

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

Dated: 17.05.2022

**MINUTES OF THE 05th MEETING OF THE EXPERT APPRAISAL
COMMITTEE**

(INDUSTRY-2 SECTOR PROJECTS)

HELD ON 10th May, 2022

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

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

(ii) Confirmation of minutes: The EAC, having taken note that final minutes were issued after incorporating comments received from the EAC members on the minutes of its 04th Meeting of the EAC (Industry-2) held during 25th -26th April, 2022 conducted through Video Conferencing (VC), confirmed the same.

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

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

10th May, 2022 (Tuesday)

Agenda No. 5.1

Expansion of Molasses based Distillery (120 to 370 KLPD) using C / B Heavy Molasses / Cane Syrup for Ethanol Production with 3 MW Captive Power Generation, Enhancement in Cane crushing (7,500 to 9,500 TCD) by M/s. Daund Sugar Private Limited, (DSPL) located at

Gat No. 99 Alegaon, Tal. Daund, Dist. Pune - Consideration of Environment Clearance

[IA/MH/IND2/259197/2022, IA-J-11011/467/2017-IA-II(I)]

The Project Proponent and the accredited Consultant M/s. Equinox Environments (I) Pvt. Ltd. made a detailed presentation on the salient features of the project and informed that the proposal is for environmental clearance to the project for Expansion of Molasses based Distillery from 120 to 370 KLPD by using C / B Heavy Molasses / Cane Syrup with 3 MW Co-generation power plant (concentrated spent wash/biomass/coal fired) along with Enhancement in Cane Crushing Capacity From 7,500 to 9,500 TCD at Alegaon village, Daund Tehsil, Pune District, Maharashtra State by M/s. Daund Sugar Pvt. Ltd.

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

The details of products and capacity as under:

Industrial Unit	Product & By-products	Unit	Quantity		
			Existing	Proposed	Total
Distillery (Expansion 120 to 370 KLPD)	RS / ENA (C Heavy Molasses) or	KLPD	120	-	120
	Ethanol (B Heavy Molasses/ Sugarcane Syrup/ Juice) or	KLPD	-	370	370
	Ethanol (C Heavy Molasses)	KLPD	120	250	370
	Electric Power from Incineration Boiler	MW	-	3	3
Sugar Factory (Expansion)	Sugar (11.5%)*	MT/M	25,950	-	25,950
	Molasses (4%)*	MT/M	9,000	2,400	9,000
	Bagasse (30%)*	MT/M	67,500	18,000	67,500

7,500 to 9,500 TCD)	Pressmud (4%)*	MT/M	9,000	-	9,000
Co-gen (18 MW)	Electricity	MW	18	-	18

Total capacity of distillery plant will not be increased beyond 370 KLPD. Only ethanol will be produced under expansion i.e. 250 KLPD and the same will be solely used for EBP programme.

Ministry had issued EC earlier vide letter no. EC21A022MH113028 dated 26th October, 2021 to the Expansion of Sugar Factory from 6,000 to 7,500 TCD and Molasses based Distillery from 90 to 120 KLPD at Alegaon village, Daund Tehsil, Pune District, Maharashtra State by Daund Sugar Pvt. Ltd. Certified compliance report has been obtained from IRO, MoEFCC, Nagpur and visit was conducted on 20.01.2022. Action Taken Report as observed by RO was submitted on 02.03.2022. Action Taken Report (ATR) is found satisfactory by the EAC.

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

Total land area required is 101.99 Hectares. Industry has already developed green belt in an area of 33.77 Hectares i.e. 33% out of total plant area. Densification of trees will be done under Expansion activity. The estimated total project cost after expansion is Rs.299.73 Crores including existing investment of Rs. 137.74 Crores. Capital cost of EMP would be Rs. 51.25 Crores and recurring cost for EMP would be Rs. 5.25 Crores per annum. Industry proposes to allocate Rs. 1.7 Crores towards Corporate Environment Responsibility. Total Employment will be 672 persons as direct & indirect after expansion.

PP reported that there are no national parks, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 Km study area. Bhima River is flowing at a distance of 2.0 Km from West to East direction.

Total fresh water requirement will be 1342 m³/day after expansion of sugar and distillery units which will be met from New Mutha Right Bank Canal & Bhima River. Effluent of 523 m³/day quantity from sugar mill will be treated through existing Effluent Treatment Plant. Treated effluent will be reused for green belt development in own factory premises.

Spent wash (2960 m³/day) will be concentrated in the existing MEE and concentrated spent wash @ 592 m³/day (1.6 KL/KL of alcohol) will be blend with the coal/bagasse and burnt in 40 TPH and 30 TPH incinerator boiler. Other effluents like spent lees @ 3135 m³/day , MEE condensate @ 2366 m³/day and other effluents @243 m³/day treated in existing and proposed Condensate Polishing Unit. Treated water from CPU (3072 m³/day) will be reused in process and boiler make up, thereby achieving Zero Liquid Discharge.

Power requirement after expansion will be 13.57 MW and will be met from co-generation power plant. Existing Sugar Factory has 100 TPH & 15 TPH bagasse fired boiler. ESP with a stack of height of 70 M is installed for controlling the particulate emissions within the statutory limit of 115 mg/Nm³ for the boiler. Existing Distillery has one 40 TPH Spent wash & Bagasse/Coal fired Incineration Boiler. ESP followed by 100 m stack height will be provided with the 30 TPH (spent wash/coal/bagasse) fired boiler.

Existing unit has two DG sets having 1010 KVA each capacity. Under expansion project additional two DG sets (1250 KVA) will be installed. DG sets to be used as standby during power failure. Stack (height 6 M) is provided as per CPCB norms to the existing DG Set.

Details of Process emissions generation and its management

- ESP is /will be installed with boilers for controlling the particulate emissions.
- Online Continuous Emission Monitoring System will be installed with the stack and data will be transmitted to CPCB/SPCB servers.
- CO₂ generated during the fermentation process will be collected by utilizing CO₂ scrubbers, compressed, bottled and sold to authorized vendors.

Details of solid waste/Hazardous waste generation and its management

- Concentrated spent wash shall be burnt in incineration boiler.
- Boiler ash is being/will be utilized for brick manufacturing.
- CPU sludge is being/will be burnt in incineration boiler.
- ETP Sludge will be reused as bio-compost for green belt development.
- Used/spent oil is being/will be reused in boiler as fuel.
- Chemical sludge, oil & grease skimming residues is being/will be used as manure.

As per Notification S.O 2339(E), dated 16th June, 2021, PP has submitted self-certification in the form of affidavit declaring that the proposed expansion capacity of 250 KLPD will be used for manufacturing fuel ethanol only.

During deliberations, PP informed that existing EC capacity i.e. 120 KLPD distillery and 7500 TCD sugar mill capacity have been achieved. Further, EAC discussed the following issues:

- CTE and CTO dated 07.05.2022 of existing 120 KLPD distillery and 7500 TCD sugar mill are available.
- Revised CER break up.
- Details of indigenous species to be developed in greenbelt.
- Agreement dated 28th December, 2020 of fresh water drawal from Irrigation canal Executive Engineer, Khadakwasla Irrigation Division.
- Recalculated GLC data for 40 TPH & 30 TPH boiler scenario.
- Committed to reduce quantity of treated effluent to 50% to be used for horticulture.
- Latest ground water monitoring report to be submitted for information.

Further, Committee desired to submit the above information in writing. Accordingly, PP has submitted the desired information and EAC found the information/commitments satisfactory.

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

The Committee noted that the EMP report is in compliance of the PFR. The Committee deliberated on the CER plan and found to be addressing the issues in the study area. The EAC has deliberated the proposal and has made due diligence in the process as notified under the provisions of the EIA

Notification, 2006, as amended from time to time and accordingly made the recommendations to the proposal. The Experts Members of the EAC have found the proposal in order and have **recommended** for grant of environmental clearance.

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

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

- (i). As per Notification S.O 2339(E), dated 16th June, 2021, project falls in category B2 and the proposed capacity of 250 KLPD shall only be used for fuel ethanol manufacturing as per self-certification in form of a notarized affidavit by the Project Proponent. Provided that subsequently if it is found that the ethanol, produced based on the EC granted as per this dispensation, is not being used completely for EBP Programme, or if ethanol is not being produced, or if the said distillery is not fulfilling the requirements based on which the project has been appraised as category B2 project, the EC shall stand cancelled.
- (ii). PP shall maintain particulate emissions within the statutory limit of 50 mg/Nm³ for the boiler and NO_x, SO₂ emissions within prescribed standards.
- (iii). The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented.
- (iv). The project proponent will treat and reuse the treated water within the factory and no waste or treated water shall be discharged outside the premises.

- (v). Total Fresh water requirement shall not exceed 1342 KLPD for sugar mill and distillery and will be met from New Mutha Right Bank Canal & Bhima River. No ground water recharge shall be permitted within the premises. Company to construct a storage pond of 60 days capacity and the accumulated Prior permission shall be obtained for surface water withdrawal before start of construction activities. water to be used as fresh water thereby reducing fresh water consumption.
- (vi). The spent wash shall be incinerated. ESP shall be installed with the boiler. PP shall use biomass like rice husk/bagasse as fuel for the proposed boiler. Low sulphur coal with maximum sulphur content of 0.5% shall only be used. Ash shall be stored in silos and used in brick manufacturing plant within the premises. PP shall meet 10% of the total power requirement from solar power.
- (vii). CO₂ generated from the process shall be bottled/made solid ice and utilized/sold to authorized vendors.
- (viii). PP shall allocate at least Rs. 50 Lakhs/annum for Occupational Health Safety. Occupational Health Centre for surveillance of the worker's health shall be set up. The health data shall be used in deploying the duties of the workers. All workers & employees shall be provided with required safety kits/mask for personal protection.
- (ix). Training shall be imparted to all employees on safety and health aspects of chemicals handling. Safety and visual reality training shall be provided to employees.
- (x). 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. PESO certificate shall be obtained.
- (xi). Process organic residue and spent carbon, if any, shall be sent to Cement and other suitable industries for its incinerations. ETP sludge, process inorganic & evaporation salt shall be disposed of to the TSDF.
- (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 clearing to reduce wastewater generation.

- (xiii). The green belt of at least 5-10 m width shall be developed in nearly 33% of the total project area, mainly along the plant periphery. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department. Records of tree canopy shall be monitored through remote sensing map.
- (xiv). PP proposed to allocate Rs. 1.7 Crores towards CER which shall be spent as submitted in CER plan for monitorable activities like up-gradation of schools with provision of facilities e.g. Class rooms, playground, Laboratory, Library, Computer class, toilets, Drinking Water Facilities, solar light/solar power support for uninterrupted power supply etc. Further, all the proposed activities under CER shall be completed before the commissioning of the plant in consultation with District Administration.
- (xv). There shall be adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products and no parking to be allowed outside on public places. Out of the total project area, 15% shall be allotted solely for parking purposes with facilities like rest rooms etc. Approach road to the project site shall be paved.
- (xvi). Storage of raw materials shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions.
- (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. 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.
- (xviii). A separate Environmental Management Cell (having qualified person with Environmental Science/Environmental Engineering/specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.

Agenda No. 5.2

Onshore Oil & Gas development drilling and production in Naharkatiya-Deohal-Bogapani-Nagajan area for 294 wells in Dibrugarh & Tinsukia District under Nahorkatiya Extension, Tinsukia Extension, Hugrijan, Chabua, Borhapjan, Dumdumada Hugrijan

Extension by M/s. Oil India Limited - Consideration of Environment Clearance

[IA/AS/IND2/246799/2018, J-11011/546/2017-IA(I)]

The Project Proponent and the accredited Consultant M/s ERM India Pvt. Ltd., made a detailed presentation on the salient features of the project and informed that the proposal is for environmental clearance to the project Onshore Oil & Gas development drilling and production in Naharkatiya-Deohal-Bogapani-Nagajan area in Dibrugarh & Tinsukia District under Nahorkatiya Extension, Tinsukia Extension, Hugrijan, Chabua, Borhapjan, Dumdumada Hugrijan Extension (Proposed) PMLs.

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

The details of products and capacity:

S. No	Product Details	Existing Quantity	Proposed Quantity	Total Quantity
1.	Wells and production installations	21 wells	294 wells and 2 production installations	315 wells and 2 production installations

Ministry had issued EC earlier vide letter no. J-11011/418/2011 - IA II (I) dated 9th October 2014 to the Drilling of Exploratory Well (21 nos.) at Naharkatiya-Deohal-Bogapani-Nagajan Area, Districts Dibrugarh & Tinsukia, Assam by M/s Oil India Limited.

Standard Terms of Reference have been obtained dated 11th February 2018. Certified compliance report has been issued by Integrated Regional Office (IRO), Guwahati vide letter No. RO-NE/E/IA/AS/MI/80/1261-1263 dated 6th October 2021. Certified action taken report has been obtained vide report no. RO-NE/E/IA/AS/MI/80/1667-1669 dated 15th December 2021. It was informed that no litigation is pending against the project.

Public Hearing for the proposed project had been conducted by the State Pollution Control Board on 6th September 2019 at Karma Bhawan for

Dibrugarh district chaired by Circle Officer (Authorized by ADM in writing) and 13th March 2020 at Sambawana Khetra, Digboi under Digboi Forest Division (JFMC) for Tinsukia district chaired by Additional Deputy Commissioner. The main issues raised during the public hearing are related to environmental protection, noise management, drill site restoration, social developmental plans, emergency preparedness, local employment, local infrastructure development in the area etc.

Total land area required is 8.96 Hectares. Greenbelt will be developed in total area of 3.5 Hectares. The estimated project cost is Rs. 9734.30 Crores. Capital cost of EMP would be Rs. 3.48 Crores and recurring cost for EMP would be Rs. 4.69 crores per annum. Industry proposes to allocate Rs. 4.81 crores as Corporate Environment Responsibility. Total Employment will be 60 persons as direct & 120 persons indirect after expansion for each drill site construction and drilling.

PP reported that wells and production installations are within 10 km ESZ of Dihing Patkai National Park and Bherjan-Borjan-Podumoni Wildlife Sanctuary. PP has applied for NBWL clearance and the proposal no. is FP/AS/MIN/6155/2021.

Ambient air quality monitoring was carried out at 8 locations during 05.10.2017 to 31.12.2017 and the baseline data indicates the ranges of average concentrations as: PM₁₀ (57.21-89.50 µg/m³), PM_{2.5} (30.0-47.29µg/m³), SO₂ (5.44-6.43 µg/m³) and NO₂ (17.4 -20.93 µg/m³). Latest baseline data of two weeks have been collected additionally at the same 8 locations during February 2022 indicate average concentrations of PM₁₀: 57.96-90.25 µg/m³, PM_{2.5}:30.25-47.04 µg/m³, SO₂:5.84-7.13 µg/m³ and NO₂:17.63 – 20.98 µg/m³. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 11.73 µg/m³, 0.48 µg/m³, 0.06 µg/m³ and 0.08 µg/m³ with respect to NO_x, SO₂, PM₁₀ and HC. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

Total fresh water requirement will be 25-30 m³/day which will be met from groundwater. Effluent of 21.8 KLD quantity will be treated through Effluent Treatment Plant and Septic tank. The project will be based on Zero Liquid discharge system.

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

Details of Process emissions generation and its management:

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

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

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

During deliberations, EAC found that Public Hearing has been conducted by a lower rank officer i.e. Circle Officer and most of the wells fall in ESZ of Dihing Patkai National Park and Bherjan-Borjan-Podumoni Wildlife Sanctuary. PP requested the Committee to consider the no. of wells for grant of EC which are not falling in District Dibrugarh and wells which are outside ESZ of sanctuaries as mentioned. EAC suggested PP to give the same in writing and to clearly give the list (Co-ordinates) of wells which will be considered as above for grant of EC. Further, EAC sought the following from PP:

- Public Hearing in one of the district is chaired by Circle Officer. It was noted that Public Hearing was not conducted in consonance with the EIA Notification, 2006. As per amended Notification dated 9th May, 2022, Public Hearing should be conducted not below the rank of SDM. Therefore, Ministry may take necessary action.
- Revised CER break up.
- Fresh water requirement shall not exceed 25-30 m³/day.
- Justification regarding ambient air quality data as discussed in EAC.

- Status of NBWL clearance for proposed wells as most of the wells fall in ESZ of Dihing Patkai National Park and Bherjan-Borjan-Podumoni Wildlife Sanctuary.

*No documents have been received from the PP as mentioned above. Accordingly, proposal was **deferred** for the needful.*

Agenda No. 5.3

Proposed 1 x 100 KLPD Grain based Ethanol Plant with 3 MW Captive power plant by M/s. Aarti Synergy Pvt. Ltd. located at Khasra Nos. 523/1, 523/4, 523/5, 523/6, 524, 525, 526/2, 527/1, 527/2, 528/1, 528/3, 528/4, 530/1, 530/2, 536/2, 537/1, 537/2, 537/3, 538/3, 538/4, 538/5, 538/6, 538/7, 538/8, 540/3, 541/1, Dondekala Village, Raipur Tehsil & District, Chattisgarh – Consideration of Environment Clearance

[IA/CG/IND2/253350/2022, IA-J-11011/30/2022-IA-II(I)]

The Project Proponent and the accredited Consultant M/s. Pioneer Enviro Laboratories and Consultants Private Limited made a detailed presentation on the salient features of the project and informed that the proposal is for environmental clearance to the project for proposed grain based distillery 100 KLPD and 3 MW co-generation power plant (biomass/coal fired) at Dondekala Village, Raipur Tehsil & District, Chhattisgarh by M/s. Aarti Synergy Private Limited.

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

The details of products and capacity as under:

S. No.	Name of unit	Name of the product	Production capacity
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1	Distillery plant	Ethanol	100 KLPD
2	Co-generation power plant	Power	3.0 MW
3	DDGS	By-product	81 TPD
4	CO2 recovery	By-product	67 TPD

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

Total land area required is 10.484 Hectares. Greenbelt will be developed in total area of 3.52 Hectares i.e. 33.6% of total project area. The estimated project cost is Rs. 75.5 Crores. Capital cost of EMP would be Rs. 12.25 Crores and recurring cost for EMP would be Rs. 1.58 Crores per annum. Industry proposes to allocate Rs. 1.2 Crores towards Corporate Environment Responsibility. Total Employment will be 100 persons as direct & indirect.

PP reported that there are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance. No major water bodies are reported within 10 Km radius of Project site.

Total fresh water requirement will be 410 m³/day which will be met from two huge rain water harvesting pits available adjacent to the site. Effluent of 836 m³/day quantity will be treated through Condensate Polishing Unit. The plant will be based on Zero Liquid discharge system.

Power requirement will be 3.0 MW and will be met from 3.0 MW co-generation power plant. Change over to CSPDCL connection is proposed to facilitate start-up operations and as a backup option. 30 TPH Coal/Biomass based Boiler will be installed. ESP with a stack of height of 50 m will be installed for controlling the particulate emissions within the statutory limit of 50 mg/Nm³ for the proposed boiler. 2 Nos. 500 KVA DG sets will be used as standby during power failure and stack height will be provided as per CPCB norms to the proposed DG sets.

Details of Process emissions generation and its management

- ESP with a stack height of 50 meters will be installed for controlling the particulate emissions.

- Online Continuous Emission Monitoring System will be installed with the stack and data will be transmitted to CPCB/SPCB servers.
- CO₂ generated during the fermentation process will be collected by utilizing CO₂ scrubbers and sold to authorized vendors.
- Bag filters with dust collectors will be installed in Grain handling & milling area and DDGS Dryer section to minimize fugitive emissions.

Details of solid waste/Hazardous waste generation and its management

- DDGS (Distilled Dried Grains Stillage) will be sold as cattle feed / fish feed / prawn feed.
- Boiler ash will be utilized for making bricks in the proposed brick making unit.
- Used oil from DG Sets will be sold to authorized recyclers.
- ETP Sludge will be reused as bio-compost for green belt development.

As per Notification S.O 2339(E), dated 16th June, 2021, PP has submitted self-certification in the form of notarized affidavit declaring that the proposed capacity of 100 KLPD will be used for manufacturing fuel ethanol only.

PP has reported that land has already been acquired and land use conversion has been completed. EAC found the information satisfactory.

Further, EAC discussed the following issues:

- Revised break up of Corporate Environment Responsibility.
- Revised break up of cost towards Environmental Management Plan.
- Avenue plantation in approach road to plant.
- Revised Incremental Ground Level Concentration due to usage of coal as fuel.
- Rainwater shall be stored in the pucca tank. No recharge well will be created.

Further, Committee desired to submit the above information in writing. Accordingly, PP has submitted the desired information and EAC found the information/commitments satisfactory.

The EAC, constituted under the provision of the EIA Notification, 2006 and comprising of Experts Members/domain experts in various fields, have examined the proposal submitted by the Project Proponent in desired form along with the EMP report prepared and submitted by the Consultant

accredited by the QCI/ NABET on behalf of the Project Proponent. The EAC noted that the Project Proponent has given undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the report. If any part of data/information submitted is found to be false/misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.

The Committee noted that the EMP report is in compliance of the PFR. The Committee deliberated on the CER plan and found to be addressing the issues in the study area. The EAC has deliberated the proposal and has made due diligence in the process as notified under the provisions of the EIA Notification, 2006, as amended from time to time and accordingly made the recommendations to the proposal. The Experts Members of the EAC have found the proposal in order and have **recommended** for grant of environmental clearance.

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

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

- (i). As per the Notification S.O. 2339(E), dated 16th June, 2021, project falls in category B2 and the proposed capacity of 100 KLPD shall only be used for fuel ethanol manufacturing as per self-certification in form of a notarized affidavit by the Project Proponent. Provided that subsequently if it is found that the ethanol, produced based on the EC granted as per this dispensation, is not being used completely for EBP Programme, or if ethanol is not being produced, or if the said distillery is not fulfilling the requirements based on which the project has been appraised as category B2 project, the EC shall stand cancelled.

- (ii). The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented.
- (iii). The project proponent will treat and reuse the treated water within the factory and no waste or treated water shall be discharged outside the premises.
- (iv). EC granted for a project on the basis of the submitted documents shall become invalid in case the actual land for the project site turns out to be different from the land considered at the time of appraisal of project.
- (v). Total Fresh water requirement shall not exceed 4 KL/KL of ethanol production and will be met from two huge rain water harvesting pits available adjacent to the site and ground water. Prior permission shall be obtained for ground water withdrawal before start of construction activities. No ground water recharge shall be permitted within the premises. Industry shall construct a storage pond of 60 days capacity and the accumulated water to be used as fresh water thereby reducing fresh water consumption.
- (vi). The spent wash shall be concentrated and dried to form DDGS to be used as cattle feed. ESP shall be installed with the boiler. Boiler ash will be utilized for making bricks in the proposed brick making unit. PP shall use biomass like rice husk/bagasse as fuel for the proposed boiler. Low sulphur coal with maximum sulphur content of 0.5% shall only be used only in case of biomass unavailability. PP shall meet 10% of the total power requirement from solar power.
- (vii). CO₂ generated from the process shall be bottled/made solid ice and utilized/sold to authorized vendors.
- (viii). PP shall allocate at least Rs. 50 Lakhs/annum for Occupational Health Safety. Occupational Health Centre for surveillance of the worker's health shall be set up. The health data shall be used in deploying the duties of the workers. All workers & employees shall be provided with required safety kits/mask for personal protection.
- (ix). Training shall be imparted to all employees on safety and health aspects of chemicals handling. Safety and visual reality training shall be provided to employees.

- (x). 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. PESO certificate shall be obtained.
- (xi). Process organic residue and spent carbon, if any, shall be sent to Cement and other suitable industries for its incinerations. ETP sludge, process inorganic & evaporation salt shall be disposed of to the TSDF.
- (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 clearing to reduce wastewater generation.
- (xiii). The green belt of at least 5-10 m width shall be developed in nearly 33% of the total project area, mainly along the plant periphery. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department. Records of tree canopy shall be monitored through remote sensing map. Greenbelt shall be developed before commissioning of the plant. Avenue plantation in approach road to plant shall be done.
- (xiv). PP proposed to allocate Rs. 1.2 Crores towards CER which shall be spent as submitted in CER plan for monitorable activities like up-gradation of schools with provision of facilities e.g. Class rooms, playground, Laboratory, Library, Computer class, toilets, Drinking Water Facilities, solar light/solar power support for uninterrupted power supply etc. Further, all the proposed activities under CER shall be completed before the commissioning of the plant in consultation with District Administration.
- (xv). There shall be adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products and no parking to be allowed outside on public places. Out of the total project area, 15% shall be allotted solely for parking purposes with facilities like rest rooms etc.
- (xvi). Storage of raw materials shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions.
- (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. 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.

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

Agenda No. 5.4

Setting up of new 120 KLPD Molasses Based Distillery by M/s. Sugar Grid Ltd. located at Village: Pingli (Bk), Tal. Man, Satara, Maharashtra– Re-Consideration of Environment Clearance

[IA/MH/IND2/138065/2020, IA-J-11011/18/2020-IA-II(I)]

The proposal was earlier considered by the EAC (Ind-2) in its 02nd meeting held during 29th to 30th March, 2022 wherein EAC deferred the proposal and desired certain requisite information/inputs. Information desired by the EAC and responses submitted by the project proponent is as under:

S.No	ADS	Reply of PP	Remarks of EAC
1.	Latest detailed baseline data for 15 days shall be submitted.	Baseline ambient air quality monitoring for 15 days has been carried out from 5 th April to 20 th April 2022, reports of the same have been submitted.	EAC found the information satisfactory.
2.	The green belt of at least 5-10 m width shall be developed in nearly 33% of the total project area, mainly along the plant periphery. Selection of plant species shall be as per the CPCB	The project proponents have allocated roughly 41% of the available plot area for greenbelt development and submitted list of species.	EAC found the information satisfactory.

	guidelines in consultation with the State Forest Department.		
3.	Greenbelt shall be developed as per the slope of the project site and species to be grown along with place shall be submitted.	Small hillocks are present in the east and south of the distillery plot boundaries. In this partially hilly/slope areas, suitable and locally available species such as acacia, neem, bamboo, etc. will be planted.	EAC found the information satisfactory.
4.	Justification for Bio-chemical Oxygen Demand (BOD) in ground water shall be given.	In the surrounding study area, agriculture is a major activity. Thus, to know any contamination of ground water bodies due to current agricultural activities the BOD parameter was included in case of ground water samples.	EAC found the information satisfactory.
	Revised CER break up shall be submitted where 50% of the amount shall be utilized for up-gradation of schools and 50% for energy conservation measures.	Revised CER break up has been submitted.	EAC found the information satisfactory.
	Brick manufacturing unit shall be installed within premises.	Commitment for the same has been submitted.	EAC found the information satisfactory.
	Revised GLC shall be submitted based on collected latest baseline data for 15 days.	Ground level concentration (GLC) of air pollutants has been estimated based on the latest monitoring data and submitted.	Revised GLC is desired by EAC taking into account

			proposed sugar mill and distillery unit.
	Revised rainwater storage and harvesting calculations.	The industry will implement rainwater-harvesting project. The area available for rain water harvesting is anticipated to be around 26732 m2. All water will be collected and channelized to collection sump. Details have been submitted.	EAC found the information satisfactory.
	Drainage pattern of the area shall be clarified as nala is passing through the project site.	As mentioned in the EIA report of the project, there is a natural drainage (nala) passing through the industrial plot. It is on the west boundary of the distillery unit. It is between sugar and distillery unit.	EAC found the information satisfactory.
	Revised plant layout shall be submitted with clear demarcation of nala.	The project proponent has constructed a culvert on the nala. Nala will be maintained as it is. As per the plan, excess storm water is channelized to natural nala. Revised plant layout has been submitted.	
	Commitment that no forest land is involved in the proposed project.	Undertaking stating that no forest land is involved in the proposed project has been submitted.	EAC found the information satisfactory.
	Forest NOC is not translated properly and discrepancy is found in the same. This shall be rectified.	A minor discrepancy noticed by Honorable EAC member was unintentional. It is corrected. Revised translation version of the same is provided.	EAC found the information satisfactory.
	Revised water balance showing clearly recycling quantity and fresh water usage.	Revised water balance showing clearly recycling quantity and fresh water usage has been submitted.	Revised water balance as well as other environmen

			tal components such as solid waste/waste water generation etc. taking into account sugar and distillery as integrated unit and no discharge of treated water within/outside premises.
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The case was again placed in 5th EAC meeting held on 10th May, 2022.

The Project Proponent and the accredited Consultant M/s. Vasantdada Sugar Institute made a detailed presentation on the salient features of the project and informed that the proposal is for environmental clearance to the project for proposed molasses based distillery 120 KLPD at Gat number 1727, Post Pingali Bk., Taluka Man, District Satara, State Maharashtra by M/s. Sugar Grid Limited.

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

The details of products and capacity as under:

S. No.	Name of unit	Name of the product	Production capacity
1	Distillery plant	Rectified Spirit/Extra Neutral Alcohol/Ethanol	120 KLPD

Standard Terms of Reference have been obtained dated 20th February 2020. Public Hearing for the proposed project had been conducted by the State Pollution Control Board on 17th March 2021 at project site chaired by Additional District Magistrate. The main issues raised during the public hearing are related to wastewater generation, spent wash and its management, benefits to local people.

Total land area required is 27.69 Hectares. Greenbelt will be developed in total area of 12.62 Hectares i.e. 45.58% of total plant area. The estimated project cost is Rs. 131.49 Crores. Capital cost of EMP would be Rs. 53.18 Crores and recurring cost for EMP would be Rs. 22.67 crores per annum. Industry proposes to allocate Rs. 1.94 Crores towards Corporate Environment Responsibility. Total Employment will be 90 persons as direct & indirect.

PP reported that there are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site. There is a reserve forest at a distance of 102 m towards east of the project. Pingali-Dahiwadi (small scale reservoir) is at a distance of 3.2 in North and River Manganga is at a distance of 7 km in East.

Ambient air quality monitoring was carried out at 8 locations during October 2019 to January 2020 (winter season). The baseline data indicates the ranges of concentrations as: PM₁₀ (53.30 to 73.30 $\mu\text{g}/\text{m}^3$), PM_{2.5} (20.00 to 33.95 $\mu\text{g}/\text{m}^3$), SO₂ (11.95 to 15.90 $\mu\text{g}/\text{m}^3$) and NO₂ (20.56 to 29.90 $\mu\text{g}/\text{m}^3$). AAQ modeling study for point source emissions indicates that the maximum rise in GLCs after the proposed project would be 1.41 $\mu\text{g}/\text{m}^3$ and 6.67 $\mu\text{g}/\text{m}^3$ with respect to PM and SO₂. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

Total fresh water requirement will be 480 m³/day which will be met from Pingali-Dahiwadi small scale reservoir through pipeline. Effluent of 1075 KLD quantity will be treated through Condensate Polishing Unit. The plant will be based on Zero Liquid discharge system.

Power requirement will be 3.6 MW and will be met from 4.0 MW co-generation power plant. 15 TPH incineration boiler concentrated spent wash/Coal/Biomass based Boiler and 28 TPH conventional boiler coal/biomass based boiler will be installed. ESP with a stack of height of 70

m will be installed for controlling the particulate emissions within the statutory limit of 115 mg/Nm³ for the proposed boiler. Existing DG sets of sugar unit will be used as standby during power failure and stack height will be provided as per CPCB norms to the proposed DG sets.

Details of Process emissions generation and its management

- ESP with a stack height of 70 meters will be installed for controlling the particulate emissions.
- Online Continuous Emission Monitoring System will be installed with the stack and data will be transmitted to CPCB/SPCB servers.
- CO₂ generated during the fermentation process will be collected by utilizing CO₂ scrubbers and sold to authorized vendors.

Details of solid waste/Hazardous waste generation and its management

- Concentrated spent wash will be burnt in incineration boiler/spray dried with ATFD to form powder.
- Boiler ash will be utilized for making bricks in the proposed brick making unit.
- ETP Sludge will be reused as bio-compost for green belt development.
- Used oil will be given to authorized recyclers.

Land required for project has been acquired and land use conversion has been obtained. EAC found the information satisfactory.

During deliberations, PP informed that there is a sugar mill of capacity 3500 TCD proposed adjacent to proposed distillery. Hence, it is an integrated project. Further, EAC sought the following information/commitments from PP:

- There is a drain within proposed site. PP shall obtain NOC from Irrigation department and submit to the Ministry.
- Revised GLC for sugar and distillery unit shall be submitted.
- Revised water balance as well as other environmental components such as solid waste/waste water generation etc. taking into account sugar and distillery as integrated unit and no discharge of treated water within/outside premises.
- Commitment to develop greenbelt towards the forest areas.
- Revised break up of fund earmarked for EMP.

No documents have been received from the PP as mentioned above. Accordingly, proposal was **deferred** for the needful.

Agenda No. 5.5

Establishment of Natural Gas Distribution pipeline network with associated facilities from Ambadi Naka at Bhiwadi Taluka, Thane District to Village Virar, Taluka Vasai, District Palghar of Maharashtra State (i.e. Called Virar Spur line) including Spur lines at Nala Sopara, Vasai, Kharpada, Sativali covering total length approx. 58.345 km with Diameters 6"/8"/12" at Palgarh, Maharashtra by M/s Gujarat Gas Ltd- Re- Consideration of Environment Clearance

[IA/MH/IND2/90520/2019, IA-J-11011/46/2019-IA-II(I)]

The proposal was earlier considered by the EAC (Ind-2) in its 02nd meeting held during 29th to 30th March, 2022 wherein EAC deferred the proposal and desired certain requisite information/inputs. Information desired by the EAC and responses submitted by the project proponent is as under:

S.No	ADS	Reply of PP	Remarks of EAC
1.	Justification regarding discrepancy of baseline monitoring dates as there is four set of Period and Dates given in the EIA Report for Monitoring of Baseline Data.	From 01 March 2019 to 31 May 2019 baseline survey was carried out.	EAC found the reply satisfactory.
2.	Sampling and Analysis Methodology adopted for O3 (Ozone), HC (Hydrocarbon), C6H6, Benzene, B(a)p, VOC to be	Sampling and Analysis Methodology adopted from Guidelines for the Measurement of Ambient Air Pollutants Volume-I by CPCB & IS methods which are as follows: 1.O zone- By IS 5182 (Part 9): 1974 (RA 2014) 2.Benzene & B(a)p- By NAAQS	EAC desired that PP shall conduct 1 hour Ozone monitoring and submit the results.

	provided as there is contradiction in values reported.	GuidelineVol-1 3. Hydrocarbon & VOCs- By (USEPAMETHOD TO-12).	
3.	Consultant has not monitored Ambient Air Quality as per Standard TOR / CPCB specified frequency and has taken only 4 samples per month as clearly reveals from Monitoring Test Report of Ambient Air quality. This is gross violation of the laid down procedures by the QCI-NABET accredited consultant.	The ambient air quality monitoring was carried out 9 locations.	EAC desired that 15 days monitoring shall be conducted in all 9 locations and results to be submitted with detailed ambient air quality monitoring table.
4.	SO2 and NO2 values (ambient air) at Project site station are nearly same reported which are scientifically unrealistic.	They are actual results.	EAC desired that 15 days monitoring shall be conducted in all 9 locations and results to be submitted with detailed ambient air quality monitoring table.
5.	Ozone concentration	The results are actual and monitoring was carried out for a	EAC desired that PP shall

	monitoring values are unrealistic and time of monitoring is also not mentioned.	period of 01 March 2019 to 31 May 2019. The method followed for Ozone sampling and analysis was IS 5182 (Part 9): 1974 (RA 2014).	conduct 1 hour Ozone monitoring and submit the results.
6.	As per TOR, Consultant to provide "Present land use based on satellite imagery for the study area of 10 km radius" which is not Complied with. Satellite Imagery is not attached which gives better idea about the land use. The map attached at Annexure XIII in EIA report does not clarify which year data have been taken and whether buffer distances from pipelines v/s various features are maintained cannot be ascertained accurately	Proposed project is for establishment of Natural Gas Distribution pipeline network in the project area. Proposed pipeline project will not have any Storage Terminal / Station along the pipeline route which normally required land use based on Satellite Imagery for 10km radius. But, the proposed project is linear in nature and therefore, 500m radius on either side of the pipeline from centerline around entire proposed pipeline Network of Virar in Palghar District was generated taking into consideration point no. 4 of ToR. LULC for the proposed pipeline network has been developed using achieve satellite imagery for the year Nov. 2019. Area calculation, Statistics generation as well as Map preparation was carried out after incorporating all the changes observed during field visits.	-
7.	There is non-compliance of ToR and contradictory replies have been submitted when EAC desired the information regarding Determination of atmospheric inversion level and	Proposed project is for Natural Gas transportation of pipeline in the Palghar district with providing City Gas Distribution network to various consumers (i.e. Domestic/commercial/CNG Station etc.). As there is no Station/Terminal/Depot in this project as well as there is no stack emission. This was not considered as there was no stationary	-

	assessment of ground level concentration of pollutants. Air quality modelling for Proposed project.	emission samples.	
8.	Mobile STP shall be proposed for treatment of domestic waste water.	There is no industrial effluent generation from the premises as this is Natural Gas transportation pipeline project. However, Mobile STP will be provided for temporary domestic waste water generated to the tune of 0.5KLD which is very marginal and will be limited to during construction period of laying of pipeline and will be disposed off appropriately to nearby Municipal Drain facilities.	-
9.	Commitment that no noise making equipment shall be used while construction as wildlife sanctuary is present.	During construction stage/laying activity of pipeline in the sanctuary area, no such level of noise will be generated that could disturb the wildlife sanctuary. Proper lubrication and anti-vibration pads will be used for construction machines. Necessary precautions will be taken like prohibition of blowing horns within sanctuary area, equipment & machinery used at site properly maintained & provided silencers, DG set provided with proper acoustic enclosures to mitigate noise level. All adequate pollution control measures shall be taken to meet the prescribed ambient noise standards for the project activity. The Undertaking for the same is submitted.	-
10.	Commitment that no private land is involved in laying of pipeline.	The Undertaking for the same is submitted.	-

11.	Commitment that guidelines from MoPNG shall be followed.	The Undertaking for the same is submitted.	-
12.	Revised CER cost specifically mentioning activities to be conducted in villages, schools etc.	CER plan for 5 Year has been submitted.	-
13.	Justification regarding photographs shown of noise monitoring.	Noise Monitoring photographs are given for information about the site only however the noise level monitoring & Measurement has been carried out as per standard guideline of MOEF&CC / CPCB (Noise Pollution (Regulation and Control) Rules, 2000"	-
14.	In RA-DMP, QRA (Qualitative Risk Analysis) study provided for 10mm, 50mm & 100mm leak Size. PP shall cover QRA study for 5mm leak Size also.	Updated QRA report has been submitted.	-

**Note: EAC deferred the proposal and remaining ADS reply were not deliberated.*

The Project Proponent and the accredited Consultant M/s Green Circle, Inc, Vadodara, made a detailed presentation on the salient features of the project and informed that the proposal is for environmental clearance to the project Establishment of Natural Gas Distribution pipeline network with associated facilities from Ambadi Naka at Bhiwadi Taluka, Thane District to Village Virar, Taluka Vasai, District Palghar of Maharashtra State (i.e. Called Virar Spur line) including Spur lines at Nala Sopara, Vasai, Kharpada, Sativali covering total length approx. 58.345 km with Diameters 6"/8"/12" at Maharashtra, Palghar by M/s Gujarat Gas Limited.

Proposed natural gas transportation pipeline project are listed at S.N. 6(a) of Schedule of Environment Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC) as Proposed Virar Spur pipe line passes through Tungareshwar Wild Life Sanctuary for 0.496 km length.

The details of products and capacity:

This is Natural Gas Distribution Distribution pipeline network with associated facilities covering total length approx. 58.345 km with Diameters 6"/8"/12" & Capacity : 0.72 MMSCMD at Maharashtra, Palghar.

Standard Terms of Reference have been obtained dated 23rd March 2019. It was informed that no litigation is pending against the project.

Public Hearing for the proposed project had been conducted by the State Pollution Control Board on 27th January, 2022 at Aangan Marriage Hall, Satpadi Road, Tembhadde, Palghar (E), Dist-Palghar (Maharashtra) chaired by Additional District Collector. The main issues raised during the public hearing are related to pipeline survey number, villages and mangrove area along the pipeline.

Proposed pipeline project will not have any land acquisition on permanent bases, but proposed pipeline route is along the existing road RoW under PWD authority and land will be used temporarily limited up to laying of pipeline on the basis Right of Use. After laying of pipeline the land will be reinstated to near its original condition and return to PWD authority. Proposed project will not have any storage terminal & Station. It will have only transportation of Natural gas through pipeline & establishment of City Gas Distribution network. Proposed pipeline route will not have any station facilities and permanent land acquisition. In addition the proposed pipeline will be layed maximum to avoiding cutting of trees. However, in unavoidable situation forest authority will be informed and necessary tree plantation /compensation to forest authority will be given. 10 trees will be planted on cutting of 1 tree as per the guideline of forest division.

The estimated project cost is Rs. 64.12 Crores. Capital cost of EMP would be Rs. 0.64 Crores and recurring cost for EMP would be Rs. 0.01 crores per annum. Industry proposes to allocate Rs. 65 Lakhs as Corporate Environment Responsibility. Total Employment will be 60 persons as direct & indirect.

PP reported that proposed pipeline route passes through Tungareshwar Wild life sanctuary as follow:

S.N.	Particulars	ESZ Length & Area	WLS Length & Area	Remarks
1	Virar Spur line passes through Tungareshwar ESZ & WLS sanctuary of	Length:3/380km Area: 0.304ha	Length: 0.496km Area: 0.0446ha [Ch.26.18 to Ch.25.81=0.367Km Ch.22.60 to Ch.22.47=0.129km Total=0.496km]	Nala Sopara, Vasai, Kharpada & Sativali Spur line are out of ESZ & WLS sanctuary.

PP has reported that earlier as per Draft Tungareshwar Wild Life Sanctuary(TWLS) notification GGL has already obtained recommendation from the State Board of Wild life vide 05th December 2018 and permission granted by Standing committee of NBWL vide F. No. 6- 30/2019 WL dated 25.03.2019 for diversion of 0.0445 ha of forestland for underground laying of natural gas pipeline of 6", 8" and 12" diameter along the existing road in the Ambadi Naka area in Virar city, Nalasopara, Vasai, Kharpada and Sativali District Palghar falling in TWLS and its notional ESZ. GGL has also complied all necessary conditions directed by NBWL and NOC for laying proposed pipeline has been granted by additional Principal Chief Conservator of Forests (Wild Life) West, Mumbai vide F. No. Desk-3/Land/NBWL/CR No. 108/1261 of 2019-20 dated 13.08.2019. Now as per Finalized TWLS notification vide dated 11.09.2019, TWLS boundary has been finalized and final Eco Sensitive Zone (ESZ) boundary has been reduced from buffer 10 km to 100 m-4 km max. As per this latest finalized Notification only Virar Spur line slightly passes through finalized Eco Sensitive Zone of TWLS for length 3.380 km (For 0.304 ha ESZ area) out of total length approx. 58.345 km with Diameters 6"/8"/12" of Proposed Virar Spur line with its connectivity of Nala Sopara spur line , Vasai spur line, Kharpada spur line, Sativali spur line.

In principle approval for diversion of 0.6818 ha forest land has been granted be Government of Maharashtra with vide Order No.: FLD12A18/CR-302/F-10, Dated 02.01.2019.

The everyday vehicle movement on existing road passes through WLS is currently present there. However, the proposed pipeline route will not have any permanent impact in this area because it is 1 to 1.2 meter underground buried pipeline along the existing road RoW under PWD department. The impact envisaged only during construction phase of the laying of pipeline in that area which will be limited to only few days and the soil will be reinstated near to its original condition after laying of pipeline. So, no impact on wild life sanctuary is expected in operation phase of pipeline. So, the project will have impact which is very marginal, temporary in nature and reversible.

Ambient air quality monitoring was carried out at 9 locations during 01 Mar 2019 To 31 May 2019 and the baseline data indicates the ranges of concentrations as: PM10 (73.3 to 66.2 $\mu\text{g}/\text{m}^3$), PM2.5 (29.3 to 26.4 $\mu\text{g}/\text{m}^3$), SO2 (14.6 to 13.2 $\mu\text{g}/\text{m}^3$) and NO2 (18.3 to 17.1 $\mu\text{g}/\text{m}^3$). The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

Water requirement only during the laying of pipeline/Construction period that is 10 KLD.

No Stationery/permanent DG set required on pipeline during operation phase. Temporary 12KVA DG set will be required for welding during laying of Steel pipeline

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

- Solid wastes generated from the temporary campsites and other wastes like plastics, paper, cardboard, etc. will be properly collected, segregated and reused / disposed off appropriately (recycle, reuse, and composting / landfill)
- No hazardous wastes are envisaged from pipeline construction activities.
- During Operation phase of the pipeline pigging operation may generate solid waste which may be safely collected, stored and disposed to approve TSDF vendor.

During deliberations, PP informed that Stage I forest Clearance and NBWL recommendation has been obtained. EAC found the information satisfactory and recommended the proposal.

During deliberations EAC found various reply unsatisfactory and sought the following additional information from PP for further consideration:

- 15 days monitoring shall be conducted in all 9 locations and results to be submitted with detailed ambient air quality monitoring table.
- PP shall conduct 1 hour Ozone monitoring and submit the results.

Accordingly, proposal was **deferred** for the needful.

Agenda No. 5.6

Petroleum and petrochemical complex in Multi products Special Economic Zone in District Jamnagar in Gujarat by M/s, Reliance Industries Limited - Consideration of Bifurcation/ Amendment to Environment Clearance

[IA/GJ/IND2/268396/2022, J-11011/149/2007 – IA II (I)]

The proposal is for amendment (bifurcation) in the Environmental Clearance granted by the Ministry vide F.No. J-11011/149/2007–IA II (I) dated 30th March, 2010 and further amendments to it for the project Petroleum and Petrochemical complex in multi products Special Economic Zone in District Jamnagar in Gujarat in favour of M/s. Reliance Jamnagar Infrastructure Limited which was further transferred in the name of Reliance Industries Limited dated 18th October, 2011. List of ECs granted and status is as follows:

S. No.	EC No.	Date	EC Applicability	Remarks
1	J-11011/149/2007 - IA II (I)	30- 03-10	Multi product petroleum and petrochemical units. C1 to C8 petrochemicals by RJIL	Units set up - Gasification, C2 complex, Paraxylene, Elastomers (Butyl and Halo-Butyl Rubber) and CPP
2	J-11011/149/2007 - IA II (I)	18- 10-11	EC changed from RJIL to RIL	Transfer of EC.
3	J-11011/149/2007 - IA II (I)	14- 05-15	EC validity extended by five years	EC now valid up to 30-03-2020
4	J-11011/149/2007	03-	Butyl and HaloButyl	EC split and one

	- IAII (I)	06-20	rubbers to be set up in a JV – RSEPL.	EC issued to Reliance Sibur Elastomers Private Limited for Elastomers and other with all remainder products continued in RIL.
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The project proponent has requested for amendment (bifurcation) in the EC with the details as under;

S. No.	Para of/EC Issued by MoEF&CC	Details as per the EC	To be revised/reads as	Justification/reason										
1.	The ECs issued to M/s RIL are as per the following table:	C1 to C8 products, Power plant, Refinery, CBFS	Split original EC wherein RIL will retain EC issued in 2020 without the Gasification Unit and grant a separate EC in the name of M/s RSL for Coke Gasification	The gasification unit will now operate in the name and style of M/s Reliance Syngas Limited. NCLT has approved the same.										
	<table border="1"> <thead> <tr> <th>EC No.</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td>J-11011/149/2007 - IA II (I)</td> <td>30-03-10</td> </tr> <tr> <td>J-11011/149/2007 - IA II (I)</td> <td>18-10-11</td> </tr> <tr> <td>J-11011/149/2007 - IA II (I)</td> <td>14-05-15</td> </tr> <tr> <td>J-11011/149/2007 - IAII (I)</td> <td>03-06-20</td> </tr> </tbody> </table>				EC No.	Date	J-11011/149/2007 - IA II (I)	30-03-10	J-11011/149/2007 - IA II (I)	18-10-11	J-11011/149/2007 - IA II (I)	14-05-15	J-11011/149/2007 - IAII (I)	03-06-20
EC No.	Date													
J-11011/149/2007 - IA II (I)	30-03-10													
J-11011/149/2007 - IA II (I)	18-10-11													
J-11011/149/2007 - IA II (I)	14-05-15													
J-11011/149/2007 - IAII (I)	03-06-20													

Para wise bifurcation of EC dated 30th March, 2010

Para No.	Stipulations	RIL (Post amendment of EC)	Reliance Syngas Limited
2	The Ministry of Environment and	Applicable	To be provided by RIL: 1. Land 272.29 Ha for

<p>Forests has examined your application. It is noted that M/s Reliance Jamnagar Infrastructure Limited (RJIL) have proposed to develop Petroleum & Petrochemical Complex in a multi-product 'Special Economic Zone' in District: Jamnagar of Gujarat. The proposed site is located near the State Highway No. 25 on the way from Rajkot to Okha and is adjacent to the existing complex of Reliance industries Limited. The area proposed for the Petrochemical Projects is located in District Jamnagar in Gujarat, which is a barren land. The area is arid in nature and only has thorny bushes and shrubs. The size of the SEZ will be 4,545 ha, residential (810 ha.), commercial (275 ha), industrial (2275 ha. and green belt/transportation (1185 ha.). It is noted that no forest land is involved. It is proposed to setup C 1 based, C 2 based, C 3 based, C 4/C 5 based & C 6/C 7/CS based units. The common</p>		<p>RSL 2. Water 3,540 m3/hr 3. Power 320 MW</p> <p>RSL will operate one desalination plant of 18,240 m3/day capacity and the return sea water 41,760 m3/day will be discharged through the RIL discharge facilities. Effluent from 4 gasifiers (245 m3/hr) will be treated in dedicated ETP and 365 m3/hr from the other six gasifiers will be pretreated at RSL and routed to the ETP of SEZ refinery for treatment.</p>
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	<p>facilities for the proposed projects will be captive power plant of 2100 MW capacity, raw material receipt and product transport terminal and warehouse.</p> <p>Desalination plant will be providing 15,000 m³/hr of water required for the industrial and residential complex. Besides central common effluent treatment plant, incinerator and a secured disposal facility will be setup within the complex. It is also noted that only gas will be used as fuel for the petrochemical complex. Project cost will be Rs. 60,000.00 Crores and an amount of Rs. 1800.00 Crores will be utilized for control of pollution control measures.</p>		
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Para 3. Details of the unit along with their production capacity include the following:

For M/s Reliance Syngas Limited (RSL)

Sr. No.	Proposed Units	Capacity (MMTPA)	Raw Material (KTPA)	Raw Material Source
I	C1 Based units			
i	Coke Gasification	8.75	8750Coke	Refinery DTAP+JERP

For M/s Reliance Sibur Elastomers Pvt Ltd. (RSEPL) as per EC 2020

Sr. No.	Proposed Units	Capacity (MMTPA)	Raw Material (KTPA)	Raw Material Source
I	Butyl Rubber	120	C4 from RIL	RIL
2	Halo-Butyl Rubber	60	C4 from RIL	RIL, external sourcing

For M/s Reliance Industries Limited (RIL)

Sr. No.	Proposed Units	Capacity (MMTPA)	Raw Material (KTPA)	Raw Material Source
I C1 Based units				
i	MethanolSynthesis	0.625	660 Syngas	Coke Gasification
ii	AceticAcid	1.00	575Syngas+ 500Methanol	Coke Gasification +Methanol Synthesis
iii	Vinyl Acetate Monomer(VAM)	0.70	390AceticAcid+ 200 C2=	Acetic Acid+Multi Feed ICat Cracker
iv	Polyvinyl Acetate (PVA)	0.35	320VAM	Vinyl Acetate Monomer
v	PolyvinylAlcohols (PVOH)	0.125	250PVA	Polyvinyl Acetate
II C2 Based units				
i	Multifeed Cracker Complex-Ethylene	3.45	2x625C2=(FCC) 1000C2(RFG) 190C2=(RFG)	Refinery DTAP+JERP
ii	Ethylene Oxide derivatives like Mono EthyleneGlycol (MEG),Di Ethylene Glycol (DEG),Tri Ethylene Glycol (TEG)	1.25	800C2=	Multi feed / Cat cracker
iii	Polyethylene	0.75	765C2=	Multi feed / Cat

	polymers like(LDPE/LLDPE/HDP E)			cracker
III	C3 Based units			
1	Acrylic Acid & derivatives,SAP	0.45	275C3= 65Acrylicacid	Multi feed/Cat Cracker+ Acrylic Acid
2	n-Butyl Acrylate, n-butyraldehyde, n-Butanol, 2-EthylHexanol	0.5	315Acrylicacid+ 250 Oxy alcohol	Acrylic Acid+Oxy Alcohol
3	Propylene derivatives Like Propylene Oxides, Cumene,Phenol	0.4	290C3= +285H2O2	Multifeed/Cat Cracker+ Hydrogen Peroxide
4	PropyleneGlycols	0.2	150PO	PropyleneOxide Unit
5	Polyols	0.25	225PO+25 EO	Propylene OxideUnit+ MEG
6	Hydrogen Peroxide (H2O2)	0.32	165Syngas	Methanol
7	PP(Nonwoven)	0.125	125PP	Polypropylene(P P)
8	Polypropylene(PP)	0.25	250C3	Multi feedI Cat Cracker
IV	C4/C5			
1	Butene1	0.0625	62.5C2=	Multi feed Cracker
2	Maleic Anhydride (MA)	0.25	NC4	Refinery DTAP+JERP
3	FumaricAcid	0.125	MA	Maleic Anhydride
V	C6/C7/C8 Based units			
1	Mono Nitro Benzene, Aniline, Methylene Di Aniline, Phosgene, Methylene Diphenyl Diisocyanate (MDI), Toluene Diisocyanate (TDI), Benzene	0.5	500Benzene	Refinery DTAP+JERP
2	Styrene	1.0	700Benzene+	Refinery

			315C2=	DTAP+JERP
3	Paraxylene(PX), Orthoxylene(OX)	2.5	Reformate	Refinery DTAP+JERP
4	PTA	1.875	1250 PX+132Acetic Acid	Aromatics
5	PET	1.5	1290PTA+500M EG	PTA+MEG
6	PolyestersComplex (POY,PSF)	0.625	140PTA+ 200MEG	PTA+MEG
VI	CarbonBlack	1.5	CBFS + CSO (2.5MMTPAtotal)	RefineryUnit (DTAP & SEZ)
VII	Lube Oil Cum Refinery Complex	8.5	140 Kbpsd crude	140Kbpsd additional CDU / VDU
VII I	Captive Power Plant	2100MW		
IX	Jamnagar Export Refinery(JERP) (already under implementation)		580 Kbpsd Crude	

Para No.	Stipulations	RIL (Post amendment of EC)	Reliance Syngas Limited
4	The common facilities for the proposed project will be captive power plant, desalination plant, central ETP and a secured disposal facility. The power requirement will be met from the captive power plant of 2100MW to be set up as a part of SEZ Infrastructure. Water requirement	Applicable	RSL water requirement of 1,03,200 m3/day will be fulfilled by operating a desalination unit of 18,240 m3/day and 84,960 m3/day will be supplied by RIL. The requirements of electricity 320 MW and other utilities of M/s Reliance Syngas Limited, will be supplied by M/s Reliance Industries Limited. Secured landfill Facility services will be outsourced by RSL.

	<p>for the existing refinery cum petrochemical complex is met through the desalination plant. The desalination plant is providing 2600m³/hr of water for the existing refinery cum petrochemical complex. For the proposed project, the desalination plant will be providing 15,000 cum/hr. of water requirement for the industrial and the residential complex. About 15 new desalination unit of capacity 1000 m³/hr each would be installed. The intake and outfall points will be the same as for the existing desalination plant. Only additional pumps would be installed. Water supply from Narmada canal is also planned.</p>		
5	<p>The effluent treatment plant will include physical, chemical and biological treatment. The input to the effluent</p>	Applicable	<p>ETPs as described above will be utilized for Effluent treatment and will have primary, secondary and tertiary treatment facilities. Effluent from four gasifiers will be</p>

	<p>treatment plant will be segregated in two streams i.e. low total dissolved solids (LTDS) and high total dissolved solids (HTDS) and will be treated in three stages, with each stage having two sub - system of oil removal, two stage biological system and two stage tertiary/polishing system so that the treated effluent reused and recycled. Besides a gray water treatment plant with ultrafiltration and reverse osmosis process will be installed for use in SEZ from power plant cooling to horticulture watering. Centralized and standalone ETP will be designed based on the raw water quality and wastewater quality. Return sea water will be discharged into sea through a multi-port diffuser system.</p>		<p>treated in the ETP within the RSL complex. Pre-treatment is provided to the balance six gasifiers and effluent from this section is send to ETP of SEZ refinery. Treated effluent is recycled for various purposes. The reject from tertiary treatment of the treated effluent is discharged.</p>
6	<p>The incinerator will be designed for capacity of more</p>	<p>Applicable</p>	<p>All HW will be handled as per HOWM Rules 2016.</p>

<p>than 200 kg/hr and will be installed with ventury scrubbing system. The Hazardous/solid wastes, oil sludge from ETP will be recycled in Delayed coker unit and converted to Coke. Slop oil will be recycled by reprocessing in the process units. Oil rags, oil contaminated cotton waste /contaminated packaging will be disposed in the SEZ area or burnt in a well designed incinerator. Waste lubricating oil and used oil will be sold to certified waste lubricating oil processor. Spent catalyst from other units like platformer, isomer and Tatory will be given back to the suppliers. Empty drums will be sold after decontamination. Spent catalyst will be disposed in landfill area. Incinerator ash will be sent to secured landfill site.</p>		
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	<p>Equilibrium catalyst will be sold to other refineries. Biological sludge will be used as manure in green belt. Activated carbon will be mixed with pet coke and molecular sieves and will be sold to cement manufacturing unit. Slag from coke gasification unit will be sold to cement manufacturing unit/metal recovery.</p>		
7	<p>The Petrochemical complexes (Industries based on processing of petroleum fractions and natural gas and/or reforming to aromatics) are listed at serial no. 5(c) of schedule of EIA Notification,2006 and categorized under A category and to be appraised by the Centre.</p>	Applicable	<p>The petcoke gasification is a part of the refining process. Accordingly, RSL's application will be categorised at serial no. 4(a) of schedule of EIA Notification,2006 and categorized under A category and to be appraised by the Centre.</p>
8	<p>The proposal was considered by the Expert Appraisal Committee (I) in its 84th meeting held during 19-21 August, 2008 and 93rd meeting held on 15th April, 2009. The Committee</p>	Applicable	Applicable

<p>sought additional information. On receipt of additional information the proposal was placed before the Expert Appraisal Committee in its meeting held during 15-17th June, 2009. The Committee recommended the proposal for environmental clearance. The proposal was further referred back to the newly constituted Expert Appraisal Committee -2(1) to re-look into the issues of power project and other petrochemicals. The Committee considered the project in its meeting held in 19-21st August, 2009. The Committee sought additional information for reconsideration. On receipt of additional information, the proposal was placed before the Expert Appraisal Committee in its meeting held in 9-10th February, 2010. The</p>		
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	<p>Committee recommended the proposal for environmental clearance subject to stipulation of additional specific safeguards. Public hearing of the project was held on 8th January,2008.</p>		
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Bifurcation of specific conditions as given in EC dated 30th March, 2010

Sr. No.	Stipulations	RIL (Post amendment of EC)	Reliance Syngas Limited
B.	Specific Conditions:		
(i)	<p>The centralized ETP and standalone ETP shall be designed based on the raw water and wastewater quality. Design details of ETP shall be submitted to the Ministry. The effluent shall be segregated into low TDS and High TDS stream which shall after primary, secondary and tertiary treatment shall be used and recycled for green belt development, cooling tower make up etc. The treated effluent shall comply with the prescribed standards. The return sea water shall be discharged into the sea through a multi-port diffuser at a point</p>	Applicable	<p>Effluent from four gasifiers will be treated in the ETP within the RSL complex. Pre-treatment is provided to the balance six gasifiers and effluent from this section is send to ETP of SEZ refinery. All treated effluent is recycled for various purposes. The reject from tertiary treatment of the treated effluent is discharged.</p>

Sr. No.	Stipulations	RIL (Post amendment of EC)	Reliance Syngas Limited
	identified by NIO.		
(ii)	The Company shall provide details of the model used for the diffuser for discharge of saline water into sea and the efficacy of the existing diffuser which is based on the HYDRODYN model and also compare with CORMIX model. The depth of discharge of diffuser shall be determined as per the above model.	Applicable	Not applicable
(iii)	The hot water effluent and outfall shall be discharged as per the prescribed standards.	Applicable	Applicable
(iv)	The company shall comply with effluent and emission standards for Petrochemical Plants of CPCB/MoEF.	Applicable	Applicable
(v)	Ambient air quality data for one season other than monsoon within 10km radius of the complex particularly one station shall be established where maximum GLC is anticipated with respect to SO ₂ , NO _x , PM ₁₀ , Ozone, CO, Benzene and Benzo (a) pyrene and data submitted to MoEF/CPCB/SPCB.	Applicable	Not applicable
(vi)	Action plan for reduction of SO ₂ and NO _x emissions from the	Applicable	Applicable

Sr. No.	Stipulations	RIL (Post amendment of EC)	Reliance Syngas Limited
	present level shall be submitted to the Ministry.		
(vii)	The company shall install low NOx burner to mitigate the NOx emission and cyclone, venturi scrubbers, sulphur recovery unit and tail gas treatment for mitigating SO ₂ emission.	Applicable	Applicable
(viii)	The company shall install detectors for phosgene and specific steps shall be taken for phosgene management.	Applicable	Not applicable
(ix)	The gaseous emissions (SO ₂ , PM ₁₀ , NO _x , CO and NMHC) from the various process units shall conform to the standards prescribed under Environment (Protection) Rules, 1986 or norms stipulated by the SPCB, whichever is more stringent. At no time, the emission level shall go beyond the stipulated standards. In the event of failure of pollution control system(s) adopted by the unit, the respective units should not be restarted until the control measures are rectified to achieve the desired efficiency.	Applicable	Applicable

Sr. No.	Stipulations	RIL (Post amendment of EC)	Reliance Syngas Limited
(x)	<p>The proponent shall upload the status of compliance of the stipulated EC conditions, including monitored data on its website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MoEF, the respective Zonal office of CPCB and the SPCB.</p> <p>The criteria pollutant namely; Particulate matter (PM₁₀, SO₂, NO_x, VOC and HC (Ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the project shall be monitored and displayed at the convenient location near the main gate of the company in the public domain.</p>	Applicable	Applicable
(xi)	<p>Process emissions shall be controlled by scrubbers. Flue gas emissions from the various stacks attached to the boilers, furnace/heaters shall conform to the prescribed standards.</p>	Applicable	Applicable
(xii)	<p>The gaseous emissions from the DG sets shall be dispersed through stack of adequate height</p>	Applicable	Applicable

Sr. No.	Stipulations	RIL (Post amendment of EC)	Reliance Syngas Limited
	as per CPCB/State Pollution Control Board standards. Acoustic enclosures shall be provided to mitigate the noise.		
(xiii)	The company shall use low sulphur fuel to minimize SO ₂ emission. Stacks which are contributing to more SO ₂ emissions shall be identified and SO ₂ emissions shall be reduced by changing the fuel or by increasing the height of major stacks to bring GLC within the prescribed limits.	Applicable	Applicable
(xiv)	To control the fugitive emissions, the unit shall have provision for internal floating roof tanks with flexible double seal for MS and intermediate products; mechanical seals in pumps; regular inspection of floating roof seals and proper maintenance of floating roof seals for storage tanks; preventive maintenance of valves and other equipment; regular skimming of oil from separators/equalization basin in ETP. The units shall assess and minimize the fugitive	Applicable	Not applicable

Sr. No.	Stipulations	RIL (Post amendment of EC)	Reliance Syngas Limited
	VOC emission wherever possible.		
(xv)	Fugitive emissions of HC from product storage tank yards etc must be regularly monitored. Sensors for detecting HC leakage shall also be provided at strategic locations.	Applicable	Not applicable
(xvi)	M/s RIL shall implement Leak Detection and Repair (LDAR) programme using a portable VOC detection instrument shall be done on distribution lines and tanks.	Applicable	Not Applicable
(xvii)	Measures shall be undertaken for odour control and inventory of odours compounds shall be maintained.	Applicable	Applicable
(xviii)	The product loading gantry shall be connected to the product sphere in closed circuit through the vapour arm connected to the tanker. Data on fugitive emissions shall be regularly monitored and records maintained.	Applicable	Not Applicable
(xix)	The company shall ensure that no halogenated organic is sent to the flares. If any of the halogenated organic are present then the respective streams may be incinerated, if	Applicable	Not Applicable

Sr. No.	Stipulations	RIL (Post amendment of EC)	Reliance Syngas Limited
	there are no technically feasible or economically viable reduction/recovery options. Any stream containing organic carbon, other than halogenated shall be connected to proper flaring system, if not to a recovery device or an incinerator.		
(xx)	The company shall obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Transboundary Movement) Rules, 2008 for management of Hazardous wastes and prior permission from GPCB shall be obtained for disposal of solid / hazardous waste in the TSDF. Details of regarding type of catalyst to be used and plan for disposal of spent catalyst shall be submitted. The company shall incinerate the oil cotton ragas only. The design of the incinerator and secured landfill facility shall be as per the CPCB guidelines.	Applicable	Applicable
(xxi)	M/s RJIL shall undertake measures for fire	Applicable	Applicable

Sr. No.	Stipulations	RIL (Post amendment of EC)	Reliance Syngas Limited
	fighting facilities in case of emergency		
(xxii)	The company shall submit time bound action plan for brine management. Further, possibility of setting up of salt manufacturing facility for management of huge volume of brine shall be explored or tie up with the salt manufacturing units in the area for brine disposal.	Applicable	Applicable
(xxiii)	The company shall prepare integrated risk assessment report considering domino effect which shall be done after freezing overall layout of the Petrochemical Complex with precise location of all individual plants as well as all offsite and battery limit storage areas of the Petrochemical Complex and after all storage capacities and tank sizes are decided.	Applicable	Not Applicable
(xxiv)	The Quantitative Risk Assessment (QRA) shall be done in comprehensive manner by taking into all consideration listed below but not limited to, a) Report to consider two mega size	Applicable	Not Applicable

Sr. No.	Stipulations	RIL (Post amendment of EC)	Reliance Syngas Limited
	<p>refineries in the same industrial area and shall deal with the risk arising out of major incident (VCE, Flash fire) in either the existing refineries or proposed petrochemical complex and its domino effect on the each other</p> <p>b) Report to consider precise layout of particular units, bulk storages and storage quantities determined, details of safety system, safeguard provided against domino effect</p>		
(xxv)	All pressure vessels shall be of SIL-3 level product at par with existing refineries.	Applicable	Applicable
(xxvi)	Any relief system for major hazardous releases shall have at least double or triple backup system against the possibility of human error.	Applicable	Applicable
(xxvii)	Risk assessment shall include BLEVE for propane and shall be considered in the lay out plan.	Applicable	Not Applicable
(xxviii)	The company shall	Applicable	Applicable

Sr. No.	Stipulations	RIL (Post amendment of EC)	Reliance Syngas Limited
	submit reports of last 2-3 years regarding external safety audit.		
(xxix)	<p>Since some of the design parameters have not been frozen at this stage of project, once the Front End Engineering Design Document (FEED) is firmed up, necessary details for integrated QRA study are available particularly with respect to lay out including, the bulk storages with storage quantities determined, details of safety system, safeguard provided against domino effect and other details as prescribed in the specific conditions stipulated above regarding catalyst and the mode of their disposal, steps for mitigation of SO₂ and NO_x releases details of phosgene management and model used for diffuser for discharged of saline water into the sea shall be submitted to the Ministry. The information provided shall be place before the Committee so that the Committee suggests mid-course correction, and if considered necessary</p>	Applicable	Not Applicable

Sr. No.	Stipulations	RIL (Post amendment of EC)	Reliance Syngas Limited
	additional environmental safeguards are stipulated for compliance by M/s RIL.		
(xxx)	M/s RIL shall undertake rainwater harvesting measures, to recharge the ground water and also to minimize the water drawl from the weir.	Applicable	Not Applicable
(xxxii)	Green belt in 33% of the plant area shall be provided to mitigate the effects of fugitive emissions all around the plant as per CPCB guidelines in consultation with local DFO.	Applicable	Applicable
(xxxiii)	Occupational health surveillance programme shall be undertaken as regular exercise for all the employees. The first aid facilities in the occupational health centre shall be strengthened and the medical records of each employees shall be maintained separately.	Applicable	Applicable
(xxxiiii)	Provision shall be made for the housing for the construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile sewage	Applicable	Not Applicable

Sr. No.	Stipulations	RIL (Post amendment of EC)	Reliance Syngas Limited
	treatment plant, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structure to be removed after the completion of the project. All the construction wastes shall be managed so that there is no impact on the surrounding environment.		
(xxxiv)	The Company shall comply with all the conditions stipulated vide ministry's clearance letter no. J-111011/232/2005-IA.II(I) dated 3 rd August,2005 for expansion and modernization of petrochemical refinery complex.	Applicable	Applicable
B	GENERAL CONDITION:		
i.	The project authorities must strictly adhere to the stipulations made by the Gujarat Pollution Control Board and the State Government.	Applicable	Applicable
ii.	No further expansion or modernization in the plant should be carried out without prior approval of the ministry of Environment and Forests.	Applicable	Applicable
iii.	At no time, the emission should go beyond the	Applicable	Applicable

Sr. No.	Stipulations	RIL (Post amendment of EC)	Reliance Syngas Limited
	prescribed standards. In the event of failure of any pollution control system adopted by the units, the respective unit should be immediately put out of operation and should not be restarted until the desired efficiency has been achieved.		
iv.	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 should confirm to the standards prescribed under EPA Rules.	Applicable	Applicable
v.	The project authorities must strictly comply with the provisions made in Manufacture, Storage and import of Hazardous Chemicals Rules 1989 as amended in 2000 for handling of hazardous chemicals etc. Necessary approvals from chief controller of explosives must be obtained before commission of the project.	Applicable	Applicable
vi.	The project authorities	Applicable	Applicable

Sr. No.	Stipulations	RIL (Post amendment of EC)	Reliance Syngas Limited
	will provide adequate funds both recurring and non-recurring to implement the conditions stipulated by the ministry of Environment and Forest as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so provided should not be diverted for any other purposes.		
vii.	The stipulated conditions will be monitored by the Regional of this Ministry at Bhopal/Central Pollution Control Board / State Pollution Control Board. A six monthly compliance report and the monitored data should be submitted to them regularly.	Applicable	Applicable
viii	The project proponent shall also submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copy as well as by e-mail) to the respective Regional office of MoEF, the respective zonal office of CPCB and the State Pollution Control Board.	Applicable	Applicable

Sr. No.	Stipulations	RIL (Post amendment of EC)	Reliance Syngas Limited
ix.	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parisad/ Municipal Corporation, Urban local Body and the local NGO, if any, from who suggestions/ representations, if any were received while processing the proposal.	Applicable	Applicable
x.	The Environmental statement for each financial years ending 31 st 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 by e-mail.	Applicable	Applicable
xi.	The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance	Applicable	Applicable

Sr. No.	Stipulations	RIL (Post amendment of EC)	Reliance Syngas Limited
	letter are available with the SPCB/Committee and may also be seen at website of Ministry at http://envfor.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 concerned the Regional Office of the Ministry.		
xii.	The project authorities shall inform the Regional Office as well as the Ministry, the date of financial closures and final approval of the project by the concerned authorities and the date of start of the project.	Applicable	Applicable

During deliberations, PP informed that Memorandum and Articles of Association between Reliance Syngas Limited and Reliance Industries Limited has been submitted and the CIN number for Reliance Syngas Limited is U24304GJ2021PLC126977.

The Expert Appraisal Committee, after detailed deliberations **recommended** the amendments (bifurcation/part transfer) in EC, as proposed by the project proponent, with all other terms and conditions remain unchanged in the EC dated 30th March, 2010. Specific conditions to be included in proposed amendment is as follows:

(i) Physical demarcation of both the units shall be clearly reflected.

(ii) Greenbelt of 33% shall be developed in the new unit area of RSL and RIL shall maintain the same percentage in existing premises.

ANNEXURE

GENERAL CONDITIONS FOR ENVIRONMENTAL CLEARANCE

- (i) No further expansion or modifications in the plant, other than mentioned in the EIA Notification, 2006 and its amendments, shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change/SEIAA, as applicable. In case of deviations or alterations in the project proposal from those submitted to this Ministry for clearance, a fresh reference shall be made to the Ministry/SEIAA, as applicable, to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.
- (ii) The energy source for lighting purpose shall be preferably LED based, or advanced having preference in energy conservation and environment betterment.
- (iii) The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under the Environment (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).
- (iv) The company shall undertake all relevant measures for improving the socio-economic conditions of the surrounding area. CER activities shall be undertaken by involving local villages and administration and shall be implemented. The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment.
- (v) The company shall earmark sufficient funds towards capital cost and recurring cost per annum to implement the conditions stipulated by the Ministry of Environment, Forest and Climate Change as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so earmarked for environment management/ pollution control measures shall not be diverted for any other purpose.
- (vi) A copy of the clearance letter shall be sent by the project proponent to concerned Panchayat, Zilla Parishad/Municipal Corporation, Urban local Body and the local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal.
- (vii) The project proponent shall also submit six monthly reports on the status of compliance of the stipulated Environmental Clearance

conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional Office of MoEF&CC, the respective Zonal Office of CPCB and SPCB. A copy of Environmental Clearance and six monthly compliance status report shall be posted on the website of the company.

- (viii) The environmental statement for each financial year ending 31st March in Form-V as is mandated shall be submitted to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Regional Offices of MoEF&CC by e-mail.
- (ix) The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB/Committee and may also be seen at Website of the Ministry and at <https://parivesh.nic.in/>. This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the concerned Regional Office of the Ministry.
- (x) The project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of the project.
- (xi) This Environmental clearance is granted subject to final outcome of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, if any, as may be applicable to this project.

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

S. No.	Name and Address	Position
1.	Shri S. C. Mann	Chairman
2.	Dr. J. S. Sharma	Member
3.	Prof. Y. V. Rami Reddy	Member
4.	Prof. Dilip Majumdar	Member
5.	Dr. Onkar Nath Tiwari	Member
6.	Shri J. S. Kamyotra	Member
7.	Dr. Rahul Ramesh Rao Mungikar	Member
8.	Dr. Seshagiri Rao Ambati (IIPe)	Member
9.	Dr. Sanjay V. Patil (VSI)	Member
10.	Dr. Siddhartha Singh (IMD)	Member
11.	Shri A.N. Singh, Scientist 'E'	Member Secretary
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12.	Dr. Mahendra Phulwaria	Scientist 'C'
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