GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE
(IA DIVISION-INDUSTRY-2-PETRO-CHEMICAL SECTOR)
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Dated:05.09.2020

MINUTES OF THE 22nd MEETING OF THE EXPERT APPRAISAL COMMITTEE (INDUSTRY-2 SECTOR FOR PETRO-CHEMICAL BASED PROJECTS), HELD on 20th August, 2020

Venue: Ministry of Environment, Forest and Climate Change, Indira ParyavaranBhawan, JorBagh Road, New Delhi-110003 through Video Conferencing (VC)

(i) Opening Remarks by the Chairman:

The Chairman has welcomed the Committee members and appreciated the efforts of the Committee. After his remarks, the Chairman opened the EAC meeting for deliberations.

(ii) Confirmation of the Minutes of the 21st Meeting of the EAC (Industry-2 Petro-Chemical) held during 17 July, 2020 at MoEFCC through VC.

The EAC, having taken note that final minutes were issued after incorporating comments offered by the EAC members on the minutes of its 21th Meeting of the EAC (Industry-2, Petrochemical projects) held during 17, July, 2020 conducted through Video Conferencing (VC), confirmed the same.

20th August, 2020 (Thursday)

Consideration of Environmental Clearance

Agenda No. 22.1

LNG Import, Storage &Distribution facility with targeted throughput of 1 MMTPA capacity within the Industrial Zone of Haldia Dock Complex at Haldia, West Bengal, India by M/s Venerable LNG Private Limited- Consideration of Environment Clearance

[IA/WB/IND2/93561/2019, IA-J-11011/41/2019-IA-II(I)]

The Project Proponent and the accredited consultantM/s. Vimta Labs Limited, made a detailed presentation on the salient features of the project and informed that:

The proposal is for environmental clearance totheproject for Setting up LNG

import, storage & distribution facility with targeted throughput of 1 MMTPA capacity within the Industrial Zone of Haldia Dock Complex at Haldia, West Bengal, India by M/s Venerable LNG Private Limited.

Standard Terms of Reference (TORs) has been issued by Ministry vide letterNo. IA-J-11011/41/2019-IA-II(I)dated 23rd March 2019.

The project/activity is covered under category A of items 6(a) “Oil & gas transportation pipe line (crude and refinery/ petrochemical products), passing through national parks /sanctuaries/coral reefs /ecologically sensitive areas including LNG Terminal” of the schedule to the Environment Impact Assessment (EIA) Notification, 2006, and requires appraisal at Central level by the sectoral EAC in the Ministry.

The terminal will be land based and will have 60,000 m^3 full containment tank, 8 truck loading bays, 3.6 MMSCMD re-gasification capacity, and use the existing multi user multi product oil jetties at Haldia Port. No jetty construction involved and existing jetty will be utilised for loading/unloading of LNG.

The proposed LNG is a greenfield project with a land of 4.65 ha (11.48 acres) within the industrial zone of Haldia dock complex. Greenbelt along the plant boundary is planned to improve the aesthetics condition of the project area, which will also act as the barrier for noise and air emissions.

The estimated project cost is Rs. 700 Crores. Total capitalcost earmarked towards environmental pollution control measures is Rs. 12 Crores and the Recurring cost (operation and maintenance) will beaboutRs. 1 crore per annum. TotalEmploymentwillbe300 persons during construction phase and 50 persons for operation phase. Industryproposes to allocate Rs. 10 crores towards Corporate Environmental Responsibility (CER).

There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site. Hugli river/Haldia Channel is flowing at a distance of 0.1 km insouthwest direction, Haldia River is flowing at a distance of 4.4 km in southwest direction and Tangua Khal is flowing at a distance of 8.1 km in west direction.

Ambientairqualitymonitoringwascarriedoutat8locationsduring1st March 2019to 31st May 2019 representing pre-monsoon season and the baselinedata indicates the ranges of concentrations as: PM_{10} (81.2 µg/m^3), $PM_{2.5}$ (49.1 µg/m^3), SO_2(26.5 µg/m^3) and NO_x (39.6 µg/m^3). AAQ modeling study for point source emissions indicates that the maximum incrementalGLCsafterthepropos edprojectwouldbe0.16µg/m^3 respect toNOx occurring at 1 km in downwind NE direction. Theresultantconcentrationsare 29.66 0.16µg/m^3arewithintheNational AmbientAirQualityStandards (NAAQS).

Total water requirement is about 4 m^3/day for domestic purpose and no water required for process. The water will be supplied by Haldia Port Authorities.

Domestic wastewater of 3.6 quantity will be generated from canteen,

employees & wash area will be disposed off through sewage drainage system which will be provided by Haldia Dock Complex.

Power requirement for construction phase is envisaged to be 1.3 MW which will be sourced from Haldia port/ West Bengal State Electricity Distribution Company Limited (WBSEDCL) & DG set 500 KVA for emergency backup and during operation phase is envisaged to be 3.5 MW which will be sourced from Haldia port / West Bengal State Electricity Distribution Company Limited (WBSEDCL). DG set of 1500 KVA capacity will be installed as a backup during emergency conditions. The proposed DG set will be provided with appropriate stack height as per CPCB norms and will be provided with proper acoustic enclosures.

The proposed LNG terminal involves operations such as LNG import, storage & distribution facility which is a clean process and essentially there is no major emission from this process. There will be minor emission from the operation of emergency DG sets and emergency flare stack. Small amount of NOx is only significant pollutant emitted under this condition. In addition, the air emissions from the truck parking area is envisaged due to the proposed project.

Domestic solid waste (non-hazardous) such as food waste & other domestic waste will be generated and will be collected in the dustbins, which will be disposed through municipal corporation. The hazardous waste such as oily waste, oil contaminated cottons and other chemical/oil containers will be generated at about 0.5 KL/year from periodic maintenance. The hazardous waste will be collected and stored at specific identified area at site and will be disposed through authorized agency/recyclers.

The proposed project site measuring 11.48 acres was allotted to VLNG by Kolkata Port Trust, which is falling in the Industrial Zone of Haldia Dock Complex, West Bengal. Board of Trustees for the Port of Kolkata is authorized to decide on the utilization of the land owned by it under Section-123 of the Major Port Trust (MPT) Act 1963. The Tariff Authority for Major Ports, under Section-49 of the said MPT Act 1963 has approved Scale of Rates of rent and conditionalities in respect of different zonal land of Haldia Dock Complex, Kolkata Port Trust, which includes Industrial Zone also. A letter was also issued by Chief Executive Officer, Haldia Development Authority on 08/07/2020, stating the proposed project site land (Mouza) is falling in the Industrial Zone of Haldia Dock Complex and is covered as Industrial Area in their Outer Development Plan (ODP) Gazette, notified on 3rd April 1993 was submitted to MoEF&CC.

The proposed project development doesn't involve any construction of new Jetty, and the existing Oil Jetties of the Haldia Dock Complex are planned to be used for unloading LNG. The proposed project installation is planned in the CRZ-II and non-CRZ areas (Industrial Area). The CRZ study is planned to be conducted to obtain NOC from WBSCZMA, but it is getting delayed due to on-going Covid-19 pandemic situation.

No litigation and court cases pending against the proposal.

During deliberations, the EAC noted the following:

The EAC during deliberations noted that the proposed project is for LNG import, storage & distribution facility and as such there is no much impact on the environment is anticipated. The Committee has noted that the proponent has sought public hearing exemption claiming the project site as Industrial area. It is also noted that the transportation of LNG is planned through trucks and as such facility for parking is not sufficient in the plant. The Committee after deliberations has agreed for in principle recommendations to the project. However, the project being located in the CRZ II area, it first requires recommendations from the concerned State Coastal Zone Management Authority, on arriving at permissibility of such activities in the area, and its admissibility. The Committee after detailed deliberations has desired for additional information/inputs in respect of the following:

- Recommendations from State Coastal Zone Management Authority.
- Copy of Notification of project area being located in the Industrial area/estate.
- Detailed transportation plan. Commitment for not parking vehicles outside plant premises/roads.
- Revised layout plan with details of parking.
- VOC analysis
- Occupational health plan.
- Conservation plan for Schedule-1 species in the area submitted with State Wildlife/Forest Dept.
- Arsenic study in the ground water.
- Detailed CER plan.
- Safety and risk assessment using advanced modelling.

The proposal was therefore DEFERRED for the needful.

Agenda No.22.2

Expansion of Refinery (Asset Development Project-1) through modernization by M/s Nayara Energy Limited at Vadinar, DevbhumiDwarka (Gujarat) - Consideration of Environment Clearance

[IA/GJ/IND2/152329/2020, IA-J-11011/320/2006-IA-II(I)]

The project proponent and their accredited consultant M/s National Environmental Engineering Research Institute made a detailed presentation on the salient features of the project through Video Conferencing (VC).

During deliberations, the EAC noted the following:

The proposal is for environmental clearance to the project for expansion of Refinery (Asset Development Project-1) through modernization by M/s Nayara Energy Limited at Vadinar, DevbhumiDwarka (Gujarat).

The details of products and capacity as under:

Sr. No.	Products	Production Capacity (KTPA)	
		Existing Refinery (20 MMTPA)	Post ADP1 (20 MMTPA)
1.	LPG	938	1208
2.	Naphtha	4200	3540
3.	Gasoline		
4.	SKO/ATF	872	732
5.	Diesel/ HSD	9706	10245
6.	Furnace Oil/VGO	220	35
7.	Sulphur	318	319
8.	Petcoke	2247	2287
9.	Bitumen	377	-
10.	Polypropylene	-	450
11.	Fuel & Losses		
	a. Fuel	1009	1066
	b. Losses	111	117

The project/activity is covered under category A of items 4(a) "Petroleum Refining Industry", 5(c) "Petro-chemical complexes" of the Schedule the Environment Impact Assessment (EIA) Notification, 2006 and requires appraisal at Central Level by the Expert Appraisal Committee (EAC) in the Ministry. The proposal has been submitted under para 7 (ii) of the EIA Notification, 2006 requesting exemption from public hearing.

Standard ToR has been issues by Ministry vide letter No. No. IA-J-11011/86/2020-IA-II(I); dated 18/04/2020.

M/s Nayara Energy Ltd. had earlier applied EC for expansion of Refinery from 20 MMTPA to 46 MMTPA and Petrochemical Complex vide online proposal no. IA/GJ/75290/2018 Dated 2nd June, 2018 and were issued TOR on 3rdAug, 2018 for Refinery expansion up to 46 MMPTA and Petrochemical Complex project. The ToR dated 3rdAug, 2018 was assailed by way of a Writ Petition being Special Civil Application Number 15322 of 2019 (DILIPSINH BHIKABHAI JADEJA Versus UNION OF INDIA)before Hon'ble Gujarat High Court challenging the TOR condition which stated: "Public consultation shall be carried out by giving a public notice in local newspapers about revised scope of the project, and for inviting responses in writing, if any, from the concerned persons having plausible stake in the environmental aspect of the project/activity"

In the last hearing of the case on 4thMarch, 2020, Counsel representing the Ministry of Environment i.e. Union of India informed the Court that there were certain developments that had transpired on

27thFebruary, 2020 in the meeting of the Expert Appraisal Committee at Delhi which he would wish to place on record of the Court and the minutes of the meeting had not been uploaded / made available yet. He stated that the minutes of the meeting would be uploaded within a week or 10 days. In view of his statement, the Hon'ble Court adjourned the matter to 23rdMarch, 2020. Counsel representing the Ministry of Environment i.e. Union of India assured the court that Ministry would file affidavit in reply on or before 23rdMarch, 2020.The affidavit has been filed and placed in the record of the court. The matter was to be listed on 23rdMarch, 2020 however in view of the Covid-19 pandemic, the functioning of all courts in Ahmedabad has been suspended and no new dates have been fixed.

Ministry had issued EC earlier vide letter no. J-11011/320/2006-IA-II (I); dated 16/09/2008 and 07/03/2014 to the existing projection favour of M/s. Essar Oil Limited valid till 16/09/2018.The Ministry vide letter dated 20th July, 2018 has transferred the EC from M/s. Essar Oil Limited to M/s Nayara Energy Limited.

Total land area of the project is 2,27,50,000sqm. Out of which 4,00,000sqm land will be utilized for the proposed project. Industry has already developed Greenbelt in an area of 34% i.e. 41,00,000sqm out of total area of the project. The estimated project cost is Rs. 6,200 Crores. Total capital cost earmarked towards environmental pollution control measures is Rs.10 Crore and the Recurring cost (operation and maintenance) will be about Rs.14 Lakh/annum. Total Employment will be 150 persons as direct &7000 persons indirect after modernization.

There is Marine National Park and Marine Sanctuary within 10 km distance from the project site. Phuljhar River and Sinhan dam are located at distance of ~2.0 km (in East) and ~5km (in South west), respectively from Refinery Boundary.

Ambient air quality monitoring was carried out at 09 locations during March 29, 2018 to June 25, 2018 and the baseline data indicates the ranges of concentrations as: PM10 (60-140 µg/m^3), PM2.5 (15 – 42 µg/m^3), SO_2 (10-31µg/m^3) andNO_2(17-36 µg/m^3). AAQ modelling study for point source emissions indicates that, there will be no change in maximum incremental GLCs after the proposed project. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS)except PM10 where baseline concentration is already exceeded the concentration.

Total water requirement of 221.3 MLD will be met from Sea Water which includes 204 MLD for existing and 17.3 MLDfor proposed modernization project. Effluent of 27.1 MLD will be treated through effluent treatment plant and entire treated effluent will be utilized for service water, fire

water make up, horticulture and as RO Feed.108.4 MLD Desalination/RO Reject &36.5 MLD sea water based cooling tower blow down will be sent for deep sea discharge through diffuser recommended by NIO.

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

Major Hazardous waste generation from the ADP-1 Project shall be as below:

Unit	Solid Waste	Quantity	Frequency
PRU	Catalyst/ adsorbents	75 Tonne	Once in 4 years
PP	Catalyst/ adsorbents	194 Tonne	Once in 4 years

Power requirement after modernization will be 199 MWincluding existing 160 MW and will be met from CPP (Captive Power Plant). Existing unit has 27 DG sets of (125 kVA to 2000 kVA)capacity used as standby during power failure. Proposed ADP-1 will add 2 DG sets of capacity 1250 kVA and 1 DG set of capacity 1000 kVA. Stack (Height 30 m)will be provided as per CPCB norms to the proposed DG sets.

PP submitted in the presentation, to set up 'Centre of Excellence' (COE) in Process Safety and Risk Management with IIT Delhi to enhance process modeling capabilities and training using VR and AR. Expenditure will be made as per requirement. Financial commitment of 'EC' will be made within three months from the date of issue of EC to make it functional.

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 PFR report prepared and submitted by the Consultant accredited by the QCI/ NABET on behalf of the Project Proponent.

The Committee has noted that the this is a small modernization project, where there is no change in crude throughput and there is no significant load on the environment and no furnace is proposed in these 2 units, effluent generated will be treated in existing unit, the project is requested to be considered under 7(ii).

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 PFR 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 Form 1/PFR report is in compliance of the notification/guidelines/OMs issued by the Ministry for such projects, reflecting the present environmental concerns and the projected scenario for all the environmental components. The Committee has also deliberated on the CER plan and found to be addressing the issues in the study area. The compliance of the existing EC conditions found to be satisfactory.

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 as per para 7(ii) of the EIA Notification, 2006 exempting fresh public hearing.

The EAC further deliberated the objection raised by complainant Sh. K.K. Solanki vide his mail dt. 19.08.2020, clarifications submitted by PP was found satisfactory.

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 treated effluent of 108.4 MLD (Desalination/RO Reject) &36.5 MLD shall be sent for deep sea discharge through diffuser recommended by NIO.

(iii) 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.

(iv) 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.

(v) Total fresh water requirement for the proposed project shall not exceed 17.3 MLD to be met from Sea water. Necessary permission in this regard shall be obtained from the concerned regulatory authority.

(vi) Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.

(vii) 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.

(viii) 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.

(ix) 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.

(x) 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.

(xi) 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.

(xii) As proposed 0.25% of the total project cost shall be allocated towards Corporate Environment Responsibility (CER). As proposed, the CER allocation shall be spent mainly for addressing the issues raised during public consultation/hearing including education/skill development/solar lights, etc., and shall be completed within 5 years. The amount proposed in CER shall be spent during execution of the project and shall not be linked with the CSR.

(xiii) 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.

(xiv) 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.

(xv) 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.

(xvi) Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.

(xvii) Process safety and risk assessment studies shall be further carried out using advanced models, and the mitigating measures shall be undertaken/implemented accordingly.

(xviii) 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.

Agenda No.22.3

Installation of 9 MMTPA Grass root Cauvery Basin Refinery at Panangudi village, Tehsil & District Nagapattinam, Tamil Nadu by M/s CHENNAI PETROLEUM CORPORATION LIMITED - Consideration of Environmental and CRZ Clearance

[IA/TN/IND2/76843/2018, IA-J-11011/276/2018-IA-II(I)]

The project proponent and their accredited consultant M/sEngineers India Limited made a detailed presentation on the salient features of the project through Video Conferencing (VC).

The proposal was earlier considered by the EAC in its meeting held during 18th June, 2020. The additional information desired by the Committee and response from the project proponent is as under:

S. No.	Query Raised in earlier EAC meeting	Query Reply Given by PP
1.	Confirm the applicability of CRZ Notification/CRZ Clearance for the project site as well as the proposed pipeline. Also, submit Marine Conservation plan.	CRZ clearance is applicable for the proposed project as Single Point Mooring (SPM), sub-sea pipelines, Land Fall Point and associated facilities, intake & outfall pipelines of desalination plant comes under CRZ areas. However, the proposed Cauvery Basin Refinery is not coming under CRZ areas. There shall be SPM of Catenary Anchor Leg Mooring (CALM) type and associated facilities shall be installed at approximately 19.5 km within sea limits & Land Fall Point (LFP) shall be at Nagapattinam coast area, close to existing CPCL Jetty area. Crude Oil Terminal (COT) will be located within the Refinery boundary. Product dispatch will be through pipeline to Karaikal port. Institute of Remote Sensing, Anna University, Chennai has carried out CRZ study. The proposed project site falls within administrative boundary of Nagapattinam Town and falls inside CRZ as per Approved CZMP

		prepared by NCSCM, Chennai and published by Tamil Nadu State Coastal Zone Management Authority (TNSCZMA) and Puducherry Coastal Zone Management Authority (PCZMA). CRZ Maps were prepared as per CRZ Notification 2011. The offshore and onshore facilities are passing through CRZ IB, CRZ III, NDZ areas of Karaikal region of Puducherry Union Territory and CRZ IB, CRZ II, CRZ IVA of Tamil Nadu State. TNSCZMA recommended the proposal to MoEFCC vide letter no. 4936/EC.3/2020-1 dated 21/03/2020. PCZMA recommended the proposal to MoEFCC vide letter no. 3531/DSTE/PCZMA/CLR/SCI/2020/719 dated 10/03/2020. The NOC/CTE was granted for the proposed pipelines passing through Karaikal region vide letter no. 3532/PPCC/CTE/TRP/KKL/JE/2020/1403 dated 09/03/2020. Recommendation letters from TNSCZMA and PCZMA has been submitted.
2.	Public hearing issues, action plan along with budget provisions.	Action plan to address issues raised by villagers during public hearing with budgetary provision and timeline has been already provided in section 7.6 of EIA report and attached
3.	*Comparison of emission w.r.t. Sulphur content with other refineries*	SO2 emission for other Indian Refineries has been submitted
4.	*Revised water balance with improvement in evaporation loss and commitment not to use ground water*	The refinery water requirement will be met from sea water through installing Desalination Plant. Maximum 8863 m3/hr sea water will be taken to desalination plant. Entire ETP treated effluent along with cooling tower blow downs and boiler blow down is already envisaged to be further treated in RO based Recycle Plant (RO-DM Plant) for generation of DM water. Total reject water generation from RODM Plant is

		envisaged to be 360 m3/hr, which shall normally be routed as feed to sea water desalination plant. Total reject water discharge to sea shall not exceed 5923 m3/h. The total desalinated water requirement for the complex is 3300 m3/hr. Total re-circulating cooling water flow rate is 101260 m3/hr. The evaporation & drift losses are estimated as 2228 m3/hr (2.2% of recirculation flow) and liquid blow-downs are estimated as 608 m3/hr (0.6% of recirculation flow) based on 12 deg. Centigrade temperature range as per standard design practice. The drift loss, evaporation loss and blow down quantity of proposed cooling towers have been rechecked and updated as per comments by EAC. The cooling towers will have high efficiency drift eliminators and be installed as per available state of the art cooling tower technologies. At present, about 72 m3/hr of water is being received from Sooranur wells (approximately 12 km from CBR) through pipeline for the existing 1 MMTPA Refinery. The Sooranur wells water will be used during the construction phase of the refinery. Updated water balance for the proposed project has been submitted
5.	*Socio-economic status report of the study area*	Baseline data for demographic characteristics, education, health, and amenities for locations existing around the project area have been studied and examined to assess the socio-economic status for the proposed project during March - May 2018 as per Terms of Reference (TOR). The socio-economic aspects of the 10 km study area are assessed using primary and secondary data. Households/respondents were interviewed with the structured questionnaire specifically designed for this study keeping in view the objectives of the study. Secondary data was collected from published

		sources i.e. Census Data of 2011. Detailed socio-economic status of the study area is given in section 3.10 of Chapter-3 of EIA report.
6.	*Detailed CER plan along with action plan for drinking water facility for the people*	CPCL will carry out various Corporate Environment Responsibility (CER) activities like Drinking water supply & Sanitation, Fishermen/Farmer Community Health Support and welfare, Education and Skill Development etc. during next 5 years in the vicinity of proposed project area. The budget for CER activities is provisioned as Rs.57.635 Crores (approx. 0.175 % of total project cost in line with MoEFCC Page 4 of 6 Sl No. Additional information/ inputs sought by EAC-Industry-II Reply from CPCL Notification vide F.No.22-65/2017-IA.III; dated: 01.05.2018). Activity and year wise detailed CER plan has been provided
7.	*Provision for employment to the local people*	Equal opportunity is available to all the qualified youth to apply against the notified vacancies. Further, apart from the regular employment, large number of work force during construction activities will come from local areas which will provide opportunity for indirect employment. During operation phase also, local people who are adequately qualified will get the opportunity for the direct/indirect employment and will be eligible for the applicable relaxations as per the applicable Govt. rules.
	In view of several recent chemical accidents occurred in various parts of the country, the risk studies need to be carried out based on the following protocol using 3D modelling which incorporates dispersion of vertical component vital for developing&placing accident prevention program in place:	The project proponent has confirmed that they will carry out 3D CFD analysis during detailed engineering phase of project when exact locations of equipment layouts, open and closed structures, piping, buildings etc. are finalized to identify individual risk and societal risk. Based on which FN curve shall be plotted. Process Safety and Risk Management (PSRM) report using 3D CFD modelling shall be shared with MoEFCC.

	• *Material Safety Data Sheet (MSDS/MDS)* • *Hazard Identification, Consequence analysis in terms of effect / threat zone distances.* • *Risk need to be carried out for Small, Medium, Larger and Catastrophic ruptures /leak and to be modeled as representative cases.Frequency/Probability of leak per year.* • *Risk needs to be quantified in termsof Individual Risk Contours* • *Societal risk* • *F-N curves to assess against risk acceptance criteria (HSE,UK etc.)..*	
	Air dispersion formula to determine stack height	All stack height considered in CBR project is calculated based on the above formula and considering flue gas quantity, volumetric flow rate, fired duty etc. The minimum stack height is considered 30 m. All stack details with height in the refinery is provided in Chapter 4 of EIA report.
	Plan for installation of solar power and utilization in the plant	CPCL will plan and install solar panels in buildings like warehouse, Administrative building, Canteen, substation and control room in the refinery area. Solar powered Street lights will be installed in the refinery roads and township. The approximate capacity of the installation would be 250 KW at a capital cost of Rs. 1.2 Crores.
	Details of wildlife sanctuary/ESA and environmental sensitivity within 10 km of the project	There is no Wildlife Sanctuary/National Park/Eco-sensitive Areas/Environmental sensitivity within

	site.	10 km of the project site.

During deliberations, the EAC noted the following:

The proposal is for Environmental and CRZ Clearance to the project for installation of 9 MMTPA Cauvery Basin Refinery in existing refinery premises by M/s Chennai Petroleum Corporation Limited at Panangudi village, Tehsil & District Nagapattinam (Tamil Nadu).

The details of products and capacity as under:

Sr No.	**FEEDS**	**KTPA**
1	LPG	676
2	Polypropylene	532
3	BS VI Regular Gasoline	1260
4	BS VI Premium Gasoline	540
5	Total Gasoline	1800
6	ATF	300
7	BS VI Diesel	3998
8	Sulphur	238
9	DCU Coke	221
10	Fuel & Loss	1253
Total Products including Fuel & Loss		9018

Standard ToR for the project was issued vide letter dated 11th October, 2018 for the proposed project. Public Hearing for the proposed project has been conducted by the Tamil Nadu Pollution Control Board on 20.09.2019at CPCL Township, Tehsil &District-Nagapattinam near to the existing refinery. The hearing was presided over by the District Collector, Nagapattinam. The main issues raised during the public hearing were related to employment generation, socio economic development, infrastructure developmentand environment only.

The project/activity is covered under category A of items 4(a) "Petroleum Refining Industry", 5(c) "Petro-chemical complexes" and 6(a) "Oil & Gas transportation pipeline" of the Schedule the Environment Impact Assessment (EIA) Notification, 2006 and requires appraisal at Central Level by the Expert Appraisal Committee (EAC) in the Ministry.

The details of earlier clearances issued by the Ministry in favour of M/s CPCL is as under: -

S. No	Project	EC letter no.	Date of EC
1.	Setting up Distillation facilities at Cauvery Basin	J-11011/19/89-IA.II	24/05/1991
2.	Development of Jetty facilities for import of crude and export of petroleum products at Nagapattinam Port	J-16011/31/2001-IA-III	29/05/2001
3.	Capacity Expansion from 0.5 MMTPA to 1.0 MMTPA and Setting up GSU/ LPG Recovery Unit	J-11011/69/2004–IA-II	25/10/2004
4.	Crude Oil Pipeline between Karaikal Port Pvt. Ltd. to the existing Chidambaranar Oil Jetty	11-82/2010-IA.III	18/11/2010

The existing 1 MMTPA refinery at Panangudi village is going to be dismantled while retaining some utilities. The refinery is already in shutdown since July 2019 and subsequently oil jetty is in idle condition.Crude is being received from **M/s ONGC** and the same is transferred to Chennai through pipeline via M/s Karaikal Port Private Limited (KPPL).

Total area requirement for Cauvery Basin Refinery is 1338.29 acres in Tamil Nadu State and 6.33 acres in Karaikal region in Puducherry UT (for Pipeline corridor). The existing refinery area is 618.29 acres. Balance land of 726.33 acres (720 acres in Tamil Nadu& 6.33 acres in Karaikal district of Puducherry UT) is under acquisition by CPCL.436.5 acres covering 33.5 % of the total complex area (1303 acres). The existing 324 acres greenbelt area within the refinery will be retained and utmost care will be taken to protect the existing greenbelt. The estimated project cost is Rs. 32908 crores.Total capital cost earmarked towards environmental pollution control measures is Rs. 199.40croresand the recurring cost (operation and maintenance) will be about Rs.3crores per annum. Direct employment will be 600 persons & indirect employments will be1000 persons during operation phase of the refinery.

There ArenoNational Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site. River Vettaris flowing at a distance of 2 Km in South direction from the proposed project.

Ambient air quality monitoring was carried out at 10locations during March to May 2018 and the baseline data indicates the ranges of concentrations as PM10 (46-78µg/m3), PM2.5 (24-46µg/m3), SO2 (5-10µg/m3) and NO2 (8-16µg/m3) respectively. Air quality modeling wascarried out for the proposed project. 24 hourly maximum incremental GLC for SO2 and NOX are predicted as 41.3 µg/m3 and 35.0 µg/m3. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

Total water requirement is 3300 cum/hrwill be met from Desalination Plant with a design capacity of 3300 cum/hr. Effluent will be treated in a new Effluent Treatment Plant of capacity 550 cum/hr and then treated water will be routed to RO-DM facility. The RO reject of 360 cum/hr will be routed to Desalination Plant. There will be a discharge of 5923 cum/hr to Sea through a pipeline.

Power requirement will be 205 MW and will be met from internal Captive Power Plant (170 MW) and Tamil Nadu State electricity grid (35 MW). Unit will have additionally 02 DG sets of 5 MVA each will be used as standby during power failure. Adequate Stack height (15m) will be provided as per CPCB norms.

Fuel Gas/Fuel Oil/coke fired boilers will be installed. Multi cyclone separator/ bag filter with a minimum stack of height of 60 m will be installed on boilers for controlling the particulate emissions within the statutory limit of 115 mg/Nm3.SOx emission from the proposed project shall be 22.3 Tons per Day (929 kg/hr). For emission management, maximum use of fuel gas in heater as fuel, adequate stack height, use of Low NOX burners in heaters& boilers, continuous stack monitoring, developing structured green belt etc. shall be carried out. Hazardous solid waste like spent catalyst will be disposed off to CPCB approved recyclers. Inert balls, Adsorbents and Grading material from different process units will be sent to nearest TSDF sites/secured landfill. ETP chemical sludge will be sent to secured Landfill site within the refinery premises and bio-sludge will be used as manure. A Provision is also kept for processing the ETP sludge in Delayed Coker Unit. Tank bottom sludge will be disposed off to secured landfill after oil recovery

Institute of Remote Sensing, Anna University, Chennai has carried out CRZ study. The proposed project site falls within administrative boundary of Nagapattinam Town and falls inside CRZ as per Approved CZMP prepared by NCSCM, Chennai and published by Tamil Nadu State Coastal Zone Management Authority (TNSCZMA) and Puducherry Coastal Zone Management Authority (PCZMA). CRZ Maps were prepared as per CRZ

Notification 2011. The offshore and onshore facilities are passing through CRZ IB, CRZ III, NDZ areas of Karaikal region of Puducherry UT and CRZ IB, CRZ II, CRZ IVA of Tamil Nadu.

TNSCZMA recommended the proposal to MoEF&CC vide letter no. 4936/EC.3/2020-1 dated 21/03/2020. PCZMA recommended the proposal to MoEF&CC vide letter no. 3531/DSTE/PCZMA/CLR/SCI/2020/719 dated 10/03/2020. The NOC/CTE was granted for the proposed pipelines passing through Karaikal region vide letter no. 3532/PPCC/CTE/TRP/KKL/JE/2020/1403 dated 09/03/2020.

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 and incremental GLC due to the proposed project within NAAQ standards. The Committee has also deliberated on the public hearing issues, action plan and CER plan and found to be addressing the issues in the study area and the issues raised during the public hearing. 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 (EC).

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 and CRZ 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 treated effluent of 5923 cum/hrshall be discharge in sea through pipeline.

(iii) 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.

(iv) 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.

(v) Total fresh water requirement for the proposed project shall not exceed 3300 cum/hr to be met from Sea water. Necessary permission in this regard shall be obtained from the concerned regulatory authority.

(vi) Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.

(vii) 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.

(viii) 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.

(ix) 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.

(x) The company shall undertake waste minimization measures as below: -
(xi) Metering and control of quantities of active ingredients to minimize waste.
(xii) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.
(xiii) Use of automated filling to minimize spillage.
(xiv) Use of Close Feed system into batch reactors.
(xv) Venting equipment through vapour recovery system.
(xvi) Use of high pressure hoses for equipment clearing to reduce wastewater generation.

(xvii) 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.

(xviii) As proposed 0.25% of the total project cost shall be allocated towards Corporate Environment Responsibility (CER). As proposed, the CER allocation shall be spent mainly for addressing the issues raised during public consultation/hearing including education/skill development/solar lights, etc., and shall be completed within 5 years. The amount proposed in CER shall be spent during execution of the project and shall not be linked with the CSR.

(xix) 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.

(xx) 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.

(xxi) 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.

(xxii) Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.

(xxiii) Process safety and risk assessment studies shall be further carried out using advanced models, and the mitigating measures shall be undertaken/implemented accordingly.

(xxiv) 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.

Agenda No. 22.4

Expansion of onshore oil & gas processing plant at Uran by establishing Additional Cogeneration Unit GT-IV and Enhanced Reactive Thermal Oxidizer (ERTO) within the existing Uran Plant, Uran, Maharashtra by M/s OIL AND NATURAL GAS CORPORATION LIMITED– Reconsideration of Environment Clearance

[IA/MH/IND2/148052/2018, IA-J-11011/635/2008-IA-II(I)]

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

The proposal was earlier considered by the EAC in its meeting held on 18th June, 2020. Additional information desired by the Committee and information submitted by the project proponent is as under:

(i) Revised proposal combining the production/ utilities in the plant complex

SN	UNIT	CAPACITY	Unit
EXISTING			
1	Crude stabilization Units 5 trains	25.00	MMTPA
2	Gas sweetening Units 3nos	15.75	MMSCMD
3	LPG recovery Units 3 nos	16.95	MMSCMD
4	Ethane Propane recovery Unit 1 no	08.54	MMSCMD
5	Condensate fractionation unit 3 nos	195	TPH
6	Condensate handling units 3 nos	200	TPH
7	Power generation 3 nos	58.8	MW
8	Steam generation 3nos HRSGs and 1 nos Gas fired Boiler	330	TPH
PROPOSED			
9	Enhanced Reactor Thermal Oxidiser	0.4	MMSCMD

10	Power generation	20	MW
11	Steam Generation	60	TPH

S.No.	Product Details	Existing Quantity	Proposed Quantity	Total Quantity
1.	Power	58.8 MW	20 MW	78.8 MW
2.	Steam	330 TPH	60 TPH	390 TPH
3.	Natural Gas	16 MMSCMD	Nil	16 MMSCMD
4.	Crude Oil	20 MMT	Nil	20 MMT
5.	LPG	0.625 MMTPA	Nil	0.625 MMTPA
6.	C2C3	0.625 MMTPA	Nil	0.625 MMTPA
7.	Naphtha	0.33 MMTPA	Nil	0.33 MMTPA
	Total	-	-	-

(ii) & (iii) Requirement of CRZ clearance for the project/ plant and the pipeline and CRZ map of the plant area 1:4000 scale

Maharashtra Coastal Zone management authority, vide letter no. CRZ-2015/CR-387/TC-4 dated 04.10.2016 noted that the gas Processing facility at ONGC, Uran is beyond the CRZ area. The copy of the MCZMA letter and CRZ map prepared by Institute of Remote Sensing, Anna University for desalination unit at Uran is attached.

In earlier ECs, for the facilities established with in the plant premises, CRZ was not required. Hence CRZ clearance for the project has not been considered.

(iv) Recent base line data collected from the existing detectors in the plant and adjoining area for the critical parameters.

Ambient air quality data for Jan-March 2020 is summarized in the following table:

Parameter	Values (µg/m3)	NAAQ Standard (µg/m3)	Method of analysis
PM10	58-83	100	IS 5182 (Part 23): 2006, WI/SAP-AA/5/1
PM2.5	28.9-45	60	CPCB Guidelines, Volume I,36/2012-13, Page no. 15, WI/SAP-AA/5/1,
SO2	7.09-11.8	80	IS 5182 (Part 2):2001,Reaffirmed 2006, WI/SAPAA/5/2
NOX	23-38.2	80	IS 5182 (Part 6): 2006, WI/SAP-AA/5/3

NH3	12.4-31.4	400	AWMA,3rd Ed., Method 401, Page no.35,1988, WI/SAP-AA/5/6
Benzene	1.1-4.4	5	IS 5182 (Part 11) : 2006, Reaffirmed 2009, WI/SAP-GC/5/6

Ambient Air quality report for May 2020 has been attached

(v) Sources of emissions in the plant and details of detectors based on 3D assessment

The typical sources of emissions are from the following stacks

1. Furnaces of LPG-I, II & III
2. HRSG I, II & III
3. Gas fired boiler
4. ERTO plant

ONGC installed stack monitoring systems for measurement of emission parameters like SO_2, NO_x, CO & PM for these Stacks. The stack monitoring systems are connected to CPCB servers for online monitoring.

Over and above the following Gas detectors are installed within the plant premises based on risk analysis and risk assessment.

Sl No.	Area	HC Detector	H2S Detector	SO2 Detector
1	GSU/EPRU/CFU-I/CFU-II	**152**	**39**	**-**
2	LPG/CSU	**363**	**31**	**-**
3	Co-Gen	**30**	**-**	**-**
4	**APU**	**75**	**21**	**-**
5	**ERTO**	**1**	**4**	**1**

(vi) Management of odour/ Hydrogen Sulphide emission

The current proposal of Enhanced Reactive Thermal Oxidizer (ERTO) is for mitigation of this odour caused by H2S only. After commissioning of the unit, H2S will be virtually eliminated. ONGC has installed adequate number of detectors at various locations within the plant to monitor H2S presence in the atmosphere.

(vii) Plan for recovery of 75% of the effluent disposed to the sea

ONGC Uran received Consent to Operate (CTO) from MPCB with a discharge limit of 9000 m3/day treated effluent through closed pipeline into sea. CTO is attached. Present quantity of effluent discharged to sea is 6800m3. ONGC is installing RO based recycle plant to treat and recycle ETP treated effluent as part of ETP modernization project. After completion of the project, ONGC will be recycling 4800 M3/day ETP treated effluent which is app. 71% of the effluent discharged to sea. The RO recycled water will be

used for process requirements. The project is under execution. PFD of the proposed system is attached
Over and above ONGC Uran has also installed STPs to treat 52 KLD of sewage effluent and the treated effluent shall be used for gardening purposes.

(viii) Safety audit of the unit

Internal & external safety audits of ONGC Uran Plant are being carried out as per statutory requirements and QHSEMS policy. The following audits are regularly conducted:

Sl.no.	Audit	Frequency of Audit	Last audit conducted
1	External Safety Audit by safety auditors recognised by Directorate of Industrial Safety & Health (DISH), Govt. of Maharashtra as per Maharashtra Factories Safety Audit Rules-2014.	Once in two years	17-19 December 2018 (Next Audit will be completed by Nov 2020)
2	Oil Industry Safety Directorate (OISD), MoPNG	Once in 4 years	19-22 August 2019
3	Internal safety Audit (Corporate HSE, Delhi & Offshore HSE, Mumbai)	Once in a year	20-22 November 2019
4	External QHSE Audit (ISO-9001:2015, ISO-14001:2015 & ISO-45001 ;2018)	Once in a year	June 2019

(ix) Public hearing issues, action plan along with budget provisions

Action plan to address issues raised by villagers during public hearing has been provided along with budget and timeline

(x) Detailed CER plan with provisions for improvement of fishery/ fishermen in the study area

The budget for CER activities is provisioned as Rs. 2.27 Crores (approx. 0.84 % of total project cost in line with MoEFCC notification vide F.No.22-65/2017-IA.III; dated: 01.05.2018) and Detailed of CER activities plan is given below:

Sl. No.	CER Activities	1st Year (Rs. In Lakhs)	2nd Year (Rs. In Lakhs)	3rd Year (Rs. In Lakhs)
1.	Drinking water supply & Sanitation	30	20	**25**
2.	Community Health Support and welfare	10	10	**12**
3.	Education and Skill Development	10	10.7	**10**
4.	Support in Infrastructure/ Transport facility	5	7	**8**

5.	Technical Support to local fishermen/ farmers	5	15	**5.7**
6.	Awareness for solar electrification and solid waste management	5	5	**5**
7.	Rain water harvesting and Tree plantation	10.7	8	**10**
Total Expense (Rs. In Lakhs)		**75.7**	**75.7**	**75.7**

Being near to the sea, ONGC is actively involved in supporting the fishermen communities of the area as well. In pursuance of these goals, ONGC has also carried out the following projects for the fishermen communities:Vocational training for youth of fishermen community (Rs 80.0 Lakhs); Support for adivasi families during COVID-19 Crisis (Rs 5.0 Lakhs); Support for families of fishermen during COVID-19 Crisis (Rs 10.0 Lakhs); Relief material was provided to the 30 fishermen societies (Rs 50.0 Lakhs).

(xi) Compliance status of existing EC conditions

ONGC Uran plant has obtained the following ECs obtained since 1990:

Sl No	**Projects/ Units**	**Environment Clearance document**	**Date**	**Compliance**
1.	5,70,000 MTPA Ethane-Propane Recovery Unit (EPRU)	J-11011/12/87-IA	14.06.1990	Complied
2.	Additional Co – Generation Facility	J-13011/18/95-1A-II	01.12.1995	Complied
3.	Uran-Trombay–JawaharDweep 36" Oil pipeline Project	J-82/2004-IA, III	20.12.2006	Complied
4.	20" UranTrombay Gas Pipeline Project	11-61/2007-IA-III	02.11.2007	Complied
5.	Additional Process Facilities & Debutanisation Projects	J-11011/635/2008-IAII(I)	20.09.2010	Complied
6.	Expansion of Uran Oil & Gas processing plant by Adding LPG bullets at Uran Complex	J-11011/354/2016-IA-II(I)	21.02.2018	Complied
7.	CRZ clearance for setting up of 20 MLD SWRO Desalination Plant inside ONGC Uran Plant	11-24/2017-IA-III	03.10.2017	Not Complied (Construction yet to start)

MoEFCC has issued six nos. environment clearances and one no CRZ clearance since 1990 forUran plant in various occasions as and when there are new units/ expansions. Six monthly compliances for earlier ECs are sent to MOEFCC regularly. MOEFCC WCZ visited Uran plant and after thorough study, issued certified compliance report for earlier ECs on 02.02.2018. Certified Compliance report is attached.

(xii) Plan for installation of solar power and utilization in the plant

Uran Plant has installed 130KW Grid connected Solar Power Plant which has generated 4.5 lakh units of electrical power since inception and all units are fully utilized. There is no further space available at Uran to install solar panels.
ONGC has also installed 25 MW cumulative solar power generation capacity, as a part of its efforts for environment conservation.
The solar installed capacity has a mix of Roof Top plants (cumulative capacity – 7.95) spread across various work centres, and 17 MW cumulative capacity of ground-mounted solar plants which are in operation at four locations (Hazira, Ankleshwar, Rajahmundry & Goa).

(xiii) Details of wild life sanctuary/ESA within 10km of the project site

There are no national parks, wild life sanctuaries, bio sphere reserves, Tiger/Elephant reserves, wild life corridors etc, within 10 km of the project site**.**

(xiv) Details of green belt development in the plant, around the periphery and outside

Outside the plant premises ONGC has carried out plantation and green cover development:
1. ONGC has planted more than 2 lakh trees on nearby Dronagiri hill which was previously barren, through helicopter seeding in an area of 2.74 sqkms (274 hectare). The land cover of the hill has completely transformed after plantation.
2. ONGC Uran has also developed a green belt of 20 mtrs width along the periphery of the premises on an approximate stretch of 1.5 kms by planting approximately 1500 trees. The total area of this green belt is approximately 30000 sqmtrs.
3. Also, a total of 33500 mangroves and 1500 trees were also planted along RoU corridor of pipelines.
4. In consultation with Uran Taluka Agricultural Officer, plantation of 40,000 Cashew saplings in and around Uran costing Rs. 16,00,000 has been earmarked. Plantation work has been started and till January, 1000 saplings were planted.

Outside the premises, ONGC Uran Plant has developed green belt in approximately 277 hectarei.e approximately 250% of the plant area i.e 112 Hectare.In future also ONGC Uran will continue to carry out plantation activities in and around the plant in consultation with local Agricultural/ Forest department. Also 1000 fruit bearing trees will be planted in surrounding

villages in consultation with the gram panchayats so that the villagers can get some economic benefits.

The proposal is for environmental clearance to the project for Expansion of onshore oil & gas processing plant at Uran by establishing Additional Cogeneration Unit GT-IV and Enhanced Reactive Thermal Oxidizer (ERTO) within the existing Uran Plant, Uran, Maharashtra by M/s Oil and Natural Gas Corporation Limited.

Standard TOR was issued vide letter no. J-11011/635/2008-IA.II(I)dated 22nd March, 2018 for the proposed project.

The project/activity is covered under category A of items 5(c)"Petro-chemical complexes" of Schedule of Environmental Impact Assessment (EIA)Notification 2006 and requires appraisal at Central Level by Expert Appraisal Committee (EAC).

The proposed project is Expansion project. Ministry had issued ECs earlier vide (a) Letter no.J-11011/12/87-IA dated 14.06.1990 for 5,70,000 MTPA Ethane-Propane Recovery Unit (EPRU), (b) Letter no.J-13011/18/95-1A-II dated 01.12.1995 for Additional Co – Generation Facility, (c)Letter no. J-82/2004-IA, III dated 20.12.2006 for Uran-Trombay– JawaharDweep 36""Oil pipeline Project, (d)Letter no.11-61/2007-IA-III dated 02.11.2007 for 20" Uran-Trombay Gas Pipeline Project, (e) Letter no.J-11011/635/2008- IAII(I) dated 20.09.2010 for Additional Process Facilities &Debutanisation Projects, (f) Letter no. J-11011/354/2016-IA-II(I) dated 21.02.2018 for Expansion of Uran Oil & Gas processing plant by Adding LPG bullets at Uran Complex and (g) Letter no.11-24/2017-IA-III dated 03.10.2017 for CRZ clearance for setting up of 20 MLD SWRO Desalination Plant inside ONGC Uran Plant in favour of M/s. Oil and Natural Gas Corporation Limited.

The total land area requirement of the project is 5500 sq. mtrs. The land is available within existing ONGC Uran plant complex (Total plant area: 112 hectares).

Proponent has developed green belt/ cover in 7400 sq. m area out of available 11665 sq. m open area. This Greenbelt constitutes 0.66% of the total area of the project i.e. 112 hectares. Proponent has already utilized the maximum available area inside complex that can be available for green belt/ cover. Proponent has carried out extensive plantation of more than 2 lakh trees (area 2.74 sq. Kms) outside the complex boundary on the adjacent Dronagiri hill and will also continue the same in consultation with local forest/ agriculture department.

The estimated project cost is Rs. 268.95 crores. Total capital cost earmarked towards environmental pollution control measures is Rs. 166 lakhs and the recurring cost (operation and maintenance) will be about Rs. 55 lakhs per annum.

Direct employment will be 20 persons during operation& indirect employment for 200 persons during construction phase. ONGC proposes to allocate Rs2.27crorestowards Corporate Environment Responsibility (CER).

There are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. lies within 10 km distance from the project site. Arabian sea is present at 900 meters away from ERTO project site and 300 meters away from GT-IV project site in West direction.

Ambient air quality monitoring was carried out at 8 locations during March to May, 2017 submitted baseline data indicates that ranges of concentrations of PM_{10} (42.8- 63.8 µg/m3), $PM_{2.5}$ (18.4- 34.9µg/m3), SO_2 (5.2- 9.4µg/m3) and NO_2 (13.2- 34.4 µg/m3) respectively. There will be 2 nos. stacks in the proposed project. Air quality modeling was carried out for the proposed project. 24 hourly maximum incremental GLC for SO_2 and NO_X are predicted as 1.44 µg/m3 and 1.52 µg/m3. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

Total fresh water requirement will be 220 m3 / day (9.2 m3/hr) which will be met from existing supply of Maharashtra Industrial Development Corporation (MIDC).

There shall be 100 m3/day (4.2 m3/hr) of liquid effluent generation from proposed project. This effluent which is mainly brine solution of Sodium Sulfite (Na_2SO_3), will be diluted with treated ETP waste water and disposed off to sea along with existing ETP treated waste water.

Power requirement for the proposed project will be 750KW and will be met from internal generation. In case of power failure, existing DG set shall be used for power requirement.

Existing ONGC Uran plant has three (03) gas turbines (total cap. 58.8 MW) and heat recovery steam generators (total cap. 240 TPH) and 90 TPH gas fired boiler. Additionally, installation of an additional gas turbine (Cap. 20 MW) and heat recovery steam generator (cap. 60 TPH) is proposed. Minimum Stack height of 30 m will be provided for the proposed Gas Turbine (GT) stack.

Total SO_2 emission from the proposed project will be 5.2 kg/hr. For emission management: Gaseous fuel will be used in GT to minimize air emission, All the emission standards will be met for gaseous emissions, Continuous stack monitoring for ambient air pollution, Leak Detection and Repair (LDAR) programme for fugitive hydrocarbon emission control, Ensuring preventive maintenance of equipment, Developing green belt/cover.

No Solid waste generation is envisaged from proposed project. Solid wastes from existing plant is handled as per Hazardous and Other Wastes (Management & Trans boundary Movement) Rules, 2016 and it's amendments.

Public Hearing was conducted on 28.08.2019 at Uran, Dist.- Raigad, Maharashtra near to the project site. The hearing was presided over by the

Additional District Magistrate, Raigad. The main issues raised during the public hearing were related to Employment to Project Affected Persons (PAP), Land Compensation to PAP, Employment to Locals, Employment after imparting training / Skill development program, CSR fund, Health facilities to Nearby Villagers.

Regional Office of MoEFCC issued Certified Compliance Report vide F.No 5-52/2010(ENV)/3200 dated 02/02/2018 for ONGC-Uran complex.

There is no litigation pending against the proposal.

The details of products and capacity as under:

S.No.	Product Details	Existing Quantity	Proposed Quantity	Total Quantity
1.	Power	58.8 MW	20 MW	78.8 MW
2.	Steam	330 TPH	60 TPH	390 TPH
3.	Natural Gas	16MMSCMD	Nil	16MMSCMD
4.	Crude Oil	20MMT	Nil	20MMT
5.	LPG	0.625MMTPA	Nil	0.625MMTPA
6.	C2C3	0.625 MMTPA	Nil	0.625 MMTPA
7.	Naphtha	0.33 MMTPA	Nil	0.33 MMTPA

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 and incremental GLC due to the proposed project within NAAQ standards. The Committee has also deliberated on the public hearing issues, action plan and the CER plan and found to be addressing the issues in the study area. Certified report on compliance of existing EC conditions also found to be satisfactory. The Committee noted that as per the submission of the project proponent and the letter from MSCZMA dated 4th October, 2016, the proposed site is not falling in the CRZ areas. The Committee also found the additional studies and information submitted and presented by the project proponent to be satisfactory.

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). As already committed by the Project proponent, 71 % of the effluent discharged to the sea shall be recovered and reused to reduce the fresh water requirement. The present effluent discharge to the sea is 6800 cum/day, out of which 4800 cum/day shall be treated through ETP/RO system and reused in the plant/process. Only the remaining shall be sent for sea discharge after meeting the prescribe standards.

(iii). To control source and the fugitive emissions, suitable pollution control devices shall be installed with different stacks to meet the prescribed norms as notified by MOEFCC 2012 for new refineries.

(iv). Total fresh water requirement shall not exceed 220 cum/day to be met from MIDC water supply. Necessary permission in this regard shall be obtained from the concerned regulatory authority. The fresh water requirement shall be reduced after installation/modernization of ETP and recovery of 71% of treated water.

(v). Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.

(vi). 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.

(vii). 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. The ash from boiler shall be sold to brick manufacturers/cement industry.

(viii). Regular VOC monitoring shall be done at vulnerable points.

(ix). The oily sludge shall be subjected to melting pit for oil recovery and the residue shall be bio-remediated. The sludge shall be stored in HDPE lined pit with proper leachate collection system.

(x). Comprehensive water audit to be conducted on annual basis and report to the concerned Regional Office of MEF&CC. Outcome from the report to be implemented for conservation scheme.

(xi). Oil catchers/oil traps shall be provided at all possible locations in rain/ storm water drainage system inside the factory premises.

(xii). 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 cleaning etc. to reduce wastewater generation.

(xiii). The green belt of 5-10 m width shall be developed in more than 33% of the total project area, mainly along the plant periphery, in downward wind direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.

(xiv). As committed Rs. 2.27 crores shall be allocated for Corporate Environment Responsibility (CER) shall be utilized for meeting the commitment of the issues of public hearing. The CER plan shall be completed before commissioning/within three year of the expansion of the project.

(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.

(xvi). 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.

(xvii). 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. In case of the treated effluent to be utilized for irrigation/gardening, real time monitoring system shall be installed at the ETP outlet.

(xviii). PP to set up occupational health Centre for surveillance of the worker's health within and outside the plant on a regular basis. 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.

(xix). The National Emission Standards for Petrochemical (Basic & Intermediates) issued by the Ministry vide G.S.R. 820 (E) dated 9th November, 2012 as amended time to time shall be followed.

(xx). Recommendations of mitigation measures from possible accident shall be implemented based on Risk Assessment studies conducted for worst case scenarios using latest techniques.

Agenda No. 22.5

Setting up 500 KTA Propane Dehydrogenation unit integrated with Polypropylene Unit at Raigardh (Maharashtra) by M/s GAIL INDIA LIMITED- Reconsideration of Environment Clearance

[IA/MH/IND2/69404/2017, IA-J-11011/464/2017-IA-II(I)]

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

The proposal was earlier considered by the EAC in its meeting held during 18th June, 2020. The information desired by the Committee and response of the project proponent is as under:

Sl. No.	Additionalinformation /inputssoughtbyEAC-Industry-II	Replyfrom GAIL
1.	Publichearingissues,actionplanalong withbudgetprovisions.	Actionplanto addressissuesraisedbyvillagersduringpublichearinghasbeenupdatedalongwiththebudgetprovisionandtimeline. UpdatedPublichearingactionplanhasbeen attached.
2.	Revisedwaterbalancewithimprovement inevaporationloss.	Treatedwaterrequirementhasalreadybeenreducedfrom 500m3/hrto480m3/hrafterdeliberationduringpreviousEACmeetingheld in Nov'19. Thetotalrecirculatingcoolingwaterflow rateis17000m3/hr. Theevaporation&driftlossesareestimatedas356m3/hr(~2%ofrecirculationflow)andliquidblow-downsareestimatedas88m3/hr(~0.5%ofrecirculationflow)basedon12deg.Centigradetemperature rangeasperstandarddesign practice. Thedrift-loss,evaporationlossandblowdownquantityofproposed coolingtowershavebeenre-checkedaspercomments byEACandfoundin linewithbest International engineeringdesign practices. Thecoolingtowerswillhavehighefficiencydrifteliminatorsandbeinstalledasperavailablestateoftheartcooling towertechnologies.

3.	PlanforZLDalongwithME E/modern technology.	EffluentTreatmentPlantfortheComplexwillbeamodernf acilitywithZeroLiquidDischargeUnit,whichwillhaveMult i-EffectEvaporators to maximizerecycleandreuseofwater.Waterbalancediagr amofthecomplexhasbeenattached.
4.	Plan for needbasedhealth programme.	TheairemissionfromComplexisminimalasthefuelused willbenaturalgasandpredictedgroundlevelconcentratio n duetoair emissionis farbelowtheNationalambientair qualitystandard. Proposed plantisZeroLiquidDischarge(ZLD)plant,henceno liquideffluent. Allsolidwastesgeneratedinsideplantareawillbehandled asperSolidWasteManagementRules,2016 and anagreementwithlocally approved TSDFfacility willalsobeputupinplace.Amongthechemicalstobeused duringoperationphase,the followingchemicalsaretoxicinnature:Iso-Propanol,Di-tert-butylPeroxide,HydrazineHydrateSolution.Theusageq uantitiesofthesechemicalsarelessandwillbestoredinca rboys/drumsinsmallquantities.Hence,evenifitleaks,itwil lnotgooutsideoftheplantboundary.Forotherchemicals/ hydrocarbonsviz.PropaneandPropylene,hazardeffectz oneshavebeenidentifiedinRRAstudy.Thesamewillbea ddressedduringdetailedengineeringstageandtakencar einEmergencyResponseandDisasterManagementPla n(ERDMP).Also,anyaccidentaldisasterduetoleakinche micalstoragewillbehandledasperon-siteandoff-siteemergencyplan. Owingtoabove,there willbeminimal effecton theenvironment duetotheproposedplant. Acommunityhealthprogramwillbechalkedouttoprovide healthcarefacilitiestothevillagersinsurrounding areas,inconsultationwithgrampanchayatsandlocal administration. GAILwillupgrade thefacilitiesatnearestGovernment runPrimaryhealthcare facilityatAlibaug(~12kmsfromprojectsite)andalsoarran gemedical campsforlocalpeople,includingsupplying ofmedicines. GAILhasallocatedRs.3.25CroresforCommunityHealth SupportandwelfareprojectsunderCERactivities. The CERamountwillbespentinnext5 years(maximum)

5.	Socio-economicstatusreportofthe studyarea	Baselinedatafordemographiccharacteristics,education,healthandamenitiesforlocationsexistingaroundtheprojectareahavebeenstudiedexaminedtoassessthesocio-economicstatusfortheproposedprojectduring December,2017-March,2018asperTermsofReference. Detailedsocio-economicstatusofthestudyareisgiveninsection3.6of Chapter-3 ofEIAreport. Thesocio-economicaspectsofthe10kmstudyareaareassessedusingprimaryandsecondarydata.Households/respondentswereinterviewedwiththestructuredquestionnairespecificallydesignedforthisstudykeepinginviewtheobjectivesofthestudy.Secondarydatawascollectedfrompublishedsourcesi.e.Census Data of2011.
6.	DetailedCERplanalongwithactionplanfordrinkingwaterfacilityfor thepeople.	GAILwillcarryoutvariousCorporateEnvironmentResponsibility(CER)activitieslikeDrinkingwatersupply&Sanitation,CommunityHealthSupportandwelfare,EducationandSkillDevelopmentlikeschoolsforchildrenetc.duringnext 5 yearsinthevicinity of proposedproject area. ThebudgetforCERactivitiesisprovisionedasRs.20.77Crores(approx.0.31%oftotalprojectcostinlinewithMoEFCCnotificationvideF.No.22-65/2017-IA.III;dated:01.05.2018).ActivityandyearwisedetailedCER planhasbeen providedas**Annexure-C.** **<u>Actionplanforproviding drinkingwaterfacilitytothevillagers:</u>** InUsarVillage,thereare270nos.householdswithatotalpopulationof1300.MajordemandoftheUsarGaonvillagersissupplyofdrinkingwater&GAILwillarrangetosupplyMIDCwatertotheexistingoverheadtankthrougha dedicated pipeline. GAILwillsupplyabout26m3/day(equivalentto20literserpersonperday)ofdrinkingwatertoUsarvillage.GAILwillconsultwithgrampanchayatandlocaladministrationwhileimplementingthe drinkingwatersupplyscheme.Rs.3.38Croreshasbeenallocatedfor DrinkingwatersupplyandsanitationprojectsunderCERactivities.ThetimedurationofCERamountspendingisnext 5 years (maximum).

7.	Provisionforemployment tothelocal people.	Equalopportunityisavailable to allthe qualifiedyouthto applyagainst thenotifiedvacancies. Besideregularemployment,largenumberofworkforced uringconstructionactivitieswillcomefromlocalareas, whichwillprovideopportunityforindirect employment. Duringoperationphasealso,localpeoplewhoareadequa telyqualifiedwillgettheopportunityforthedirect/indirecte mploymentand willbeeligiblefor theapplicablerelaxationsasper theapplicableGovt.rules.
8.	Inviewofseveralrecentc hemicalaccidentsoccurr edinvariouspartsoftheco untry,theriskstudies needtobecarriedoutbas	DuringEIApreparationstage,plotplanandequipmentlay outarepartiallyavailableforthemegaprojectsofOil &Gasindustries.The only tool whichisavailable to carry outRiskAnalysis, is2D softwaremodels. HazardassociatedhasbeenidentifiedwiththeMaterialSaf

	edonthefollowingprotocolusing3Dmodellingwhichincorporatesdispersionofverticalcomponentvitalfordeveloping&placingaccidentpreventionprogram inplace: • MaterialSafetyDataSheet (MSDS/MDS) • Hazard Identification,Consequenceanalysisinterms ofeffect/threatzonedistances. • Riskneedtobecarriedoutforsmall,Medium,LargerandCatastrophic • Riskneedstobequantifiedintermsofindividualriskcontours • Societal risk • F-N curves toassessagainstriskacceptancecriteria(HSE,UK etc.).	etyDataSheet(MSDS)ofthematerialsbeinghandled in theplant. Riskanalysis(RRA)isdoneusingPHASTsoftwarewhichinvolvedidentificationofvariouspotentialhazards& credibleorreasonablybelievablefailuresscenariosforvariousunitsbasedontheirfrequency ofoccurrence& resultingconsequence.Twotypesofscenariosareidentifiedspanningacross variousprocess facilities: Caseswithhighchance ofoccurrencebuthavinglowconsequence,e.g. InstrumentTapping Failureand Caseswithlowchanceofoccurrencebuthavinghighconsequence,e.g.,LargeHoleonthebottomoutletofPressureVessels. Effectzonesforvariousoutcomesoffailurescenarios(FlashFire,JetFire,PoolFire,Blastoverpressure,toxicrelease,etc.)are studiedandidentifiedintermsofdistancesonplotplan.Basedoneffectzones,measuresformitigationofthehazard/riskaresuggested.DetailedRiskAnalysisreportisattachedasAnnexure-V ofEIAreport. TheObservationsandrecommendationsarisingoutoftheRapidRiskanalysisstudywillbesuitablyincorporatedindetailedengineeringstage. However,ComputationalFluidDynamics(CFD)isperformedon3Dlayout/actualgeometryofplantconsideringeffectofignitionlocationandremoteobstaclesonpressurebuild-upbasedonconfined/congestedareaduetoopenandclosedstructures,piping,buildingsandotherfacilitiesassociatedwithprocesstopredicthazardassociatedwithplant.Thisisrealisticdeterminationofimpactsthatcanbemadeto minimize the risktopopulation near thereleaselocations. Presently,detailsrequiredtocarryout3DCFDanalysisshallnotbefinalizeduntilfinallicenseorselectionforPPandPDHunits.Performing3DCFDanalysisatthisstagewillnotcaptureactualconfinedandcongestionassociatedwithplantandwillnotpredictactualhazardandriskassociatedwithit.MoEFCCwouldappreciatethatthedatafromasimilarplantwillalsonotcapturethecorrectscenario,aseverequipmentlayoutanditsselectionistailor made.QuantitativeRiskAnalysisshallbeperformedduringdetail engineeringbasedon finalized processconditionsandlayout. Hence, we confirmtocarryout3DCFDanalysisisduringdetailedengineeringphaseofprojectwhenall the processdesignactivitiesarecompletedandexactlocationsofequipmentlayouts,openandclosedstructures,piping,buildingsetc.arefinalizedtoidentifyindividualriskandsocietalrisk.basedonwhichFNcurveshallbeplotted.ProcessSafetyandRiskManagement(PSRM)reportusing3DCFDmodellingshallbeshared withMoEFCC.

9.	Plan for installationofsolarpowerandutilizationin the plant	GAILhasRooftopandgroundmountedSolarProjectsatsomeofitsexistinglocations. ForUsaralso,astudywillbecarriedoutforassessmentofroofsurfaceareasofbuildingslikewarehouse,adminbuildingetc.,baseduponwhichfeasibilitywillbecarriedoutandaccordinglysolarprojectwillbesetup.After provisionofgreenbelt,emptylandareawillnotbeavailableforgroundmountedSolarpanels.
10.	Detailsofwildlifesanctuary/ESAwithin 10kmof theprojectsite	There isnowildlifesanctuary/ESA/NationalParkwithin 10kmof theprojectsite.

The proposal is for environmental clearance to the project for Setting up 500 KTA Propane Dehydrogenation (PDH) unit integrated with Polypropylene (PP) Unit at Usar Industrial Area, Usar village, Alibag Tehsil, Raigad district, Maharashtra by M/s GAIL (India) Limited.

Standard TOR was issued vide letter no. IA-J-11011/464/2017-IA-II (I) dated 26th October, 2017 for the proposed project.

The project/activity is covered under category A of items 5(c) “Petro-chemical complexes” of Schedule of Environmental Impact Assessment (EIA)Notification 2006 and requires appraised at Central Level by Expert Appraisal Committee (EAC).

The total land area requirement of the project is 160 acres. The land is available within existing GAIL Usar plant complex (Total area available: 321 acres). Proponent will develop greenbelt in an area of 33 % i.e.106 acres out of 321 acres of the total complex area.

The estimated project cost is Rs. 6706.67 crores. Total capital cost earmarked towards environmental pollution control measures is Rs10.25croresand the recurring cost (operation and maintenance) will be about Rs1.38crores per annum.

Direct employment will be 330 persons during operation & indirect employment for 2500 persons during construction phase (peak). GAIL proposes to allocate Rs. 20.77 crores 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 from the project site. Arabian sea, Kundalika river and Amba river are present 10 km from the project site.

Ambient air quality monitoring was carried out at 8 locations during 15th December, 2017 to 15th March 2018 and submitted baseline data indicates that ranges of concentrations of PM_{10} (56.2-67.8 µg/m3), $PM_{2.5}$ (25.1-32.5

µg/m3), SO_2 (12.2-14.7 µg/m3) and NO_2 (13.8-16.5 µg/m3) respectively. There will be 3 nos. stacks in the proposed plants. Air quality modeling was carried out for the proposed project. 24 hourly maximum incremental GLC for SO_2 and NO_X are predicted as 0.13 µg/m3 and 1.55 µg/m3. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

Total fresh water requirement will be 11,520 m3 / day (480 m3/hr) which will be met from supply of Maharashtra Industrial Development Corporation (MIDC).

There shall be 15 m3/hr of liquid effluent generation from proposed plant which will be treated in Effluent Treatment Plant. ETP treated waste water will be recycled through Zero Liquid Discharge (ZLD) plant. There will not be any liquid effluent discharge from plant.

Power requirement for the proposed project will be 125 MW and sourced from state electricity grid. There will be 1 no. new DG set of 3 MW capacity used during power failure. Stack height of 30 m will be provided as per CPCB norms to the proposed DG set.

Existing GAIL Usar plant has 5 TPH FG/NG fired boiler. Additionally, (1 + 1) x 50 TPH FG/NG fired boiler (1 working, 1 standby) will be installed. Minimum Stack height of 35 m will be provided for the proposed boiler stack.

Total SO_2 emission from the proposed project will be 6.0 kg/hr. For emission management: Gaseous fuel will be used in heater & boiler to minimize air emission, Low NOX burners in heater & boiler, All the emission standards will be met for gaseous emissions, Continuous stack monitoring for ambient air pollution, Leak Detection and Repair (LDAR) programme for fugitive hydrocarbon emission control, ensuring preventive maintenance of equipment, Developing green belt.

Solid waste like Spent Catalyst, Adsorbents, Inert grain, Alumina Balls, Support balls will be generated once in 4 years during operation phase. Spent Catalyst will be handed over to catalyst processor for metals reclamation/ authorized recyclers. Other solid wastes shall be sent to landfill in accordance with local regulation. An agreement with locally approved TSDF agency will also be put in place. All hazardous solid wastes will be handled as per Hazardous and Other Wastes (Management & Trans boundary Movement) Rules, 2016 and it's amendments.

Public Hearing was conducted on 21.06.2019, which was presided over by the Additional District Magistrate, Raigad. The main issues raised during the public hearing were related to Employment to Project Affected Persons (PAP), Land Compensation to PAP, Employment to Locals, Employment after imparting training / Skill development program, CSR, Insurance to Nearby Villagers.

GAIL previously obtained Environmental Clearance (EC) for LPG Recovery Project in 1992 vide file no. J-11011/22/91-1A-II(I) dated 29/04/1992 and 11/11/1992. LPG recovery Plant at Usar was commissioned in 1998.

Presently, LPG Usar plant is under shutdown due to non-availability of rich gas. GAIL submitted compliance to EC to Regional Office-MoEFCC vide letter no. GAIL/USR/LPG/TS/755/03-04 dated 06/03/2004.

There is no litigation pending against the proposal.

The details of products and capacity as under:

S.No.	Product Details	Existing Quantity (KTPA)	Proposed Quantity (KTPA)	Total Quantity (KTPA)
1.	Polypropylene	0	500	500
2.	C4 LPG	0	25	25
	Total	0	525	525

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 and incremental GLC due to the proposed project within NAAQ standards. The Committee has also deliberated on the public hearing issues, action plan and the CER plan and found to be addressing the issues in the study area. Certified report on compliance of existing EC conditions also found to be satisfactory. The Committee also found the additional studies and information submitted and presented by the project proponent to be satisfactory.

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) As already committed by the Project proponent, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises. All the waste water to be collected and to be reused after treatment.

(iii) To control source and the fugitive emissions, suitable pollution control devices shall be installed with different stacks to meet the prescribed norms as notified by MOEFCC 2012 for new refineries.

(iv) Total fresh water requirement shall not exceed 480 cum/hour to be met from MIDC water supply. Necessary permission in this regard shall be obtained from the concerned regulatory authority.

(v) Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.

(vi) 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.

(vii) 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. The ash from boiler shall be sold to brick manufacturers/cement industry.

(viii) Regular VOC monitoring shall be done at vulnerable points.

(ix) The oily sludge shall be subjected to melting pit for oil recovery and the residue shall be bio-remediated. The sludge shall be stored in HDPE lined pit with proper leachate collection system.

(x) Comprehensive water audit to be conducted on annual basis and report to the concerned Regional Office of MEF&CC. Outcome from the report to be implemented for conservation scheme.

(xi) Oil catchers/oil traps shall be provided at all possible locations in rain/ storm water drainage system inside the factory premises.

(xii) 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 cleaning etc. to reduce wastewater generation.

(xiii) The green belt of 5-10 m width shall be developed in more than 33% of the total project area, mainly along the plant periphery, in downward wind direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.

(xiv) As committed Rs. 20.77 crores shall be allocated for Corporate Environment Responsibility (CER) shall be utilized for meeting the commitment of the issues of public hearing. The CER plan shall be completed before commissioning of the expansion of the project.

(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.

(xvi) 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.

(xvii) 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. In case of the treated effluent to be utilized for irrigation/gardening, real time monitoring system shall be installed at the ETP outlet.

(xviii) PP to set up occupational health Centre for surveillance of the worker's health within and outside the plant on a regular basis. 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 .

(xix) The National Emission Standards for Petrochemical (Basic & Intermediates) issued by the Ministry vide G.S.R. 820 (E) dated 9th November, 2012 as amended time to time shall be followed.

(xx) Recommendations of mitigation measures from possible accident shall be implemented based on Risk Assessment studies conducted for worst case scenarios using latest techniques.

Agenda No.22.6

Laying of Anjar - Chotila Natural Gas transportation pipeline project with associated facilities from Anjar (District Kutch) to Chotila (District Surendranagar) by M/s Gujarat State Petronet Limited (Gujarat) –Environmental & CRZ Clearance

[IA/GJ/IND2/53487/2016, J-11011/144/2016- IA II(I)]

The project proponent made a detailed presentation on the salient features of the project through Video Conferencing (VC).

During deliberations, the EAC noted the following:

The proposal is for environmental and CRZ clearance to the project for laying 36/30" Natural Gas transportation pipeline from Anjar (Kutch) to Chotila (Surendranagar) covering approx. length 196.14 km with associated facilities by M/s Gujarat State Petronet Limited (Gujarat).Gujarat CZMA has submitted its CRZ Recommendation to MoEF&CC vide letter dated 4th September, 2017.

The proposal was earlier recommended by the EAC in its meeting held 29-31 May, 2018 for grant of EC and CRZ Clearance with the condition to obtain Stage-I forest clearance for diversion of forest land. Further, based on recommendation of EAC, online ADS was sent to the project proponent to submit the copy of Stage-I forest clearance for diversion of forest land.

In response of the same, the project proponent submitted the copy of Stage-1 Forest Clearance on 1st June, 2020.

Thereafter, the proposal further deliberated in the Ministry and it has been observed that as the Stage-1 Forest clearance has been submitted after the two years of EAC recommendations, accordingly it has been decided to refer the proposal back to the EAC for reconsideration for relook as per the Ministry's Office memorandum dated 19th June, 2014. The said OM states that……."in case the primary data used in preparation of EIA report is more than three years old. In such a situation, the EAC may get the fresh data collected and on that basis and after due diligence, either reiterate its earlier recommendations, or decide for reappraising the project proposal on account of valid reasons, as the case may be. In case it is decided to reappraise the project, the committee may also decide on the requirement of documents/information for reappraisal as also the need for a fresh public hearing".

The EAC during deliberation observed that the present proposal is for laying of Natural Gas transportation pipeline and no pollution effect involved in the operation of the same.

The EAC, after detailed deliberations, **reiterate its earlier recommendations for grant of EC and CRZ Clearance**. All conditions mentioned in the earlier recommendations will remain unchanged.

Agenda No. 22.7

Developmental Drilling of 37 onshore wells in Tanot, Dandewala&Bagitibba Mining Lease Block at Village Tanot, Tehsil Ramgarh, District Jaisalmer, Rajasthan by M/s Oil India Ltd – Reconsideration of Environmental Clearance - reg.

[No. IA/RJ/IND2/67524/2017, *IA-J-11011/430/2017- IA II(I)*]

The proposal was earlier considered by the EAC in its meeting held on 11-13 May, 2020. The Committee while considering the proposal for environmental

clearance has desired for following additional information. Information desired by the Committee and response of the project proponent is as under:

<table>
<tr><th>S. No.</th><th>ADS</th><th>Reply</th></tr>
<tr><td>1.</td><td>Considering the technical advancement in drilling, revised water balance with reduction in fresh water requirement to 20 cum/day/well</td><td>Water is basically required for preparing drilling mud, direct washing of drill cuttings, cooling of gas engines and for meeting domestic needs of the campsite. Typically, the water consumption will be about 20cum per day per well as per details given below:
<table>
<tr><th>Sl .No.</th><th>Description</th><th>Quantity of Water Requirement</th><th>Quantity of Wastewater generation</th><th>Disposal method</th></tr>
<tr><td>1</td><td>Water for domestic use</td><td>3m^3/ day/ well</td><td>2m^3/ day/ well</td><td>Mobile Sewage Treatment Plant of 5 m^3 /day capacity and treated water reused for gardening</td></tr>
<tr><td>2</td><td>Drilling water consumption for mud preparation</td><td>12 m^3/ day/ well</td><td>--</td><td>Waste drilling mud stored in HDPE lined pits for solar evaporation.</td></tr>
<tr><td>3</td><td>Drilling Rig operation</td><td></td><td></td><td></td></tr>
<tr><td>a.</td><td>Jet wash – washing of drill cuttings at shale shaker</td><td>1 m^3/ day/ well</td><td>4 m^3/ day/ well</td><td rowspan="3">The water will be adequately treated in a mobile ETP to ensure conformance to the S No. 72 A (ii) Schedule I Standards for Emission or Discharge of Environmental Pollutants from Oil Drilling and Gas Extraction Industry of</td></tr>
<tr><td>b.</td><td>Preparation of cementing materials</td><td>2 m^3/ day/ well</td></tr>
<tr><td>c.</td><td>General housekeeping/ washing</td><td>1 m^3/ day/ well</td></tr>
</table></td></tr>
</table>

<table>
<tr><td></td><td></td><td>
<table>
<tr><td>d.</td><td>Miscellaneous use (cooling, dust suppression, etc.)</td><td>1 m^3/ day/ well</td><td></td><td>CPCB. The treated water will be recycled back for washing/gardening/mud preparation.</td></tr>
<tr><td></td><td>Total Water Requirement</td><td>20 m^3/day/well</td><td>6 m^3/day/well</td><td></td></tr>
</table>
</td></tr>
<tr><td>2.</td><td>Source of water and details of authorized water supplier, or other source.</td><td>Oil India Limited already made an agreement with Govt. of Rajasthan, represented by the Chief Engineer, Indira Gandhi NaharPariyojna for supply of water from IGNP. The agreement was signed on 07th April 2017 with a validity of 10 years. The water will be drawn from IGNP in Jaisalmer District, Rajasthan. The sanctioned amount as per the agreement is 600 KLD.</td></tr>
<tr><td>3.</td><td>Action plan for managing gas leakage, if any, from the drilling site and storage facilities.</td><td>ACTION PLAN FOR ANY GAS LEAKAGE/ BROACHING ACTIVITY
• Monitoring of Well Head parameters
• Mobilization of Crisis Management Team
• An area within the 500 meters of the well on the down wind direction will be demarcated as danger zone.
• Sensitizing local villagers near the block area about gas leakage/ broaching incident
• Firefighting equipment (Fire tender, extinguishers etc.) with a team to be deployed at the well site immediately.
• Multiple wind socks to be installed to check the wind directions.
• Round the clock security personals to be deployed to prevent any unauthorized movement.
• Local authorities to be informed regarding the incident.
• Ensured continuous LEL monitoring around the well plinth.
• A central control room to be made available.
• Killing process to be done to subside the well.
• Well killing is carried out by deploying Coil Tubing Unit (CTU)
• Finally abandoning the well if required, as per the policy</td></tr>
<tr><td>4.</td><td>Revised CER plan with the increased budget and taking into account</td><td>
<table>
<tr><th rowspan="2">Sl. No</th><th rowspan="2">CER Activities</th><th colspan="10">CER Budget (In Rs. Lakh)</th></tr>
<tr><th>Y1</th><th>Y2</th><th>Y3</th><th>Y4</th><th>Y5</th><th>Y6</th><th>Y7</th><th>Y8</th><th>Y9</th><th>Y10</th></tr>
<tr><td>1</td><td>Upgradation</td><td>1</td><td>9</td><td>2</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td></tr>
</table>
</td></tr>
</table>

	requirement of medical facility and public hearing issues.		of Local Health Centre	50	4	5	5	5	0	0	0	0	0
		2	Free eye camp in our operational areas	8	8	8	8	8	8	8	8	8	8
		3	Arranging mobile health camps	15	15	12	12	12	12	12	10	10	10
		4	Providing Financial Assistance for Ambulance	10	10	10	8	8	5	5	5	5	5
		5	Providing PPE Kit to the local villagers to fight against COVID-19	50	50	0	0	0	0	0	0	0	0
		6	To facilitate COVID-19 tests to local villagers around OIL's Operational areas	100	100	0	0	0	0	0	0	0	0
		7	Construction of Road	15	15	12	12	10	8	8	0	0	0
		Total		**348**	**292**	**67**	**55**	**53**	**43**	**43**	**33**	**33**	**33**
		Grand Total		**1000**									
5.	Action plan for monitoring fugitive emission of methane, if any, during production, storage and handling.	• Air pollution would be primarily due to fugitive emissions from vehicular movement, material handling. Weathering of soil would take place as a result of clearing of vegetation, excavation and movement of heavy vehicles. The weathered soil generates dust due to re-entrainment during vehicular movement and equipment mobilization. Such dust emissions as experienced in other similar construction activities are of larger than 10μ (more than respirable range) and propagates to short distances. These emissions only have nuisance factor affecting workers at site. Use of dust masks would be adequate to mitigate impacts on workers. • Fugitive emissions in the form of material dust is expected during drilling operations (loading, unloading, handling of drilling fluid, chemical additives, cement and cement additives). Fugitive										

		emissions during drilling are not expected to travel beyond project boundaries. Workers working near fugitive emission sources are only susceptible which would be mitigated through use of PPEs in these areas. • Fugitive emissions of VOC may result from the vents from the venting of un-burnt methane from well testing. However, the testing phase will be short duration of 14 -21 days. • Testing facilities will be available at drilling rig for separation of liquid phase and burning of all hydrocarbons during testing. • The test flare boom will be located at a distance from the drilling rig. In production testing hydrocarbon are flared for 1 or 2 days in case it is required. The quantities involved in test flaring may be highly variable due to geological un-certainties and reservoir potential. However, the maximum quantity expected in such well are 2500 m3/hour (15000 m3/day) (max.) of gas. Temporary flaring will be carried out at ground with elevated stack of 30 m high. • The test flaring will result in temporary emissions of CO_2, water vapours, NOx and other trace gases. It is assumed that the occurrence of SO_2 in the flare gas would be in traces or negligible as gas shall not have H_2S.
6.	Action plan for trapping/storing of the CO_2 generated, if any, during the process and handling.	• Proposal from M/s. Beerengas for establishment of CO_2 removal plant under active consideration.
7.	Compliance status of existing environmental clearance (3rd September, 2015) conditions forwarded by the Ministry's Regional Office.	The latest 6 monthly compliance report for existing Environmental Clearance have been submitted on 28.05.2020 vide letter no. R/S&E/E-1/26/2020 to Regional Office, MoEF&CC. We have also submitted Self-Certified EC Compliance certificate vide letter no. R/S&E/E-1/46/2020 dt. 10.08.2020. Self-Certified EC Compliance certificate submitted due to ongoing COVID-19 restrictions and it will take time to get such Certificate from RO, MoEF&CC.

The proposal is for environmental clearance to the project for Developmental Drilling of 37 onshore wells in Tanot, Dandewala&Bagitibba Mining Lease Block covering an area of 250 sqkm located at Village Tanot, Tehsil Ramgarh, District Jaisalmer, Rajasthan by M/s Oil India Ltd.

The Committee has noted that, earlier the proposal was considered by the EAC in its meeting held on 11-13 May, 2020 in the Ministry. The Committee found the EIA/EMP report complying with the ToR and recommended the project for grant of environmental clearance. However, the Committee had noted that the project proponent proposed to use 45 cum/day/well fresh water sourced through tanker supply. Considering the technical advancement in drilling and scarcity of water in the area, it was suggested to submit revised water balance with reduction in fresh water requirement. The Committee was of the view that 20 cum/day/well would be suffice for drilling. The Committee has also suggested the project proponent to submit an action plan for managing gas leakage, if any, from the drilling site and storage facilities. The EAC has also suggested the project proponent to submit a revised CER plan with the increased budget and taking into account requirement of medical facility and public hearing issues.

As per the details of public hearing, the project proponent hold a EC dated 3rd September, 2018 for exploration activities of 20 wells in the same area, and certified compliance report shall be required as per provisions of OM May 2012 to see the compliance status of earlier EC.

Subsequent to submission of additional information by the project proponent, the proposal was again placed before the Committee for deliberations and recommendations.

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 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 additional details submitted by the project proponent to be satisfactory and addressing the concerns of the Committee. Certified report on compliance of existing EC conditions submitted with the Ministry's Regional Office also found to be satisfactory.

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 EAC, after detailed deliberations, has **recommended** the project for grant of environmental clearance, reiterating the conditions stipulated in its

meeting dated 11-13 May, 2020. The CER amount shall be restricted as per the Ministry's OM in this regard.

Consideration of Amendment in EC/ToR

Agenda No.22.8

Exploratory Drilling (24 additional wells) in On-shore PEL Block L-II of Cauvery Basin by **M/S Oil and Natural Gas Corporation Limited** – Amendment of Environment Clearance

[IA/TN/IND2/157370/2020, J-11011/2/2011-IA.II(I)]

The proposal is for extension of validity of Environmental Clearance dated 21st August, 2013 for project " Exploratory Drilling (24 additional wells) in On-shore PEL Block L-II of Cauvery Basin at District Nagapattinum (Tamilnadu) by M/S Oil and Natural Gas Corporation Limited

The project proponent has requested for extension of validity of ECwith the details as under:

S.No.	EC issued by MoEF&CC	Period ofExtension	Justification/reasons
1.	F. No. J-11011/2/2011-IA II(I)dated 21st August, 2013	3 years	The EC grant was taken for drilling of 24 exploratory wells. Sixteenwells were successfully completed and one well is currently under drilling. The remaining seven wells will be taken up as: (i) The earlier focus of exploration in the block was on shallower Cretaceous and Tertiary plays. However, in the recent past two main plays namely Early Synrifts and Basement Play have come to the focus of exploration and therefore these locations are planned to be taken up for Deeper prospects. (ii) G & G studies are under progress to analyze the prospects based on the

				re-interpretation of seismic volumes. (iii) Studies are in progress to understand the subsurface conditions as the remaining few exploratory locations are of deeper depths with High Pressure and High temperature conditions.

The Committee, after detailed deliberations, has **recommended** for extension of validity of the environmental clearance till 20th August, 2023, to complete the work as per the scope of the project, with all other terms and conditions remain unchanged.

Agenda No. 22.9

Proposed Expansion of Carbon Black Manufacturing Plant along with Waste Gas Based Co-Generation Power Plant at Survey No. 47, SH-46, Village Mokha, Taluka Mundra, District Kutch, State Gujarat by M/s PHILLIPS CARBON BLACK LTD – Amendment in ToR.

[IA/GJ/IND2/123619/2019, J-11011/195/2016- IA II(I)]

The proposal is for amendment in the Terms of Reference granted by the Ministry vide letter dated26th August 2019for the project expansion of Carbon Black Manufacturing Plant along with Waste Gas Based Co-generation Power Plant at located atSurvey No.47, SH-46, Village Mokha, Taluka Mundra, District Kutch (Gujarat) in favor of M/s Phillips Carbon Black Ltd.

The project proponent has requested for amendment in the ToR with the details are as under;

S. No.	Para of ToR issued by MoEF&CC	Details as per the ToR	To be revised read as	Justification/ reason
1	Para on Page No. 2	In this regard, under the provisions of the EIA Notification	In this regard, under the provisions of the EIA Notification 2006 as	• No additional Land requirement • Incremental increase in pollution load • PCBL faced lot of nuisance during the

S. No.	Para of ToR issued by MoEF&CC	Details as per the ToR	To be revised read as	Justification/ reason
		2006 as amended, the Standard TOR for the purpose of preparing environment impact assessment report and environment management plan for obtaining prior environment clearance is prescribed with public consultation as follows:	amended, the Standard TOR for the purpose of preparing environment impact assessment report and environment management plan for obtaining prior environment clearance is prescribed ***without*** public consultation as follows:	last PH due to interference of unscrupulous NGOs. • PCBL haspproposed production increase by only 22% (Original TOR - 96% increase) of the existing production capacity. • PCBL has decided to expand capacity for production of Specialty Carbon Black at Mundra plant, instead of ASTM/Normal Carbon Black. Normal Carbon Black expansion will be taken up in our proposed plant in Tamilnadu. • Economic recession and Global COVID Pandemic have resulted indrastic fall in demand. • Our last EC has been granted from MoEF&CC dated 15th January 2018 and amended on 20th May 2019 for carbon black production capacity to 16500 MTM. For this, PCBL has carried out Public consultation on 16th May 2017. All the actions arising out of PH has been addressed satisfactorily. • Hence, PCBL

S. No.	Para of ToR issued by MoEF&CC	Details as per the ToR	To be revised read as	Justification/ reason
				requests you to grant exemption from Public Hearing process for the proposed expansion.

ToR Amendment Application is done for reduction in production capacity. In coordination with reduction in production, water consumption, waste water generation, fuel consumption, flue gas stacks, process vents and hazardous waste details are also revised. Details are as following.

1. Production Details

S. No.	Product Name	Existing	Proposed in ToR Granted	Total in ToR Granted	Proposed for ToR Amendment	Total after ToR Amendment
1	Carbon Black, MTPM	16500	15900	32400	3600	20100
2	Co-generation Power (waste gas base), MW	32	32	64	8	40

2. Pollution Load Statement

S. No.	Item	Existing	Proposed in ToR Amendment	Total	% increase	Remark
1	**Production Capacity**					
	Carbon Black, MTPM	16500	3600	20100	22	Increased to ~22% of the existing capacity
	Co-generation Power (waste gas base), MW	32	8	40	25	Waste gas is used for power generation which reduces environmental

S. No.	Item	Existing	Proposed in ToR Amendment	Total	% increase	Remark
						pollution
2	Land Requirement, m^2	294614	0	294614	0	No additional land required
3	**Power Requirement, MW**	8.3	2.5	10.8	30	Own power generated will be used
4	**Water Consumption**					
	Total Water Consumption, KLD	2021	515	2536	25	
	Recycle water from RO	338	61	399	18	
	Fresh Water Consumption	1683	454	2137	27	Water will be taken from Gujarat Water Infrastructure Limited (GWIL) and Borewell - Permissions are taken from GWIL and CGWA
5	**Generation of waste water, KLD**	394	73	467	19	The existing Unit is ZLD and after proposed expansion also the unit will to ZLD, however the latest technology supplied by GE have been used at an investment of ~19 Cr. INR
6	**Fuel Consumption, MT/M**					
	Tail Gas, NM3/hr	145812	30000	175812	21	Waste gas is used for power generation which reduces environmental pollution

S. No.	Item	Existing	Proposed in ToR Amendment	Total	% increase	Remark
	HSD, KL/Month	6	0.00	6	0	Used for DG Set only in case of power failure
7	**Stack Details**					
	No. of Flue Gas Stacks	6	1	7	17	
7.1	**Flue Gas stacks**					
a	**Flare Stack**	2 No.	0	2 No.		To take care of gas during upset in CPP for new lines.
b	**Power Plant Capacity**	16 MW – 1 No.	8 MW – 1 No.	16 MW – 1 No.		
c	**DG set**	1No. 1250 kVA	0	1No. 1250 kVA		
7.2	**No. of Process Vents**	6	6	12	100	
8	**Hazardous Waste Generation**					
	Used Oil, MT/Year	2.2	0.5	2.7	23	Will be sent to GPCB registered recycler
	Spent Acid from Batteries, MT/Year	0.024	0	0.024	0	Will be disposed by Authorized way
	Chemical Sludge from Waste water Treatment, MT/Year	1735	425	2160	24	The unit is member of M/s. Saurashtra Enviro Projects Pvt. Ltd. (SEPPL) for Hazardous waste disposal.
	Oily Sludge Emulsion, MT/Year	15	3.5	18.5	23	
	Used Batteries, MT/Year	0.1	0.1	0.2	100	Disposal as per lead batteries rules.

S. No.	Item	Existing	Proposed in ToR Amendment	Total	% increase	Remark
	Discarded Drum / Barrels/ Containers / Bags/ Liners/ Bag filter, MT/Year	20	5	25	25	The unit is member of M/s. Saurashtra Enviro Projects Pvt. Ltd. (SEPPL) for Hazardous waste disposal.
	Spent Ion Exchange Resin Containing Toxic Metal, MT/Year	1	0.2	1.2	20	
	Oily Cotton Waste /Leather Hand Gloves / Cotton Hand Gloves, MT/Year	3	2	5	67	

The Committee after detailed deliberations and justifications submitted by the project proponent has **recommended** for amendment in ToR dated 26th August 2019as proposed by the project proponent.

Agenda No. 22.10

MR Ethylene Cracker Project at Rasayani, Maharashtra by M/s Bharat Petroleum Corporation Limited- Amendment in ToR.

[IA/MH/IND2/149968/2020, IA-J-11011/51/2020-IA-II(I)]

The proposal is for amendment in the Standard Terms of Reference (for PH Exemption) granted by the Ministry vide letter MOEF&CC No.IA-J-11011/51/2020-IA-II(I)ToR dated 19.03.2020 for the "Proposed BPCL MR Ethylene Cracker" Project located at Rasayani, Maharashtra in favour of M/s Bharat petroleum Corporation Limited.

The Project proponent has requested for amendment in the ToR with the details are as under

S. No	Para of TOR issued byMoEFCC	Details as per existing TOR	To be revised/read as	Justification/ reasons

1.	As per Standard TOR.	The Standard TOR for the purpose of preparing environment impact assessment report and environment management plan for obtaining prior environment clearance is prescribed **with public consultation.**	The Standard TOR for the purpose of preparing environment impact assessment report and environment management plan for obtaining prior environment clearance is prescribed **without public consultation.**	The site proposed is used for industrial purpose since 1960, by M/s Hindustan Organic Chemicals Limited (HOC). EAC recommended grant of EC for BPCL's earlier proposal for installation of Polypropylene (PP) unit at Rasayani and interconnecting pipelines from BPCL Mumbai Refinery (MR) to Rasayani (File No .IA-J-11011/168/2018-IA-II (I)), subject to 'Stage-1 forest clearance for pipe lines. A **public hearing was conducted recently on 24/09/2019** for the same proposal. There is no adverse siting factor such as reclassification of land use and pattern, displacement etc. BPCL's current proposal of Ethylene Cracker Project will also be located in the same premises and involves same localities/ area for Public Hearing process.

During deliberations, the EAC noted the following:

The Committee during deliberations noted that the justifications submitted by the project proponent not stands considering that Ethylene Cracker project is a large scale project with more anticipated environmental and social impacts. The proposed project is having different scope of work and as such found no merit in consideration. The Committee was of the view that the project proponent shall assess the impact integrating both the projects.

The proposal was accordingly RETURNED in its present form.

Agenda No. 22.11

Expansion of Petrochemical Complex by Adding Polypropylene Unit at Pata, District Auraiya, Uttar Pradesh by M/s GAIL (India) Limited – Environmental Clearance - reg.

[Proposal No: [IA/UP/IND2/161777/2019, File No: J-11011/595/2010-IA (II)I]

The proposal is for environmental clearance to the project for Expansion of Petrochemical Complex by Adding Polypropylene Unit at Pata, District Auraiya, Uttar Pradesh by M/s GAIL (India) Limited.

The project/activity is covered under Category A of items 5(c) - Petro-chemical complexes as per Schedule of Environmental Impact Assessment (EIA) Notification 2006 and requires appraisal at Central Level by Expert Appraisal Committee (EAC).

The Standard TOR was issued vide letter no. J-11011/595-2010/-IA-II(I) dated 13th September, 2019 and amendment in ToRexempting public hearing for the proposed project was issued on 06/03/2020.

During deliberations, the EAC noted the following:

The EAC during deliberations noted that the documents and information submitted by the project proponent is not adequate to examine the proposal. The Committee after detailed deliberations desired for more comprehensive presentation with all the requisite additional documents for consideration of the proposal. The Committee suggested that the proposal shall be placed in the **next** meeting of the EAC.

The proposal was accordingly *DEFERRED* for the needful.

22.12 Any other items with the permission of the Chair.

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ANNEXURE

GENERAL CONDITIONS

(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 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.

Annexure-I

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.	Shri R. K. Singh	Member
3.	Shri Ashok Agarwal	Member
4.	Shri S.C. Mann	Member
5.	Dr. Y.V. Rami Reddy	Member
6.	Dr. T. K. Joshi	Member
7.	Dr. J. S. Sharma	Member
8.	Dr. SaloniGoel	Member
9.	Dr. T. Indrasena Reddy	Member
10.	Dr. Uma Kapoor, CGWA	Member
11.	Shri Dinabandhu Gouda, CPCB	Member
12.	Sh. Sanjay Bist, IMD	Member
13.	Sh. Ashok Kr Pateshwary, Director, MoEFCC	Member Secretary
MoEFCC		
14.	Dr Saurabh Upadhyay	Scientist 'C'
15.	Dr. E.P. Nobi	Research Officer

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