

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

Dated: 16.12.2022

**Meeting ID: IA/IND2/13399/12/12/2022
MINUTES OF MEETING OF THE EXPERT APPRAISAL COMMITTEE
(INDUSTRY-2 SECTOR PROJECTS)
HELD ON 12th -13thDecember, 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 Meeting (ID: IA/IND2/13394/28/11/2022) held on 28th - 29th November, 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.

(iii) 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: -

12th December, 2022 (Monday)

Agenda No. 1

Project for 200 KLPD grain-based Fuel Ethanol plant and 5 MW of captive power plant (Coal or Biomass), located at Khasra No:172, 199/KH, 204, 206, 208 Samariha Village, Lalganj Tehsil, Mirzapur District, Uttar Pradesh by M/s. Brajdev Ethanol Private Limited. – Re-consideration of Environmental Clearance

[IA/UP/IND2/291235/2022, IA-J-11011/358/2022-IA-II(I)]

The proposal was earlier considered by the EAC (Ind-2) in its meeting ID: IA/IND2/13379/14/11/2022) held on 14th- 15th November, 2022. It has been informed to EAC by PP vide mail dated 11.11.2022 that due to unavoidable circumstances they will not be able to attend EAC meeting. Accordingly, the proposal was deferred.

Accordingly, the proposal was again considered in EAC meeting (Meeting ID: IA/IND2/13399/12/12/2022) held on 12th – 13th December, 2022.

The Project Proponent and the accredited Consultant M/s. Pioneer Enviro Laboratories and Consultants Private Limited (NABET / EIA/ 1922 / SA 0148 valid upto 16-12-2022), made a detailed presentation on the salient features of the project and informed that the proposal is for environmental clearance to the project for 200 KLPD grain-based Fuel Ethanol plant and 5 MW of captive power plant (Coal or Biomass), located at Khasra No:172, 199/KH, 204, 206, 208 Samariha Village, Lalganj Tehsil, Mirzapur District, Uttar Pradesh by M/s. Brajdev Ethanol 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 |
|---------------------------|---------------------|----------------------------|----------------------------|
| 1 | Distillery plant | Ethanol | 200 KLPD |
| 2 | Power plant | Electricity | 5.0 MW |
| <u>BY-PRODUCTS</u> | | | |
| 1 | Distillery plant | DDGS | 160 TPD |
| 2 | Distillery plant | CO ₂ recovery | 152 TPD |

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

Total land required is 11.13 Ha. (27.50 acres). Total land of 11.13 Ha (27.50 acres) is taken on lease and land use conversion application has been submitted to Sub-Divisional Magistrate, Lalganj Tehsil, Mirzapur District dated 14-09-2022. Greenbelt will be developed in total area of 3.88 Ha. (9.60 acres) i.e 35.42 % of total project area. The estimated project cost is Rs. 279.06 crores. Capital cost of EMP would be Rs. 30.50 crores and recurring cost of EMP would be Rs. 6.20 Crores per annum. Industry proposes to allocate Rs. 2.79 Crores towards extended EMP (Corporate Environment Responsibility). Total Employment will be 150 persons as direct & indirect.

There are no National parks / Wild life sanctuaries, Biosphere Reserves, Tiger / Elephant reserves, Wildlife corridors etc. within 10 Km radius. Unnamed Forest is at a distance of 8.4 Kms. Belan Nadi is flowing at a distance of 0.30 Kms, Adwa Nadi is flowing at a distance of 0.60 Kms, Suswara Nala is flowing at a distance of 1.0 Kms & Sarkar Nala is flowing at a distance of 1.15 Kms. Few tanks/ ponds are present within 10 Kms radius. PP has obtained NOC for Belan Nadi vide dated 19th October, 2022 from Office of the Executive Engineer Sirsi Dam Division, Mirzapur. It was mentioned that HFL of Belan river based on 25 years flood data is 137 m and elevation of the project site is 141.3 m which indicates that project site is located at higher level compared to HFL.

AAQ modelling study for point source emissions indicates that the maximum incremental GLCs for the proposed project would be 0.1 µg/m³, 0.1 µg/m³,

4.9 $\mu\text{g}/\text{m}^3$, and 0.6 $\mu\text{g}/\text{m}^3$ with respect to PM_{10} , $\text{PM}_{2.5}$, SO_2 and NO_x . The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

Total fresh water requirement will be 800 m^3/day which will be met from Ground water/Belan river. Application has been submitted to SGWB for drawing Ground water & Irrigation Department, Govt. of Uttar Pradesh for drawing water from Belan river. In this regard, EAC suggested to meet the fresh water requirement from the surface water source only. Effluent (Condensate/spent lees/blow down etc.) of 1183 m^3/day quantity will be treated through Condensate Polishing Unit of capacity 1200 KLPD. Raw stillage (1200 KLPD quantity of raw spent wash from distillation) will be sent to decanter followed by MEE and dryer to produce DDGS. Non-Process effluent (Backwash from DM plant & Boiler blowdown) of 67 KLD will be neutralized in a neutralization tank and will be utilized for greenbelt development, dust suppression and ash conditioning after ensuring compliance with treated effluent quality as per MoEF / SPCB Standards. STP of capacity 10 KLPD will be installed to treat sewage generated from factory premises. The plant will be based on Zero Liquid discharge system and no effluent/treated water will be discharged outside factory premises.

The power requirement will be 5 MW and will be met from the proposed 5 MW captive power plant. 50 TPH Biomass / Coal fired boiler will be installed. APCE Electro Static Precipitator with a stack height of 55 m will be installed for controlling the particulate emissions within the statutory limit of 30 mg/Nm^3 for the proposed boiler. 2 x 1000 KVA DG set will be used as standby during power failure and stack height (3 m above building) will be provided as per the CPCB norms to the proposed DG sets.

Details of Process emissions generation and its management:

- APCE ESP with a stack height of 55 meters will be provided to boiler for effective dispersion of sulphur dioxide emission into the atmosphere.
- Online Continuous Emission Monitoring System will be installed with the stack and data will be transmitted to CPCB/SPCB servers.
- CO_2 generated (152 TPD) during the fermentation process will be collected by utilizing CO_2 scrubbers and sold to authorized vendors.

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

- DDGS (Distilled Dried Grains Stillage) (160 TPD) will be sold as cattle feed / fish feed / prawn feed.
- Boiler ash (92 TPD) will be used for brick manufacturing in proposed brick manufacturing plant inside plant premises.
- Used oil (0.5 Kilolitres per annum) will be sold to authorized recyclers.
- CPU sludge (0.6 TPD) and STP Sludge (0.8 Kg/day) 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 notarized affidavit declaring that the proposed capacity of 200 KLPD will be used for manufacturing fuel ethanol only.

During deliberations, EAC discussed following issues:

- i. As per kml file presented there are lot of small parcels of land included in the proposed site fragmenting lot of plots around the boundary of the project. PP has informed that the parcels of land around the project are under the possession of the company but are not demarcated in the project layout. EAC suggested PP to demarcate the land under the possession of the company.
- ii. PP has proposed the source of water requirement as both ground water and surface water from river Belan. EAC suggested that water requirement for the Industry shall be met only by surface water and directed PP to withdraw application made to SGWB for extraction of ground water. PP shall provide the undertaking for the same.
- iii. ESP (5 field) with 99.9% efficiency with a stack height of 55 meters will be installed to 50 TPH boiler for controlling the particulate emissions less than 30mg/Nm³. PP agreed to it.
- iv. Maximum incremental GLCs for the proposed project with respect to SO₂ is mentioned as 4.9 µg/m³ which is found on higher side. EAC sought justification from PP for anomaly and asked for preventive measures to reduce the SO₂ emissions.
- v. EAC found the details risk analysis mentioned in EMP purely of bookish

in nature. No specific details to the project such as potential threat zone, approximate zone of influence etc were not submitted and suggested PP to submit the same.

- vi. PP shall develop indigenous plants in consultation with local DFO. Greenbelt development shall be completed within one year.
- vii. 15% of the total power requirement shall be met from solar energy.
- viii. Funds earmarked towards Extended EMP (CER) shall be increased to Rs. 3.00 crores which shall be spent on monitorable activities like upgradation of schools, potable drinking water facilities etc within nearby areas. PP shall submit revised details of the activities proposed along with budgetary allocation.
- ix. Belan Nadi is flowing at a distance of 0.30 Kms, Adwa Nadi is flowing at a distance of 0.60 Kms. Thick greenbelt shall be developed along with strong RCC retaining wall along the river side shall be provided.
- x. PP shall provide proper garland drain followed by settling tank for water drainage from the project site during rainy season.
- xi. Entry to the Industry shall not be provided on the village road side as blind turn was located there. PP shall revise plant layout changing the entry point. Village road should be strengthened for meeting traffic load during operation of the project.
- xii. Filter press shall be used instead for sludge drying bed.
- xiii. PP shall replace non-indigenous species with indigenous species and minimum number of species shall be 20. The details of the number of individuals of each species shall be provided. Accordingly, PP shall ensure that selection of plant species shall be indigenous species while developing greenbelt and minimum number of species shall be 20. The details of the number of individuals of each species shall be provided to concerned IRO, MoEF&CC.

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

The EAC, constituted under the provision of the EIA Notification, 2006 and comprising of Experts Members/domain experts in various fields, have examined the proposal submitted by the Project Proponent in desired form along with the 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 200 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). EC granted for a project on the basis of the submitted documents shall become invalid in case the actual land for the project site turns out to be different from the land considered at the time of appraisal of project. Conversion of land use (CLU) certificate shall be obtained before start of construction activities.
- (iv). Belan Nadi is flowing at a distance of 0.30 Kms, Adwa Nadi is flowing at a distance of 0.60 Kms. Thick greenbelt shall be developed along with strong RCC retaining wall along the river side shall be provided. PP shall provide proper garland drain followed by settling tank for water drainage from the project site during rainy season.
- (v). PP shall ensure that village road is strengthened for meeting traffic load during operation of the project. PP shall revise the entry point of factory in their layout map to avoid traffic congestion.
- (vi). NOC from the Concerned Local authority shall be obtained before start of the construction of plant for drawing of the surface water for the project activities, State Pollution Control Board / Pollution Control Committees shall not issue the Consent to Operate (CTO) under Air (Prevention and Control of Pollution) Act and Water (Prevention and Control of Pollution) Act till the project proponent shall obtain such permission.
- (vii). Total Fresh water requirement shall not exceed 4 KL/KL of ethanol production i.e. 800 m³/day, which will be met from Belan river. No ground water recharge shall be permitted within the premises. Industry shall construct a rain water storage pond of 60 days capacity and the accumulated water to be used as fresh water thereby reducing fresh water consumption.

- (viii). Spent wash shall be dried to form DDGS to be used as cattle feed. The condensate, spentlees and utilities effluent shall be treated in the ETP comprising tertiary treatment (Condensate Polishing Unit). Treated effluent will be recycled/reused for makeup water of cooling towers/process etc. and no waste or treated water shall be discharged outside the premises. STP shall be installed to treat the sewage generated from factory premises. Filter press shall be used instead for sludge drying bed
- (ix). 5 field Electrostatic precipitator (5 field & 99.9% efficiency) with a stack height of 55 meters will be installed with the proposed boilers of capacities 50 TPH Biomass /Coal fired boiler for controlling the particulate emissions within the statutory limit of 30 mg/Nm³. SO₂ and NOx emissions shall be less than 100 mg/Nm³. At no time, the emission levels shall exceed the prescribed standards. In the event of failure of any pollution control system adopted by the unit, the respective unit shall not be restarted until the control measures are rectified to achieve the desired efficiency. Performance assessment of pollution control devices/ systems will be conducted annually.
- (x). Boiler ash (92 TPD) will be used for brick manufacturing in proposed brick manufacturing plant inside plant premises. 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. PP shall meet 10% of the total power requirement from solar power by generating power inside plant premises/adjacent/nearby areas.
- (xi). CO₂ generated (152 TPD) during the fermentation process will be collected by utilizing CO₂ scrubbers and sold to authorized vendors.
- (xii). 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.
- (xiii). 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.

- (xiv). The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire fighting system shall be as per the norms. PESO certificate shall be obtained.
- (xv). 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.
- (xvi). 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.
- xiv. The green belt of at least 5-10 m width shall be developed within an year in nearly 9.60 acres i.e., 35.42% of the total project area with tree density @ 2500 trees per hectares, mainly along the plant periphery. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department and native species shall be developed. Records of tree canopy shall be monitored through remote sensing map. PP shall ensure that selection of plant species shall be indigenous species while developing greenbelt and minimum number of species shall be 20. The details of the number of individuals of each species shall be provided to concerned IRO, MoEF&CC.
- (xvii). PP proposed to allocate Rs. 3.00 Crores towards Extended EMP (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, potable drinking water facilities, solar light/solar power support for uninterrupted power supply, soil nutrient management etc. Further, all the proposed activities under CER shall be completed before the commissioning of the plant in consultation with District Administration.

- (xviii). 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.
- (xix). Storage of raw materials shall be either in silos or in covered areas to prevent dust pollution and other fugitive emissions. All stockpiles should be constructed over impervious soil and garland drains with catch pits to trap runoff material shall be provided. Biomass shall be stored in covered sheds and wind breaking walls/curtains shall be provided around biomass storage area to prevent its suspension during high wind speed. All Internal roads shall be paved. Industrial vacuum cleaner shall be provided to sweep the internal roads. The Air Pollution Control System shall be interlocked with process plant/machinery for shutdown in case of operational failure of Air Pollution Control Equipment.
- (xx). Continuous online (24x7) monitoring system for stack emissions/effluent shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.
- (xxi). A separate Environmental Management Cell (having qualified person with Environmental Science/Environmental Engineering/specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions. EMC head shall report directly to Head of Organization/Director/CEO as per company hierarchy.
- (xxii). PP shall sensitize and create awareness among the people working within the project area as well as its surrounding area on the ban of Single Use Plastic in order to ensure the compliance of Notification published by MOEFCC on 12th August, 2021. A report along with photographs on the measures taken shall also be included in the six-monthly compliance report being submitted to concerned authority.

Agenda No. 2

Greenfield Project of Grain Based Distillery Plant of 200 KLD capacity long with Co-Generation Power Plant of 6 MW located at Village- Neglur, Taluk & Dist- Haveri, State- Karnataka by M/s. Prabhriti Ethanol Private Limited – Re-consideration of Environmental Clearance

[IA/KA/IND2/401207/2022, IA-J-11011/478/2022-IA-II(I)]

The proposal was earlier considered by the EAC (Ind-2) in its meeting/meeting ID- IA/IND2/13379/14/11/2022 held during 14th-15th November 2022 wherein EAC deferred the proposal and desired certain requisite information/inputs. After submission of ADS reply by Project Proponent, proposal was again considered in EAC meeting (Meeting ID: IA/IND2/13399/12/12/2022) held on 12th – 13th December, 2022. Information desired by EAC and responses submitted by the project proponent along with remarks of EAC as discussed in meeting are as follows:

| No. | ADS by MOEFCC | Reply by proponent |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | As per the EMP report submitted, it is mentioned that water to be sourced from Malaprabha River. However, during meeting, PP informed that application has been submitted for obtaining water withdrawal permission from Tungabhadra River. Committee suggested them to fill correct details in the EMP report while submitting the proposal. | For the proposed project, water source is Tungabhadra river and application has been submitted to Water Resources Dept, Govt of Karnataka for obtaining water withdrawal permission from Tungabhadra River. |
| 2 | Revised total capital cost & recurring cost of EMP shall be submitted as EMP cost is on lower side. | Revised total capital cost of EMP is Rs 18.45 crores and recurring cost of the EMP is Rs 1.06 crores and breakup is submitted on parivesh portal. |
| 3 | Clarify regarding area of greenbelt as it is different in presentation and documents submitted. PP shall submit final | Revised layout map with greenbelt in plant premises is submitted on parivesh portal. Now proposed greenbelt area is |

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|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| | area of greenbelt as 5.05 acres i.e. 2.04 Ha. Also, revised plant layout clearly showing greenbelt in plant premises shall be submitted. | 5.05 acres (2.04 Ha) i.e. 33% of the total area. |
| 4 | Industry shall earmark 15% parking area out of total plant area | 15% parking area has been earmarked within the project site and same is shown in the layout plan. |
| 5 | Revised fresh water consumption balance @ 4 KL/KL of ethanol production shall be submitted. Accordingly, water balance to be modified. | Revised fresh water consumption balance @ 3.88 KL/KL of ethanol production is submitted on parivesh portal. |
| 6 | Sewage to be treated in the STP instead of septic tank and soak pit. Proposal for the same shall be submitted. | 10 KLD capacity STP is proposed to treat sewage and STP proposal is submitted on parivesh portal. |
| 7 | Re-verify the incremental concentrations of PM10, PM2.5, SO2 and NOx as values are different as submitted and presented. | Re-verified the incremental concentrations of PM10, PM2.5, SO2 and NOx as values are 0.226, 0.151, 2.60 and 2.69 µg/m ³ respectively. |
| 8 | Detailed risk analysis shall be submitted and PP shall submit precautionary measures in order to ensure that threat zone of predicted danger shall be neutralized at the plant boundary. | Detailed Risk Analysis report is submitted on parivesh portal. |
| 9 | PP shall submit action plan for greenbelt development & commit that greenbelt shall be developed by December, 2023. | Action plan for Greenbelt development is submitted on parivesh portal. |

During deliberations EAC sought some basic queries related to location of the project and background of the proposed site to which EIA coordinator Sh. Madan Prakash responded that he has no idea about the project and had never made a visit to the proposed project site. Further, he had also informed the committee that he has no relation to the information submitted in the PFR/EMP. EAC noted that the environmental consultant has not carried out their work properly and submitted sub-standard report. Therefore, EAC suggested that Ministry should take action against the Environmental Consultant namely M/s. Ecomen Laboratories Pvt. Ltd and write to

QCI/NABET for disqualification as Consultant. Further, EAC recommended the project to be returned in present form.

Accordingly, proposal was returned in present form.

Agenda No. 3

Expansion of Distillery Capacity from 100 to 250 KLPD based on Sugar cane Syrup/C/B Heavy Molasses as Raw Material and 120 KLPD Grain based Distillery to Produce Ethanol located at Village: - Bellad - Bagewadi, Tehsil: - Hukeri, District: - Belgavi, State : - Karnataka by M/s. Vishwaraj Sugar Industries - Re-consideration of Environmental Clearance

[IA/KA/IND2/404187/2022, IA-J-11011/465/2022/IA-II (I)]

The proposal was earlier considered by the EAC (Ind-2) in its meeting/meeting ID- IA/IND2/13379/14/11/2022 held during 14th-15th November 2022 wherein EAC deferred the proposal and desired certain requisite information/inputs. After submission of ADS reply by Project Proponent, proposal was again considered in EAC meeting (Meeting ID: IA/IND2/13399/12/12/2022) held on 12th - 13th December, 2022. Information desired by EAC and responses submitted by the project proponent along with remarks of EAC as discussed in meeting are as follows:

| Sr.No. | ADS by MoEF&CC | Reply By PP |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|
| 1 | Affidavit that PP shall not produce any RS or ENA as part of expansion and no liquor bottling plant shall be installed. PP has submitted the undertaking stating that at any time capacity shall not exceed 250 KLPD and no RS/ENA will be produced as well as no bottling plant will be installed. Also, informed that there is an IML bottling unit within the premises , the same has been leased out to another company and there shall not be any supply of spirit to IML unit from distillery | Affidavit is submitted on parivesh portal. |

| | | |
|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2 | PP shall commit that bio-composting will be stopped for existing as well as proposed capacity within 2 year. PP has submitted that after commissioning of the 250 KLPD plant, bio-composting will be stopped and both the existing as well as proposed units will have spray dryer treatment instead of bio-composting for spent wash. | Affidavit is submitted on parivesh portal. |
| 3 | Greenbelt shall be uniformly distributed around the premises. PP has committed that remaining greenbelt will be developed within 3 years | Greenbelt will be uniformly distributed around the premises and will be developed within 3 years. |
| 4 | PP shall commit that no coal shall be used as fuel. | Affidavit is submitted on parivesh portal. |
| 5 | Committee noted that incremental concentration as well as baseline concentrations are on higher side. PP shall ensure that vehicle that meet the norms shall only be permitted in the project area. Also, PP shall submit additional measures to control SO ₂ and NO _x emissions. | PP shall strictly permit the vehicles shall meet the Euro norms and all the vehicles which are more than 15 years shall not be allowed to operate and enter into factory premises. The additional measures to reduce SO ₂ and NO _x are submitted on parivesh portal. |
| 6 | Revised EMP budget shall be submitted after increasing cost of environmental monitoring. | Revised EMP budget is submitted on parivesh portal. |
| 7 | Clarification regarding quantity of carbon di-oxide capture shall be submitted. PP has submitted that entire CO ₂ will be captured and bottled. | For 250 KLPD distillery 160 TPD-170 TPD of CO ₂ shall be captured. |
| 8 | PP shall commit that Ghataprabha Bird Sanctuary is more than 10 km away from project site and does not lie in 10 km radius study area. PP has submitted that Ghataprabha Bird Sanctuary is more than 8 km away (aerial distance) from project site | Ghataprabha Bird Sanctuary is more than 8 km away (aerial distance) from project site. |
| 9 | The committee discussed the consultant | Inadvertently, the |

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| | <p>to explain why they have not mentioned the important details in the document as well as misguided the important details. Further EAC asked them to provide the following details for further considerations.</p> <ul style="list-style-type: none"> i) Details of ESZ Notification of Ghatprabha Bird Sanctuary. ii) Distance of project site w.r.t. ESZ and Ghatprabha Bird Sanctuary notification in the map which shall be authenticated by Chief Wildlife Warden. iii) Copy of Wildlife Conservation Plan for schedule-1 species authenticated by Chief Wildlife Warden to be submitted. | <p>distance between the Ghatprabha Bird Sanctuary and Vishwaraj Sugars Industries were not mentioned. We apologize for missing the important details and request to pardon us as we have no intension to misguide the Authority. The details of the authentication of Chief Wildlife Warden is submitted on parivesh portal.</p> |
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The Project Proponent and the accredited Consultant M/s. Dr. Subbarao's Environment Center, Sangli (NABET Certificate no: NABET/EIA/2023/SA0174 and validity 12th December, 2023) 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 existing distillery unit from 100 KLPD to 250 KLPD distillery located at Village Bellad-Bagewadi, Tehsil Hukeri, District Belgavi, State Karnataka by M/s. Vishwaraj Sugar Industries.

As per EIA Notification 2006 (Schedule 5(g) Category A); however, as per in the MoEF&CC Notification S.O. 345(E), dated the 17th January, 2019, notification number S.O.750(E), dated the 17th February, 2020, S.O. 980 (E) dated 02nd March, 2021 & S. No.2339(E) 16th June, 2021, a special provision in the EIA Notification, 2006 "Expansion of sugar manufacturing units or distilleries for production of ethanol, having Prior Environment Clearance (EC) for existing unit, to be used completely for Ethanol Blended Petrol (EBP) Programme only, as per self-certification in form of an affidavit by the Project Proponent, shall be appraised as category 'B2' projects."

The details of products and capacity as under:

| Sr. No. | Name of Unit | Name of the product/ by product | Existing production capacity | Additional production capacity | Total production capacity |
|----------------|-----------------------------------------------------------------------|----------------------------------------|-------------------------------------|---------------------------------------|----------------------------------|
| 1 | Molasses/syrup based Distillery OR | Ethanol | 100 KLPD | 150 KLPD | 250 KLPD |
| | | Power | 1 MW | 2 MW | 3 MW |
| | Ethanol from grains during non-availability of molasses/syrup in KLPD | Ethanol | - | 120 KLPD | 120 KLPD |
| 2 | DWGS dryer | DDGS | - | 80 - 85 TPD | 80 - 85 TPD |
| 3 | Fermentation unit | Carbon dioxide | 30 - 40 TPD | 70 - 80 TPD | 100 - 120 TPD |
| 4 | ATFD | Conc. Spent wash powder | - | 80 - 100 TPD | 80 - 100 TPD |
| 5 | Bio-composting unit | Bio-compost | 80 TPD | - | 80 TPD |

Note: Capacity shall not exceed 250 KLPD at any time.

Ministry has issued Environmental Clearance to the existing Industry for a capacity of 100 KLPD vide File No. J-11011/453/2009-IA11 (1) dated 24th January, 2011 which was extended on 11th January 2019. Certified Compliance report of existing EC has been obtained from Integrated Regional Office, MoEFCC, Bengaluru vide File no- EP/12.1/2011-12/16/KAR/424 dated 17th February 2022. EAC found the information satisfactory.

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

Total plant area after expansion will be 58.82 Ha existing plant area

58.82 Hectares of the company and converted to industrial use/ No additional land will be acquired for the expansion project as the same will be done within existing plant premises. Out of the total plant area 58.82 Hectares i.e. 33% of the total plant area is reserved. 48.27 % greenbelt has been developed and the same will be maintained. 51.73 % will be developed under greenbelt & plantation in and around plant premises. The estimated project cost is Rs. 150 Crores. Capital cost of EMP would be Rs. 30.45 Crores and recurring cost for EMP would be Rs. 2.74 Crores per annum. Industry proposes to allocate Rs. 1.125 Crores towards extended EMP (Corporate Environment Responsibility). Total Employment after expansion will be 40 persons as direct & indirect.

There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridor etc. within 10 km distance. Water bodies: Ghatprabha River is at a distance of 3 Km in SE Direction.

AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be $1.88\mu\text{g}/\text{m}^3$, $1.26\mu\text{g}/\text{m}^3$, $3.03\mu\text{g}/\text{m}^3$ and $3.24\mu\text{g}/\text{m}^3$ with respect to PM₁₀, PM_{2.5}, SO₂ and NO_X. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

Total fresh water requirement after expansion will be 424 m³/day which will be met from Ghatprabha River. NOC has been obtained vide letter no. WRD/77/NIN/2022-WRD-TECH4-Water Resource SEC dated 12th September 2022 and validity 21st July 2025. Existing effluent generation is 1437m³/day from distillery which is treated through Condensate Polishing Unit. Proposed effluent generation will be 2790CMD from distillery which will be treated through proposed/upgraded Condensate Polishing Unit. In molasses based operation, spent wash generated from the analyser column during distillation will be concentrated in Multi Effect Evaporator and concentrated spent wash will be burnt in incineration boiler/concentrated spent wash will be bio-methanated and converted into powder form by spray dryer (ATFD) technology/ concentrated spent wash will be treated through bio-composting and bio-compost will be sold to farmers in packed form. In grain based operation, raw stillage (1070 KLPD: quantity of raw spent wash from distillation) will be sent to decanter followed by MEE followed by dryer to produce DDGS. Domestic waste water is being/will be treated in STP of capacity 6.4 KLPD. The plant is being/will be based on Zero Liquid discharge system and treated

effluent/water is being/will not be discharged outside the factory premises.

Total power requirement of distillery after expansion will be 3 MW which will be sourced from existing 39 MW co-generation power plant in distillery. Existing distillery has 22 TPH Biogas fired boiler. 50 TPH Bagasse Briquette fired boiler will be installed in distillery. APCE Bag Filter with a stack height of 43 m is installed with the existing boiler for controlling the particulate emissions within the statutory limit of 50mg/Nm³. APCE Bag Filter with a stack height of 60 m will be installed for controlling the particulate emissions within the statutory limit of 50mg/Nm³ for the proposed boiler. Industry has 500 KVA DG set which will be used as stand by during power failure and stack height(6m)will be provided as per CPCB norms to the proposed DG sets.

Details of Process emissions generation and its management:

- APCE Bag Filter with a stack height of 43 m is installed with the existing boiler for controlling the particulate emissions within the statutory limit of 50 mg/Nm³. APCE Bag Filter with a stack of height of 60 m will be installed for controlling the particulate emissions within the statutory limit of 50 mg/Nm³ for the proposed boiler.
- Online Continuous Emission Monitoring System is being/will be installed with the stack and data will be transmitted to CPCB/SPCB servers.
- CO₂(120 TPD)generated during the fermentation process is being/will be collected by utilizing CO₂scrubbers and sold to authorized vendors/collected in proposed bottling plant.

Details of solid waste/Hazardous wastegeneration and its management:

- Concentrated spent wash (400 m³/day) for "C" Molasses is willbe converted to powder by ATFD/spray dryer.
- DDGS(Distilled Dried Grains Stillage)(180 TPD) for 100 KLPD and 450 TPD for 250 KLPD for "C" Molasses is being / will be sold as cattle feed/fish feed/ prawn feed.
- Boiler ash (240 TPD) is being/will be used for brick manufacturing

in proposed brick manufacturing plant inside plant premises/supplied to brick manufacturers/ given to farmers to be used as manure.

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 expansion capacity of 150 KLPD will be used for manufacturing fuel ethanol only.

During deliberations, EAC discussed following issues:

- EAC found mitigation measures proposed to control NO_x in Ammonia not elaborative. PP has informed that DCS (Distributor Control System) shall be used for the proposed Boiler for expansion of the Distillery capacity from 100 to 250 KLPD. PP has also informed that proposed technology ensures that the usage of air (Oxygen) is optimum for fuel air mixing, there by eliminates formation of higher NO_x levels.
- PP shall develop indigenous plants in consultation with local DFO. Greenbelt development shall be completed within one year.
- Bio composting shall be abandoned in the existing plant by the within 2 years from the date of issuance of EC.
- IMFL/RS/ENA shall not be manufactured in proposed expansion.
- PP has submitted a copy of letter No. PCCF/WL/D/CR-01/2022-23 dated 29.11.2022 issued by PCCF & CWLW Karnataka mentioning that the project site is located about 8-10 km away from the boundary of the Ghatprabha Bird Sanctuary and the proposed site is outside the notified ESZ of the Ghatprabha Bird Sanctuary. Further, PP has submitted a copy of Map authenticated by PCCF&CWW indicating distance between project site and ESZ boundary is 3.48 Km.

The committee was satisfied with the response & presentation made by PP on additional details sought. 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 150 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). EC granted for a project on the basis of the submitted documents shall become invalid in case the actual land for the project site turns out to be different from the land considered at the time of appraisal of project. Conversion of land use (CLU) certificate shall be obtained before start of construction activities.
- (iv). NOC from the Concerned Local authority shall be obtained before start of the construction of plant and drawing of the surface water for the project activities, State Pollution Control Board / Pollution Control Committees shall not issue the Consent to Operate (CTO) under Air (Prevention and Control of Pollution) Act and Water (Prevention and Control of Pollution) Act till the project proponent shall obtain such permission. No ground water shall be used for the plant operations.
- (v). Total Fresh water requirement shall not exceed 424 m³/day after proposed expansion, which will be met from Ghatprabha River. No ground water recharge shall be permitted within the premises. Industry shall construct a rain water storage pond of 60 days capacity and the accumulated water to be used as fresh water thereby reducing fresh water consumption.
- (vi). In molasses based operation, spent wash generated from the analyser column during distillation shall be concentrated in Multi Effect Evaporator followed by incineration in incineration boiler. For the existing unit, Spent wash shall be bio-methanated followed by concentrated and converted into powder form by spray dryer (ATFD) technology. In grain based operation, raw stillage (1070 KLPD: quantity of raw spent wash from distillation) shall be sent to

decanter followed by MEE followed by dryer to produce DDGS. Spent wash from grain based distillery shall be dried to form DDGS to be used as cattle feed. The condensate, spentlees and utilities effluent shall be treated in the ETP comprising tertiary treatment (Condensate Polishing Unit). Treated effluent will be recycled/reused for makeup water of cooling towers/process etc. and no waste or treated water shall be discharged outside the premises. STP shall be installed to treat the sewage generated from factory premises.

- (vii). Adequate numbers of ground water quality monitoring stations by providing piezometers around the project area shall be set up. Sampling and trend analysis monitoring must be conducted on monthly basis and report submitted to SPCB and RO, MOEFCC. The ground water quality monitoring for pH, BOD, COD, Chloride, Sulphate and Total Dissolve Solids shall be monitored and report submitted to the Ministry's Regional Office.
- (viii). Bag filter with a stack height of 60 meters will be installed with the proposed boilers of capacities 50 TPH Biomass fired boiler for controlling the particulate emissions within the statutory limit of 50 mg/Nm³. SO₂ and NO_x emissions shall be less than 100 mg/Nm³. At no time, the emission levels shall exceed the prescribed standards. In the event of failure of any pollution control system adopted by the unit, the respective unit shall not be restarted until the control measures are rectified to achieve the desired efficiency. Performance assessment of pollution control devices/ systems will be conducted annually.
- (ix). Boiler ash (240 TPD) shall be used for brick manufacturing in proposed brick manufacturing plant inside plant premises and also given to farmers to be used as manure. PP shall use biomass like rice husk/bagasse as fuel for the proposed boiler. PP shall meet 10% of the total power requirement from solar power by generating power inside plant premises/adjacent/nearby areas. Bio composting shall be abandoned in the existing plant by the within 2 years from the date of issuance of EC.
- (x). CO₂(120 TPD)generated during the fermentation process is being/will be collected by utilizing CO₂scrubbers and sold to authorized vendors/collected in proposed bottling plant.

- (xi). 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.
- (xii). 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.
- (xiii). The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire fighting system shall be as per the norms. PESO certificate shall be obtained.
- (xiv). 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.
- (xv). 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.
- (xvi). The green belt of at least 5-10 m width shall be developed within one year from the date of issue of EC letter in 58.82 hectares i.e., 33% of the total project area with tree density @ 2500 trees per hectares, mainly along the plant periphery. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department and native species shall be developed. Records of tree canopy shall be monitored through remote sensing map.
- (xvii). PP proposed to allocate Rs. 1.125 Crores towards Extended EMP (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, potable

drinking water facilities, solar light/solar power support for uninterrupted power supply, soil nutrient management etc. Further, all the proposed activities under CER shall be completed before the commissioning of the plant in consultation with District Administration.

- (xviii). 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.
- (xix). Storage of raw materials shall be either in silos or in covered areas to prevent dust pollution and other fugitive emissions. All stockpiles should be constructed over impervious soil and garland drains with catch pits to trap runoff material shall be provided. Biomass shall be stored in covered sheds and wind breaking walls/curtains shall be provided around biomass storage area to prevent its suspension during high wind speed. All Internal roads shall be paved. Industrial vacuum cleaner shall be provided to sweep the internal roads. The Air Pollution Control System shall be interlocked with process plant/machinery for shutdown in case of operational failure of Air Pollution Control Equipment.
- (xx). Continuous online (24x7) monitoring system for stack emissions/effluent shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.
- (xxi). A separate Environmental Management Cell (having qualified person with Environmental Science/Environmental Engineering/specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions. EMC head shall report directly to Head of Organization/Director/CEO as per company hierarchy.
- (xxii). PP shall sensitize and create awareness among the people working within the project area as well as its surrounding area on the ban of

Single Use Plastic in order to ensure the compliance of Notification published by MOEFCC on 12th August, 2021. A report along with photographs on the measures taken shall also be included in the six-monthly compliance report being submitted to concerned authority.

Agenda No. 4

Greenfield Project of Grain Based Distillery Plant of 250 KLD along with Co-generation Power Plant of 8.5 MW located at Khasra No. 554, 1119, 1171, 1229, 1170, 1264, 1344, 1020, 1145, 1073, 1147, Village-Doulian Jattan, Tehsil-Marheen, District-Kathua, Jammu & Kashmir by M/s. Avir Agro Private Limited –Consideration of Environmental Clearance

[IA/JK/IND2/407537/2022, IA-J-11011/506/2022-IA-II(I)]

The Project Proponent and the accredited Consultant M/s. GRC India Pvt. Ltd. (NABET certificate no. NABET/EIA/2124/RA0213 and valid till 15.02.2024) made a detailed presentation on the salient features of the project and informed that the proposal is for environmental clearance to the project 250 KLD Grain Based Ethanol Plant along with 8.5 MW Co-generation Power Plant located at Khasra No. 554, 1119, 1171, 1229, 1170, 1264, 1344, 1020, 1145, 1073, 1147, Village-Doulian Jattan, Tehsil-Marheen, District-Kathua, Jammu & Kashmir by M/s. Avir Agro Private Limited.

At the start of the presentation EAC found the land lease agreement has not been registered with office of sub registrar/Revenue Department. EAC suggested that the proposal cannot be considered without the valid land document of the project site and suggested PP to submit the same for consideration.

Accordingly, proposal was returned in present form.

Agenda No. 5

Proposed 200 KLPD Multi-Grain based Distillery/Ethanol Plant located at Jeevangi, Hobali Mahagaon, Dist. Kalaburagi, Karnataka

by M/s. Maashree Distillery Pvt. Ltd. – Consideration of Environmental Clearance

[IA/KA/IND2/402450/2022, IA-J-11011/434/2022-IA-II(I)]

The Project Proponent and the accredited Consultant M/s. MITCON Consultancy and Engineering Services Ltd. (NABET certificate no. NABET/EIA/2124/RA 0229_Rev 02 and validity 05.02.2024) made a detailed presentation on the salient features of the project and informed that the proposal is for environmental clearance to the project for 200 KLPD Grain based Ethanol Plant located at Jeevangi, Hobali Mahagaon, Dist. Kalaburagi, Karnataka by M/s. Maashree Distillery Pvt. Ltd.

During deliberations, EAC discussed following issues:

- Details of AAQ modelling study for point source emissions were submitted w.r.t SPM instead of PM_{2.5} and PM₁₀. EAC directed PP to submit details of the same.
- EAC found the land lease agreement has not been registered with office of sub registrar/Revenue Department. EAC suggested that the proposal cannot be considered without the valid land document and suggested PP to submit the same for consideration.
- Revised capital cost & recurring cost of EMP shall be submitted as they are found on the lower side.
- As per kml file presented there are lot of small parcels of land included in the proposed site fragmenting lot of plots around the boundary of the project. PP shall clarify the same.
- Total Fresh water requirement shall not exceed 800 KLPD.
- PP shall develop indigenous plants in consultation with local DFO. Greenbelt development shall be completed within one year.
- Engineering layout of the project shall be submitted.
- PP has informed that approach road to Industry 30 ft which is under construction.
- Proposed CO₂ recovery 85 TPD is found on the low for the proposed 200 KLPD distillery plant. EAC suggested to increase CO₂ recovery.

EAC found the land lease agreement has not been registered with office of sub registrar/Revenue Department. EAC suggested that the proposal cannot be considered without the valid land document of the project site and suggested PP to submit the same for consideration.

EAC also suggested that the above all information may also be taken into account while submitting the proposal on the PARIVESH portal for further consideration by EAC

Accordingly, proposal was returned in present form.

13th December, 2022 (Tuesday)

Agenda No. 01

Proposed capacity expansion from 16.6 to 18.2 MMTPA located at Kuthethoor/Bala village, Dakshin Kannada District, Mangalore, Karnataka by M/s. Mangalore Refinery and Petrochemicals Limited - Consideration of Environmental Clearance

[IA/KA/IND2/404544/2022, J11011/215/2010-IA-II(I)]

The Project Proponent and the accredited Consultant M/s. Engineers India Limited having NABET certificate no. NABET/EIA/1922/RA0189_Rev01 valid up to 22/11/2023 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 capacity expansion from 16.6 to 18.2 MMTPA located at Kuthethoor/Bala village, Dakshin Kannada District, Mangalore, Karnataka by M/s. Mangalore Refinery and Petrochemicals Limited.

All project/activity are listed at S.N. 4(a) - Petroleum Refining Industry and 5(c) - Petro-chemical complexes of Schedule of Environment Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC). PP has informed that proposal has been submitted as per Ministry's OM dated 11.04.2022 issued for granting of Environmental Clearance under para 7(ii)(a) of EIA notification-2006.

The details of products and capacity as under:

Unit Capacities:

| S. No. | Unit | Existing Capacity (MMTPA) | Proposed Capacity (MMTPA) | Total Capacity After expansion (MMTPA) Based on increase in operating hrs from 8000 to 8760 per annum) |
|---------------|-------------------------|----------------------------------|----------------------------------|---------------------------------------------------------------------------------------------------------------|
| 1. | CDU/VDU (Including NSU) | 16.6 | 1.6 | 18.2 |
| 2. | VBU | 0.00 | 0.02 | 0.02 |
| 3. | BBU | 0.19 | 0 | 0.19 |
| 4. | DCU | 3.09 | 0.39 | 3.48 |
| 5. | CHT | 1.01 | 0 | 1.01 |
| 6. | HCU | 3.36 | 0.43 | 3.79 |
| 7. | PFCC | 2.74 | 0 | 2.74 |
| 8. | PPU | 0.51 | 0 | 0.51 |
| 9. | GOHDS & DHDT | 5.32 | 0.59 | 5.91 |
| 10. | NHT/ CCR | 0.93 | 0.13 | 1.06 |
| 11. | RSU | 0.82 | 0.12 | 0.94 |
| 12. | Mixed Xylene | 0.52 | 0.04 | 0.56 |
| 13. | ISOM | 0.59 | 0 | 0.59 |
| 14. | HYD (DHDT) | 0.11 | 0.01 | 0.12 |
| 15. | SRU | 0.29 | 0.03 | 0.32 |
| 16. | KeroMerox | 1.12 | -0.02 | 1.10 |
| 17. | LPG Merox | 0.22 | 0.03 | 0.25 |

Product Pattern:

| Sl. No. | Product/ By-product | Existing Quantity (MMTPA) | Proposed Quantity (MMTPA) | TotalQuantity (MMTPA) |
|----------------|----------------------------|----------------------------------|----------------------------------|------------------------------|
| 1. | LPG | 1.21 | 0.05 | 1.26 |
| 2. | Naphtha | 1.601 | 0.17 | 1.771 |

| Sl. No. | Product/ By-product | Existing Quantity (MMTPA) | Proposed Quantity (MMTPA) | TotalQuantity (MMTPA) |
|----------------|----------------------------|----------------------------------|----------------------------------|------------------------------|
| 3. | Motor Spirit | 1.78 | 0.18 | 1.96 |
| 4. | Kerosene | 0.05 | 0 | 0.05 |
| 5. | ATF | 2.04 | 0 | 2.04 |
| 6. | Diesel | 5.70 | 0.77 | 6.47 |
| 7. | Fuel Oil | 0.37 | 0 | 0.37 |
| 8. | Bitumen | 0.19 | 0 | 0.19 |
| 9. | Sulphur | 0.28 | 0.03 | 0.31 |
| 10. | Mixed Xylene | 0.002 | 0 | 0.002 |
| 11. | Pet Coke | 1.00 | 0.12 | 1.12 |
| 12. | Polypropylene | 0.51 | 0 | 0.51 |
| 13. | VGO | 0.00 | 0.15 | 0.15 |
| 14. | Fuel & Loss | 1.86 | 0.14 | 2.00 |

MoEF&CC has issued latest Environmental Clearance to MRPL Modernization Project vide File No. J-11011/215/2010-IA-II(I) dated 19/01/2021. Certified Compliance report of existing ECs has been obtained from Integrated Regional Office-Bangalore, MoEFCC, vide File no EP/12.1/2017-18/04/KAR/800 dated 12.10.2022 with no non-compliance points. Earlier show cause notices issued to MRPL by KSPCB dated 25.7.2022 and 05.09.22 are replied with Action Taken Reports on 06.08.2022 and 14.09.22 respectively to KSPCB. KSPCB issued letter dated 08.08.2022 and 03.06.2022 to MRPL and Action Taken Reports submitted to KSPCB on 12.08.2022 and 27.06.2022. PP has informed that SCN issued for non-compliance w.r.t hazardous waste collection and for exceeding norms stipulated for ETP outlet. Further, PP informed that they have taken corrective measures and submitted the response to the KSPCB. Committee was satisfied the response of PP.

As per the OM dated 11.04.2022 issued by MoEFCC for granting of Environmental Clearance under para 7(ii)(a) of EIA notification-2006, PP has submitted EIA report along with CCR. It was informed that no litigation is pending against the proposal.

Public hearing is exempted for as per the OM dated 11.04.2022 issued by MoEFCC. The proposed expansion is upto 20% based on environmental safeguard conditions.

Total plant area after expansion will be 644.25 Ha (1592 acre) which is already under possession of company. No additional land will be acquired for the expansion project as the same will be done within existing plant premises. Out of the total plant area 644 Hectares i.e. 188 Ha greenbelt is already developed within the MRPL complex. MRPL carried out additional 10.1 Ha of afforestation at Thanerbavi area (Tree park) and 20.2 Ha greenbelt at Pilikula Nisargadhama Biological Park. Total greenbelt developed in the refinery and outside afforestation is 218.3 Ha (539.4 acre) which is 33.9% of the total area. There will be no investment to the expansion project as it will be carried out based on actual operating capacity considering 8760 operation hours in a year. Capital cost of EMP is not applicable as there are no construction activities and recurring cost for EMP will be Rs. 316.7 Lakhs per annum. Additional employment will be around 15 persons for operations phase.

There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors within 10 km distance. There are no Reserve forests/protected forests within 10 km distance. Nandini river is 9 km in North direction and Gurupura river is 4 km in South direction from refinery.

Ambient air quality monitoring was carried out at 8 locations during October to December 2020 period and the baseline data indicates the ranges of concentrations as: PM₁₀ (57.6 to 76.0 µg/m³), PM_{2.5} (18.8 to 26.7 µg/m³), SO₂ (11.8 to 16.4 µg/m³) and NO₂ (15.2 to 21.1 µg/m³). All the values are within the National Ambient Air Quality Standards (NAAQS). No additional stacks are envisaged for the proposed expansion project.

Total water requirement of the complex is 4003 m³/hr. Out of which 2658 m³/hr from Netravati River & DESAL plant, 728 m³/hr of treated STP water of MSEZL and 617 m³/hr from recycle treated effluent. No additional freshwater is required as 1250 m³/hr DESAL plant has been commissioned. MRPL has an agreement (Vide Letter No.-EE1/GDH/PB-3/MRPL/2022-23/228) dated 30.05.2022 with Irrigation Department, Govt. of Karnataka for withdrawal of 947 m³/hr raw water from Netravati River. MRPL has also an agreement (Vide Letter no.-MRPL/D(R)/IOM-022) dated 10.10.2014 with MSEZL for supply of 1231 m³/hr raw water & 1231 m³/hr Treated STP water.

Total effluent generation post expansion will be 1063 m³/hr. Out of which, 617 m³/hr is recycled back to cooling tower make-up and 446 m³/hr is discharged to sea after treatment in ETPs. No additional rate of effluent generation is envisaged from proposed project.

Total power requirement of refinery cum petrochemical complex after expansion will be 160 MW. Post project also, the same power requirement will be there with no additional load.

Details of Process emissions generation and its management

- The SO_x and NO_x emissions of the existing complex are 56.95 TPD and 29.88 TPD respectively. There will be no change in SO_x & NO_x emissions rate value as there are no additional stacks envisaged in expansion project.
- Online Continuous Emission Monitoring System is already installed. Data on stack monitoring is connected to CPCB/SPCB servers.
- Adequate stack heights are provided for controlling the particulate emissions and for better dispersion of flue gases.
- Low NO_x burners are used in all process heaters, furnaces and boilers.
- Low Sulphur Fuel Oil and Fuel Gas are used as fuel in Process fired heaters and Boilers.
- Installation of internal floating roof with double seals in all Class-A tanks for reduction of fugitive emissions.
- Provision of mechanical seals in all the hydrocarbon pumps for reduction of fugitive emissions.
- LDAR survey is carried out periodically

Details of Solid waste / Hazardous waste generation and its management

- There will be no additional solid waste generation for proposed expansion project. All hazardous solid wastes shall be handled as per Hazardous and Other Wastes (Management & Trans boundary Movement) Rules, 2016 and subsequent amendments.
- Catalysts are used in various refinery process units. Spent catalyst are being sent to authorized recyclers/TSDF after end of its lifecycle. The same practice will be continued post expansion also. There will be no additional spent catalysts generation due to proposed expansion.

- Additional sludge generated due to proposed expansion will be processed in Delayed Coker Unit (DCU).
- There shall be no additional generation of hazardous solid waste from existing process/ treatment units. The generated wastes shall be disposed as per authorized disposal procedure.
- Used Lubricating oil will be collected in metal drums kept in secured area and will be recycled internally.
- MRPL has an agreement with M/s Resustainability Limited for safe disposal of all the hazardous waste generated in MRPL Complex to TSDF facility.
- Discarded containers/barrels/ liners contaminated with hazardous waste will be disposed as per Hazardous Waste Rules, 2016.

During deliberations, EAC discussed following issues:

- Commitment for withdrawal of TOR application for same project. PP informed that they have already applied.
- MRPL is planning to enhance its present refinery capacity from 16.6 MMTPA to 18.2 MMTPA in the existing refinery complex, without unit revamps, without addition of new units, but only by increase in the number of operation hours from 8000 hours to 8760 hours per annum.
- PP shall provide incremental GLC for the existing stacks by using air quality model. Accordingly, PP shall submit addendum to EIA/EMP report considering latest ambient air quality data collected from the existing manual and online monitoring stations. GLC for SO₂ and NO_x has been reported as 1.4 ug/m³ and 3 ug/m³ respectively.
- Sulphur balance data to be provided for the project. PP submitted the same.
- Commitment for installation of SRU of 99.99%. Further PP informed that SRU-1, 2 & 3 are old SRUs and SRU 4, 5, 6 & 7 are based on state of art technologies. Existing SRUs are able to take additional load of Removal of Sulphur for the expansion case.
- Plan to maximize the recycling of the treated effluent instead of discharge into sea after treatment in ETP. Further PP informed that MRPL will explore the possibility of further recycling the effluent by conducting a feasibility study by external reputed agency. They are committed to recycle the effluent to maximum extent possible in the complex.
- PP shall clarify how they will carry out maintenance of the plant as it

was submitted that proposed EC is for 365 days operation. PP clarified that MRPL has been established in three phases (1995, 1998 & 2012) which can be operated either on integrated or standalone basis. For ensuring the reliability and sustaining the run length, continuous online Inspection being carried out. Plant M&I activities will be done once in four years. Accordingly, MRPL is shutting down one of the phases at a time, once in four years. Based on this, Refinery can operate continuously for entire year without any planned shutdown to cater fuel for the requirement of the nation.

- As proposed, PP shall explore the feasibility for generation and use of Green Hydrogen for future requirement. PP informed that MRPL propose to set up Green Hydrogen plant of 500 TPA, for utilizing it in Hydroprocessing & Desulfurization. Expression of Interest has been floated to ascertain technical maturity, commercial references, utilities, etc. MRPL propose to install and commissioning Green Hydrogen plant by March 2025.

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

The EAC, constituted under the provision of the EIA Notification, 2006 and comprising of Experts Members/domain experts in various fields, have examined the proposal submitted by the Project Proponent in desired form along with the 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 EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. The Committee has found the baseline data is within NAAQ standards. The Committee has deliberated the action plan proposed by the project proponent to arrest the

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

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

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

- (i). The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented. All public hearing issues shall be addressed as per timeline and budget submitted.
- (ii). The National Emission Standards for Petroleum Oil Refinery issued by the Ministry vide G.S.R. 186(E) dated 18th March, 2008 and G.S.R.595(E) dated 21st August, 2009 as amended from time to time, shall be followed.
- (iii). Volatile organic compounds (VOCs)/Fugitive emissions shall be controlled at 99.997% with effective chillers/modern technology. For emission control and management, use of FG/NG in heater as fuel, adequate stack height, use of Low NOX burners in heater & boiler, continuous stack monitoring, Sulphur recovery plant, etc. shall be installed/ensured.

- (iv). As proposed, the SO_x and NO_x emissions of the existing complex are 56.95 TPD and 29.88 TPD respectively. There will be no change in SO_x& NO_x emissions rate value as there are no additional stacks envisaged in expansion project.
- (v). Total fresh water requirement for the proposed project shall not exceed 2658 m³/hr to be met from Netravati river and 728 m³/hr to be met from treated STP water. Necessary permission in this regard shall be obtained from the concerned regulatory authority.
- (vi). Comprehensive water audit to be conducted on annual basis and report to the concerned Regional Office of MEF&CC. Outcome from the report to be implemented for conservation scheme.
- (vii). Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.
- (viii). Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm, and solvent transfer to be done through pumps.
- (ix). Process organic residue and spent carbon, if any, shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF.
- (x). Regular VOC monitoring shall be done at vulnerable points. VOC monitoring shall be under taken every quarterly from the vicinity of the potential sources and also from across the boundary of the refinery along with methane & non methane hydrocarbon on bi-monthly basis from the processes, storage , loading, Heat exchanger, processes drain, waste water treatment facility and from boundary area.
- (xi). The oily sludge shall be subjected to melting pit for oil recovery and the residue shall be bio-remediated. The sludge shall be stored in HDPE lined pit with proper leachate collection system.
- (xii). Oil catchers/oil traps shall be provided at all possible locations in rain/storm water drainage system inside the factory premises.
- (xiii). 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.
- (xiv). The green belt of 5-10 m width shall be developed in the total project area, mainly along the plant periphery, in downward wind direction, and along road sides etc. The project proponent shall ensure 33% greenbelt area vis-à-vis the project area through afforestation in the degraded area. The Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.
- (xv). As per the Ministry's OM dated 30.09.2020 superseding the OM dated 01.05.2018 regarding the Corporate Environmental Responsibility, and as per the action plan proposed by the project proponent to address the socio-economic and environmental issues in the study area, the project proponent, as committed, shall provide education funds in technical training centers/ support in nearby village's schools, support in health care facilities, drinking water supply and funds for miscellaneous activities like solar street lights, battery, solar panel etc., in the nearby villages. The action plan shall to be completed within time as proposed.
- (xvi). For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.
- (xvii). 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.
- (xviii). Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises. In case of the

treated effluent to be utilized for irrigation/gardening, real time monitoring system shall be installed at the ETP outlet.

- (xix). PP to set up occupational health Centre for surveillance of the worker's health within and outside the plant on a regular basis. The health data shall be used in deploying the duties of the workers. All workers & employees shall be provided with required safety kits/mask for personal protection. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
- (xx). Process safety and risk assessment studies shall be further carried out using advanced models, and the mitigating measures shall be undertaken/implemented accordingly.
- (xxi). The National Emission Standards for Petrochemical (Basic & Intermediates) issued by the Ministry vide G.S.R. 820 (E) dated 9th November, 2012 as amended time to time shall be followed.
- (xxii). Recommendations of mitigation measures from possible accident shall be implemented based on Risk Assessment studies conducted for worst case scenarios using latest techniques.
- (xxiii). The project proponent shall develop R& D facilities to develop their own technologies for propylene and polypropylene processing.
- (xxiv). 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.
- (xxv). PP shall sensitize and create awareness among the people working within the project area as well as its surrounding area on the ban of Single Use Plastic in order to ensure the compliance of Notification published by MOEFCC on 12th August, 2021. A report along with photographs on the measures taken shall also be included in the six-monthly compliance report being submitted to concerned authority.

Agenda No. 2

Proposed Battery Anode Material Manufacturing Plant located at Village Anthapura, Taluka Sandur, District Bellary, Karnataka by M/s. EPSILON C2GR PRIVATE LIMITED – Amendment in Terms of Reference.

[IA/KA/IND2/ 294669/2022, IA-J-11011/221/2022-IA-II(I)]

The proposal is for amendment in the ToR granted by the Ministry vide letter no. IA-J-11011/221/2022-IA-II(I), dated. 07.07.2022 for the project Proposed Battery Anode Material Manufacturing Plant located at Village Anthapura, Taluka Sandur, District Bellary, and State Karnataka in favour of M/S. EPSILON C2GR PRIVATE LIMITED.

PP informed that the following are the proposed changes/modifications in the products/by-products:

| S. No. | Name of Product | Quantity in MT/Annum as Per ToR Received dated 07.07.2022 | Quantity in MT/Annum for ToR Amendment | Reason Change in products quantity for ToR Amendment |
|---------------|----------------------------------------------------------------------------------------------|------------------------------------------------------------------|-----------------------------------------------|-----------------------------------------------------------------------------|
| | Main Plant | | | |
| 1 | Anode Materials for Lithium Battery | 1,01,000 | 1,00,000 | Nominal change in final product due to projected market product requirement |
| | By Products | | | |
| 1 | Bulk Mesocoke fines / Needle coke fines / Petroleum based coke fines /Natural Graphite Fines | 58,000 | 74,173 | Change in product mix due to change in technology and material balance |
| 2 | Pitch Oil/ Anthracene Oil | 17,000 | 13,625 | |
| 3 | Crucibles (Used) / | 29,550 | 29,550 | No change |

| | | | | |
|---|---------------------------------------------------------------------------------------------|----------|----------|------------------------------------------------------------------------------------------------------|
| | Graphitized Coke | | | |
| 4 | Calcined Petroleum Coke (Used) / Graphitized Calcined petroleum Coke | 2,37,500 | 2,09,000 | Change is due to change in Acheson furnace Technology |
| 5 | Carbon Black (Used) | 6,500 | 6,500 | No change |
| 6 | Quartz Sand/ River Sand / Industrial Sand (Used) | 15,000 | 15,000 | |
| 7 | Gypsum (Calcium Sulfate) cake or Sodium Sulfate cake up to 20% water (Qty - 100% dry basis) | 21,500 | 31,350 | Change is after considering revised Sulphur content in raw material coke and Calcined petroleum coke |
| 8 | Wash Oil from Scrubber (Used) | 2,448 | 2,400 | Nominal change due to design considerations |
| | Crucible Manufacturing Plant | | | |
| 1 | Crucibles (1,50,000 Nos per annum) | 30,000 | 30,000 | No change |
| | By Products | | | |
| 1 | Pitch Oil/ Anthracene Oil | 2,340 | 2,800 | Change because high pitch oil content coal tar based pitch is considered as raw material |

The project proponent has requested for amendment in the ToR with the details areas under:

| S. No. | Details as per ToR Letter | ToR To be revised/ read as | Justification/ reason |
|---------------|-----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| 1. | Total Production Capacity (Products & By products) = 5,20,838 MTPA | Total Production Capacity (Products & By products) = 5,14,398MTPA | Change in Production capacity and by products due to change in material balance |
| 2. | Greenbelt area = 7,61,321 m ² | Greenbelt area = 7,57,212 m ² | Nominal change due to rearrangement of layout |
| 3. | Power = 365 MW | Power = 265 MW | Change in design of Acheson furnace & other electrical heated equipment leading to lower power consumption |
| 4. | Source of Water Supply: Water will be sourced from JSW Steel Water Network | Source of Water Supply: Water will be sourced form JSW Steel Water Network or from State | - |
| 5. | Total Water Consumption: 4,856 KLD Recycled Water: 903 KLD Fresh Water Consumption: 3,953 KLD | Total Water Consumption: 6,037 KLD Recycled Water: 1,141 KLD Fresh Water Consumption: 4,895 KLD | Revision in process and technology & material balance leading to change in water consumption |
| 6. | Total Wastewater generation: 909 KLD | Total Wastewater generation: 1,146 KLD | Change in water consumption leads to change in waste - water generation |
| 7. | No. of Flue Gas Stacks = 18 | No. of Flue Gas Stacks = 43 | Due to requirement of dryer for green coke and needle coke and requirement of carbonization furnaces. |

| | | | |
|-----|---------------------------------------------------------------------------|----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 8. | No. of Process vents = 156 | No. of Process vents = 225 | As per change in process the Nos of equipment, storages, material handling system updated. Leading in increase in Nos. of process vent |
| 9. | Fuel Quantity: | | |
| | Furnace Oil /LDO/Anthracene oil/ Coke oven Gas or mixed gas = 5,210 kg/hr | Furnace Oil /LDO/Anthracene oil/ Coke oven Gas or mixed gas /Natural Gas = 6,958 kg/hr | Requirement of fuel for carbonization/ calcination furnaces re-evaluated as per process requirement. Requirement of dryer for green coke and needle coke based raw material. This was not considered earlier. |
| 10. | Hazardous Waste Storage | | |
| | ETP Sludge & MEE Salt = 1,350 MTPA | ETP Sludge & MEE Salt = 2,250 MTPA | As per revised water balance |
| | - | Settled solids from desulphurization system = 200 MTPA | PM in flue gas trapped and settled in desuphurization system is now considered. |

During deliberations, EAC discussed following issues:

- PP shall not use additional 1574 m³/day fresh water for gardening.
- Area earmarked for greenbelt shall not be reduced.
- 2 natural drains are passing thorough the proposed project site . Accordingly PP shall submit the NOC from the concerned Irrigation department of the State Government.
- Furnace oil shall not be used as fuel.

EAC found the justification for amendment sought satisfactory and recommended for amendment in ToR as proposed by the project proponent subject to the following additional ToR:

- PP shall not use additional 1574 m³/day fresh water for gardening.
- Area earmarked for greenbelt shall not be reduced.
- 2 natural drains are passing through the proposed project site . Accordingly PP shall submit the NOC from the concerned Irrigation department of the State Government.
- Commitment for not using Furnace oil as fuel.

Agenda No. 03

Proposed 150 KLPD Sugar Syrup/ Molasses based Distillery & 3.0 MW captive generation (Fuel: Spent wash and Bagasse) located at Village Sr. No. 612, village Mathori, Tal. ShirurKasar, Dist. Beed, Maharashtra by M/s. Mohatadevi Sugar Mills and Agro Ltd. - Consideration of Environmental Clearance

[IA/MH/IND2/402946/2022, IA-J-11011/197/2022-IA-II(I)]

The Project Proponent and the accredited Consultant M/s. MITCON Consultancy and Engineering Services Ltd. (NABET certificate no. NABET/EIA/2124/RA 0229_Rev 02 and validity 05.02.2024) made a detailed presentation on the salient features of the project and informed that the proposal is for Environmental Clearance to the project project 150 KLPD Sugar Syrup/ Molasses based Distillery & 3.0 MW captive generation (Fuel: Spent wash and Bagasse) located at Village Sr. No. 612, village Mathori, Tal. ShirurKasar, Dist. Beed, Maharashtra by M/s. Mohatadevi Sugar Mills and Agro Ltd.

All Molasses based distilleries >100 KLPD & Non-Molasses based distilleries >200 KLD are listed at S.N. 5(g) of Schedule of Environment Impact Assessment (EIA) Notification dated 14.9.2006 and as amended on 13.6.2019 under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC).

The details of products and capacity as under:

| Sr. No. | Unit | Product/By-product | Existing | Proposed | Total |
|----------------|-------------|---------------------------|-----------------|-----------------|--------------|
| 1 | Distillery | RS/ENA/AA/ | - | 150 KLPD | 150 KLPD |

| | | | | | |
|---|------------|--------------------|---|------|------|
| | | Ethanol | | | |
| 2 | Distillery | Captive generation | - | 3 MW | 3 MW |

Standard Terms of Reference have been obtained vide F. No. IA-J-11011/197/2022-IA-II(I) dated 21.06.2022. It was informed that no litigation is pending against the project.

Public Hearing for the proposed project has been conducted by the Maharashtra Pollution Control Board on 19.09.2022 at M/s. Mohatadevi Sugar Mills and Agro Limited chaired by Shri. Santosh Raut (Chairman) ADM, Beed. The main issues raised during the public hearing and their action plan:

- The Sindhapana river is not located within the 10 km radius.
- The sugar factory received the IEM in 2011, which stated that there must be a minimum of 15 kilometres between two industries. According to data from the IEM, Survey of India, the 2 industries are at a distance of 16km. Additionally, the bank guarantee have been submitted and renewed periodically. The industry will be based on Zero liquid discharge. The treated water shall be utilized in the process. The online continuous emission monitoring system shall be installed for the Water and Air and the same shall be connected to the MPCB server. In order to make system more efficient by reducing the use of fresh water, industry shall be installing CPU and ETP. The treated water shall not be discharged outside the industrial premises.
- The public hearing notice of Maharashtra State Pollution Control Board was given in the daily newspapers namely Dainik Lokmat and Dainik Sakal on 19.08.2022. The public hearing documents were also made available in the group Grampanchayat. The industry will be a Zero liquid discharge unit through incineration boiler. The treated water shall be utilized in the process. Industry shall be installing CPU and ETP. The treated water shall not be discharged outside the industrial premises.
- The Committee noted that Shri, Dnyandev Nagargoje, Sarpanch, Malegaon (Chakla), Tal. Shirur Ka., Dist. Beed have submitted written application in which following points are raised 1. As per the notice in the newspaper M/s. Mohatadevi Sugar Mills Ltd. Matori, has been granted permission on 14/09/2006 i.e. permission is being granted before 17 years. 2. From mauje Malegaon (Chakla) M/s. Suman SSK is

about 12km and this M/s. Mohatadevi Sugar Mills Pvt. Ltd., is about 2km i.e. the distance between this two sugar industries is about 14km and as per the rules the distance between two sugar industries shall not be less than 25km. If these two sugar industries are started the pollution level in the area will definitely affect human habitation, farming, animals in the area. Hence this distance shall be taken in consideration during granting of the permission. 3. M/s. Mohatadevi Sugar Mills Ltd. Matori, has been granted IEM and as per the conditions mentioned in it, have M/s. Mohatadevi Sugar Mills Ltd. Complied the conditions of Bank Guarantee.

In response, PP informed that the sugar factory received the IEM in 2011, which stated that there must be a minimum of 15 kilometres between two industries. According to data from the IEM, Survey of India, the 2 industries are at a distance of 16km. Additionally, the bank guarantee have been submitted and renewed periodically. The industry will be a Zero liquid discharge unit. The treated water shall be utilized in the process. The online continuous emission monitoring system shall be installed for the Water and Air and the same shall be connected to the MPCB server. In order to make system more efficient by reducing the use of fresh water, industry shall be installing CPU and ETP. The treated water shall not be discharged outside the industrial premises.

Committee was satisfied with the response of PP.

Total land area required is 8.47 hectares. Greenbelt will be developed on total area of 2.79 hectares i.e., 33% of total project area. The estimated project cost is Rs. 139.15 Crores. Total land of 8.47 Hectares is under possession of the company and land use conversion has been completed vide letter no. 200RB/Desk/ II/LND/II/7 dated 17.12.2021 land use conversion application has been submitted to office of Collector, Beed dated 06.08.2022. Capital cost of EMP would be Rs. 9.88 Crores and recurring cost for EMP would be Rs. 0.63 Crores per annum. Industry proposes to allocate Rs. 2.78 Crores towards Extended EMP (Corporate Environment Responsibility). Total Employment will be 225 (Construction and operation phase) persons as direct & indirect.

There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance. Conservation plan for schedule I species has been submitted to Chief Wildlife Warden dated 11.11.2022 and a budget of 10 lakhs has been earmarked for the same. Water bodies: Kinha river is at a distance of 1.56 Km in S direction.

Ambient air quality monitoring was carried out at 8 locations during March 2022 to May 2022 and the baseline data indicates the ranges of concentrations as: PM10 (39.50 to 71.70 $\mu\text{g}/\text{m}^3$), PM2.5 (26.0 to 46.27 $\mu\text{g}/\text{m}^3$), SO2 (6.00 to 16.50 $\mu\text{g}/\text{m}^3$) and NO2 (10.10 to 20.50 $\mu\text{g}/\text{m}^3$). AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.12 $\mu\text{g}/\text{m}^3$, 0.08 $\mu\text{g}/\text{m}^3$, 0.23 $\mu\text{g}/\text{m}^3$ and 1.25 $\mu\text{g}/\text{m}^3$ with respect to PM10, PM2.5, SO2 and NOx respectively. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

Total fresh water requirement will be 623 CMD which will be met from Godavari Canal from Jayakwadi Irrigation Department. The committee suggested to keep water requirement within 4 kL/kL of alcohol produced i.e 600 CMD. Application has been submitted to Jayakwadi Irrigation Department dated 09.03.2022. Spent wash will be treated in MEE followed by incineration boiler. Effluent of 1027 CMD quantity will be treated through Condensate Polishing Unit/Effluent Treatment Plant of capacity 1100 KLPD. STP of capacity 10 KLPD will be installed to treat sewage generated from factory premises. The plant will be based on Zero Liquid discharge system and no effluent/treated water will be discharged outside factory premises.

Power requirement will be 2.7 MW and will be met from proposed 3 MW captive power plant. 30 TPH incineration boiler will be installed. Bagasse will be used as fuel. APCE Electrostatic Precipitator with a stack of height of 60 m will be installed for controlling the particulate emissions within the statutory limit of 50 mg/Nm³ for the proposed boiler. 500 kVA DG set will be used as standby during power failure and stack height (12 m) will be provided as per CPCB norms to the proposed DG sets.

Details of Process emissions generation and its management

- CO₂ (50 TPD) will be bottled and supplied to manufacturers of beverages /secondary uses.

Details of Solid waste/ Hazardous waste generation and its management

- Spent wash ash of 1.2TPH will be used as a manure
- Bagasse ash of 0.05 TPH will be used as a manure
- Yeast sludge of 27 TPD will be sent to factory farm
- CPU sludge of 2.00 TPD will be used as a compost in own garden.

Total land of 8.47 Hectares is under possession of the company and land use conversion has been completed vide letter no. 200RB/Desk/ II/LND/II/7 dated 17.12.2021 land use conversion application has been submitted to office of Collector, Beed dated 06.08.2022. EAC found the information satisfactory.

During deliberations, EAC discussed following issues:

- Spent wash will be treated in MEE followed by incineration boiler.
- Bagasse will be used as fuel.
- The committee suggested to keep water requirement within 4 kL/kL of alcohol produced i.e 600 CMD.
- Capacity for concentrated spent wash storage shall not exceed 5 days.
- PP has submitted revised incremental GLCs for the proposed project would be 0.12 µg/m³, 0.08 µg/m³, 0.23 µg/m³ and 1.25 µg/m³ with respect to PM10, PM2.5, SO₂ and NO_x respectively.
- The species like Saraca asoka shall be replaced as it is riparian species and local species shall be planted in the project area. In addition to that it was also mentioned that the non-indigenous species like Polyalthia longifolia shall be replaced. Accordingly, PP shall ensure that non-indigenous species shall not be considered while developing greenbelt.

The committee was satisfied with the response provided by PP on above information. Further, Committee desired to submit the above information in

writing. Accordingly, PP has submitted the desired information and EAC found the information/commitments satisfactory.

The EAC, constituted under the provision of the EIA Notification, 2006 and comprising of Experts Members/domain experts in various fields, have examined the proposal submitted by the Project Proponent in desired form along with the 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 EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. The Committee has found the baseline data is within NAAQ standards. The Committee has deliberated the action plan proposed by the project proponent to arrest the incremental GLC due to the project. The Committee has also deliberated on the CER plan and found to be addressing the issues in the study area. The EAC has deliberated the proposal and has made due diligence in the process as notified under the provisions of the EIA Notification, 2006, as amended from time to time and accordingly made the recommendations to the proposal. The Experts Members of the EAC have found the proposal in order and have **recommended** for grant of environmental clearance.

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

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

- (i). The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented. All public hearing issues shall be properly addressed as per timeline and budget submitted.
- (ii). 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.
- (iii). NOC from the Concerned Local authority for surface water supply shall be obtained before start of the construction of plant, State Pollution Control Board / Pollution Control Committees shall not issue the Consent to Operate (CTO) under Air (Prevention and Control of Pollution) Act and Water (Prevention and Control of Pollution) Act till the project proponent shall obtain such permission. No ground water shall be used.
- (iv). Total Fresh water requirement shall not exceed 600 m³/day which will be met from Godavari Canal. No ground water recharge shall be permitted within the premises. Industry shall construct a rain water storage pond of 60 days capacity and the accumulated water to be used as fresh water thereby reducing fresh water consumption.
- (v). Spent wash shall be concentrated in MEE followed by incineration. The condensate, spent lees and utilities effluent shall be treated in the ETP comprising tertiary treatment (Condensate Polishing Unit). Treated effluent will be recycled/reused for make up water of cooling towers/process etc. and no waste or treated water from distillery shall be discharged outside the premises and Zero Liquid Discharge shall be maintained for both the units. STP shall be installed to treat sewage generated from factory premises.
- (vi). Adequate numbers of ground water quality monitoring stations by providing piezometers around the project area shall be set up. Sampling

and trend analysis monitoring must be conducted on monthly basis and report submitted to SPCB and RO, MOEFCC. The ground water quality monitoring for pH, BOD, COD, Chloride, Sulphate and Total Dissolve Solids shall be monitored and report submitted to the Ministry's Regional Office.

- (vii). Electrostatic precipitator (5 field & 99.9% efficiency) with a stack height of 60 meters will be installed with 30 TPH Biomass like bagasse fired boiler for controlling the particulate emissions within the statutory limit of 50 mg/Nm³. SO₂ and NO_x emissions shall be less than 100 mg/Nm³. At no time, the emission levels shall exceed the prescribed standards. In the event of failure of any pollution control system adopted by the unit, the respective unit shall not be restarted until the control measures are rectified to achieve the desired efficiency. Performance assessment of pollution control devices/ systems will be conducted annually.
- (viii). Boiler Ash (0.05 TPH) will be used by farmers as manure. PP shall use biomass like rice husk/bagasse as fuel for the proposed boiler. PP shall meet 10% of the total power requirement from solar power by generating power inside plant premises/adjacent/nearby areas.
- (ix). CO₂ (50 TPD) will be bottled and supplied to manufacturers of beverages /secondary uses.
- (x). Adequate numbers of ground water quality monitoring stations by providing piezometers around the project area shall be set up. Sampling and trend analysis monitoring must be conducted on monthly basis and report submitted to SPCB and RO, MOEFCC. The ground water quality monitoring for pH, BOD, COD, Chloride, Sulphate and Total Dissolve Solids shall be monitored and report submitted to the Ministry's Regional Office.
- (xi). 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.

- (xii). 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.
- (xiii). 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.
- (xiv). 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. Filter press shall be installed for drying of sludge.
- (xv). 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.
- (xvi). The green belt of at least 5-10 m width shall be developed in nearly 2.79 hectares i.e., 33 % of the total project area with tree density @ 2500 trees per hectares, mainly along the plant periphery. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department and native species shall be developed. Records of tree canopy shall be monitored through remote sensing map. PP shall ensure that non-indigenous species shall not be considered while developing greenbelt. Greenbelt development shall be completed before commissioning of the plant.
- (xvii). PP proposed to allocate Rs. 2.78 Crores towards Extended EMP (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, soil nutrient management etc. Further, all the proposed

activities under CER shall be completed before the commissioning of the plant in consultation with District Administration.

- (xviii). 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.
- (xix). Storage of raw materials shall be either in silos or in covered areas to prevent dust pollution and other fugitive emissions. All stockpiles should be constructed over impervious soil and garland drains with catch pits to trap runoff material shall be provided. Biomass shall be stored in covered sheds and wind breaking walls/curtains shall be provided around biomass storage area to prevent its suspension during high wind speed. All Internal roads shall be paved. Industrial vacuum cleaner shall be provided to sweep the internal roads. The Air Pollution Control System shall be interlocked with process plant/machinery for shutdown in case of operational failure of Air Pollution Control Equipment.
- (xx). Continuous online (24x7) monitoring system for stack emissions/effluent shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.
- (xxi). A separate Environmental Management Cell (having qualified person with Environmental Science/Environmental Engineering/specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions. EMC head shall report directly to Head of Organization/Managing Director/CEO as per company hierarchy.
- (xxii). PP shall sensitize and create awareness among the people working within the project area as well as its surrounding area on the ban of Single Use Plastic in order to ensure the compliance of Notification published by MOEFCC on 12th August, 2021. A report along with

photographs on the measures taken shall also be included in the six-monthly compliance report being submitted to concerned authority.

Agenda No. 04

Project expansion of sugarcane crushing capacity from 3,500 TCD to 7,500 TCD, co-generation power plant from 15 MW to 30 MW and establishment of new distillery of capacity 300 KLPD to produce Ethanol using multi feedstock sugarcane syrup / molasses / grains with a captive power plant of capacity 6 MW for distillery, location at survey nos. Survey Nos. 207/2A, 207/1B, 207/2B, 207/1C, 208/5, 208/2, 210/2A, 210/2B, 208/4, 209/2, 209/3, 215/1, 215/3, 215/4, 215/2A, 215/2B, 217/2 and 217/3 of Malaghan village, Sindagi Taluk, Vijayapura District, Karnataka by M/s. Manali Sugars Limited– Amendment in Terms of Reference.

[IA/KA/IND2/ 294793/2022, IA-J-11011/409/2022-IA-II(I)]

The proposal is for amendment in the Terms of Reference granted by the Ministry vide letter no. No. IA-J-11011/409/2022-IA-II(I) dated 10.10.2022 for the project expansion of sugarcane crushing capacity from 3,500 TCD to 7,500 TCD, co-generation power plant from 15 MW to 30 MW and establishment of new distillery of capacity 300 KLPD to produce Ethanol using multi feedstock sugarcane syrup / molasses / grains with a captive power plant of capacity 6 MW for distillery, location at survey nos. Survey Nos. 207/2A, 207/1B, 207/2B, 207/1C, 208/5, 208/2, 210/2A, 210/2B, 208/4, 209/2, 209/3, 215/1, 215/3, 215/4, 215/2A, 215/2B, 217/2 and 217/3 of Malaghan village, Sindagi Taluk, Vijayapura District, Karnataka by M/s. Manali Sugars Limited.

The project proponent has requested for amendment in the ToR with the details areas under:

| S. No. | Details as per the ToR | To be revised/ read as | Justification / Reason |
|---------------|---------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | System generated standard ToRis issued only for activity 5 (j)- Sugar instead of integrated | To issue specific ToR for Activity 5(j), 5(g) for Integrated Sugar, Co-generation and Distillery unit | <ul style="list-style-type: none"> Application of EC with pre-feasibility report is made for integrated facility for expansion of Sugar plant, Cogen plant expansion and new distillery establishment with captive power plant. |

| | | | |
|--|-----------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | facility. | | <ul style="list-style-type: none"> • The system generated Standard ToR for EIA Studies issued only Activity 5(j)- Sugar Industry. Specific Terms of Reference for distillery unit i.e., Activity 5(g) - Distilleries is not included in the Standard ToR. • Hence, request for specific ToR for the integrated sugar, co-gen and distillery complex. |
|--|-----------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

During deliberations, EAC found the total land for the proposed project is 11 acres which is not feasible for installation of 300 KLPD distillery. The committee noted that existing land of 102 acres 35 guntas is available with the PP. In this regard, EAC suggested PP to reorient the proposed project by earmarking 25 acres in the existing available land. Therefore, EAC recommended the amendment proposed by the project proponent in standard ToR issued with the following additional term of reference:

(i) PP shall reorient the proposed distillery project by earmarking at least 25 acres in the existing available land. PP shall also submit the engineering drawing as a supporting document.

Agenda No. 05

Greenfield Project of 150 KLD Grain Based Ethanol Plant along with 4.5 MW Cogeneration Power Plant located at Khasra no. 230/1, 230/3, 230/4, Village-Natwarpur, Tehsil & District-Raigarh, Chhattisgarh by M/s. Maa Mangla Ispat Private Limited - Consideration of Environmental Clearance

[IA/CG/IND2/404947/2022, IA-J-11011/480/2022-IA-II(I)]

The Project Proponent and the accredited Consultant M/s. GRC India Pvt. Ltd. (NABET certificate no. NABET/EIA/2124/RA0213 and valid till 15.02.2024) made a detailed presentation on the salient features of the project and informed that the proposal is for environmental clearance to the

Greenfield Project of 150 KLD Grain Based Ethanol Plant along with 4.5 MW Cogeneration Power Plant at Khasra no. 230/1, 230/3, 230/4, Village-Natwarpur, Tehsil & District-Raigarh, Chhattisgarh by M/s. Maa Mangla Ispat 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 are as under:

| S.No. | Name of Unit | Name of the product /by-product | Production capacity |
|--------------|---------------------------|----------------------------------------|----------------------------|
| 1 | Distillery | Ethanol | 150 KLD |
| 2 | Co-generation power plant | Power | 4.5 MW |
| 3 | DWGS dryer | DDGS | 75 TPD |
| 4 | Fermentation unit | Carbon di-oxide | 98 TPD |

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

Total land area required is 5.76 hectares. Greenbelt will be developed in total area of 1.9 hectares i.e., 33% of total project area. Total land of 5.76 Hectares is under the possession of the company. The land conversion application has been submitted to the competent authority vide letter no. 782/A-2/2021-22 dated 12.08.2022. The estimated project cost is INR Rs. 220 Crores. Capital cost of EMP would be INR Rs. 33.11 Crores and recurring cost for EMP would be INR Rs. 5.57 Crores per annum. Industry proposes to allocate Rs. 2.2 Crores towards Extended EMP (Corporate Environment Responsibility). Total Employment will be 70 persons as direct & indirect.

There are no national parks, Wildlife sanctuary etc. within 10 km distance. Sambalpuri Protected forest is approx. 0.1 km towards West. Barkachhar Reserved forest is approx. 1.4 km towards North. Jhargurha Protected forest is approx. 1.6 km towards East. Kumbahal Protected forest is approx. 3 km towards South. Balbhadarpur Protected forest is approx. 4.6 km towards ESE. Patrapali Protected forest is approx. 5.8 km towards South. Sarapali Protected forest is approx. 5.9 km towards South. Garhdongari Reserved forest is approx. 6.4 km towards North. Boirdadar Reserved forest is approx. 6.6 km towards SW. Jamji Aria Protected forest is approx. 6.7 km towards NE. Chuhapali Protected forest is approx. 7 km towards SE. Bhagora Protected forest is approx. 7.4 km towards SSE. Mahuapali Protected forest is approx. 8 km towards South. Lamidarha Protected forest is approx. 8.3 km towards WSW. Sikosimal Protected forest is approx. 8.4 km towards SE. Barlia Protected forest is approx. 8.5 km towards West. Kukurda Reserved forest is approx. 8.5 km towards South. Kharudaldali Protected forest is approx. 8.8 km towards ENE. Kolairahal Protected forest is approx. 9.2 km towards SE. Dungapani Protected forest is approx. 9.5 km towards West. Keradungri Protected forest is approx. 9.6 km towards WNW. No major River or water body is present within 10 km study area. The NOC for no involvement of forest land within the project site has been obtained from the Divisional Forest Officer, Raigarh vide letter no. 6128 dated 07.12.2022.

AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be $0.014 \mu\text{g}/\text{m}^3$, $0.009 \mu\text{g}/\text{m}^3$, $0.248 \mu\text{g}/\text{m}^3$ and $0.085 \mu\text{g}/\text{m}^3$ with respect to PM_{10} , $\text{PM}_{2.5}$, SO_2 , and NO_2 . The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

Total fresh water requirement including CPP will be $599 \text{ m}^3/\text{day}$ which will be met from Ground water. The application for permission of withdrawal of ground water has been submitted to CGWA having application no. 21-4/7471/CT/IND/2022 dated 17/10/2022. Effluent (Condensate/spent lees/blowdown etc.) of $632 \text{ m}^3/\text{day}$ quantity will be treated through Condensate Polishing Unit/Effluent Treatment Plant of capacity 800 KLPD. Raw stillage will be sent to decanter followed by MEE and dryer to produce DDGS. STP of capacity 10 KLD will be installed to treat sewage generated from factory premises. The plant will be based on Zero Liquid discharge system and no effluent/treated water will be discharged outside factory premises.

Power requirement will be 3.96 MW and will be met from proposed 4.5 MW co-generation power plant. 45 TPH of Rice Husk fired boiler will be installed. ESP with a stack height of 60 m will be installed for controlling the particulate emissions within the statutory limit of 50 mg/Nm³ for the proposed boiler. 750 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 60 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 (98 TPD) generated during the fermentation process will be collected by utilizing CO₂ scrubbers and it shall be sold to authorized vendors/collected in installed bottling plant.

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

- DDGS (Distilled Dried Grains Stillage) (75 TPD) will be sold as cattle feed/fish feed/ prawn feed.
- Boiler ash (57.64 TPD) will be used for brick manufacturing in proposed brick manufacturing plant inside plant premises of capacity approx. 2.85 Cr. bricks per annum.
- Used oil (2 Kilolitres per annum) will be sold to authorized recyclers.
- CPU sludge (86.27 kg/day) and STP Sludge (1.1 kg/day) 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 notarized affidavit declaring that the proposed capacity of 150 KLPD will be used for manufacturing fuel ethanol only.

Total land of 5.76 Hectares is under the possession of the company. The land conversion application has been submitted to the competent authority vide letter no. 782/A-2/2021-22 dated 12.08.2022. EAC found the information satisfactory.

During deliberations, EAC discussed following issues:

- Spatial distribution of PM_{2.5} is mapped up to an area of more than 5.00 km. EAC sought explanation since settling area of PM_{2.5} generally exceed than 1.2 km. As no explanation has been received from consultant, EAC suggested conducting the modelling study again. Accordingly PP submitted the revised details.
- Commitment for installation of Electrostatic precipitator (5 field & 99.9% efficiency).

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

The EAC, constituted under the provision of the EIA Notification, 2006 and comprising of Experts Members/domain experts in various fields, have examined the proposal submitted by the Project Proponent in desired form along with the 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 150 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). EC granted for a project on the basis of the submitted documents shall become invalid in case the actual land for the project site turns out to be different from the land considered at the time of appraisal of project. Conversion of land use (CLU) certificate shall be obtained before start of construction activities.
- (iv). NOC from the Central Ground Water Authority (CGWA)/ Concerned Local authority shall be obtained before start of the construction of plant and drawing of the ground water for the project activities, State Pollution Control Board / Pollution Control Committees shall not issue the Consent to Operate (CTO) under Air (Prevention and Control of

Pollution) Act and Water (Prevention and Control of Pollution) Act till the project proponent shall obtain such permission.

- (v). Total Fresh water requirement shall not exceed 4 KL/KL of ethanol production, which will be met from Ground water. No ground water recharge shall be permitted within the premises. Industry shall construct a rain water storage pond of 60 days capacity and the accumulated water to be used as fresh water thereby reducing fresh water consumption.
- (vi). Spent wash shall be dried to form DDGS to be used as cattle feed. The condensate, spentlees and utilities effluent shall be treated in the ETP comprising tertiary treatment (Condensate Polishing Unit). Treated effluent will be recycled/reused for make up water of cooling towers/process etc. and no waste or treated water shall be discharged outside the premises. STP shall be installed to treat the sewage generated from factory premises.
- (vii). Electrostatic precipitator (5 field & 99.9% efficiency) with a stack height of 60 meters will be installed with 45 TPH Biomass like Rice Husk fired boiler for controlling the particulate emissions within the statutory limit of 50 mg/Nm³. SO₂ and NO_x emissions shall be less than 100 mg/Nm³. At no time, the emission levels shall exceed the prescribed standards. In the event of failure of any pollution control system adopted by the unit, the respective unit shall not be restarted until the control measures are rectified to achieve the desired efficiency. Performance assessment of pollution control devices/ systems will be conducted annually.
- (viii). Boiler ash (98 TPD) will be used for brick manufacturing in proposed brick manufacturing plant inside plant premises. 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. PP shall meet 10% of the total power requirement from solar power by generating power inside plant premises/adjacent/nearby areas.
- (ix). CO₂ (98 TPD) generated during the fermentation process will be collected by utilizing CO₂ scrubbers and it shall be sold to authorized vendors/collected in installed bottling plant.

- (x). 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.
- (xi). 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.
- (xii). The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire fighting system shall be as per the norms. PESO certificate shall be obtained.
- (xiii). 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.
- (xiv). 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.
- (xv). The green belt of at least 5-10 m width shall be developed in 1.9 hectares i.e., 33 % of the total project area with tree density @ 2500 trees per hectares, mainly along the plant periphery. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department and native species shall be developed. Records of tree canopy shall be monitored through remote sensing map. Greenbelt development shall be completed before commissioning of the plant.
- (xvi). PP proposed to allocate Rs. 2.2 Crores towards Extended EMP (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, potable drinking water facilities, solar light/solar power support for uninterrupted power supply, soil nutrient management etc. Further, all the proposed activities under CER shall be completed before the commissioning of the plant in consultation with District Administration.

- (xvii). 15% of the plant area shall be earmarked for parking of vehicles for raw materials and finished products with facilities like rest rooms etc and no parking to be allowed outside on public places.
- (xviii). Storage of raw materials shall be either in silos or in covered areas to prevent dust pollution and other fugitive emissions. All stockpiles should be constructed over impervious soil and garland drains with catch pits to trap runoff material shall be provided. Biomass shall be stored in covered sheds and wind breaking walls/curtains shall be provided around biomass storage area to prevent its suspension during high wind speed. All Internal roads shall be paved. Industrial vacuum cleaner shall be provided to sweep the internal roads. The Air Pollution Control System shall be interlocked with process plant/machinery for shutdown in case of operational failure of Air Pollution Control Equipment.
- (xix). Continuous online (24x7) monitoring system for stack emissions/effluent shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.
- (xx). A separate Environmental Management Cell (having qualified person with Environmental Science/Environmental Engineering/specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions. EMC head shall report directly to Head of Organization/Director/CEO as per company hierarchy.
- (xxi). PP shall sensitize and create awareness among the people working within the project area as well as its surrounding area on the ban of Single Use Plastic in order to ensure the compliance of Notification

published by MOEFCC on 12th August, 2021. A report along with photographs on the measures taken shall also be included in the six-monthly compliance report being submitted to concerned authority.

Agenda No. 06

Establishment of 40 KLD Grain based Ethanol Plant along with 0.9 MWH Cogeneration Power Plant located at Karatagi Village, Karatagi Tehsil, Koppal District, Karnataka State by M/s. Tungabhadra Ethanol Private Limited - Consideration of Environmental Clearance

[IA/KA/IND2/406092/2022, IA-J11011/326/2022-IA-II(I)]

The Project Proponent and the accredited Consultant M/s. Enviro Resources (NABET Certificate No. NABET/EIA/1922/SA0133 and validity 28th December 2022) made a detailed presentation on the salient features of the project and informed that the proposal is for environmental clearance to the project for 40 KLD Grain based Ethanol Plant & 0.9 MWH Co-generation power plant (Rice Husk/Coal) located at Karatagi Village, Karatagi Tehsil, Koppal District, Karnataka State by M/s. Tungabhadra Ethanol 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 are as under:

| Sl. No. | Name of unit | Name of the product/by-product | Production capacity |
|----------------|------------------------|---------------------------------------|----------------------------|
| 1 | Distillery (Rice Husk) | Ethanol | 40 KLPD |
| 2 | Co-generation | Power | 0.9 MW |

| | | | |
|---|-------------------|-----------------|--------|
| | power plant | | |
| 3 | DWGS dryer | DDGS | 18 TPD |
| 4 | Fermentation unit | Carbon di-oxide | 18 TPD |

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

There are no national parks, Wildlife sanctuary etc. within 10 km distance. Daroji Bear Sanctuary is located at a distance of 37.07 km (S).

Total land area required is 2.8 hectares. Greenbelt will be developed in total area of 0.93 hectares i.e., 33.3% of total project area. The estimated project cost is Rs. 57.38 Crores. Capital cost of EMP would be Rs. 3.75 Crores and recurring cost for EMP would be Rs. 0.22 Crores per annum. Industry proposes to allocate Rs. 0.15 Crores towards Extended EMP (Corporate Environment Responsibility). Total Employment will be 43 persons as direct & indirect.

AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 4 $\mu\text{g}/\text{m}^3$, 1 $\mu\text{g}/\text{m}^3$ and 8 $\mu\text{g}/\text{m}^3$ with respect to PM_{10} , SO_2 and NO_x . The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

Total freshwater requirement will be 256 CMD which will be met from Somanahal Halla and Borewell. The Committee suggested that total fresh water requirement shall not exceed 4 kL/kL of ethanol production i.e 160 KLPD. Application has been submitted to Irrigation Department, Raichur for withdrawal of water from Somanahal Halla dated 4th March 2022 and to Karnataka Ground Water Authority for permission of borewell on 29th October 2022. Effluent (Condensate/spent lees/blowdown etc.) of 293.7 CMD quantity will be treated through Effluent Treatment Plant of capacity 70 CMD. Raw stillage (274 KLPD: quantity of raw spent wash from distillation) will be sent to decanter followed by MEE and dryer to produce DDGS. Domestic sewage will be sent to Septic tank followed by Multigrade Filter. The plant will be based on Zero Liquid discharge system and no effluent/treated water will be discharged outside factory premises.

Power requirement will be 0.9 MW and will be met from proposed 0.9 MW co- generation power plant. 10 TPH Rice husk/Coal fired boiler will be installed. APCE Bag Filter + Cyclone Separator with a stack height of 30 m will be installed for controlling the particulate emissions within the statutory limit of 50 mg/Nm³ for the proposed boiler. 1 X 325 kVA DG set will be used as standby during power failure and stack height (10 m) will be provided as per CPCB norms to the proposed DG sets.

Details of Process emissions generation and its management:

- APCE Bag Filter + Cyclone Separator with a stack height of 30 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 (18 TPD) generated during the fermentation process will be collected by utilizing CO₂ scrubbers and it shall be sold to authorized vendors/collected in proposed bottling plant.

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

- DDGS (Distilled Dried Grains Stillage) (18 TPD) will be sold as cattle feed.
- Boiler ash (10 TPD) will be sold to brick manufacturers.
- Used oil (0.23 Kilolitres per annum) will be sold to authorized recyclers.
- ETP sludge (1 TPD) will be used in dryer.

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 40 KLPD will be used for manufacturing fuel ethanol only.

Total land of 2.8 Hectares is under possession of the company. The land use conversion has been completed for 1.6 hectares vide letter No. 273507 dated 30.03.2022 and application for land use conversion for 1.2 acres has been submitted to Office of the District Collector Office; Koppala. EAC found the information satisfactory.

During deliberations, EAC discussed following issues:

- Total fresh water requirement shall not exceed 160 KLPD.
- As suggested PP has submitted revised incremental GLC details:

The incremental concentration of parameters such as PM, NO₂&SO_x is revised and shown in the below table.

| S. No | Parameter s | Permissible concentration (µg/m³) | Baseline concentration (µg/m³) | Incremental concentration GLC (µg/m³) | Total Predicted GLC (µg/m³) |
|--------------|--------------------|-----------------------------------------------------|--------------------------------------------------|---------------------------------------------------------|-----------------------------------------------|
| 1. | PM ₁₀ | 100 | 62.8 | 0.04 | 62.84 |
| 2. | SO ₂ | 80 | 8.5 | 0.013 | 8.513 |
| 3. | NO _x | 80 | 21.2 | 0.018 | 21.218 |

- Commitment that PP shall not use ground water for the meeting the fresh water requirement.
- As proposed PP shall use surface water source for meeting the requirement of fresh water for industry.

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

The EAC, constituted under the provision of the EIA Notification, 2006 and comprising of Experts Members/domain experts in various fields, have examined the proposal submitted by the Project Proponent in desired form along with the 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 40 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). EC granted for a project on the basis of the submitted documents shall become invalid in case the actual land for the project site turns out to

be different from the land considered at the time of appraisal of project. Conversion of land use (CLU) certificate shall be obtained before start of construction activities.

- (iv). NOC from the Central Ground Water Authority (CGWA)/ Concerned Local authority shall be obtained before start of the construction of plant and drawing of the ground water for the project activities, State Pollution Control Board / Pollution Control Committees shall not issue the Consent to Operate (CTO) under Air (Prevention and Control of Pollution) Act and Water (Prevention and Control of Pollution) Act till the project proponent shall obtain such permission.
- (v). Total Fresh water requirement shall not exceed 4 KL/KL of ethanol production i.e 160 KLPD which will be met from Somanahal Halla. No ground water recharge shall be permitted within the premises. Industry shall construct a rain water storage pond of 60 days capacity and the accumulated water to be used as fresh water thereby reducing fresh water consumption.
- (vi). Spent wash shall be dried to form DDGS to be used as cattle feed. The condensate, spentlees and utilities effluent shall be treated in the ETP comprising tertiary treatment (Condensate Polishing Unit). Treated effluent will be recycled/reused for make up water of cooling towers/process etc. and no waste or treated water shall be discharged outside the premises. STP shall be installed to treat the sewage generated from factory premises.
- (vii). Bagfilter followed by cyclone separator with a stack height of 30 meters will be installed with 10 TPH Biomass like Rice Husk/Coal fired boiler for controlling the particulate emissions within the statutory limit of 30 mg/Nm³. SO₂ and NO_x emissions shall be less than 100 mg/Nm³. At no time, the emission levels shall exceed the prescribed standards. In the event of failure of any pollution control system adopted by the unit, the respective unit shall not be restarted until the control measures are rectified to achieve the desired efficiency. Performance assessment of pollution control devices/ systems will be conducted annually.
- (viii). Boiler ash (10 TPD) will be sold to brick manufacturers. 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. PP shall meet 10% of the total power requirement from solar power by generating power inside plant premises/adjacent/nearby areas.

- (ix). CO₂ (18 TPD) generated during the fermentation process will be collected by utilizing CO₂ scrubbers and it shall be sold to authorized vendors/collected in proposed bottling plant.
- (x). 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.
- (xi). 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.
- (xii). The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire fighting system shall be as per the norms. PESO certificate shall be obtained.
- (xiii). 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.
- (xiv). 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.
- (xv). The green belt of at least 5-10 m width shall be developed in of 0.93 hectares i.e., 33.3% of the total project area with tree density @ 2500 trees per hectares, mainly along the plant periphery. Selection of plant species shall be as per the CPCB guidelines in consultation with the

State Forest Department and native species shall be developed. Records of tree canopy shall be monitored through remote sensing map. Greenbelt development shall be completed before commissioning of the plant.

- (xvi). PP proposed to allocate Rs. 0.15 Crores towards Extended EMP (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, potable drinking water facilities, solar light/solar power support for uninterrupted power supply, soil nutrient management etc. Further, all the proposed activities under CER shall be completed before the commissioning of the plant in consultation with District Administration.
- (xvii). 15% of the plant area shall be earmarked for parking of vehicles for raw materials and finished products with facilities like rest rooms etc and no parking to be allowed outside on public places.
- (xviii). Storage of raw materials shall be either in silos or in covered areas to prevent dust pollution and other fugitive emissions. All stockpiles should be constructed over impervious soil and garland drains with catch pits to trap runoff material shall be provided. Biomass shall be stored in covered sheds and wind breaking walls/curtains shall be provided around biomass storage area to prevent its suspension during high wind speed. All Internal roads shall be paved. Industrial vacuum cleaner shall be provided to sweep the internal roads. The Air Pollution Control System shall be interlocked with process plant/machinery for shutdown in case of operational failure of Air Pollution Control Equipment.
- (xix). Continuous online (24x7) monitoring system for stack emissions/effluent shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.
- (xx). A separate Environmental Management Cell (having qualified person with Environmental Science/Environmental Engineering/specialization in

the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions. EMC head shall report directly to Head of Organization/ Director/CEO as per company hierarchy.

- (xxi). PP shall sensitize and create awareness among the people working within the project area as well as its surrounding area on the ban of Single Use Plastic in order to ensure the compliance of Notification published by MOEFCC on 12th August, 2021. A report along with photographs on the measures taken shall also be included in the six-monthly compliance report being submitted to concerned authority.

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 (One day 13.12.2022) | Member |
| 5. | Dr. Sanjeev Chaudhari | Member |
| 6. | Dr. Onkar Nath Tiwari | Member |
| 7. | Shri. J.S. Kamyotra | Member |
| 8. | Dr. Rahul Ramesh Rao Mungikar | Member |
| 9. | Dr. Seshagiri Rao Ambati (IIFE) (One day 12.12.2022) | Member |
| 10. | Dr. Sanjay V. Patil (VSI) | Member |
| 11. | Dr. Siddhartha Singh (IMD) | Member |
| 12. | Shri A. N. Singh, Scientist 'E' | Member Secretary |
| MoEFCC | | |
| 13. | Dr. Mahendra Phulwaria | Scientist 'C' |
| 14. | Mr. Kanaka Teja | Research Assistant |
