125kVA DG set and stack height as per CPCB guidelines will be provided.

Details of Process emissions generation and its management:

The source of emissions will be only from Diesel Generator only. The Stack height will be stack as per CPCB guidelines will be provided.

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

In Drilling Site, 0.194TPA/well of Organic Municipal Solid Waste and 0.129 TPA/well of Inorganic Municipal solid waste will be generated in Construction Phase and 6.208TPA/well of Organic Municipal Solid Waste and 4.131 TPA/well of Inorganic Municipal solid waste will be generated in Drilling Phase in which the Organic Waste will be will be disposed to local municipal bins via local vendors & Inorganic waste will Proper segregation and storage of recyclable waste in a designated bins onsite. Recyclables will be periodically sold to local waste recyclers.

In proposed Production Site(STF), 16.75TPA of Organic Municipal Solid Waste and 11.16 TPA of Inorganic Municipal solid waste will be generated in Construction Phase and 7.884TPA/well of Organic Municipal Solid Waste and 5.256 TPA/well of Inorganic Municipal solid waste will be generated in Production Phase, In which the Organic Waste will be Will be disposed to local municipal bins via local vendors & Inorganic waste will Proper segregation and storage of recyclable waste in a designated bins onsite. Recyclables will be periodically sold to local waste recyclers.

Hazardous Waste Generation- (In Drilling Site):

- Used/ spent oil (Category 5.1) of quantity 0.5 KL/well will be disposed to CPCB/ SPCB registered used oil recyclers/ facilities via authorized vendor(s)/transporter(s) by use of GPS mounted vehicles
- Discarded containers/ barrels/liners contaminated with hazardous waste (Category 33.1) of quantity 50 No.s/yr /well will be Stored in secure manner in covered/ isolated area and Sold to authorized Scrap Vendor- SPCB authorized recyclers.
- Mobile ETP-Sludge (Sludge Containing Oil) (Category 2.2) of quantity 1-2 Tons/well will be Collection in HDPE lined pit and disposal / Common Hazardous Waste TSDF / HW Processing Facility.

Hazardous Waste Generation- (In STF- Moran):

- Used/ spent oil (Category 5.1) of quantity 20Litres/Day will be disposed to CPCB/ SPCB registered used oil recyclers/ facilities via authorized vendor(s)/transporter(s) by use of GPS mounted vehicles
- Discarded containers/ barrels/liners contaminated with hazardous waste (Category 33.1) of quantity 50 No.s/yr /well will be Stored in secure manner in covered/ isolated area and Sold to authorized Scrap Vendor- SPCB authorized recyclers.
- Common ETP Sludge-(Sludge Containing Oil) (Category 2.2) of quantity 1-1.5 Tons/Day will be Collection in HDPE lined pit and disposal / Common Hazardous Waste TSDF / HW Processing Facility.
- Drill cutting generated from Water Based Mud will be 600-700m³/well and it 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.

During deliberations, following issues were discussed:

- The Project Proponent (PP) shall identify suitable wells for the reinjection of treated water from the (STF) and include this information in the Environmental Impact Assessment (EIA) report. The reinjection process shall adhere to the norms and guidelines established by the Central Pollution Control Board (CPCB).
- PP shall submit detailed information about the pipelines, including whether existing or proposed wells will pass through any Eco-Sensitive Zone (ESZ), and include this information in the Environmental Impact Assessment (EIA) report.
- PP shall install a modular Sewage Treatment Plant (STP) in place of the existing soak pit and septic tank.
- PP shall ensure that all hazardous waste is sent to an authorized Treatment, Storage, and Disposal Facility (TSDF).
- PP shall segregate non-hazardous solid waste and carry out composting of the segregated waste.
- PP shall provide an undertaking confirming that no elephant corridor is located within the project site.
- PP shall submit the Compliance Status Report (CCR) for the existing Environmental Clearance (EC) if obtained any since PML is under the possession of OIL since 2001. If not, PP shall submit details of undertaken by any other operators within the same project area.

After deliberations, the Committee **recommended** the project proposal for prescribing following specific ToRs along with public hearings in the Dibrugarh, Sibsagar and Charaideo Districts for undertaking detailed EIA and EMP study in addition to the standard ToR applicable for the project.

1. One season (non-monsoon) primary baseline data on ambient air quality should be collected at appropriate locations for PM_{2.5}, PM₁₀, SO₂, NO_x, CO, VOCs, O₃, methane, and non-methane hydrocarbons, water quality, noise levels, soil, and flora and fauna. The compiled AAQ and other data should be presented chronologically in the EIA and EMP Report. Site-specific meteorological data should also be gathered. The location and number of monitoring stations, sampling stations should adequately represent the 10 km radius area of every well pad proposed and be justified based on the wind rose and predominant wind direction and the location of sensitive receptors.

2. Public Hearing shall be conducted in all districts of the proposed project. Public Hearing Report containing details such as (i) Details of advertisements (ii) Copy of forwarding letter of SPCB to MoEF&CC (iii) Legible copy of public hearing proceedings duly signed by the presiding officer. (iv) Attendance sheets (v) Action plan to address the issues raised during public hearing along with budget allocation and time line. (vi) Copy of hand written grievances/submissions if any.

3. The Project Proponent (PP) shall identify suitable wells for the reinjection of treated water from the (STF) and include this information in the Environmental Impact Assessment (EIA) report. The reinjection process shall adhere to the norms and guidelines established by the Central Pollution Control Board (CPCB).

4. PP shall submit detailed information about the pipelines, including whether existing or proposed wells will pass through any Eco-Sensitive Zone (ESZ), and include this information in the Environmental Impact Assessment (EIA) report.

5. No. of exploratory wells for which environmental clearance is accorded and No. of new wells proposed during expansion. Status and No. of the wells which are completed and abandoned.

6. Base line data collection for surface water for one season leaving the monsoon season within 1 km for each exploratory wells, particularly in respect of oil content in the water sample and sediments sample.

7. Distance of nearest waterbody from proposed drilling locations.
8. Details of stack height of DG sets and Flares as per CPCB standards.
9. PP shall submit the Compliance Status Report (CCR) for the existing Environmental Clearance (EC) if obtained any since PML is under the possession of OIL since 2001. If not, PP shall submit details of undertaken by any other operators within the same project area.
10. The project proponent shall prepare a site specific conservation plan and wildlife management plan in case of the presence of Schedule-1 species in the study area, as applicable to the project, and submit to Chief Wildlife Warden for approval.
11. The project proponent shall clarify the applicability of Forest and NBWL clearances. In case of applicability of FC, PP shall submit the application submitted for Stage –I FC.

Agenda No. 12

Environmental Clearance for Proposed New Distillery of 120 KLD capacity consisting of B-Heavy Molasses with provision to use Grain for production of Ethanol along with 3.0 MW cogeneration power plant at Village Narar, Tehsil Kaithal District Kaithal, Haryana by M/s The Kaithal Co-Operative Sugar Mills Ltd-Consideration of Environmental Clearance.

[IA/HR/IND2/535606/2025, IA-J-11011/397/2023-IA-II(I)]

The Project Proponent and the accredited Consultant M/s. Enviro Infra Solutions Pvt. Ltd. having NABET certificate no. NABET/EIA/2225/RA_Rev01 0300 and validity of November 27 2025 made a detailed presentation on the salient features of the project and informed that the proposal is for Environmental Clearance to the project Proposed New Distillery of 120 KLD capacity consisting of B-Heavy Molasses with provision to use Grain for production of Ethanol along with 3.0 MW cogeneration power plant at Village Narar, Tehsil Kaithal District Kaithal, Haryana by M/s The Kaithal Co-Operative Sugar Mills Ltd.

All distillery projects are listed at S.N. 5(g) of Schedule of Environment Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC).

The details of products and capacity is as under:

S. No	Unit	Product/by-product	Existing Quantity	Proposed Quantity	Total Quantity
1	KLD	Fuel Grade Ethanol	0	120	120
2	MW	Cogeneration power	0	3	3

Standard Terms of Reference have been obtained vide F. No. IA-J-11011/397/2023-IA-II(I) dated 20/11/2023. It is informed that there is no litigation pending against the proposal.

Public Hearing for the proposed project had been conducted by the Haryana State Pollution Control Board on 18/7/2024 at Kaithal Sugar Mill chaired MS. C. Jay Shradha, IAS, Additional District Magistrate, Kaithal. The main issues raised during the public hearing and their action plan:

S. No	Issues in Brief	Action plan	Budget allocated along with Timeline
1.	Mr. Singh praises the effort of CMO Mrs. Renu as she is associated with the village in the last 25 years and doing a great work. He also Praises M D of Kaithal Sugar Mill for the project and said that in year 2018 Prime Minister Shree Narendra Modi ji has given permission to this project. He also stated that in every agitation which he attained for any other reason he saw that framer always supported	The project propon ent thanked his appreciation and support for the project.	-

	<p>for this project. Further he asked to the respected members present in the public hearing for organizing the camps for better production of Sugarcane in the villages falls around the 10 km radius project area, as the production of the sugarcane is decreased in recent years. If the production of sugarcane will be increased it will be good for the project.</p>		
2.	<p>Mr. Karamveer welcomed the ADC ma'am, MD Kaithal Sugar Mill along with other respected members present in the public hearing. He also welcomed the project and said that the villages (such as Sega, Sergarh, Geong, Narad, Pilni and Mundari etc.) which comes within 10 Km radius of the project site mainly engaged in the production of wheat and sugarcane and their fields are very much productive. He stated that although the he supports the project but before commencement of the project we should talk to the farmer of respected villages and explain them about the project by conducting the awareness camp in order to avoid any kind of agitation as</p>	<p>Project proponent explained that land of proposed project will be inside the premises of Kaithal sugar mill as they already have 150 acres of land out of which the project will be established in 20 acres of land. She also stated that no land will be acquired for the project from the framer for the said project.</p> <p>Also, K K Tiwari, Chief chemist Kaithal Sugar Mills submitted that if the proposed project will be installed outside</p>	-

	<p>farmer did at the time of Highway construction and Canal construction. He also stated that it is good that that there is no any court case pending regarding the project and asked that where will be plant established in the district.</p> <p>Mr. Karamveer also offered 20 acres of land for the project in his village</p>	<p>the premises of sugar mill then it may cause unnecessarily increase the cost of project as project proponent will have to install infrastructure and other equipment which are already installed in the Sugar Mill.</p>	
<p>3.</p>	<p>Mr. Kumar asked that how this project is will be beneficial to the local people.</p>	<p>Project proponent stated that during the construction as well after the commencement of the project the requirement of manpower (i.e., 70 and 78 respectively,) will be fulfilled by local people on priority basis.</p> <p>Apart from this project 2 Crore has been given as a corporate environmental Responsibilities which will be spend for the welfare of the nearby villages. In which there is a provision of installation of solar</p>	<p>Rs. 2 Crore has been assigned as a budget for corporate environmental Responsibilities for 5 years</p>

		panel, construction of drinking water facilities as well as rain water harvesting will be done in the nearby villages.	
4.	He asked that whether the liquor will be manufactured under this project.	Project proponent clearly specified that the ethanol produce in the project will be directly sold to Government for the blending in petrol.	-
5.	Sh. Mahavir question about the CSR and what will be scope of employment for the local people in this project.	Project proponent specified that the project has kept separate provision of CER (i.e., Corporate Environmental responsibility) which is 2 Crores and CSR (i.e., Corporate social responsibility) which is 1.5% of total project cost used in the welfare of the nearby villagers. Regarding the employment on behalf of project proponent stated that employment	Rs. 2 Crore has been assigned as a budget for corporate environmental Responsibilities. CSR (i.e., Corporate social responsibility) which is 1.5% of total project cost used in the welfare of the nearby villagers for 5 years.

		<p>priority will be given to the local people and also stated that the total manpower required for the project is 70 during construction phase and 78 during operation phase.</p>	
<p>6.</p>	<p>Shree Ram Niwas questioned that due to the commencement of this project is there any possibilities of water pollution or air pollution in our village.</p>	<p>Project proponent submitted that the project is based on Zero Liquid discharge (ZLD) and no waste water (effluent) will be discharged outside the premises. All the waste effluent will be reused/recycled after treatment through ETP/ZLD Plant.</p> <p>In case of air pollution during the construction phase, adequate provision for dust suppression has been kept in the project. The dust produced during the transportation will be mitigated by sprinkling of water.</p>	<p>Rs.150 lakh capital cost and Rs. 40 lakh recurring cost has been kept in point no.1 of EMP budget for mitigation of air pollution control and dust suppression for 5 years.</p> <p>Rs.13 lakh capital cost and Rs. 3 Lakh recurring cost has been kept in point no.8 of EMP budget for Green belt for 5 years.</p>

		<p>Apart from this to subside the air pollution provision of 50% greenbelt has been given in the project.</p> <p>Adequate APCM, s will be installed to mitigate air emission during operation phase.</p>	<p>Rs.40 lakh capital cost and Rs. 10 lakhs recurring cost has been kept in point no.3 of EMP budget for Spent wash treatment and ZLD for 5 years.</p>
7.	<p>Mrs Sharma stated that what are the provision kept in the project for mitigation of air pollution during the construction as well the operation phase.</p>	<p>Project proponent submitted that proper water sprinkling will be done during the construction phase to mitigate the air pollution.</p>	<p>Rs.150 lakh capital cost and Rs. 40 Lakh recurring cost has been kept in point no.1 of EMP budget for mitigation of air pollution control and dust suppression for 5 years.</p>

Total land area required is 20.34 acre (8.231 hectares). Greenbelt will be developed in total area of 2.75 hectares i.e., approx. 33% of total project area. The estimated project cost is Rs. 194.88 crore. The capital cost of EMP shall be Rs. 8.26 Crore whereas recurring cost shall be Rs. 0.99 Crore. Industry proposes to allocate 2.0 Crores towards Extended EMP. Manpower is about 70 during construction and 78 during operation.

There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, and Wildlife Corridors etc. within 10 km distance. No Reserve forests/protected forests is within 10 km distance. No national parks, wildlife sanctuaries, Biosphere Reserves,

Tiger/Elephant Reserves, Wildlife Corridors etc. is within 10 km distance. No ESZ and Eco-sensitive Zone is within 10 km distance. Sirsa Canal is at a distance of approx. 3.89 km from the project site in South West direction.

Ambient air quality monitoring was carried out at 8 locations during 01 Oct 2023 to 31 Dec 2023 and the baseline data indicates the ranges of concentrations as: PM₁₀ (41.0 - 86.2 µg/m³), PM_{2.5} (24.2 - 49.5 µg/m³), SO₂ (5.9 - 14.9 µg/m³) and NO₂ (14.2 - 42.1 µg/m³). AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 1.2 µg/m³, 0.6 µg/m³, 0.8 µg/m³ and 0.7 µg/m³ with respect to PM₁₀, PM_{2.5}, SO₂ and NO_x respectively. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS). Additional one-month Ambient air quality monitoring conducted in the month of March 2025 and the analysis data indicates the range of concentration as follows: PM₁₀ (41.1 to 84.5 µg/m³), PM_{2.5} (22.6 to 46.3 µg/m³), SO₂ (5.3 to 12.6 µg/m³) NO₂ (11.2 to 40.5 µg/m³) and O₃ (81.0 to 98 µg/m³).

The water requirement for the first run for project would be 1814.7 KLD, which will be further reduced through recycling of 1345.2 KLD. Hence, fresh water requirement will be 469.3 KLD (4 KL / KL) in Molasses based distillery. The water requirement for the first run for project would be 1895.0 KLD, which will be further reduced through recycling of 1419.1 KLD. Hence, fresh water requirement will be 475.9 KLD (4 KL/ KL) in Grain based distillery. Effluent from sugar mill 1000 KLD (541 KLD condensate water after cooling and 459 KLD from the Plant) will be used in proposed distillery unit after treatment. When sugar mill will not be functional then water requirement will be fulfilled from ground water abstraction. The water consumption per KL of ethanol is estimated 4KL / KL B-heavy molasses and grain respectively. The required water will be taken from proposed borewell.

Effluent generation

1. **Molasses Based:** Spent wash of 837.73 KLD (@ 4 KL/KL of Product) will be generated and generated spent wash will be first concentrated in MEE and the MEE reject will be incinerated in Slop fired Boiler of capacity 30 TPH.
2. **Grain Based:** The Grain Spent Wash of 860.9 KLD (@ 4 KL/KL of Product) from the bottom of the column will be fed to decanter.

Decantation section comprises of centrifuge decanter for separation of suspended Solid from Spent Wash (SLOP). Supernatant from the decantation process will be concentrated in MEE and the reject from MEE (Thick Syrup) will be mixed with Wet Cake of Decanter and Mixture will be sold off as cattle feed.

Power requirement will be 4026 KW and will be met from proposed 3.0 MW co- generation power plant. 30 TPH incineration biomass fired boiler will be installed. ESP with a stack of height of 30 m will be installed for controlling the particulate emissions within the statutory limit of 50 mg/Nm³ for the proposed boiler. Two DG sets of 320 kVA & 660 kVA will be provided for backup power during closer and starting of distillery.

Details of Process emissions generation and its management:

S.No	Item	Capacity	Process	Emission	Management
1	Boiler	30 TPH boiler	3.0 MW power generation process	50 mg/Nm ³	Electrostatic Precipitator 4-field ESP Air handling capacity: ~100,000 Nm ³ /hr

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

S.No.	Item	Type of waste	Source	Quantity Per Annum	Mode of Disposal
1	Solid waste	Yeast Sludge	Fermentation	7.5 MT/Day	Yeast sludge will be used in incinerator boiler/bio composting
		Boiler Furnace ash	Boiler	162 Kg/day	Boiler furnace ash will be used as manure/ manufacturing of fly ash brick.

		Garbage	Construction and operation Phase	21 kg/day during construction Phase 39 Kg/day during operation Phase	As per Solid Waste Management Rules, 2016
2	Hazardous waste	Used oil (schedule I, Category 5.1)	DG sets	3.5 KL/year	It will be stored on site and sold to authorized recyclers

Total land of 60.70 Hectares is under possession of the company and out of which 8.23 Ha to be used for proposed Distillery. Land has been awarded vide letter no. 1 of 1988-89 (ENDst no. 9894) dated 26.02.1988.

Capital cost and recurring cost of EMP are given below:

S. No	Particulars	Capital Cost In Rs lacs	Annual Recurring Cost in Rs lacs
1	Air pollution control system (ESP/Bag filter) on 30 TPH low pressure boiler	155	40
2.	Scrubbing system, compressing system, liquefying system and storage for CO ₂ removal	45	15
3.	Treatment system for spent wash, DWGS centrifuge decanter, DDGS dryer for ZLD system	45	10
4.	Condensate Polishing unit for water treatment and recycle	35	10
5.	Rainwater harvesting systems	15	3
6.	Occupational Health Management	5	2

7.	Noise Reduction Systems	4	1
8.	Green Belt Development	13	3
9.	Environment monitoring	-	5
10.	Environment management cell	-	10
11.	Slip road Construction	300	
12.	Compliance of public hearing	The concern raised regarding Air pollution control management, dust suppression, employment generation, ZLD system and waste water treatment and green belt.	Budget for the same is proposed in Point no. 1, 3 & 8.
13.	Conservation Plan	9.5	
14.	CER	200	
15.	Total	826.5	99

Details of Extended EMP with proposed activities and budgetary allocation:

S. No.	Activities	Amount (Rs. in crores)
1.	Infrastructure creation for drinking water supply by providing hand pumps in Kaithal, Mundri & Segga villages	0.10
2.	Cross drainage structure in village roads for better drainage at Kaithal, Mundri & Segga villages	0.20
3.	Providing skills development training like computer education and distribution of books at Government Primary School Kaithal, Mundri & Segga villages	0.20
4.	Farmers' fields Soil testing and advise proper fertilization in Kaithal, Mundri & Segga villages	0.20

5.	Scientific support to local farmers to increase the yield of crop and fodder in Kaithal, Mundri & Sega villages	0.20
6.	Plantation in community areas with native species in consultation with Forest Department at Kaithal, Mundri & Sega villages	0.60
7.	Provision of solar panel lights in Kaithal, Mundri & Sega villages	0.50
Total		2.00

During deliberations, following issues were discussed:

- PP shall submit CCR to CTO. However, PP has submitted CTO compliance report as per Ministry's OM dated 08th June, 2022.
- PP shall submit an application for groundwater extraction permission.
- PP shall recheck and revise the water balance calculations and update the data on fresh water usage.
- PP shall provide an undertaking confirming that coal will not be used in the boilers.
- PP shall ensure that the boiler concentrate is directed to the Condensate Polishing Unit (CPU).
- PP shall maintain a 33% green belt with a minimum thickness of 4 meters. Native plant species, with saplings at least 4 feet tall and 3 years old, shall be used for the development of the green belt.
- PP shall remove non-native species, such as rubber plants and Ashoka trees, and shall complete the plantation of native species in the green belt within 2 years.

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

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 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.

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 Extended EMP 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.

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.

The EAC, after detailed deliberations, **recommended** the project for grant of environmental clearance, subject to compliance of terms and conditions as under, and general terms of conditions at Annexure: -

1. 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.
2. EC granted for a project on the basis of the submitted documents shall become invalid in case the actual land for the project site turns out to be different from the land considered at the time of appraisal of project.

Conversion of land use (CLU) certificate shall be obtained before start of construction activities.

3. NOC from the Concerned Local authority shall be obtained before start of the construction of plant and drawing water from ground water. State Pollution Control Board shall not issue the Consent to Operate (CTO) under Air (Prevention and Control of Pollution) Act and Water (Prevention and Control of Pollution) Act till the project proponent shall obtain such permission.

4. Total fresh water requirement for distillery for fresh water requirement will be 475.9 KLD in Grain based operation and 469.3 KLD in Molasses based operation, which shall be met from ground water. No ground water recharge shall be permitted within the premises. Industry shall construct a rainwater storage pond of adequate capacity and the accumulated water to be used as fresh water thereby reducing freshwater consumption.

5. Spent Wash/stillage shall be sent to the decanter followed by the Multiple Effect Evaporator and dryer to form DDGS. DDGS to be used as cattle feed. The MEE & Drier condensate, spent lees, WTP Rejects, Boiler & Cooling tower blowdowns, washings etc. shall be treated in the 'Condensate Polishing Unit' (CPU). STP shall be installed to treat domestic wastewater. The plant will be based on 'Zero Liquid Discharge' system and no effluent/treated water will be discharged outside factory premises.

6. The spent wash form molasses-based distillery shall be concentrated in MEE and concentrated spent wash shall be incinerated in the incineration boiler. Other lean effluents Spent lees, MEE Condensates and utility effluents shall be treated in the condensate polishing unit (CPU) comprising of three stage RO. No wastewater or treated water from integrated unit of sugar mill and distillery shall be discharged outside the premises and Zero Liquid Discharge shall be maintained for all the units namely sugar, Distillery and Cogen Power Plant. STP shall be installed to treat sewage generated from factory premises.

7. Adequate numbers of ground water quality monitoring stations by providing piezometers around the project area shall be set up considering the ground water hydrogeology. Sampling and trend analysis monitoring must be conducted on monthly basis and report submitted to SPCB and RO- MoEF&CC. The ground water quality monitoring for pH,

BOD, COD, Chloride, Sulphate and Total Dissolve Solids shall be monitored and report submitted to the Ministry's Regional Office.

8. Stack height of 60 m along with ESP (99.99 % efficiency) shall be provided to rice husk/baggase fired boiler (30 TPH) for controlling the particulate matter emissions within the statutory limit of 50 mg/Nm³. At no time, the emission levels shall exceed the prescribed standards. In the event of failure of any pollution control system adopted by the unit, the respective unit shall not be restarted until the control measures are rectified to achieve the desired efficiency. Performance assessment of pollution control devices/systems will be conducted annually.

9. The DG sets used for power requirements shall comply with the latest CPCB norms.

10. Boiler ash shall be converted to Granules and utilised as manure. Ash generated during grain based operation ash shall be provided to brick manufacturers. PP shall install 10% of the total power requirement in the form of solar power inside plant premises/adjacent/nearby areas.

11. CO₂ generated during the fermentation process will be collected by utilizing CO₂ scrubbers in the proposed bottling plant and sold to beverage industry.

12. PP shall allocate at least Rs. 0.05 Crores proposed as a capital cost and Rs. 0.02 Crore as recurring cost for Occupational Health Safety. Occupational Health Centre for surveillance of the worker's health shall be set up. The health data shall be used in deploying the duties of the workers. All workers & employees shall be provided with required safety kits/mask for personal protection.

13. Training shall be imparted to all employees on safety and health aspects of chemicals handling. Safety and visual reality training shall be provided to employees.

14. The unit shall make arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire-fighting system shall be as per the norms. PESO certificate shall be obtained. Location of ethanol storage tanks shall be placed in such a way that in the event of any fire, accident, explosion or any unforeseen conditions the impact of such event should not go beyond the boundary of the plant,

i.e., the risk should be tolerable (acceptable) at the boundary. PP shall adhere to OISD standards specifically OISD-STD-108 & 129.

15. Company shall maintain an Emergency Response Decision support system in such a way so that identification of the detector's network for the location of the leak source and the probable leaked quantity in real-time, followed by modelling of the dispersion of the plume and consequences as forecast is done in advance and thus, no leak accident may go unattended. Accordingly, Risk Mitigation plan shall be in place.

16. Company shall determine the distance of fire hydrant while finalizing its location from ethanol storage tanks or any other hazardous storage substance shall be based on dispersion of Thermal Radiation so that during any unforeseen situation fire hydrant is always available to operate manually.

17. Process organic residue and spent carbon, if any, shall be sent to Cement and other suitable industries for its incinerations. ETP sludge, process inorganic & evaporation salt shall be disposed of to the TSDF.

18. The company shall undertake waste minimization measures as below: (a) Metering and control of quantities of active ingredients to minimize waste, (b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes, (c) Use of automated filling to minimize spillage, (d) Use of Close Feed system into batch reactors, (e) Venting equipment through vapour recovery system, (f) Use of high pressure hoses for equipment clearing to reduce wastewater generation.

19. Greenbelt of at least 5-10 m width shall be developed in 2.75 hectares, i.e., 33% of total project area with tree density @ 2500 trees per hectare, 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. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department and native species shall be developed. No cutting of existing trees is permitted. Records of tree canopy shall be monitored through remote sensing map. 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/>).

20. PP proposed to allocate Rs. 2.0 Crores towards Extended EMP which shall be spent as submitted in Extended EMP. Further, all the proposed activities under CER shall be carried out in consultation with District Administration and completed before commissioning of the plant.

21. There shall be adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products and no parking to be allowed outside on public places. At least 15% of total project area shall be allotted solely for parking purposes with facilities like rest rooms etc.

22. Storage of raw materials shall be either in silos or in covered areas to prevent dust pollution and other fugitive emissions. All stockpiles should be constructed over impervious soil and garland drains with catch pits to trap runoff material shall be provided. Biomass shall be stored in covered sheds and wind breaking walls/curtains provided around biomass storage area to prevent its suspension during high wind speed. All Internal roads shall be paved. Industrial vacuum cleaner shall be provided to sweep the internal roads. The Air Pollution Control System shall be interlocked with process plant/machinery for shutdown in case of operational failure of Air Pollution Control Equipment.

23. Continuous online (24x7) monitoring system for stack emissions/effluent shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.

24. A separate Environmental Management Cell (having qualified person with Environmental Science / Environmental Engineering /specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions. EMC head shall report directly to Head of Organization/ Director/CEO as per company hierarchy.

25. 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.

Any other Agenda

Agenda No. 01

Expansion of Molasses based Distillery from 30 KLPD to 100 KLPD located at Vitthalrao Shinde Nagar, Village: Mhaisgaon, Tal.: Madha, Dist.: Solapur, Maharashtra by M/s Vitthal Corporation Limited- Consideration of Environmental Clearance.

[IA/MH/IND2/237847/2019, 11011/704/2008- IA II (I)]

The proposal was considered by the EAC in its 45th meeting held on 29-30th November, 2021 in the Ministry, wherein the project proponent and their consultant M/s. Equinox Environments (I) Pvt. Ltd., presented the project. EAC recommended the proposal for grant of EC. However, during processing it has been found that existing EC granted and proposed expansion attracts NBWL clearance. In this regard, competent authority directed PP to submit NBWL clearance. Accordingly, ADS was raised seeking NBWL clearance. However, PP has not submitted NBWL clearance yet.

During deliberations, following issues were discussed:

- EAC noted that PP has not submitted the NBWL Clearance as required in the ADS raised on 16/01/2023. It was advised to submit copy NBWL Clearance.

Accordingly, the proposal was returned in present form.

Agenda No. 02

Onshore Oil & Gas Development drilling and production in Dumduma-Pengeri Area in Tinsukia District under PMLs namely Mechaki PML, Borhapjan PML, Dumduma PML and Digboi PML – Consideration of Environmental Clearance

[IA/AS/IND2/220363/2007, J-11011/1251/2007-IA II (I)]

The proposal was considered by the Expert Appraisal Committee (Industry-II) in its 42nd meeting held during 20th - 22nd October, 2021 in the Ministry, wherein the project proponent and their consultant presented the proposal. EAC has recommended the project for grant of EC. However, during processing following major issues were flagged:

Concealment of fact that proposed activity area falling under the critical elephant habitat and corridor which connects the two States Assam and Arunachal Pradesh. The proposed diversion is completely falling under the Dihing Patkai Elephant Reserve, Assam and South Arunachal Elephant Reserve, Arunachal Pradesh. Project Elephant Division has also mentioned that the proposed activities (Onshore Oil & Gas development drilling) may adversely impact on elephant conservation and lead to further escalation of the Human Elephant Conflicts.

Further, PP has also concealed court case against the proposed area. The detailed chronology of the court case is mentioned below:

"1. Dr. Kashmira Kakati had filed an Original Application No. 19/2014 in the Principal Bench NGT, under section 14 read with 18 of the NGT Act, 2010 with a serious concern for protection of elephant population in the country and to protect elephant corridors or elephant reserves.

2. As per the Application filed, the appellant had alleged that Oil India Limited had released untreated oil processing effluent into the open sludge pits and seepage areas around oil rigs in the Digboi Oil field, which falls within Upper Dihing RF (East Block) and the Dihing Patkai Elephant Reserve. The Application was filed against 13 respondents, including the Government of India, the Government of Assam, IOCL, NHAI, Coal India, Digboi Town Committee, and M/s. Oil India Limited.

3. As per the order dated 08.12.2017 passed by the Hon'ble NGT Bench, certain directions were given, one of which was as follows: "Respondent No. 7 i.e. Oil India Limited to forthwith stop releasing of untreated oil effluent in open sludge pits and seepage areas around oil rigs in the Digboi Oil field which falls within upper Dihing RF (East Block) and the Dihing Patkai Elephant Reserve".

4. The matter was then taken up in the Hon'ble Supreme Court as C.A. No. 9710-9711/2018, wherein Coal India Limited was the petitioner while Oil India Limited was one of the Respondents along with the Ministry of Environment, Forest and Climate Change and others. As per the order dated 10.08.2022, the Hon'ble Court had ordered the Ministry to file status report regarding the steps taken for implementation of directions given by the National Green Tribunal vide its order dated 08.12.2017. In furtherance of the same, a Committee was constituted.

5. The Committee submitted its report on 04.01.2023 (enclosed) wherein, inter-alia, the following observation was made by the Committee in regards to the directions that had to be followed by OIL India Limited:

- i. Oil is leaking from underground pipelines in the Reserve forest.
- ii. At several places, oily sludge pits of abandoned wells have been found and natural drains pass through these pits.
- iii. Oil spill have been found in several oil producing wells and Crude Gathering Stations. No fencing had been provided at these well sites.
- iv. More than 800 wells have been drilled since the operation of Burma Oil Company Limited. OIL India Ltd. does not even have the inventories of these abandoned oil wells, let alone treatment of these pits.
- v. In the three oil sludge remediation sites visited, the remediation has not resulted in complete conversion of oily sludge into biodegradable matter. They do not even maintain the inventors of abandoned oil wells. OIL India Ltd. has been unable to stop the release of untreated oil effluent in open sludge pits and seepage areas around oil rigs in the Digboi Oil field." The Ministry had filed the compliance affidavit/status report and the same was acknowledged in the Order dated 16.03.2023 passed by the Hon'ble Supreme Court.

6. Furthermore, in the final Order, dated 27.04.2023, passed by the Hon'ble Supreme Court in C.A. No. 9710-9711/2018, it was held that since the compliance reports have been filed by the stakeholders and also put on record, therefore the matter will be remitted back to the Tribunal along with the compliance reports as a part of the record in O.A. No. 19/2014 on the file of the Tribunal. The matter was thus, remitted back to the Tribunal.

In view of the above, as directed by competent authority ADS was raised vide letter dated 04th December, 2023 to approach the Ministry after the final outcome of the court case. The court case is still under subjudice. The Committee also noted that PP has not complied with observations of Joint Committee.

The EAC agreed with the direction of the competent authority and suggested PP to submit the proposal only after receipt of final outcome of the court case.

Accordingly, the proposal was returned in present form.
