

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

Dated: 12.01.2023

**Meeting ID: IA/IND2/13414/09/01/2023
MINUTES OF MEETING OF THE EXPERT APPRAISAL COMMITTEE
(INDUSTRY-2 SECTOR PROJECTS)
HELD ON 09th -10th January, 2023**

**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/IND2/13410/21/12/2022) held on 21st -22nd December, 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: -

09th January, 2023 (Monday)

Agenda No. 01

Proposal for Installation of Polypropylene (PP) unit at Rasayani and Interconnecting Pipelines from BPCL Mumbai Refinery (MR) to Rasayani- Re-consideration of Environmental Clearance

[IA/MH/IND2/74952/2018, IA-J11011/168/2018-IA-II(I)]

The proposal was earlier considered by the EAC (Ind-2) in its 14th meeting of EAC, 15th meeting of EAC and 16th meeting of EAC held during November 20-22, 2019, December 30-31, 2019 & January 01, 2020 and January 21-23, 2020 respectively wherein EAC **recommended the project for grant of Environmental & CRZ clearance** subject to submission of **Stage-1 forest clearance** as per the provisions of the Forest (Conservation) Act, 1980. Information desired by the EAC and responses submitted by the project proponent is as under:

S. No.	ADS by MOEFCC	Reply of PP
1	Forest Stage-1 Clearance to be submitted.	Stage -1 Forest Clearance was obtained from MoEF&CC, Nagpur vide F.No. FC-II/MH-163/2021-NGP/10134 dated 10.08.2022 and is uploaded on parivesh portal.
2	Confirmation for the total requirement of Forest Land vis-à-vis Stage-1 FC is available sought.	<p>Bharat Petroleum Corporation Ltd has proposed to lay petroleum product pipelines (4 nos) from Mumbai Refinery to Proposed Poly propylene plant at Rasayani. The pipelines are of different sizes having diameters 18" Multiproduct, 10" Lube oil, 10" Unconverted oil & 8" polypropylene with approx. 40 km length, passing through MBPT, Belapur Creek, CIDCO, NH348, Cross Country section and is passing through forest area in the cross country section and finally terminating at Rasayani Plant.</p> <p>In forest area it is passing through some of Mangrove areas across Belapur creek shores in Mahul villages at Mumbai side and village Ulve, Sonkhar, Owle & Pargaon Dungi, in Panvel Taluka. In FC portion the pipeline is proposed to pass through villages Wahal, Sirdhon, Pargaon Dungi, Karanjade, Somtane, Narpoli and Devloli Budruk in Panvel area.</p> <p>The total forest area affected by laying pipeline in villages from Mumbai to Rasayani is as follows.</p> <p>1) Mahul - 7.8013 ha</p>

	<p>2) Belapur creek area - 7.0141 ha</p> <p>3) Ulve - 1.5399 ha</p> <p>4) Sonkhar - 2.0065 ha</p> <p>5) Owle - 1.4490 ha</p> <p>6) Pargoan Dungi - 0.0338 ha</p> <p>7) Karanjade - 0.3041 ha</p> <p>8) Shirdhon - 1.1712 ha</p> <p>9) Somtane - 0.3359 ha</p> <p>10) Narpoli - 0.7839 ha</p> <p>11) Devloli - 0.5253 ha</p> <p style="text-align: center;">Total - 22.9648 ha</p> <p>Division wise diversion of forest areas are given below.</p> <p>1. Forest in Mahul Division (Mangrove) - 7.8012 Ha</p> <p>2. Forest in Alibag Division (Mangrove) - 11.0716 Ha</p> <p>3. Forest In Alibag Division (Other Forest) - 4.0920 Ha</p> <p style="text-align: center;">Total - 22.9648 ha</p> <p>Above forest areas has been surveyed and vetted by Deputy Conservator of Forests (DCF), Chief Conservator of Forests (CCF) and Nodal after carrying out detailed Scrutiny of the proposal. Subsequently Stage – I Forest Clearance was granted by Regional Office, MoEFCC, Nagpur.</p> <p>The Compensatory Afforestation (CA) land has been identified in following villages and has been approved by DCF, Alibag and the same is part of the forest proposal.</p> <p>1) Palaspe, Tal, Panvel - 10.00 ha</p> <p>2) Morba, Tal. Panvel, - 15.00 ha</p> <p>3) Kashele, Tal. Karjat - 08.00 ha</p> <p>4) Ganegaon, Tal. Karjat - 13.00 ha</p> <p style="text-align: center;">Total - 46.00 ha</p> <p>There is no development in Mangrove areas and in other forests areas, so its status till date is forest hence the area required for project remains as forest only. Since the pipeline shall be passing underground in those forest areas, it will not affect forest land and its title.</p> <p>As per the above statement, we confirm that the total requirement of Forest Land vi-a-vis stage I forest clearance is available.</p>
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Proposal seeking environmental and CRZ clearance for Installation of Polypropylene unit of capacity 450 KTPA at Rasayani, Khalapur Taluka, Raigad District, Maharashtra and interconnecting pipelines from BPCL Mumbai Refinery to Rasayani by M/s. Bharat Petroleum Corporation Limited.

The proposal was considered in the EAC meeting held during 21st -23rd January, 2020 and recommended the proposal for grant of environmental clearance subject to the condition as under: 'Stage-1 forest clearance shall be submitted for the forest area/mangrove area involved under the project as per the provisions of the Forest (Conservation) Act, 1980.

Further, PP vide letter no. FC-II/MH-163/2021-NGP/10134 dated 10.08.2022 has submitted copy of Forest Clearance Stage I for diversion of 22.9648 Ha of land for construction of underground petroleum pipeline with OFC and its associated facilities from Mahul to Rasayani in the State of Maharashtra.

Since stage -I FC was submitted after more than 18 months, considering OM dated 19th June, 2014, Ministry referred the matter to EAC for relook of the project in case, primary data used in preparation of EIA report is more than three years old.

During deliberation, the Committee noted the following:

Bharat Petroleum Corporation Limited (BPCL) has proposed a Polymer Grade Propylene plant at Rasayani, approx. 50 km from Mumbai Refinery. MoEFCC issued standard Terms of Reference (TOR) for carrying out EIA study vide letter no. No. IA-J-11011/168/2018-IA-II(I) dated 17th June, 2018. Public Hearing was conducted on 24.09.2019 at Rasarang Building, HOC Colony, Taluka Khalapur, Dist. Raigad – 410207.

Stage -1 Forest Clearance was obtained from MoEF&CC, Nagpur vide F.No. FC-II/MH-163/2021- NGP/10134 dated 10.08.2022 for 22.9648 ha. However, earlier as per EIA /EMP report, "the total Forest Area to be diverted for laying the pipelines is 25.68 Hectares (Mangrove area: 21.9 ha and Reserved / Protected Forest area: 3.78 ha).

Further, PP explained that the total forest land requirement for the proposal is 22.9648 ha only. The requirement of optimum forest land for the diversion arrived after a joint site inspection with forest officials (undertaken by DCF, Alibag, Raigad) and scrutiny of the proposal. Therefore, Stage -1 Forest Clearance was obtained for lesser area i.e. 22.9648 Hectares.

PP has confirmed that there is no change in project configuration. However, the Committee suggested them to submit the same in writing.

The Committee noted that the ambient air quality monitoring was carried out at 8 locations during December 2018 to February 2019, which more than three years old data. The Committee also noted that the wind rose data shows predominant wind direction is from SE direction. But PP has taken wrong sampling stations i.e. most of stations are located at upwind direction instead of downwind direction. Only one location was shown in downwind direction, which cannot represent correct ambient quality of the area as well as predictions. Considering sampling locations identified earlier was not appropriate and data is more than 3 years old now, the Committee suggested to carry out fresh ambient air quality monitoring for 3 months as per OM dated 8th June, 2022.

1. It was also suggested that AAQ data (except monsoon) at 8 locations for PM₁₀, PM_{2.5}, SO₂, NO_x, CO and other parameters i.e. HC, Ozone, BTX and Ammonia shall be collected. The monitoring stations shall be based CPCB guidelines and take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests.
2. PP shall also confirm that Pipeline is not passing through ESZ of Thane Creek Flamingo Sanctuary. PP shall provide Map indicating distance of project from the nearest boundary of ESZ authenticated by PCCF/Wildlife warden.
3. Copy of MCZMA recommendations dated 19.11.2019.

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

Agenda No. 02

Expansion of existing distillery capacity from 100 KLD to 160 KLD (Molasses Based Distillery) along with co-generation power from 3 MW to 4 MW at village- Golabhar, Tehsil: Gola, District: Lakhimpur Kheri, State: Uttar Pradesh of M/s Bajaj Hindusthan Sugar Ltd, Unit – Gola, Distillery Division – Re-consideration of Environmental Clearance.

[IA/UP/IND2/285776/2014, J- 11011/46/2022-IA-II(I)]

The proposal was earlier considered by the EAC (Ind-2) in its EAC meeting/meeting IDIA/IND2/13342/26/09/2022 held during 27.09.2022 wherein EAC deferred the proposal and desired certain requisite information/inputs. Information desired by the EAC and responses submitted by the project proponent is as under:

Sr No	Additional information Sought	Reply
1.	EAC desired to submit the details of court case, action plan to comply the direction of the court case.	There is one litigation is pending in Hon'ble Supreme Court. WP (S) (Civil) No - 778/2020, dated 30/07/2020 was filed the in Supreme Court against the Environmental Compensation imposed by CPCB. Stay order issued by Hon'ble Supreme Court to us on 11/08/2020 (Copy submitted). Further CPCB inspected the industry and revoke the earlier closure direction(Copy submitted). Unit also obtained Consent to operation(Copy submitted).
2.	PP shall submit action plan for all issues mentioned in court cases as well as measures taken to control effluent discharge into the river.	The Case pending in Hon'ble Supreme Court is filed by industry against the Environmental Compensation imposed by CPCB vide their direction letter no - B-79, PCI-111/2k - 2k01/269 dated 19 th August 2019 (Copy submitted). Industry discarded the bio-composting process and adopted the Incineration process for treatment of Spent wash.
3.	PP shall also submit current status of the court case w.r.t. stay by the Hon'ble Court on the existing as well as proposed industry.	The Case is presently pending in the Hon'ble Supreme Court.
4.	CER budget shall be invested before commissioning of plant.	Company is ensuring that, CER funds will be spend before the start of operation of plant at expanded capacity.

5.	Report of monitoring of ground water for existing 5-6 years shall be submitted.	Ground water monitoring report for last 5-6 years (Copy submitted).
6.	Details regarding Environmental management cell hierarchy.	Details of Environmental management cell is already formed in existing Distillery having total 10 People in EMC Cell.
7.	Existing unit was based on bio-composting. The committee suggested that bio composting shall not be operated. Accordingly, PP shall submit the commitment letter.	Industry already closed down the bio composting process in the existing Distillery. A Commitment letter Copy was submitted. Currently, spent wash is being concentrate in MEE then concentrate from MEE is being/ will be utilised as fuel in Incineration boiler along with Bagasse. Same process will be utilised after expansion also.
8.	Project cost seems to be on lower side. Accordingly, they have to recheck and submit the same.	Revised project cost for the project is Rs 40 Crores.

EAC found the response submitted by PP for ADS satisfactory.

The M/s Bajaj Hindusthan Sugar Ltd, Unit – Gola, Distillery Division and the accredited Consultant M/s. Environmental and Technical Research Centre (NABET certificate no. NABET/EIA/1922/IA0050 and validity 29th January, 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 molasses based distillery capacity from 100 KLD to 160 KLD along with co-generation power from 3 MW to 4 MW at Village Golabhar, Tehsil Gola, District Lakhimpur Kheri, State Uttar Pradesh by M/s. Bajaj Hindusthan Sugar Ltd., Unit – Gola, Distillery Division.

All Molasses based Distillery > 100 KLD are listed at S.N. 5(g) of Schedule of Environment Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC).

The details of products and capacity as under:

Sr No	Unit	Product/by-product	Existing Quantity	Proposed Quantity	Total Quantity
1	Distillery	Rectified Spirit	100 KLD	60 KLD	160 KLD

		/ ENA / Ethanol			
2	Co-generation power plant	Power	3.0 MW	1.0 MW	4.0 MW

During deliberation, PP informed that the existing industry is operational on the basis of Consent to Operate because existing distillery unit was established in year 1944, hence not covered under EIA notification 2006. Thus, Environmental Clearance was not applicable. Latest CTO (air and water) has been issued on 09/12/2021 and is valid till 31/12/2021. Certified CTO compliance report has been issued dated 14/07/2022 from SPCB.

Standard Terms of Reference have been obtained vide F. No. IA-J-11011/46/2022-IA-II(I) dated 15th Feb., 2022. It was informed that no litigation is pending against the proposal.

Public Hearing for the proposed expansion project had been conducted by the Uttar Pradesh Pollution Control Board on 30.05.2022 at project site chaired by CDO, Lakhimpur (Authorized by DM, Lakhimpur Kheri) and document showing that CDO designation is equivalent to SDM has been submitted. The main issues raised during the public hearing and their action plan:

Regarding benefit to the farmers by the expansion of the industry and supply of fertilizers to farmers, Industry has allocated the fund of Rs 35.0 Lakhs for Fly ash granulation plant, proposed work will be completed with start of production work at expanded capacity (18 Months) and Fly Ash granules rich in potash is being / will be provided to the nearby farmer.

Regarding sugarcane payment, PP informed that 1000 crore rupees have been paid. The remaining payments will also be made soon. It was also apprised that the expansion of the project would increase the income of the industry, which would also make it easier to make payments.

Regarding ground water pollution and red color in ground water, unit is being / will be based on Zero Liquid Discharge. Spent wash generated is being / will be concentrated in MEE then concentrate from MEE is being / will be used as fuel in incineration boiler. Other effluent is being / will be treated in Condensate Polishing unit (CPU). Industry allocated fund of Rs 4.25

Crores for expansion of CPU, MEE etc. PP also informed that the amount of iron in the ground water of the surrounding area is high, due to which the ground water becomes light red / brown after keeping it for some time.

Regarding bagasse and ash dispersion on road, PP informed that covered conveyer belt will be provided for bagasse transfer to avoid the bagasse fall on the road and nearby areas. Fly ash generated from the incineration boiler will be converted to granule and provided to the farmer as manure. Industry has allocated fund of Rs 50 Lakhs.

Total plant area after expansion remains the same i.e. 8.210 Ha as no additional land is required for proposed expansion. An area of 2.72 Hectares i.e. 33% of the total plant area has already been developed as greenbelt & plantation and the same will be maintained in and around plant premises. The estimated project cost is Rs. 23.34 Crores. Capital cost of EMP would be Rs.8.0 Crores and recurring cost for EMP would be Rs. 3.5 Crores per annum. Industry proposes to allocate Rs. 2.01 Crores towards extended EMP (Corporate Environment Responsibility). Total Employment after expansion will be 250 persons as direct & indirect.

There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance. Reserve forests/protected forests: Gola drain at a distance of 0.32 km in North east direction, Razanagar Reserve forest at a distance of 2.83 km in south east direction. No major water body is present in 10 km radius of project site.

Ambient air quality monitoring was carried out at 08 locations during 1st December 2021 to 28th February 2022 and the baseline data indicates the ranges of concentrations as: PM₁₀ (65.2 - 88.2 µg/m³), PM_{2.5} (33.85 - 52.77 µg/m³), SO₂ (9.89 - 14.69 µg/m³) and NO₂ (11.52 - 17.58 µg/m³). AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.99 µg/m³, 0.59 µg/m³, -1.74 µg/m³ and 1.47 µg/m³ 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 960 KLD, which will be met from Ground Water. NOC has been obtained from UPGWD vide NOC no.

NOC046103, NOC023923 dated 17/08/2021. Existing effluent generation is 1152 KLD which is treated through Condensate Polishing Unit of capacity 2000 KLD. Proposed effluent generation will be 1723 CMD which will be treated through upgraded Condensate Polishing Unit of capacity 2000 KLD. Concentrated spent wash will be mixed with biomass and burnt in incineration boiler. Domestic waste water is being/will be treated in STP of capacity 60 KLD. 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 3.8 MW which will be sourced from proposed 4.0 MW co-generation power plant. Existing unit has 40 TPH slop/biomass fired boiler. 20 TPH slop/biomass fired boiler will be installed. ESP with a stack of height of 85 m is installed with the existing boiler for controlling the particulate emissions within the statutory limit of 50 mg/Nm³. ESP with existing stack of height of 85 m will be installed for controlling the particulate emissions within the statutory limit of 50 mg/Nm³ for the proposed boiler. Industry has 1x 1000 KVA DG set which will be used as standby during power failure and stack height (6.3 m ARL) will be provided as per CPCB norms to the proposed DG sets.

Details of Process emissions generation and its management:

- ESP with a stack of height of 85 m is installed with the existing boiler for controlling the particulate emissions within the statutory limit of 50 mg/Nm³. ESP with existing stack of height of 85 m will be installed for controlling the particulate emissions within the statutory limit of 50 mg/Nm³ for the proposed boiler.
- Online Continuous Emission Monitoring System is being/will be installed with the stack and data will be transmitted to CPCB/SPCB servers.
- CO₂ (130 TPD maximum) will be generated after expansion from the fermentation. CO₂ bottling unit will be installed within premises and provided to beverage industry as well as fire extinguisher manufacturing industry.

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

- Concentrated spent wash will be incinerated in boiler.
- Ash from Incineration boiler (77.22 TPD) will be utilised as manure or supplied to fertiliser industry.
- Yeast Sludge (16 TPD) will be mixed with press mud and provided to farmer as manure.

During the deliberations EAC discussed the following points and also requested PP to submit in writing:

- Point wise compliance report issued by the CPCB closure direction was discussed. Further, PP presented the compliance report before the Committee. PP informed that closure direction was revoked by the CPCB after submission of closure report. The Committee was satisfied with the response.
- The Committee suggested that display board under Hazardous Waste Rules provided is not as per CPCB format. Therefore, they should correct the same.
- Details of comparative analysis of sampling done for two Pizometer wells were discussed during the meeting. The Committee was satisfied with the response.

Details of capital and recurring cost of EMP:

Sr. No.	Description	Capital Cost (in Lakhs)	Recurring Cost / Annum (in Lakhs)
1	Modification of Air Pollution Control Equipment (APC)	150	21
2	Secondary Effluent treatment plant	150	18
3	Environmental Monitoring and Management	10	5
4	Green Belt Development	40	24
5	Occupational Health & Safety	25	10
6	Others (MEE & Incineration)	425	272
	Total	800	350

Details of CER activities:

CER Activity		Year from start of commissioning of the project at expanded capacity (Amount in Lakhs)		
		01st	2nd	Total
1	Training & Skill Development of local youths	3.0	3.0	6.0
2	Adoption of Schools in nearby village for infrastructure development.	40.0	35.0	75.0
3	Solar light distribution	60.0	60.0	120.0
	Grand Total	103.0	98.0	201

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

The EAC, constituted under the provision of the EIA Notification, 2006 and comprising of Experts Members/domain experts in various fields, have examined the proposal submitted by the Project Proponent in desired form along with the EIA/EMP report prepared and submitted by the Consultant accredited by the QCI/ NABET on behalf of the Project Proponent. The EAC noted that the Project Proponent has given undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the 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 project proponent shall abide by all orders and judicial pronouncements made from time to time in the case filed in NGT & Supreme Court of India.
- (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. All public hearing issues shall be properly addressed as per timeline and budget submitted.
- (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.
- (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 after expansion shall not exceed 4 KL/KL of alcohol production i.e. 640 m³/day including all process and non-process applications 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 sent to the Multiple Effect Evaporator followed by boiler for incineration. The MEE & spent lees, WTP Rejects, Boiler & Cooling tower blowdowns, washings etc. shall be treated in the 'Condensate Polishing Unit' (CPU). STP shall be installed to treat sewage generated from factory premises. PP shall ensure to implement Zero Liquid Discharge (ZLD) in existing and expansion of sugar factory and cogeneration plant including proposed Distillery.
- (vii). Electro Static Precipitator with a stack of height of 85 m is installed with proposed 20TPH slop/biomass and existing 40 TPH slop/biomass boilers for controlling the particulate emissions within the statutory limit of 50 mg/Nm³. At no time, the emission 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). Ash from Incineration boiler (77.22 TPD) will be utilised as manure or supplied to fertiliser industry. 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 (130 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). 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 has already been developed in 2.72 Hectares i.e. 33% of the total plant area which will be maintained in and around plant premises 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. Reserve forest is adjacent to project site, 20 m wide greenbelt towards Reserve Forest shall be developed. Greenbelt development shall be completed in 1 year.
- (xvii). PP proposed to allocate Rs. 2.01 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. 03

Proposed 300 KLPD Cane Juice/Sugar Syrup/ Grain Based Distillery along with 6.0 MW Co-Generation Power Plant at Village Shamli-Shamla & Gagore, Tehsil Unn, District Shamli, Uttar Pradesh by M/s. Superior Biofuels Private Limited – Re-consideration of Amendment in Terms of Reference.

[IA/UP/IND2/292687/2022, IA-J11011/3/2020-IA-II(I)]

The proposal was earlier considered by the EAC (Ind-2) in its EAC meeting/meeting IDIA/IND2/13379/14/11/2022 held during 14th -15th November, 2022 wherein EAC deferred the proposal and desired certain requisite information/inputs. Information desired by the EAC and responses submitted by the project proponent is as under:

S. No.	ADS by MoEFCC	Reply by PP
1	Plant layout of new plant area shall be submitted and position of boiler & other equipment shall be provided to understand that no major modifications have been proposed.	There is a minor shift in the location of the proposed project to the adjacent land due to which the shape of land has been modified. According to the modified shape of the land, the boiler location has shifted by 90 meters only. Existing & Revised plant layout has been duly submitted.
2	Undertaking shall be submitted that there will be no impact on baseline monitoring results and incremental studies conducted as per earlier land details.	The company hereby undertakes that there will be no impact on baseline monitoring results. However, the incremental concentrations will be done again and the results will be compared with the earlier concentrations and submitted along with the Final EIA/EMP Report.
3	PP shall obtain NOC from Gram Panchayat regarding addition of separate patch of land and the NOC shall be endorsed by District Magistrate.	NOC has been obtained by the company from Gram Panchayat regarding addition of separate patch of land.

EAC found the response submitted by PP against ADS raised as satisfactory

The proposal is for amendment in the ToR granted by the Ministry vide letter no. IA-J-11011/3/2020-IA-II(I) dated 23rd February, 2022 for the project Proposed 300 KLPD Cane Juice/Sugar Syrup/ Grain Based Distillery along with 6.0 MW Co-Generation Power Plant located at Village Shamli-Shamla & Gagore, Tehsil Unn, District Shamli, Uttar Pradesh by M/s. Superior Biofuels Private Limited.

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

S.No.	Particulars of ToR issued by MoEF&CC	Details as per the ToR	To be revised/read as	Justification/ reasons
1.	Raw Material	Molasses/ Cane Juice/Sugar Syrup/ Grain Based Distillery	Cane Juice/Sugar Syrup/ Grain Based Distillery	Molasses being removed as a raw material because of less availability of molasses in the area. Cane juice from the adjacent sugar mill will be used for the production of ENA/RS/ETHANOL.
2.	Land Requirement	7.2462 ha	6.10 ha	Plant boundary has been re-worked to maintain safe distance from Nala i.e. more than 200 m and also the khasra numbers have changed. The company will maintain 33% as greenbelt and plantation.
3.	Khasra Numbers	1126, 1128, 1129, 1130, 1131, 1127, 1116 (Village Shamli-Shamla) and 13, 14, 15, 39 [k.eh., 42, 43, 1, 2 d, & 12 (Village Gagore)	1KH, 2K (Village Gagore) and 1116, 1126, 1128, 1129, 1130, 1131, 1115 Mi, 1103 A, 1103 B, 1004 K, 1004 KH & 1127 (Village Shamli-Shamla)	

During deliberations, Committee noted that an OM dated 22nd January, 2010 is available regarding consideration of proposals relating to change in location after public hearing has been held. From the presentation, it was noted that PP has done some modification in the existing proposed land by deducting part land and adding some more land adjacent to the existing land. Now, modified plot area has been reduced from 7.2462 ha to 6.10 ha. Accordingly, the Committee recommended that no fresh public hearing is required for this case. After detailed deliberations, EAC found the justification satisfactory and recommended the amendment proposed by the project proponent in standard ToR issued with the following additional term of reference:

- PP shall not reduce the green belt area proposed earlier during award of TOR.
- The Committee also felt that project area of 6.10 ha is less for 300 KLPD distillery establishment. So PP should explore some more plot area at the vicinity of the project site.

However, all other terms of reference mentioned vide letter IA-J-11011/3/2020-IA-II(I) dated 23rd February, 2022 shall remain unchanged.

Agenda No. 04

Expansion in the production capacity from 52.5 KLPD (Molasses based RS/ENA/Ethanol) to 202.5 KLPD (Establishment of 150 KLPD Grain Based Distillery to produce Ethanol for blending under EBP Programme) with existing cogeneration power plant for existing & proposed distillery is 15 MW located at Village Chelluru, Tehsil Rayavaram, District Dr. B.R. Ambedkar Konaseema (Formerly East Godavari) District, State Andhra Pradesh by M/s. Sri Sarvaraya Sugars Limited – Re-consideration of Environmental Clearance

[IA/AP/IND2/404506/2022, IA-J-11011/128/2003-IA II (I)]

The proposal was earlier considered by the EAC (IND 2) in its meeting ID IA/IND2/13394/28/11/2022 held during 28.11.2022 to 29.11.2022 wherein EAC deferred the proposal and desired certain requisite information/inputs. Information desired by the EAC and response submitted by the project proponent is as under:

S. No.	ADS by MoEFCC	Reply by PP
1	<p>As per details submitted in EMP report, it was mentioned in the section air pollution modelling at page 27 that <i>"In order to predict the Ground Level Concentrations (GLCs) at various distances from the source of the above mentioned pollutants, an air modelling exercise has been undertaken and is discussed in the impact prediction section below"</i>. However, it was noticed that there was no such information is available in the EMP Document. Accordingly, PP should provide ambient air quality baseline data from the secondary source to understand the background situation of the project site. Also PP shall provide details of AAQ modelling carried out for the existing boilers.</p>	<p>PP submitted the details of AAQ modelling carried out for the existing boilers.</p>
2	<p>It was noted that as per guidelines mentioned in OM dated 08.06.2022 that the project proponent shall approach concerned Regional</p>	<p>PP has submitted CCR for the existing distillery obtained from IRO Vijayawada vide letter IRO/VIJ/EPA/EC-A/101/03-31/2022 – 833 dated 19.12.2022.</p>

	<p>Offices of Central Pollution Control Board (CPCB) or MS of respective State Pollution Control Boards (SPCB) in case IRO of Ministry has not furnished CCR within three months of application. PP shall provide clarification for adherence to guidelines prescribed in OM dated 08.06.2022.</p>	
	<p>It was noted that the proposed fresh water requirement is on the higher side. EAC suggested to revise water balance so that net fresh water requirement does not exceed 4 KL/KL of ethanol production</p>	<p>The total fresh water requirement for the proposed grain based distillery unit is 576 KLD. Total fresh water requirement after expansion will be 902 KLD.</p>
	<p>Zero Liquid Discharge plan for the existing wastewater generation</p>	<p>The industry is operating Bio digester, RO system along with MEE followed by Bio composting to meet ZLD. Further, we are planning to establish a spent wash drier in a phase manner to convert the spent wash into dry powder by utilizing excess steam in the process</p>
	<p>PP shall not produce DWGS as end product, DWGS should be converted to DDGS</p>	<p>They are planning to establish Steam Tube Bundle Dryer/Ring Dryer to convert the DWGS into DDGS. Therefore, there would not be any discharge/sale of DWGS generated during the process</p>
	<p>PP shall submit details of the</p>	<p>They are going to use rice husk and</p>

	<p>proposed measures for controlling SO₂ emissions when coal is used as fuel in the boiler</p>	<p>imported coal (Indonesian) in which the Sulphur content in flue gas will be within the limits. As we are using fuel (Husk + coal as combination) and at any point of time, Indonesian coal will be using which has Sulphur content of less than 0.14%. Hence at any point of time, we will meet design standards of SO₂ emission</p>
	<p>PP shall submit the proposed safety measures for storing caustic soda onsite</p>	<ul style="list-style-type: none"> ➤ In storage areas, caustic soda will be stored separate from other chemicals. ➤ In anticipation of any breakdown of the containers, caustic soda must be isolated from acids, metals, explosives, organic peroxides and so on. ➤ When caustic soda is stored in steel drums, store it in a warehouse or indoor stock yard that is as dry as possible to prevent the external corrosion of drums, moisture absorption, and freezing. ➤ It is desired that outdoor tanks for caustic soda solution be equipped with an insulation system and heating system such as steam heating coils. ➤ A facility should be available to supply large quantities of water so as to flush any spilt caustic soda
	<p>CO₂ bottling plant shall be installed in the Industry</p>	<p>They are planning to set up CO₂ plant of capacity suitable for capturing of total CO₂ generation during the startup</p>

		<p>conditions of fermentation. We will be establishing a plant to capture 100 TPD of raw CO₂. CO₂ also. We will implement machinery system to collect 110 TPD of CO₂. CO₂ will be liquefied in cryogenic bulk storage containers. Part of the beverage grade CO₂ will be utilized completely in our company's beverage division and the balance will be sold to other beverage plants in the country</p>
	<p>Details of rain water harvesting including size of pond/tank</p>	<p>At present, they have 5 no.'s of rain water collection pits with capacity 2 m³ each filled with filter media. These are connected to 12 m depth harvesting pits for ground water recharge.</p> <p>Now they are planning to provide 20 no.'s of rainwater collection pits with capacity 3 m³ each and these will be connected to pond of 100 to 150 m³ capacity.</p> <p>The rain water harvested water will be used at various process operations duly passing through water treatment system.</p>
	<p>Details of activities proposed in CER along with breakup of budgetary allocation</p>	<p>i. Green Belt Development with maintenance on either side of the approach road from Chelluru village to Pasalapudi village, which is approximately 4.0 km costing about Rs. 40.0 Lakhs.</p> <p>ii. Collection of wet waste from Chelluru village in collaboration with Gram Panchayat for vermicomposting – Rs. 1.0 crore</p> <p>iii. Presently farmers are burning</p>

		paddy straw in their fields, which is causing air pollution. Hence, we are planning to collect paddy straw using baling machines. The collected straw waste will be shredded into smaller pieces and used as boiler fuel – Rs. 1.2 crore (For procuring Balers and Collecting equipment)
	Confirmation regarding compliance to C & D waste management Rules while demolishing the existing sugar unit	Most of the structures to be removed are of steel which will be reused for the proposed 150 KLPD Grain based ethanol plant. The sugar machinery will be sold as individual machines and balance as scrap to authorized vendors as applicable Any civil structural waste that needs to be demolished in our sugar plant, the waste will be reused for filling purposes in the new proposed plant. They will confirm and the dispose as per the C & D waste management rules 2016
	15% of power requirement shall be met from solar	Solar power will be installed in a phase manner to achieve 15% power requirement. All lighting in the proposed project will be LED lighting
	Bio composting in the existing plant shall be phased out completely within 3 years from the date of issuance of EC	Currently they are operating Bio digester, RO plant along with MEE to reduce the effluent load to bio compost. Since establishment of incineration boiler is not at all economically viable for this capacity, they are planning to establish a spent wash drier in a phase manner to convert the spent wash into dry powder

		by utilizing excess steam in the process
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EAC found the response submitted by PP against ADS raised as satisfactory.

The Project Proponent and the accredited Consultant M/s. SV Enviro Labs & Consultants (NABET certificate no. NABET/EIA/2124/RA 0240 and validity 24.10.2024) made a detailed presentation on the salient features of the project and informed that the proposal is for environmental clearance to the project for expansion in the production capacity from 52.5 KLPD (Molasses based RS/ENA/Ethanol) to 202.5 KLPD (Establishment of 150 KLPD Grain Based Distillery to produce Ethanol for blending under EBP Programme) with existing cogeneration power plant for existing & proposed distillery is 15 MW located at Village Chelluru, Tehsil Rayavaram, District Dr. B.R. Ambedkar Konaseema (Formerly East Godavari) District, State Andhra Pradesh by M/s. Sri Sarvaraya Sugars Limited.

As per 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 under Schedule 5 (g) Category A of EIA Notification, 2006, 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:

S. No.	Name of the unit	Name of the product/ by-product	Existing Production Capacity	Additional Production Capacity	Total Production Capacity
1.	Distillery	Existing Product - RS/ENA/Ethanol Proposed Product - Ethanol	52.5 KLPD (Molasses as Raw material)	150 KLPD (Grain as Raw material)	202.5
2.	Co-generation	Power	15.0 MW	--	15.0 MW

	power plant				
3.	DWGS Drier	DDGS	73.0 TPD	--	73.0 TPD
4.	Fermentation Unit	Carbon di-oxide	12.0 TPD	60.0 TPD	72.0 TPD
5.	Bio composting Unit	Digester Sludge & Fermentor Sludge	1.0 TPD	--	TPD

Ministry has issued Environmental Clearance to the existing Industry for 52.5 KLPD distillery vide file No. J-11011/128/2003-IA II (I) dated 22.03.2004. Certified Compliance report of existing EC has been issued by IRO Vijayawada vide letter IRO/VIJ/EPA/EC-A/101/03-31/2022 – 833 dated 19.12.2022 in which 3 partial/non-compliances were mentioned and informing that a letter has been issued to project authorities for taking corrective measures. The committee noted that 3 partial/non-compliances observed in CCR were regarding establishment of at least 4 ambient air quality monitoring stations in the downwind directions; (ii) non submission copy of newspaper advertisement of existing EC granted; (iii) Submission of 6 monthly compliance reports. In this regard, PP has informed that existing 52.5 KLPD distillery was not in operation since long and it shall be dismantled except the existing boiler. Hence, no action is required on the said observation. However, EAC suggested that first two points should be incorporated as conditions in the recommendations for proposed project.

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 25.50 Hectares (existing plant area 17.40 Hectares and additional land required 8.10 Hectares for proposed capacity) which is under possession of the company and is under Industrial use. Out of the total plant area 9.71 Hectares (Existing – 7.04 & Proposed – 2.67) i.e. 38% of the total plant area has already been developed as greenbelt & plantation and the same will be maintained/ will be developed under greenbelt & plantation in and around plant premises. The estimated project cost for the proposed project is Rs. 175.0 Crores and the existing was Rs. 39.98 Crores. Capital cost for proposed EMP would be Rs. 15.88 Crores and recurring cost for EMP would be Rs. 2.0 Crores per annum in addition to existing Capital Cost for EMP is Rs. 8.47 Crores & Recurring Cost

for EMP is Rs. 1.29 Crores per Annum. Industry proposes to allocate Rs. 2.86 Crores towards extended EMP (Corporate Environment Responsibility). Total Employment after expansion will be 230 persons as direct & indirect.

There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wild life Corridors etc. within 10 km radius from project site. There are no Reserve forests/protected forests within 10 km radius from project site. Water bodies: Mandapeta Canal is at a distance of 1.10 Km in NE direction. No Rivers are located within distance of 10 km from the project Site.

AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be $1.08 \mu\text{g}/\text{m}^3$, $3.60 \mu\text{g}/\text{m}^3$ and $2.52 \mu\text{g}/\text{m}^3$ with respect to PM_{10} , SO_2 and NO_x . The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

The total fresh water requirement for the proposed grain based distillery unit is 576 KLD. Total fresh water requirement after expansion will be 902 KLD, which will be met from Ground Water through Bore Wells. NOC has been obtained to M/s. Sri Sarvaraya Sugars Limited from APWALTA, Tadepalli Guntur District Andhra Pradesh vide letter no. PRR05-11028/22/2018-SLNA-GIS-CORD dated 20.11.2020.

The Distillery effluent (Spent Wash) @ 863 KLD is sent to the decanter where the wet grain is separated. Further a part of the Thin Slop i.e. 174 KLD will be reused in the process and the remaining i.e. 587 KLD will go the Multiple Effect Evaporator (Capacity - 800 KLD). In the MEE it is further concentrated and these Solids i.e. 88.0 KLD are separated. The wet grain from the Decanter and MEE is 218 TPD will be sent to dryer to form DDGS. The MEE & Drier condensate, spent lees, WTP Rejects, Boiler & Cooling tower blowdowns, washings etc., is 1114 KLD will be sent to the 'Condensate Polishing Unit' of 1200 KLD Capacity. followed by dryer to produce DDGS. STP of 20 KLD capacity will be installed to treat domestic waste waters. The plant will be based on Zero Liquid discharge system and no effluent/treated water will be discharged outside factory premises.

The Committee noted that the existing distillery is operating bio-digester, RO system along with MEE followed by Bio-composting to meet ZLD. The Committee suggested to abandon bio-composting process within 3 years and adopt powder formation technology.

Total power requirement of distillery after expansion will be 6.0 MW, which will be sourced from existing 15.0 MW co-generation power plant in the existing sugar mill/distillery. NOC for power requirement from State Grid has been obtained vide letter no. NA dated NA. The industry will be using the existing 70 TPH Boiler provided with Electro Static Precipitator with stack height of 60.0 meters and 9.0 TPH Boiler provided with Multi Cyclone separators with a stack height of 40.0 meters were installed for controlling the particulate emissions. Accordingly, Committee suggested that ESP/bagfilter should be provided in place of multicyclone to achieve emission standards of 30 mg/Nm³. Industry has an existing 1 x 500 KVA DG set which will be used as standby during power failure and stack height (7.0 m) has been provided as per CPCB norms to the proposed DG sets.

Details of Process emissions generation and its management:

- For 70.0 TPH Boiler APCE is Electro Static Precipitator with a stack height of 60 meters. At present the APCE is designed to meet < 115 mg/Nm³ of PM and PP proposed to upgrade the existing ESP to meet < 30 mg/Nm³ by installing additional fields. For 9.0 TPH Boiler APCE is Multi-Cyclone Separator with a stack height of 40.0 meters was installed for controlling the particulate emissions. As suggested by the Committee, multicyclone separator should be replaced by ESP/bagfilter.
- Online Continuous Emission Monitoring System be installed with the stack and data will be transmitted to CPCB/SPCB servers.
- CO₂ (100 TPD) generated during the fermentation process will be collected by utilizing CO₂ scrubbers and it shall be used in Industry/ sold to authorized vendors/collected in proposed bottling plant.

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

- Proposed DDGS (Distilled Dried Grains Stillage) (73.0 TPD) will be sold as cattle feed / fish feed /Prawn feed.

- Boiler ash of 38.0 TPD (Existing – 7.0 TPD & Proposed – 31.0 TPD) shall be given to nearby brick manufacturing units.
- Used oil (100 LPA) and used is being sold to authorized recyclers and used lead acid batteries (4 no.'s/year) shall be return to the dealer/manufacturer on buy back system.
- The CPU & STP sludge or rejects will be used for Ash Quenching or returned back to MEE for further treatment.
- The existing sludge generation (Digester Sludge & Fermentor Sludge) is 1.0 TPD is being used in the bio composting process and the final product is being sold 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 25.50 Hectares (Existing – 17.40 Hectares & Proposed – 8.10 Hectares) is under possession of the company since 1958 and was certified Panchyati Secretary Chelluru Rayavaram Mandal vide letter no. 2250 dated 26.06.2021 stating the survey numbers in which Sri Sarvaraya Sugars Limited establishments situated are being used for Non-Agriculture purpose only. EAC found the information satisfactory.

During deliberations, EAC discussed following issues:

- Existing spent wash storage lagoons shall be converted to rain water harvesting area. PP agreed to it.
- Industry shall ensure that BOD outlet limit of STP should be less than 10 mg/L. PP agreed to the same.
- Bag filter should be provided in place of multi-cylcone seperator to achieve emission standards of 30 mg/Nm³. PP informed that after establishment of the new 150 KLPD Grain based Distillery only existing 70.0 TPH boiler connected to the ESP which will be in operation and existing 9.0 TPH boiler shall be dismantled. In the meantime, Industry shall connect the 9.0 TPH boiler stack to the existing ESP of 70.0 TPH boiler.
- Low sulphur coal with maximum sulphur content of 0.5% shall only be used. PP has informed that rice husk and coal in equal proportions are

proposed as fuel for boiler and cumulative Sulphur content shall be within 0.1 – 0.15 %.

Capital cost and recurring cost of EMP are given below:

S. No.	Description	Capital Cost in Lakhs	Recurring Cost in Lakhs/Annum
1.	Air Pollution		
	Pollution Control Equipment - Existing ESP will be used	--	7.0
	Dust Suppression	--	
2.	Water Pollution		
	RWH Pits	10.0	2.0
	CPU, MEE & RO	1525.0	150.0
3.	Noise Pollution		
	Acoustic Enclosure	18.0	3.0
4.	Solid Waste & Hazardous Waste	20.0	5.0
5.	Environmental Monitoring		
	Ambient Air, Stack, Noise, Soil, Water & Waste Water etc.,	--	20.0
6.	Landscaping/Green Belt Development		
	Plantation	10.0	3.0
7.	Occupational Health & Safety		
	PPE & Health check up	5.0	10.0
	Sub Total	1588	200.0
8.	CER Activities @ 1.5 % of the total project cost (as per OM Dt: 01.05.2018)	260	26.0
	Grand Total	1848.0	226.0

Details of CER with proposed activities and budgetary allocation:

Sl. No	Proposed activity	Proposed Budget
1.	Green Belt Development with maintenance on either side of the approach road from Chelluru village to	Rs. 40.0 Lakhs

	Pasalapudi village, which is approximately 4.0 km costing about Rs. 40.0 Lakhs.	
2.	Collection of wet waste from Chelluru village in collaboration with Gram Panchayat for vermicomposting	Rs. 1.0 crore
3.	Presently farmers are burning paddy straw in their fields, which is causing air pollution. Hence, we are planning to collect paddy straw using baling machines. The collected straw waste will be shredded into smaller pieces and used as boiler fuel	Rs. 1.2 crore
4.	Other activities	Rs. 26.0 Lakhs

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). As committed, PP shall ensure installation of at least 4 ambient air quality monitoring stations in the downwind directions; (ii) submission copy of newspaper advertisement for new EC granted; (iii) Regular submission of 6 monthly compliance reports to the respective Region Office.
- (v). NOC from the 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. No ground water shall be used for the plant operations.

- (vi). Total fresh water requirement after expansion shall not exceed 902 m³/day, 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.
- (vii). Spent Wash/stillage shall be sent to the decanter followed by the Multiple Effect Evaporator and dryer to form DDGS. DDGS to be used as cattle feed. The MEE & Drier condensate, spent lees, WTP Rejects, Boiler & Cooling tower blowdowns, washings etc., is shall be treated in the 'Condensate Polishing Unit' (CPU). STP of 20 KLD capacity shall be installed to treat domestic wastewater. The plant will be based on 'Zero Liquid Discharge' system and no effluent/treated water will be discharged outside factory premises.
- (viii). 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.
- (ix). As proposed, PP shall upgrade ESP of 70.0 TPH Boiler to meet particulate emission within 30 mg/Nm³ by installing additional fields with a stack height of 60 meters. PP shall also install bagfilter as a pollution control device with 9 TPH boiler for controlling particulate emission within 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.

- (x). Boiler ash (38 TPD) shall be supplied to authorised vendor for nearby brick manufacturing units. 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 3 years from the date of issuance of EC.
- (xi). CO₂ (72 TPD) generated during the fermentation process will be collected by utilizing CO₂ scrubbers and it shall be used in Industry/ sold to authorized vendors/collected in proposed bottling plant.
- (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.

- (xvii). The green belt of at least 5-10 m width has already been developed in 9.71 hectares i.e., 38.0 % of total project area shall be maintained 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.
- (xviii). PP proposed to allocate Rs. 2.86 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.
- (xix). 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.
- (xx). 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.
- (xxi). 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.

- (xxii). 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.
- (xxiii). 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. 05

Expansion of the sugar from 3500 TCD To 10000 TCD, Co-generation 27.5 MW to 34.5 MW, establishment of distillery 300 KLPD and captive power plant of 4 MW located at Nad KD Village, Indi Taluk, Vijayapura District, Karnataka State by M/s. Jamkhandi Sugars Limited Unit – II- Re-consideration of Environmental Clearance.

[IA/KA/IND2/402350/2022, IA-J-11011/72/2021-IA-II(I)]

The proposal was earlier considered by the EAC (Ind-2) in its Agenda Sl. No. 6 held on meeting/meeting ID IA/IND2/13394/28/11/2022 held during 29.11.2022 wherein EAC deferred the proposal and desired certain requisite information/inputs. Information desired by the EAC and responses submitted by the project proponent is as under:

Sl. No.	ADS by MOEFCC	Reply of PP
1	PP shall submit point wise	PP has submitted the point wise time bound action plan along with budgetary allocation to address all the issues raised in Public Hearing

	time bound action plan along with budgetary allocation to address all the issues raised in Public Hearing.																																																				
2	Fresh water requirement shall be reduced by considering the utilization of treated effluent from sugar plant. Accordingly, PP shall submit revised water balance.	<p>Fresh & recycle water requirement for Sugar and Distillery units: Water Consumption for Distillery unit, in KLD</p> <table border="1"> <thead> <tr> <th>Sl. No.</th> <th>Particulars</th> <th>C Heavy molasses 300 KLD</th> <th>B Heavy molasses 300 KLD</th> <th>Sugarcane syrup 450 KLD</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Fresh water for process, domestic use, Labs and DM plant in KLD</td> <td>1275</td> <td>1294</td> <td>1171</td> </tr> <tr> <td></td> <td>Specific freshwater requirement KL/KL of alcohol</td> <td>4.25</td> <td>4.31</td> <td>2.60</td> </tr> <tr> <td>2</td> <td>Reuse from distillery CPU in KLD</td> <td>2128</td> <td>1857</td> <td>2520</td> </tr> <tr> <td>3</td> <td>Reuse from Sugar plant in KLD</td> <td>-</td> <td>-</td> <td>685</td> </tr> <tr> <td colspan="2">Total water requirement in KLD</td> <td>3403</td> <td>3151</td> <td>4376</td> </tr> </tbody> </table> <p>Freshwater & Recycle water requirement for Sugar Plant and co-generation unit:</p> <table border="1"> <thead> <tr> <th>Sl. No.</th> <th>Proposed Sugarcane-10000 TCD with Co-Gen34.5 MW</th> <th>Water in KLD</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>Fresh Water</td> <td></td> </tr> <tr> <td></td> <td></td> <td>641</td> </tr> <tr> <td>i</td> <td>DM Plant permeate to Boiler makeup</td> <td>441</td> </tr> <tr> <td>ii</td> <td>Cooling Tower</td> <td>200</td> </tr> <tr> <td></td> <td>Recycle water</td> <td></td> </tr> <tr> <td>A2</td> <td>Water from Sugarcane crushed @ 68% of 10000 TCD</td> <td>6800</td> </tr> </tbody> </table> <p>Note: for the water requirement in the sugar plant for imbibition, bearings cooling etc., the treated condensate water will be recycled.</p>	Sl. No.	Particulars	C Heavy molasses 300 KLD	B Heavy molasses 300 KLD	Sugarcane syrup 450 KLD	1	Fresh water for process, domestic use, Labs and DM plant in KLD	1275	1294	1171		Specific freshwater requirement KL/KL of alcohol	4.25	4.31	2.60	2	Reuse from distillery CPU in KLD	2128	1857	2520	3	Reuse from Sugar plant in KLD	-	-	685	Total water requirement in KLD		3403	3151	4376	Sl. No.	Proposed Sugarcane-10000 TCD with Co-Gen34.5 MW	Water in KLD	A	Fresh Water				641	i	DM Plant permeate to Boiler makeup	441	ii	Cooling Tower	200		Recycle water		A2	Water from Sugarcane crushed @ 68% of 10000 TCD	6800
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		The excess will be used in the Distillery plant.																								
3	PP shall mention fresh water requirement for existing and proposed project (sugar, distillery & Cogen power separately).	<ul style="list-style-type: none"> In the existing operation the sugar cane crushing capacity is 3500 TCD. Freshwater is not used in sugar mill. The condensate water of 1597 KLD is recycled for sugar plant use. In the existing plant for the boiler of capacity 90 TPH – freshwater is used after demineralization. The quantity of freshwater drawn for this purpose is 105 KLD. The details of freshwater requirement for sugar plant, co-generation and distillery is shown in the Table below; <table border="1"> <thead> <tr> <th>Sl. No.</th> <th>Plant</th> <th>Existing in KLD</th> <th>Proposed in KLD</th> <th>After expansion in KLD</th> <th>Remarks</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Sugar plant</td> <td>-</td> <td>200</td> <td>200</td> <td>Freshwater used for Cooling tower makeup</td> </tr> <tr> <td>2.</td> <td>Co-generation plant</td> <td>105</td> <td>441</td> <td>441</td> <td>Freshwater used for boiler makeup through DM plant</td> </tr> <tr> <td>3.</td> <td>Distillery unit</td> <td>-</td> <td>1294</td> <td>1294</td> <td>Fresh water requirement for worst case scenario i.e., when B-heavy molasses is used as feedstock</td> </tr> </tbody> </table>	Sl. No.	Plant	Existing in KLD	Proposed in KLD	After expansion in KLD	Remarks	1.	Sugar plant	-	200	200	Freshwater used for Cooling tower makeup	2.	Co-generation plant	105	441	441	Freshwater used for boiler makeup through DM plant	3.	Distillery unit	-	1294	1294	Fresh water requirement for worst case scenario i.e., when B-heavy molasses is used as feedstock
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4	PP shall submit detailed scheme for treatment of for existing and proposed project (sugar, distillery	<p>Sugar plant Effluent Management:</p> <ul style="list-style-type: none"> Sugar plant effluent from process and laboratory will be 953 KLD <p>A. Upgradation of Existing Sugar plant ETP:</p> <ul style="list-style-type: none"> The existing treatment plant capacity is 350 KLD to treat the existing effluent load. Effluent treatment plant process comprises of primary treatment and secondary treatment. Primary treatment comprises of screen chamber, oil & grease trap, equalization tank. In the secondary treatment, effluent is treated in two stage activated sludge process. The treated effluent is collected in 15 days holding lagoon and applied on land for greenbelt 																								

& co-gen power). PP shall incorporate biological treatment in the aforementioned details.

- A separate monthly wash water tank is provided to hold the plant cleaning effluent and taken for treatment in a regulated manner.

Details of Existing ETP unit in sugar unit

Sl. No.	Units	Dimension
1	Bar screen chamber	0.6 m W X 1 m L
2	Oil & Grease chamber	1 m W X 1 m L X 1 m D
3	Equalization tank	546 m ³
4	Primary aeration	994.5 m ³
5	Primary clarifier	190 m ³
6	Secondary aeration	416.5 m ³
7	Secondary clarifier	190 m ³
8	Sludge drying beds	3.5 L X 3.5 W X 1.5 D
9	Treated water sump 1	160 m ³
10	Treated water sump 2	160 m ³
11	MGF flow	20 m ³ /hr
12	15 Days Lagoon	3500 m ³
13	Monthly wash tank	3800 m

To meet the additional load from proposed expansion, ETP will be upgraded as under;

The ETP will be upgraded to treat the additional load of effluent generated due to the expansion.

Effluent Quantity generated due to the expansion: Process effluent 950 KLD and 3 KLD from laboratory.

- It is proposed to add one digester to reduce the BOD load by 60 to 70% and addition to the existing ETP system.
- One more RCC constructed diffused aeration tank of 1000 m³ holding capacity 20 m X 12 m X 4.5 m to use diffused aeration tank.
- One set of multi grade filter followed by activated carbon filter will be installed to transfer the spray pond over flow through filters to avoid contaminated water to flow to ETP.
- The clarifier capacity will be increased by replacing the existing one.
- It is proposed to install sludge decanter for the secondary sludge concentrated & drying.
- RCC constructed treated water effluent storage tanks to store treated water of 15 days.
- A suitable capacity activated carbon filter along with flow meter will be installed on delivery line of pump.

B. For treating sugar plant condensate, CPU of 3000 m³ will be installed for treating and the reject will be taken to sugar ETP.

- Hot Condensates generated from sugarcane crushing will be recycled in various process uses and some part will be evaporated.
- The excess condensate is 1825 KLD and cooling tower bleed of 990 KLD together is taken to Condensate Treatment plant.
- The Effluent of 1825 KLD + 990 KLD=2815 KLD will be treated in CPU of 3000 m³ capacity.
- Treated condensate of 830 KLD will be recycled back to sugar process, 1300 m³ to cooling tower water makeup and remaining 685 KLD treated condensate will be used in distillery unit during sugarcane crushing season.

DISTILLERY WASTEWATER TREATMENT METHODS

- The spent wash from the distillery will first collected in a RCC and with epoxy coat impervious collection tank of 5 days capacity is proposed capacity will be 12000 m³ for raw spent wash to hold.
- Raw spent wash will be partially recycled in the process in case of B- Heavy and Sugarcane syrup-based distillery operations.
- The raw spent wash will be concentrated in Multiple Effect Evaporator (MEE).
- MEE having five effects evaporation to concentrate spent wash at 16 Brix to concentrate to 60 Brix.
- Concentrated spent wash will be used as fuel in incineration boiler.

Lean effluent treatment methods:

- Spent lees, MEE condensate, boiler blowdown, cooling tower bleed, DM plant rejects and lab and other washings will be collected and treated in the distillery Condensate Polishing Unit (CPU) of 3000 m³ capacity comprising of three stage RO.
- The treated permeate will be reused in cooling tower water makeup and for molasses dilution.
- The CPU rejects will be taken back to MEE.

Condensate Polishing Unit – 3000 m³

- CPU is comprising of both biological treatment method for spent lees and process condensates treating in anaerobic reactor, extended aeration tank followed by secondary and tertiary clarifier followed by multigrade filter, carbon filter.
- Inorganic effluents viz., boiler blowdowns, cooling tower bleed, DM plant rejects are treated in equalization tank, clarifier followed by multigrade filter and carbon filter.
- After secondary treatment of both organic and inorganic effluents will be collected in collection tank. Further, UV treated effluents will be used in Fermentation process and

		<p>Ultrafiltration and Reverse Osmosis treated effluent will be used in cooling tower makeup.</p> <ul style="list-style-type: none"> • RO rejects will be taken back to MEE. • CPU sludge will be treated in decanter centrifuge. 																																																																																																																												
5	PP shall provide clarification for low concentration of both PM10 and PM2.5 values and their nearly identical concentration.	<ul style="list-style-type: none"> • Baseline Ambient Air Quality is monitored at nine locations around the project site for period of three months during March, April & May 2021. • Table presented in the PPT presentation file is summary of Baseline monitoring for three months period indicating maximum and minimum values with respect to PM₁₀, PM_{2.5}, SO₂, NO_x & CO. Thereby table looks as under; <p>Summary of AAQ Monitoring Values</p> <table border="1"> <thead> <tr> <th rowspan="2">Sl. No.</th> <th rowspan="2">Place</th> <th>PM₁₀ µg/m³</th> <th>PM_{2.5} µg/m³</th> <th>SO₂ µg/m³</th> <th>NO₂ µg/m³</th> <th>CO mg/m³</th> </tr> <tr> <th>Min-Max</th> <th>Min-Max</th> <th>Min-Max</th> <th>Min-Max</th> <th>Min-Max</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Out of 9 Monitoring locations</td> <td>20.1 - 39.6</td> <td>17.2 - 26.4</td> <td>7.1 - 14.2</td> <td>9.2 - 17.8</td> <td>0.1 - 0.6</td> </tr> <tr> <td colspan="2">NAAQ Standard</td> <td>100</td> <td>60</td> <td>80</td> <td>80</td> <td>4</td> </tr> </tbody> </table> <p>The details of Ambient Air Quality monitored in nine locations indicating Maximum, Minimum, Average and 98th Percentile for three months period is presented as under (extracted from EIA report);</p> <table border="1"> <thead> <tr> <th rowspan="2">Sampling location</th> <th colspan="4">PM₁₀ in µg/m³</th> <th colspan="4">PM_{2.5} in µg/m³</th> </tr> <tr> <th>Max</th> <th>Min</th> <th>Avg</th> <th>98th percentile</th> <th>Max</th> <th>Min</th> <th>Avg</th> <th>98th percentile</th> </tr> </thead> <tbody> <tr> <td>Project site</td> <td>39.6</td> <td>20.4</td> <td>31.6</td> <td>37.6</td> <td>26.4</td> <td>18.6</td> <td>22.7</td> <td>26.1</td> </tr> <tr> <td>Nad KD</td> <td>34.6</td> <td>23.6</td> <td>28.4</td> <td>33.1</td> <td>25.6</td> <td>18.4</td> <td>20.5</td> <td>24.2</td> </tr> <tr> <td>Golsara</td> <td>31.4</td> <td>20.1</td> <td>27.7</td> <td>30.9</td> <td>22.6</td> <td>18.2</td> <td>19.9</td> <td>22.5</td> </tr> <tr> <td>Hanchinal</td> <td>35.6</td> <td>22.6</td> <td>28.5</td> <td>33.6</td> <td>22.5</td> <td>17.8</td> <td>20.1</td> <td>22.0</td> </tr> <tr> <td>Arjunagi</td> <td>31.4</td> <td>20.4</td> <td>28.4</td> <td>31.4</td> <td>23.4</td> <td>17.2</td> <td>20.7</td> <td>23.4</td> </tr> <tr> <td>Marsanahalli</td> <td>30.7</td> <td>22.5</td> <td>27.8</td> <td>30.3</td> <td>22.7</td> <td>16.7</td> <td>20.0</td> <td>22.6</td> </tr> <tr> <td>Teggelli</td> <td>30.7</td> <td>20.4</td> <td>27.8</td> <td>30.5</td> <td>23.5</td> <td>18.5</td> <td>20.2</td> <td>23.1</td> </tr> <tr> <td>Shirashya</td> <td>32.4</td> <td>24.2</td> <td>28.2</td> <td>31.3</td> <td>22.6</td> <td>16.8</td> <td>19.9</td> <td>22.5</td> </tr> <tr> <td>Satalagao</td> <td>31.</td> <td>23.</td> <td>28.</td> <td>31.6</td> <td>23.</td> <td>17.</td> <td>20.</td> <td>23.0</td> </tr> </tbody> </table>	Sl. No.	Place	PM ₁₀ µg/m ³	PM _{2.5} µg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³	CO mg/m ³	Min-Max	Min-Max	Min-Max	Min-Max	Min-Max	1	Out of 9 Monitoring locations	20.1 - 39.6	17.2 - 26.4	7.1 - 14.2	9.2 - 17.8	0.1 - 0.6	NAAQ Standard		100	60	80	80	4	Sampling location	PM ₁₀ in µg/m ³				PM _{2.5} in µg/m ³				Max	Min	Avg	98 th percentile	Max	Min	Avg	98 th percentile	Project site	39.6	20.4	31.6	37.6	26.4	18.6	22.7	26.1	Nad KD	34.6	23.6	28.4	33.1	25.6	18.4	20.5	24.2	Golsara	31.4	20.1	27.7	30.9	22.6	18.2	19.9	22.5	Hanchinal	35.6	22.6	28.5	33.6	22.5	17.8	20.1	22.0	Arjunagi	31.4	20.4	28.4	31.4	23.4	17.2	20.7	23.4	Marsanahalli	30.7	22.5	27.8	30.3	22.7	16.7	20.0	22.6	Teggelli	30.7	20.4	27.8	30.5	23.5	18.5	20.2	23.1	Shirashya	32.4	24.2	28.2	31.3	22.6	16.8	19.9	22.5	Satalagao	31.	23.	28.	31.6	23.	17.	20.	23.0
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		NAAQ standards	100				60			
		Sampling location	SO₂ in µg/m³				NOx in µg/m³ in µg/m³			
			Max	Min	Avg	98th percentile	Max	Min	Avg	98th percentile
		Project site	14.2	10.9	12.3	13.9	17.8	12.6	14.3	17.3
		Nad KD	12.5	7.3	10.2	12.2	13.5	9.8	12.3	13.5
		Golsara	11.8	8.2	10.3	11.6	16.3	10.6	12.2	15.1
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		Satalagaon	12.2	6.9	10.1	12.0	13.4	11.2	12.4	13.3
		NAAQ standards	100				60			
		Sampling location	CO mg/m³							
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		Project site	0.6	0.1	0.3	0.6				
		Nad KD	0.3	0.1	0.1	0.1				
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6	PP shall provide clarifications	Criteria for selection of noise level monitoring during the Baseline study <ul style="list-style-type: none"> As the ToR baseline monitoring is to be carried out at eight 								

	<p>on for not adopting site selection criteria for monitoring of noise levels and collecting soil samples</p>	<p>locations. Accordingly, the Noise monitoring stations are located at the project site and in the villages around the plant. In the villages the noise levels are monitored near the school and commercial area</p> <ul style="list-style-type: none"> The impact of noise due to the industrial activity no doubt is only about 500 m to 2 Km. But as per the requirement of the TOR monitoring locations were selected beyond the impact area. <p>Criteria for selection of soil sampling during the Baseline study</p> <ul style="list-style-type: none"> Soil samples are collected in agricultural land in the village limits but in advertently the locations are mentioned as villages. As per the requirement ToR condition, samples are collected at eight locations around project site within 10 Km radial distance. 																		
7	<p>PP shall re-calculate incremental GLC for the proposed project by conducting AAQ modelling again.</p>	<ul style="list-style-type: none"> As suggested by the EAC, AAQ modeling is redone again. Revise the AERMOD studies and incremental concertation are as under; <p>A. Inputs for AERMOD studies are considered with respect to the standards stipulated in the emission Standards vide Notification No. S.O. 3305(E) dated 07.12.2015 i.e.,</p> <ul style="list-style-type: none"> for coal fired boiler PM - 30 mg/Nm³, SO₂ – 100 mg/Nm³, NO_x – 100 mg/Nm³ for bagasse fired boiler PM - 50 mg/Nm³, SO₂ – 100 mg/Nm³, NO_x – 100 mg/Nm³ <p>With the minimum emission level of PM 30 mg/Nm³ is considered for running the model</p> <p>B. Inputs considered for AERMOD studies: Lakes Environment Soft Ware 9.8.1 is used.</p> <p style="text-align: center;">Inputs considered for AERMOD studies</p> <table border="1" data-bbox="403 1559 1406 1877"> <thead> <tr> <th>Particular</th> <th>Stack height in m</th> <th>Stack Dia. in m</th> <th>Stack exit gas temp in Kelvin</th> <th>Gas velocity in m/s</th> <th>PM g/s</th> <th>SO₂ g/s</th> <th>NO_x g/s</th> <th>Remarks</th> </tr> </thead> <tbody> <tr> <td>120</td> <td>90</td> <td>2.8</td> <td>408</td> <td>10.</td> <td>2.201</td> <td>4.402</td> <td>4.402</td> <td>Existing</td> </tr> </tbody> </table>	Particular	Stack height in m	Stack Dia. in m	Stack exit gas temp in Kelvin	Gas velocity in m/s	PM g/s	SO ₂ g/s	NO _x g/s	Remarks	120	90	2.8	408	10.	2.201	4.402	4.402	Existing
Particular	Stack height in m	Stack Dia. in m	Stack exit gas temp in Kelvin	Gas velocity in m/s	PM g/s	SO ₂ g/s	NO _x g/s	Remarks												
120	90	2.8	408	10.	2.201	4.402	4.402	Existing												

TPH Boiler				2	50 mg/Nm³	100 mg/Nm³	100 mg/Nm³	and operates in the months of October to April (sugar cane crushing season)
50 TPH boiler								Proposed and incineration boiler operates throughout the year
55 TPH incineration boiler	77	2.6	411	8.5	1.045 mg/Nm³	3.482 mg/Nm³	3.482 mg/Nm³	

Calculation/Justification of AERMOD input data
120 TPH Boiler – Bagasse fired

Parameter	Flue gas temp		Stack Dia in m	C/s Area in m ²	Vel in m/s	Flow in m ³ /s	Flow in Nm ³ /s	Concn in mg/Nm ³	g/s
	°C	°K							
PM	145	418	2.8	6.158	10.2	62.807	44.025	50	2.201
SO ₂	145	418	2.8	6.158	10.2	62.807	44.025	100	4.402
NO ₂	145	418	2.8	6.158	10.2	62.807	44.025	100	4.402

50 TPH bagasse fired boiler + 55 TPH Boilers spent wash + coal fired boiler

Parameter	Flue gas temp		Stack Dia in m	C/s Area in m ²	Vel in m/s	Flow in m ³ /s	Flow in Nm ³ /s	Concn in mg/Nm ³	g/s
	°C	°K							
PM	138	41	2.6	5.3	9.2	48.84	34.822	30	1.0

		1		09		6			45
SO ₂	138	41 1	2.6	5.3 09	9.2	48.84 6	34.822	100	3.4 82
NO ₂	138	41 1	2.6	5.3 09	9.2	48.84 6	34.822	100	3.4 82

AERMOD studies are carried out by considering both the scenarios i.e.,

Scenario 1. Operation Sugar & co-generation plant boilers works only during sugarcane crushing seasons i.e., October to April and distillery boiler throughout the year.

Scenario 2. Operation Sugar & co-generation plant boilers distillery boilers throughout the year

Predicted incremental short-term concentrations

Description	Maximum predicted concentrations, µg/m ³		Distance & Direction
	Scenario - 1 when all the boilers operate throughout the year	Scenario -2 when sugar boiler operates 6 months & distillery boiler operates throughout the year	
Particulate Matter (PM)	7.644	4.73	Maximum incremental concentrations found within site 200 m from emission sources towards South West direction near the site boundary, in that direction there is no village, no water body up to 6.0 Km and there are agricultural land
Sulfur dioxide (SO ₂)	12.432	11.90	
Oxides of Nitrogen (NO ₂)	12.432	11.90	

- A. * The Clarification: The values of SO₂ and NO_x are similar as the input values considered for SO₂ and NO_x are emission outlet standards, since the emission outlet standards for both is same as per the emission standards prescribed.
- B. The pattern of isopleth for SO₂ and NO₂ values is decided by the meteorological data files used for modelling. Since, same meteorological data files for SO₂ and NO₂ modelling, the isopleths look similar. Also, AERMOD (Gaussian model) doesn't account for any chemical transformation therefore, model treats SO₂ and NO₂ alike.
- C. Maximum incremental concentrations are presented in above table are 1st hourly highest concentration. Whereas, for 24 hourly and annual increment concentration will be lessor then this.

As desired by the committee the particulate matter is apportioned for PM₁₀ and PM_{2.5} and resultant maximum hourly incremental concentration with baseline monitored data for maximum concentrations of PM₁₀, PM_{2.5}, SO₂ and NO₂ at all the locations are tabulated below;

Resultant Maximum 1st Hourly Concentrations with baseline monitored values

Pollutant	Units	Max. Baseline concentrations	Incremental concentrations at peak load (24 hr average)**	Max Resultant concentration	Limits as per MoEF for industrial areas
AAQ 1 : Project site					
PM10	µg/m ³	39.6	4.73	44.33	100
PM2.5	µg/m ³	26.4	4.73	31.13	60
SO ₂	µg/m ³	14.2	11.9	26.1	80
NO ₂	µg/m ³	17.8	11.9	29.7	80
AAQ 2 : Nad KD village					
PM10	µg/m ³	34.6	4.73	39.33	100
PM2.5	µg/m ³	25.6	4.73	30.33	60
SO ₂	µg/m ³	12.5	11.9	24.4	80

NO ₂	µg/ m ³	13.5	11.9	25.4	80
AAQ 3: Golsara village					
PM10	µg/ m ³	31.4	4.73	36.13	100
PM2.5	µg/ m ³	22.6	4.73	27.33	60
SO ₂	µg/ m ³	11.8	11.9	23.7	80
NO ₂	µg/ m ³	16.3	11.9	28.2	80
AAQ 4: Hanchinal village					
PM10	µg/ m ³	35.6	4.73	40.33	100
PM2.5	µg/ m ³	22.5	4.73	27.23	60
SO ₂	µg/ m ³	12.4	11.9	24.3	80
NO ₂	µg/ m ³	15.3	11.9	27.2	80
AAQ 5: Arjunagi village					
PM10	µg/ m ³	31.4	4.73	36.13	100
PM2.5	µg/ m ³	23.4	4.73	28.13	60
SO ₂	µg/ m ³	12.7	11.9	24.6	80
NO ₂	µg/ m ³	13.8	11.9	25.7	80
AAQ 6 : Marsanahalli village					
PM10	µg/ m ³	30.7	4.73	35.43	100
PM2.5	µg/ m ³	22.7	4.73	27.43	60
SO ₂	µg/ m ³	11.4	11.9	23.3	80
NO ₂	µg/ m ³	13.5	11.9	25.4	80
AAQ 7 : Teggelli village					
PM10	µg/ m ³	30.7	4.73	35.43	100
PM2.5	µg/ m ³	23.5	4.73	28.23	60
SO ₂	µg/ m ³	12.2	11.9	24.1	80
NO ₂	µg/ m ³	13.6	11.9	25.5	80
AAQ 8 : Shirashyad village					

		PM10	µg/m ³	32.4	4.73	37.13	100	
		PM2.5	µg/m ³	22.6	4.73	27.33	60	
		SO ₂	µg/m ³	12.5	11.9	24.4	80	
		NO ₂	µg/m ³	13.7	11.9	25.6	80	
AAQ 9 : Satalagaon village								
		PM10	µg/m ³	31.6	4.73	36.33	100	
		PM2.5	µg/m ³	23.4	4.73	28.13	60	
		SO ₂	µg/m ³	12.2	11.9	24.1	80	
		NO ₂	µg/m ³	13.4	11.9	25.3	80	
Vehicular emission impact:								
Assumption made:								
<ul style="list-style-type: none"> • Number of vehicular movements to the industry per day is - 1000 • Age of the vehicle - 5-10 years • Emission factor considered for the age and type of vehicle - PM₁₀ -0.12 g/km (Air Quality Monitoring Project-Indian Clean Air Programme (ICAP) • Emission concentration = number of vehicles*emission rate 								
		Pollutant	Units	Max. Baseline concentrations	Incremental concentrations at peak load due to vehicles (24 hr average) **	Incremental concentrations at peak load due to point sources	Max Resultant concentration	Limits as per MoEF for industrial areas (24 hrs)
AAQ 1: Project site								
		PM10	µg/m ³	39.6	3.11	4.73	47.44	100
** As such there is no separate values for PM₁₀ and PM_{2.5} from the dispersion model. Incremental concentration for Particulate emission from the dispersion modelling results outputs same values are considered for both.								
8	PP shall	PP has submitted the details of stack height calculations and						

	re-calculate the stack height of the combined boilers of 50 TPH & 55 TPH.	<p>informed that existing boiler is provided with stack of 90 m, which is adequate even after enhancing the boiler capacity considering coal as fuel.</p> <p>Proposed boilers: with combined stack for 50 TPH and 55 TPH boiler with dedicated ESP</p> <p>Co-generation unit - 50 TPH Bagasse fired boiler Distillery unit - 55 TPH incineration boiler (spent wash 70% + coal 30 %) is used as fuel</p> <p>It is proposed to provide individual ESP's and common chimney of 77 m height.</p> <p>For worst-case scenario considering boilers fuel used as Coal</p> <p>Total coal requirement is - 27.63 TPH</p> <p>Stack Height $H = 14(Q)^{0.3}$ $Q = \text{Sulphur content in the coal} - 0.5 \%$ $Q = ((27630 * 0.5 * 2) / 100)^{0.3} = 5.38$ $H = 14 * 5.38 = 75.32 \text{ m or Say } 76 \text{ m or } 77 \text{ m.}$</p>
9	PP shall replace sludge drying bed with filter press in the existing plant	Instead of sludge drying beds in effluent treatment plants it is proposed to install filter press/ decanter in both existing ETP and proposed effluent treatment for sludge management.
10	PP shall submit revised CER table	PP has submitted budget earmarked towards Corporate Environment Responsibility including enriching the soil nutrients in the Agricultural land in surrounding villages.

The Project Proponent and the accredited Consultant M/s. Samrakshan (NABET certificate no. NABET/EIA/1922/SA 0138 (Rev.01), QCI/NABET/EIA/ACO/22/2560 and validity extended up to 17.01.2023) 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 the sugar from 3500 TCD To 10000 TCD, Co-generation 27.5 MW to 34.5 MW, establishment of distillery 300 KLPD and captive power plant of 4 MW located at Nad KD Village, Indi Taluk, Vijayapura District, Karnataka State by M/s. Jamkhandi Sugars Limited Unit – II.

Integrated Sugar Industry, co-generation power plants and Distilleries are listed at S.N. 5(j), 1(d) and 5(g) of Schedule of Environment Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC).

The details of products and capacity as under:

S. No.	Unit	Product /By-product	Existing capacity	Proposed capacity	Ultimate capacity
1	Sugar plant	Sugar	3500 TCD	6500 TCD	10000 TCD
2	Co-generation power plant	Electric Power	27 MW	7.5 MW	34.5 MW
3	Distillery plant	RS/ENA/Ethanol using C-Heavy or B-Heavy molasses	-	300 KLPD	300 KLPD
		RS/ ENA/ Ethanol using sugarcane syrup	-	450 KLPD	450 KLPD
4	Distillery Captive power plant	Electric Power	-	4 MW	4 MW
5	Fermentation section	CO ₂	-	342 TPD	342 TPD

Note: Total capacity shall not exceed 300 KLPD at any time

Ministry has issued Environmental Clearance to the existing capacity 3500 TCD and 27 MW Co-generation vide File No. F. No. J-13012/38/2012-IA.II (T) dated 19.02.2014. Certified Compliance report of existing EC has been obtained from Integrated Regional Office, MoEF CC, Bangalore vide File No. EP/12.1/2013-14/09/KAR /33 dated 31.01.2022. Action Taken Report has been submitted by the PP to IRO, MOEFCC, Bangalore dated 14.11.2022 for partial compliances is observed. EAC found the response satisfactory.

Standard Terms of Reference have been obtained vide F. No. IA-J-11011/72/2021-IA-II(I) dated 05.03.2021. It was informed that No litigation is pending against the project. Public Hearing for the proposed project had been conducted by the Karnataka State Pollution Control Board on 02.09.2022 at project site chaired by Additional Deputy Commissioner, Vijayapur.

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

Sl. No.	Name of participant	Views expressed by the participant	Response from the project proponent	Budgetary provision & timeline
1	Sri P.D. Jathimani, Nad K D village	<ul style="list-style-type: none"> This factory was established 10 years ago and it is the most beautiful thing ever happened to this village. This factory has always brought benefits to people of this region. He opined that this factory neither can cause misery to this region nor it can cause environmental issues. 	Positive response and no opposition expressed for proposed project	As no demand is made, no budgetary provision is made
2	Sri. Srimanth Kariappa Tavarkare, Nad K D village:	<ul style="list-style-type: none"> Not only his village, the other villages that are in close proximity to the factory has no issues at all with the factory 	Expressed that there is no adverse impact on the village due to industry	- As no demand is made, no budgetary provision is made
3	Sri. Suresh Gurappa Sadargond Nad K D village:	<ul style="list-style-type: none"> Before 2006, the farmers use to burn their excess sugarcane crops and use to look for jobs elsewhere leaving our own fields. The factory has not caused any problems 	Positive response for expansion. Expressed that there is no adverse impact on the village due to industry	- As no demand is made, no budgetary provision is made

		<p>whatsoever, neither to the people of this village nor to the environment.</p>		
4	Sri. Malkan Shanmukappa Malkar, Golsar Village	<ul style="list-style-type: none"> The sugar factory has benefitted in terms of the infrastructure. The roads and the water supply facilities have made their lives extremely easier 	Positive response for expansion. Expressed that the village is benefitted.	- As no demand is made, no budgetary provision is made
5	Sri. Maheboob Mohammad Anif Nadaf, Nad k.d. village	<ul style="list-style-type: none"> Expressed happiness over the establishment of the factory and mentions it has benefitted them greatly 	Positive response for expansion	- As no demand is made, no budgetary provision is made
6	Sri. Pandita Shankrappa Tagdi, sakinwade villages	<ul style="list-style-type: none"> Praising the kind of development that is happening in the nation and expresses his appreciation about the same. 	Supported the proposed project.	- As no demand is made, no budgetary provision is made
7	Sri. Sahebgouda Parmananda Maigalli, Nad k.d. village	<ul style="list-style-type: none"> After the establishment of this factory the infrastructure of this region has developed in leaps and bounds, the roads and water supply, the two most basic 	Industry will continue to develop infrastructure facilities nearby the project under CER activities.	Rs. 2.0 Crores is budgeted under CER period 2023 - 26

		amenities for a smooth life have happened only after the establishment of the industry.		
8	Sri. Khenu Kasiram Chavan, Kesraltanda Village	<ul style="list-style-type: none"> Any sort of development that can be seen in this region is because of this factory, without this it would have been nothing in this region. Informed that there is financial stability in his family as the industry is paying appropriately for his sugarcane crop. 	Supported the proposed project.	- As no demand is made, no budgetary provision is made
9	Sri. Sarannaiha Siddlingaihah math, Sirshad Village	<ul style="list-style-type: none"> Praising the factory authorities in their attempt to maintain a viable environment. There are some factories who fail to curb foul smell when we are in close proximity, but it is fascinating to witness that due to this factory there is no such foul smell. 	All pollution control measures will be provided and maintained. Environmental cell within the industry will monitor the day today activities.	- As no demand is made, no budgetary provision is made
10	Sri. Shankar	<ul style="list-style-type: none"> In his younger 	Positive	- As no

	Hugar, Nad k.d Village	<p>age they used to produce variety of the crops and use to yield 3 quintals per acre which would fetch 15,000 to 20,000 rupees.</p> <ul style="list-style-type: none"> • In the present days they grow sugarcane up to 30 to 35 tons per acre of the land and it is fetching them 80,000 to 1,00,000 rupees. • This factory has really benefitted them a lot. 	response and no opposition expressed for proposed project.	demand is made, no budgetary provision is made
11	Sri. Ramanagouda Siddangouda Malipati, Jewargi Village	<ul style="list-style-type: none"> • This factory every year used to crush around 3,00,000 ton of sugarcane. But, this year 7,00,000 tons of sugarcane is crushed and he credited the workers of the factory for achieving these feet. • He expressed his concern with respect to the usage of water from canal. • He opines that, though government has built canals in this region, it 	<p>Supported the proposed project.</p> <p>The request for release of water in to the canal and water supply for irrigation is within the preview of the Irrigation Department of Karnataka.</p>	<p>-</p> <p>As this aspect is a subject matter related to Government,</p>

		<p>has failed to help the people in utilizing it to the great extent, there are no adequate water supply facilities to the respective fields.</p> <ul style="list-style-type: none"> • Requests the authorities and the government to help them to advance the water supply facilities, so that the farmers of this region achieve still more prosperity in their respective lives. 		<p>industry in association with the Irrigation Department will support to improve the water requirement as far as possible.</p>
12	Sri. Shivayogi Sidappa, Nad K D Village	<ul style="list-style-type: none"> • He expressed his happiness that this factory has really improved economic condition of the people in this region. 	<p>Supported the proposed project. Industry will continue to develop the infrastructure facilities in surrounding villages - Nad KD village, Arjunagi B K village, Hanchinal village, Golasar village and Shirashyd villages under for which CER budget.</p>	<p>- The company Will continue to support to further improve the infrastructure in the area.</p>

Total plant area after expansion will be 37.23 Ha, which is under possession of the company and converted to industrial use/ No additional land will be acquired for the expansion project as the same will be done within existing plant premises. Out of the total plant area 37.23 hectares i.e. 35.86% of the total plant area has already been developed as greenbelt & plantation and the same will be maintained in and around plant premises. The estimated project cost is Rs. 584.06 Crores. Capital cost of EMP would be Rs. 46.45 Crores and recurring cost for EMP would be Rs. 1.77 Crores per annum. Industry proposes to allocate Rs. 2.5 Crores towards extended EMP (Corporate Environment Responsibility). Total Employment after expansion will be 480 persons as direct & indirect. The revised details of CER are given below:

SI · N o.	Activity under CER	Fund Allocated (Rs. in Lakhs)	Timeline (Year wise)
1.	Infrastructure development programs in Governments schools in viz., school blocks, computers, desk and tables, smart boards in following villages; <ul style="list-style-type: none"> • Nad KD village • Arjunagi B K village • Hanchinal village • Shirashyd village 	60	2023 -24
2.	Providing drinking water from borewell after treatment in Carbon and multi grade filters and dis - infection <ul style="list-style-type: none"> • Nad KD village • Hanchinal village • Golasar village • Government school in Shirashyd village 	50	2024 -25
3.	Solar street lighting facility to <ul style="list-style-type: none"> • Nad KD village • Shirashyd village 	40	2023 -24
4.	Programs under soil nutrients enriching in agricultural land in surrounding villages <ul style="list-style-type: none"> • Marsanahalli village • Vibhuthihalli village 	50	2024 -27

	<ul style="list-style-type: none"> • Shirashyad village • Nad KD village 		
5.	<p>To conduct skill development program for rural youth to take up employment in industry, the training programs will be conducted through external agencies in following villages</p> <ul style="list-style-type: none"> • Arjunagi B K village • Hanchinal village • Shirashyd village • Nad KD village 	50	2023 - 26
Total		250	

Capital cost and recurring cost of EMP are given below:

Sl. No.	Particular	Budget towards EMP, Rupees in Lakhs	
		implemented in existing sugar, co- gen industry Rs. in lakhs	Additional during proposed expansion Rs. in lakhs
1	Capital Investment		
1.1	Air pollution control facilities (ESP upgradation, Chimney, ESP and ash handling)	394	4000
1.2	ETP and CPUS with online monitoring system viz., effluent flow meter, monitor for sugar plant treated eff. and IP camera	125	300
1.3	Greenbelt development and maintenance	8	10
1.4	Rainwater harvesting	12	20
1.5	Online monitors – stacks and flow meters and IP camera	20	40
1.6	Occupational Health and Safety	10	50
1.7	Personal Protective Equipment (PPEs) and OHES	10	15
1.8	Solid and Hazardous Waste storage and management	2	10
1.9	Corporate Environment	-	200

	Responsibility (CER)		
	Sub total	581	4645
2	Recurring Cost of Operation and Maintenance		
2.1	Air pollution control	20	25
2.2	Water pollution control	10	20
2.3	Occupational Health and Safety	5	20
2.4	Green belt Maintenance	5	40
2.5	Online monitoring cost	10	15
2.6	Environmental training and safety	1	10
2.7	Environmental monitoring through NABL Laboratory	5	12
2.8	Rain water harvesting system	10	10
2.9	Solid and Hazardous waste management	5	10
2.10	Personal Protective Equipment (PPEs) and OHES	10	15
	Sub total	81	177

There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance. No Reserve forests/protected forests within 10 km distance. No national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc within 10 km from project site. Water bodies: Lalasangi Lake at a distance of 4.8 Km in North West direction. River Bheema is at a distance of 9 km.

Ambient air quality monitoring was carried out at 9 locations during March to May 2021 and the baseline data indicates the ranges of concentrations as: PM₁₀ (20.1 - 39.6 µg/m³), PM_{2.5} (16.7 - 26.4 µg/m³), SO₂ (6.9 - 14.2 µg/m³) and NO₂ (9.2 - 17.8 µg/m³). AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 47.44 µg/m³, 31.13 µg/m³, 26.1 µg/m³ and 32.48 µg/m³ with respect to PM₁₀, PM_{2.5}, SO₂ and NO₂. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

Total fresh water requirement after expansion will be 1960 KLD for both sugar and distillery unit which will be met from River Bheema. NOC has been obtained by Water Resource Development Organization; Government of

Karnataka vide letter No. EE/KNNL/IPC/Dn.1/Jama Sugar/ PB-10/2022-22/86 dated 19.04.2022.

Sugar & Co-generation plant -Effluent management System

After expansion, the sugar plant effluent 953 KLD is mainly from the spray pond over flow, process condensate, co-generation plant cooling tower bleed and the boiler blow down. The existing treatment plant has a capacity to treat 350 KLD of effluent. ETP process comprises of primary and secondary treatment. A separate monthly wash water tank is provided to hold the plant cleaning effluent and taken for treatment.

It is proposed to upgrade the ETP by increasing the capacity to handle 1200 m³ per day of sugar plant effluent.

For sugar plant condensate of 1825 KLD and cooling tower& boiler blowdown 990 KLD will be treated in condensate polishing unit of capacity 3000 KL is proposed. The treated condensate 830 KLD will be reused in the sugar plant & 1300 KLD for cooling tower makeup. Excess treated effluent 685 KLD will be used for distillery.

For storage of treated effluent, an RCC storage tank/polishing pond of capacity 15 days holding capacity is proposed. Excess treated effluent of 1108 KLD will be used for on land green belt and on R & D farm owned by the industry for irrigation in experimental farming. No effluent shall be discharged outside the factory owned land.

Distillery Plant - Effluent management System

The spent wash from the distillery will be collected in impervious collection tank of 5 days i.e, 12000 m³ capacity. The spent wash will be concentrated in MEE and concentrated spent wash will be used as fuel in incineration boiler.

Other lean effluents Spent lees, MEE Condensates and utility effluents treated in the condensate polishing unit (CPU) comprising of biological treatment system followed by Multigrade filtration, activated filter and tertiary treatment plant comprising of ultrafiltration and RO. The treated permeate will be reused in cooling tower water makeup and for molasses dilution. The RO rejects will be taken back to MEE. The distillery plant will be operating on Zero Liquid Discharge (ZLD) principle.

Domestic Sewage: 20 KLD is treated in Sewage Treatment Plant.

Total power requirement of sugar mill, co-generation unit and distillery plant after expansion will be 30.4 MW which will be sourced from 34.5 MW co-generation power plant and for proposed distillery plant 4 MW captive power plant. Existing unit has 90 TPH bagasse fired boiler this will be upgraded to 120 TPH. Proposed 50 TPH bagasse fired boiler is for co-generation and in proposed 55 TPH Incineration boiler concentrated spent wash and bagasse/coal is the fuel. APCE ESP with a stack of height of 90 m is installed in the existing boiler for controlling the particulate emissions within the statutory limit of 50 mg/Nm³. APCE individual ESP with a common stack of height of 77 m will be installed for controlling the particulate emissions within the statutory limit of 50 mg/Nm³ for the proposed boilers. Industry has two 1010 KVA DG sets which will be used as standby during power failure and stack height (30 m) is provided as per CPCB norms to the proposed DG sets.

Details of Process emissions generation and its management:

- Process emission: CO₂ generation from fermentation process is of 190 KLD, this will be scrubbed and bottled in CO₂ bottling unit.

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

- Bagasse – 2700 TPD will be used as fuel in Boilers
- Press mud – 400 MTD will be mixed with yeast sludge and given farmers as manure
- Lime sludge – 2500 Kg/day will be used for filling low lying areas
- Boiler ash – 50 MTD will be given brick manufacturers
- Yeast sludge – 120 MTD will be mixed with press mud and given to farmers as manure.
- ETP sludge – 60 MTD will be given to famers as manure
- Used oil – 0.9 KLPA - Stored in secure manner and disposed to KSPCB authorized agencies
- Wastes residues containing oil - 0.873 MT/A- Stored in secure manner and disposed to KSPCB authorized agencies

During deliberations, EAC discussed following issues:

- Committee suggested that Sugar plant condensate effluent after treatment shall be completely recycled in sugar plant and excess utilized for distillery. PP agreed to it.
- ESP (five fields) should be provided to 55 TPH incineration boiler to control particulate emission less than 30 mg/Nm³. PP agreed to it.
- Budget earmarked towards Corporate Environment Responsibility shall be increased to Rs. 2.50 Crores. PP agreed to it.

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

The EAC, constituted under the provision of the EIA Notification, 2006 and comprising of Experts Members/domain experts in various fields, have examined the proposal submitted by the Project Proponent in desired form along with the EIA/EMP report prepared and submitted by the Consultant accredited by the QCI/ NABET on behalf of the Project Proponent. The EAC noted that the Project Proponent has given undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the 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 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.
- (iv). Total Fresh water requirement after expansion shall not exceed 1960 KLPD, which will be met from River Bheema. 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). The spent wash shall be concentrated in MEE and concentrated spent wash shall be incinerated in the incineration boiler. Other lean effluents Spent lees, MEE Condensates and utility effluents shall be treated in the condensate polishing unit (CPU) comprising of three stage RO. The treated permeate will be reused in cooling tower water makeup and for molasses dilution. The RO rejects will be taken back to MEE. Treated effluent will be recycled/reused for make up water of cooling towers/process etc. No wastewater or treated water from integrated unit of sugar mill and distillery shall be discharged outside the premises and Zero Liquid Discharge shall be maintained for all the units namely sugar, Distillery and Cogen Power Plant. STP shall be installed to treat sewage generated from factory premises. PP shall ensure to implement Zero Liquid Discharge (ZLD) in existing and expansion of sugar factory and cogeneration plant including proposed Distillery.
- (vi). APCE individual ESP with a common adequate stack of height will be installed with the upgraded 120 TPH bagasse fired boiler for controlling the particulate emissions within the statutory limit of 50 mg/Nm³. APCE individual ESP with a common stack of height of 77 m will be installed for controlling the particulate emissions within the statutory limit of 50 mg/Nm³ for the proposed boiler. At no time, the emission 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.
- (vii). Boiler ash (50 TPD) will transported in closed trucks to nearby brick manufacturers. 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.
- (viii). CO₂ (342 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.

- (ix). 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.
- (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. Firefighting 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. Filter press shall be installed for drying of sludge.
- (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 has already been developed in 13.35 Hectares i.e. 35.86 % of the total plant area which will be maintained in and around plant premises 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. Reserve forest is adjacent to project site, 20 m wide greenbelt towards Reserve Forest shall be developed. Greenbelt development shall be completed in 1 year.

- (xvi). PP proposed to allocate Rs. 2.50 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.
- (xvii). 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.
- (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/ Managing 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

Grass root Green Needle Coker Unit (GNCU) with Needle Coke Calcination Unit (CCU) at Paradip Refinery cum Petrochemical Complex – Consideration of Environmental Clearance

[IA/OR/IND2/ 409486/2022, IA-J-11011/121/2017-IA-II(I)]

The Project Proponent has requested to withdraw the proposal for updating in technical information.

Accordingly, proposal was returned in present form.

Agenda No. 07

Greenfield Proposed project 120 KLD Grain Based Ethanol plant along with 3.4 MW Co-generation Power Plant at Khasra No. 12(S), 13/1(S), 13/2(S), 13/2(S), 13/3(S) & 15(S) Village – Mojha Changheri, Tehsil- Malhargarh, District- Mandsaur (M.P) by M/s Kripa Biotech LLP- Consideration of Environmental Clearance.

[IA/MP/IND2/401900/2020, IA-J-11011/423/2022-IA-II(I)]

The Project Proponent and the accredited Consultant M/s Ascenso Enviro Pvt Ltd (NABET certificate no. NABET/EIA/2124/SA 0175 and validity Dec

21, 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 120 KLPD Grain based Ethanol Plant & 3.4 MW Co-generation power plant (Bio fuel as Rice husk will be use as fuel) located at Village Mojha Changheri, Tehsil - Malhargarh, District - Mandsaur, State-M.P by M/s Kripa Biotech LLP.

During presentation, the Committee noted that EIA Coordinator and other fictional area expert of the project were not present in the meeting who was supposed to present the case. In this regard EAC opined that EIA coordinator who has submitted the relevant compiled EMP documents should make presentation of the case as they are well versed with the all issues related to EMP.

Accordingly, proposal was returned in present form.

Agenda No. 08

Expansion of Sugar Mill (5000 TCD to 12000 TCD) along with Co-generation Power Plant (6 MW to 15 MW) at Village Sewrahi, Block & Post Office Seorahi, Tehsil Tamkuhi Raj, District Kushinagar, Uttar Pradesh by M/s. The United Provinces Sugar Company Limited - Consideration of Environmental Clearance.

[IA/UP/IND2/411026/2022, IA-J-11011/249/2019-IA-II(I)]

The Project Proponent and the accredited Consultant M/s. J.M. EnviroNet Private Limited (NABET certificate no. NABET/EIA/2023/RA 0186 and Validity till 7th Februray,2023) made a detailed presentation on the salient features of the project and informed that the proposal is for environmental clearance to the project Expansion of Sugar Mill (5000 TCD to 12000 TCD) along with Co-generation Power Plant (6 MW to 15 MW) at Village Sewrahi, Block & Post Office Seorahi, Tehsil Tamkuhi Raj, District Kushinagar, Uttar Pradesh by M/s. The United Provinces Sugar Company Limited.

As per EIA Notification dated 14thSep, 2006 and its amendments, the project falls under Category "B", Project or Activity '5(j)' Sugar Industry [≥ 5000 TCD cane crushing capacity] but since the General Condition i.e.

the Interstate boundary of Uttar Pradesh & Bihar lies at an approximate distance of 1.5 km in NE direction from plant site thus this project will be considered as Category "A" and will be appraised at Central level in MoEFCC, New Delhi.

The details of products and capacity as under:

S. No.	Units	Product	Existing Production Capacity	Additional Production Capacity	Total Production Capacity
1.	Sugar Mill	Sugar	5000 TCD	7000 TCD	12000 TCD
2.	Co-generation power plant	Power	6.0 MW	9.0 MW	15.0 MW
3.	Bagasse	By-Product	225000 TPA	315000 TPA	540000 TPA
4.	Press mud	By-Product	33750 TPA	47250 TPA	81000 TPA
5.	Molasses	By-Product	33750 TPA	47250 TPA	81000 TPA

The existing industry is operating on the basis of Consent to Operate obtained from UPPCB prior to EIA Notification 2006. Hence, Environmental Clearance was not applicable. Latest CTO for air and water has been obtained from UPPCB vide Ref No. 142348/UPPCB/Gorakhpur(UPPCBRO)/CTO/air/KUSHINAGAR/2021 and 142349/UPPCB/Gorakhpur(UPPCBRO)/CTO/water/KUSHINAGAR/2021 dated 20.12.2021 valid till 31.12.2023. Certified CTO Compliance report has been obtained from Regional Office, UPPCB, Gorakhpur dated 09.11.2022. EAC found information satisfactory.

Standard ToR has been issued by Ministry vide letter No. J IA-J-11011/249/2019-IA-II(I) dated 16th April, 2022. It was informed that there is no litigation is pending against the project.

Public Hearing for the Expansion project has been conducted by Uttar Pradesh Pollution Control Board on 7th September, 2022 at 11:00 am inside the existing industrial premises, chaired by Mr. Devi Dyal Verma, Additional District Magistrate (Finance and Revenue), District Kushinagar. The main issues raised during public hearing and their action plan:

S. No.	Issues in brief	Action plan in brief	Budget allocated and timeline
1.	Supply of more sugarcane to the sugar factory.	Procurement of more will directly help the farmers and provide benefits to them by increasing their income and timely payment is being/will be done in future also.	All provision and efforts will be made so as to provide benefits to the local people and famers.
2.	Payment for sugarcane supply	The company has always prioritized the sugarcane farmers and payment made timely to them for their livelihood. All attempts have been/will be made so that farmers get payments for sugarcane on time and will be maintained in future also.	The company has also allocated a budget of Rs. 2.2 Crores for socio economic developmental activities as a part of this expansion project.
3.	Air pollution mitigation measures	New 160 TPH boiler would be installed with ESP and stack of 60 m for controlling the particulate emissions within the statutory limit of 50 mg/Nm ³ . All the roads are/will be asphalted to control the fugitive dust emissions. Online Stack Monitoring system is already in place and operational and will be installed for the proposed boiler.	Rs 4.0 crores as capital cost and Rs. 40.5 Lakhs/annum as recurring cost has been allocated by the company for Air pollution management.
4.	Provision of calendaring	The company will explore the calendaring facility which has	The company has proposed Rs. 1.5 crores as

	<p>facility & control of pollution</p>	<p>ceased to operate. At present there is no occurrence of air, noise, or water pollution due to the sugar industry and will not be in future as well. The company has adopted various mitigation measures to control the pollution & to reduce the impact. The plant is inclined towards "Zero Effluent Discharge", it will reuse the wastewater generated after treatment in Existing ETP of 1900 KLPD which will be upgraded with advance treatment technology.</p>	<p>capital cost and Rs. 10.5 lakhs/annum as recurring cost for water pollution management, Rs 4.0 crores as capital cost and Rs. 40.5 Lakhs/annum as recurring cost for Air pollution management, Rs. 0.80 crores as capital cost and Rs. 8.0 lakhs/annum as recurring cost for solid waste management and for environment monitoring (air, water system, noise & ground water etc) Rs 0.50 crores as capital cost and Rs. 5.0 lakhs/annum as recurring cost.</p>
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Total land area required is 21.198 ha (52.38 acres). Greenbelt will be developed in total area of 7.0 ha i.e. 33% of total plant area within one year. The estimated cost for the Expansion project is Rs 215.93 Crores. Capital cost of EMP would be Rs. 7.95 Crores and recurring cost for EMP would be Rs. 0.73 Crores per annum. Industry proposes to allocate additional Rs. 2.20 Crores towards Extended EMP (Corporate Environment Responsibility). Total Employment will be 345 persons during Crushing Season & 140 Persons during Non- Crushing Season. Based on recommendation of EAC, PP increased the budget towards extended EMP to Rs. 2.50 Crores.

There are no National Parks, Reserved Forest (RF)/ Protected Forest (PF), Wildlife Sanctuaries, Biosphere Reserves, Tiger/ Elephant Reserves, Wildlife Corridors etc. lies within 10 km radius of the plant site. Water bodies: Bansi Nadi is located at a distance 1.5 km in NNE direction,

Bhagwanpur Distributary is located at a distance 1.5 km in WSW direction, Western Gandak Main Canal is located at a distance 2.0 km in WSW direction, Mishrauli Distributary is located at a distance 4.0 km in SE direction, Jharahi Nadi is located at a distance 4.5 km in West direction, Mani Nala is located at a distance 5.5 km in WNW direction, Chhoti Gandak Nadi is located at a distance 7.5 km in ENE direction & Gandak River is located at a distance 9.75 km in ENE direction. Bansi Nadi is at a distance of 1.5 km for which NOC has been obtained from Executive Engineer, Flood Division, Kushinagar vide letter no. 2/20/Ba.Kh.Ku./ N.O.C. dated - 24/11/2022 stating the plant site is away from flood zone based on flood data of last 25 years.

Ambient air quality monitoring was carried out at 8 locations during Summer season (March, 2022 to May, 2022) and the baseline data indicates the ranges of concentrations as: PM₁₀ (65.1 to 89.2 µg/m³), PM_{2.5} (24.9 to 50.5 µg/m³), SO₂ (5.4 to 15.4 µg/m³) and NO₂ (14.9 to 28.6 µg/m³). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.688µg/m³, 0.275µg/m³, 0.757µg/m³ and 0.936µg/m³ with respect to PM₁₀, PM_{2.5}, SO₂ and NO₂. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

Total fresh water requirement will be 510 KLPD (yearly average) which will be sourced from ground water. During crushing season, total fresh water requirement will be 595 KLPD (145 KLPD Sugar mill & 450 KLPD Domestic use) & rest of the year 450 KLPD for domestic use only. NoC for groundwater withdrawal of 204400 m³/year has been obtained from Ground Water Department (Namami Gange & Rural Water Supply Department), Ministry of Jal Shakti, Government of Uttar Pradesh vide Registration No: 202110000418 - valid from 17/12/2021 to 16/12/2026. Effluent generated after Expansion will be 900 KLPD which will be treated through state of art CPU/ETP of Capacity 1900 KLPD after upgradation. STP of capacity 150 KLPD will be installed to treat sewage generated from factory premises. The plant is being/will be based on Zero Effluent Discharge system and no effluent/treated water is being/will be discharged outside factory premises.

Total power requirement after expansion will be 15.0 MW which will be sourced from 15.0 MW Co-generation Power plant. Existing unit has 16

TPH, 32 TPH, 50 TPH & 75 TPH bagasse fired boiler. With proposed expansion, new 160 TPH Bagasse fired boiler will be installed. APCE Wet Scrubber with stack of 30.5, 40.5, 45 & 45 m respectively has been installed with the existing sugar mill boilers to control the particulate emissions within the statutory limit of 50 mg/Nm³. APCE ESP with 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. Industry has 2 x 320 KVA & 725 KVA DG Set with stack height 4 m & 6 m respectively which will be used as standby during power failure and stack height 7 m will be provided as per CPCB norms to the proposed 1000 KVA DG Set.

Details of Process emissions generation and its management:

- APCE ESP with stack of 60 m will be installed with the proposed boiler (160 TPH) for controlling the particulate emissions within the statutory limit of 50 mg/Nm³.
- Online Stack Monitoring system is already in place with existing stacks and operational and will be installed for the proposed boiler.

Details of solid waste/Hazardous wastegeneration and its management:

- Bagasse (540000 TPA) is generated by sugar industry and 80% of generated bagasse is being/will be used as fuel for boilers and rest is being/will be sold to paper industry.
- Molasses (81000 TPA), a by-product generated from sugar mill is being/will be utilized in own adjacent distillery for alcohol production or sold to fermentation industries.
- Press mud/ press cake (81000 TPA) generated by the sugar mill is being/will be used as manure.
- Boiler ash (4750 TPA) is being/will be given to brick manufactures in covered vehicles.
- ETP waste in the form of oil & grease emulsion (2.88 TPA) is being/will be collected from ETP and is being/will be incinerated in boiler along with bagasse as fuel.

- Used oil (1.0 KL/annum) generated from plant machinery /gear boxes as hazardous waste is being/will be sold out to the CPCB authorized recycler.

During deliberations, EAC discussed following issues:

- The Sugar mill shall be based on Zero Effluent Discharge system and no effluent/treated water will be discharged outside factory premises. Treated water from ETP should be reused in process activities, ash quenching & horticulture uses. All measures will be taken to keep the treated effluent parameters within the standard statutory limits as prescribed by CPCB/UPPCB.
- Industry shall install solar power within plant and to the nearby areas to the tune of 10% of total power consumption (approx. 1500 KW) of the unit in form of solar lights/solar panels/solar gadgets etc. as a part of socio economic developmental activities.
- Coal shall not be used as fuel for the boiler.
- After expansion, new proposed 160 TPH Bagasse fired boiler and existing 75 TPH Bagasse fired boiler will be operational. Existing 16 TPH, 32 TPH, 50 TPH boilers will be kept as standby. APCE ESP with adequate stack height shall be installed for all operational boilers for controlling the particulate emissions within the statutory limit of 50 mg/Nm³.
- STP of capacity 150 KLPD shall be installed to treat sewage generated from factory premises. On the recommendation of honorable EAC, the company has proposed 300 KLPD STP for treatment of sewage generated for colony & quarters only.
- PP shall increase the budget for socio-economic development activities from Rs. 2.2 Crores to Rs. 2.5 Crores.

- The company should achieve 33% greenbelt development within one year.

Details of capital and recurring cost of EMP:

S. No.	Description		Capital Cost (Crores)	Recurring Cost/annum (Lakhs)
1	Air Pollution management	ESP + Stack	4.0	40.5
2	Water Pollution management	Effluent Treatment plant up-gradations	1.5	10.5
3	Environment monitoring	Laboratory instrument & Chemicals	0.30	3.0
		Online monitoring of air and water system, Noise & groundwater monitoring Instruments, Third party monitoring, Submission of compliance, ESR etc.)	0.50	5.0
4	Solid waste management	Ash handling & management & other	0.80	8.0
5	Greenbelt & plantation development	Plantation for greenbelt	0.35	5.0
6	Rain water harvesting	Required infrastructure	0.50	1.0
	Total		7.95	73.0

Details of CER activities with budgetary allocation:

S. No.	<u>PROPOSED ACTIVITIES</u>	<u>IMPLEMENTATION OF EMP FOR SOCIAL AND INFRASTRUCTURE DEVELOPMENT ON THE BASIS OF PHYSICAL</u>	<u>TOTAL BUDGET ALLOCATED (RS. IN LAKHS)</u>

		TARGETS		
		Year 1	Year 2	
1	Repair & improvement of existing roads- Repair works in nearby roads like potholes, ruts, corrugations, paving, widening of lanes etc.	Rs. 37.5 Lakhs Village- Sewrahi	Rs. 37.5 Lakhs Village- Banaraha Purabpatti	75
2	Social Infrastructure Development- Installation of Solar Street Light, Solar Lanterns, assistance to Anganwadi centres, Village Pond Infrastructure Development, etc.	Rs. 20 Lakhs Village- Banaraha Purabpatti	Rs. 20 lakhs Village- Sewrahi	40
3	Densification of plantation-Gap Filling of existing plantations/ Avenue plantation along roadside, tree plantation in nearby schools/colleges/vacant land/Panchayat bhavan, etc.	Rs. 17.5 lakhs Village- Sewrahi (875 no. of plants)	Rs. 17.5 Lakhs Village- Banaraha Purabpatti (875 no. of plants)	35
4	Skill development for youth- Organising Training programmes for youth/residents in Skill Development centre	Rs. 15 Lakhs Village- Banaraha Purabpatti	Rs. 15 Lakhs Village- Sewrahi	30
5	Up gradation of School infrastructure & Educational facilities- Provide Interactive smart class equipments /gadgets/solar panels like desktop computers, projectors, Interactive White Boards and distributing study	Rs. 20 Lakhs (Govt school at Village Sewrahi)	Rs. 20 Lakhs (Govt school at Village Banaraha Purabpatti)	40

	materials, school bags, water bottles, sports equipments etc. to students, Seating Benches, installation of water purifiers, construction of sanitized toilets etc.			
TOTAL				220
<p><i>*The above action plan will be implemented during project implementation phase.</i></p> <p><i>**The activities given in the above table are excluding the Pollution Control and mitigation measures which are included in EMP Cost.</i></p>				

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

The EAC, constituted under the provision of the EIA Notification, 2006 and comprising of Experts Members/domain experts in various fields, have examined the proposal submitted by the Project Proponent in desired form along with the EIA/EMP report prepared and submitted by the Consultant accredited by the QCI/ NABET on behalf of the Project Proponent. The EAC noted that the Project Proponent has given undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the 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 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.

- (iv). Total Fresh water requirement shall not exceed 510 KLPD, 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.
- (v). Effluent shall be treated in the condensate polishing unit (CPU) and no waste or treated water from integrated unit of sugar mill 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. PP shall ensure to implement Zero Liquid Discharge (ZLD) in existing and expansion of sugar factory and cogeneration plant.
- (vi). PP shall ensure that no wastewater /treated water shall be discharged into nearby waterbodies.
- (vii). APCE ESP (5 fields) with stack of 60 m will be installed with the proposed boiler (160 TPH) for controlling the particulate emissions within the statutory limit of 50 mg/Nm³. At no time, the emission 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). As committed, proposed 160 TPH Bagasse fired boiler and existing 75 TPH Bagasse fired boiler will be used for operation. However, existing 16 TPH, 32 TPH, 50 TPH boilers will be kept as standby. The PP shall also ensure that adequate pollution control device has been installed to all existing standby boilers to meet the prescribed standards for particulate emissions.
- (ix). Boiler ash (4750 TPA) will transported in closed trucks to nearby brick manufacturers. PP shall use biomass like rice husk/bagasse as fuel for the proposed boiler. Coal shall not be used as a fuel for boiler. Industry shall install solar power within plant and to the nearby areas to the tune of 10% of total power consumption (approx. 1500 KW) of the unit in

form of solar lights/solar panels/solar gadgets etc. as a part of socio economic developmental activities.

- (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. Firefighting 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. Filter press shall be installed for drying of sludge.
- (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 has already been developed within a year after issuance of EC in 7.00 Hectares i.e. 33.00% of the total plant area which will be maintained in and around plant premises 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.

- (xvi). PP proposed to allocate Rs. 2.50 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.
- (xvii). 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.
- (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/ Managing 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. 09

Greenfield Project of Grain Based Distillery Plant of 120 KLD and Cogeneration Power Plant of 3.0 MW located near Vill. Gahanapalli, Block- Buguda, Dist- Ganjam of Odisha State by M/s Tarangini Distilleries Private Limited (TDPL)– Consideration of Environmental Clearance.

[IA/OR/IND2/410705/2022, IA-J-11011/454/2022-IA-II(I)]

The Project Proponent and the accredited Consultant M/s Enviro Infra Solutions Pvt. Ltd., Ghaziabad, (NABET Certificate No. NABET/EIA/1922/RA 0157 and validity 22nd Feb.'2023) made a detailed presentation on the salient features of the project and informed that the proposal is for environmental clearance to the project 120 KLPD Grain Based Ethanol Plant and 3.0 MW Cogeneration Power Plant (Fuel to be use Rice Husk / Biomass Briquette) located at Vill. Gahanpalli, Block- Buguda, Dist- Ganjam of Odisha State by M/s Tarangini Distilleries Private Limited (TDPL).

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 Product / By Product	Production Capacity
1	Distillery (Maize / Broken Rice raw material)	Ethanol	120 KLPD
2	Power Cogeneration	Power	3.0 MW
3	DDGS Dryer	DDGS	65 TPD
4	Fermentation Unit	CO ₂	65 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 7.18 Hectares. Greenbelt will be developed in total area of 3.17 hectares i.e., 44 % of total project area. The estimated project cost is Rs. 149.38 Crores. Capital cost of EMP would be Rs. 8.34 Crores and recurring cost for EMP would be Rs. 1.5 Crores per annum. Industry proposes to allocate Rs. 1.5 Crores towards Extended EMP (Corporate Environment Responsibility). Total Employment will be 125 persons as direct & indirect.

There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance. Reserve forests/protected forests: Gocha at a distance of 1 km in NE direction, Panchubhuti at a distance of 1 km in NW direction, Karachuli at a distance of 2 km in SW direction, Kriamba at a distance of 0.5 km in E direction. Water bodies: Baghua Dam Reservoir is at a distance of 3 Km in S direction.

AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 1.17 µg/m³ , 0.75 µg/m³ , 0.96 µg/m³ and 1.06 µg/m³ 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 will be 480 m³/day which will be met from Baghua Dam Reservoir. Application has been submitted to Office of Supdt. Engineer, Bhanjanagar Irrigation Division, Bhanjanagar, Odisha dated 22.09.2022. Effluent (Condensate/spent lees/blowdown etc.) of 470 m³/day

quantity will be treated through Condensate Polishing Unit/Effluent Treatment Plant of capacity 600 m³/day. Raw stillage (950 KLPD :quantity of raw spent wash from distillation) will be sent to decanter followed by MEE and dryer to produce DDGS. STP of capacity 25 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 2.6 MW and will be met from proposed 3 MW cogeneration power plant/state grid. 30 TPH Rice husk/briquette fired boiler will be installed. APCE 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. 500 kVA DG set will be used as standby during power failure and stack height (3.5 m. above roof of the building) will be provided as per CPCB norms to the proposed DG sets.

Details of Process emissions generation and its management:

- APCE 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 (65 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) (65 TPD) will be sold as cattle feed / fish feed / prawn feed.
- Boiler ash (42 TPD) will be supplied to fly ash brick manufacturers
- Used oil (0.5 Kilolitres per annum) will be sold to authorized recyclers.
- CPU sludge (0.075 TPD) and STP Sludge (0.025 TPD) 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 120 KLPD will be used for manufacturing fuel ethanol only.

During deliberations, EAC discussed following issues:

- Approach to the project site to the nearest highway will be maintained by the Industry.
- Greenbelt of at least 20 m width will be developed inside the plant boundary towards Kriamba Reserve Forest.

Capital and recurring cost of EMP as given below :

Particulars	Amount in INR, Lakhs
One Time Installation Cost	
Installation of Air Pollution Control System	275.0 lakh
Installation of MEE, CPU & DWGS Dryer System	450.0 Lakh
Solid waste such as Garbage, process and ETP storage and odor management system	15.00 lakh
Green Belt Development	15.0 lakh
Installation of Tertiary Water Treatment Plant	24.0 lakh
Installation of Fire Safety System	25.0 lakh
Installation of Solar Power System	20.0 lakh
Rain Water Harvesting System	10.0 lakh
Total	834.0 lakh
Recurring Cost / Annum	
Environmental Monitoring	10.0 lakh
Maintenance Cost of Air Pollution Control System	30.0 lakh

Maintenance of MEE, CPU & DWGS Dryer System	90.0 Lakh
Greenbelt maintenance	10.0 lakh
Maintenance of ETP / STP / Water Treatment Plant	10.0 lakh
Total	150.0 lakh
Grand Total	984 lakh

Details of CER activities:

CER Activities	Year after Commissioning of the Project (All figures in Lakh Rs.)		
	Upto Dec. 2023	Upto Dec. 2024	Total
Support to Govt. Health Care agencies for improvement and upgradation of existing health infrastructure in Badapada, Salabani, Nimapalli and Karchuli villages of Ganiam District	25	25	50
Financial assistance & Support to agriculture deptt. for implementation of PM Kusum Yojana for Harvesting of Solar Power and Installation of standalone solar powered agricultural pumps.	30	30	60
Skill development for 100 nos. local youths (as per employability potential) in villages Badapada, Salabani, Nimapalli and Karchuli. Training Charges Rs. 7500/= plus Rs. 2500/= stipend per month for 3	7.5	7.5	15
Development of Rain Water Collection Pond in Badapada and Karchuli village	15	10	25
TOTAL AMOUNT	77.5	72.5	150

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 120 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 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 480 KLPD, which will be met from Baghua Dam Reservoir. 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/stillage shall be sent to the decanter followed by the Multiple Effect Evaporator and dryer to form DDGS. DDGS to be used as cattle feed. The MEE & Drier condensate, spent lees, WTP Rejects, Boiler & Cooling tower blowdowns, washings etc., is shall be treated in the 'Condensate Polishing Unit' (CPU). STP shall be installed to treat domestic wastewater. The plant will be based on 'Zero Liquid Discharge' system and no effluent/treated water will be discharged outside factory premises.
- (vii). Electrostatic precipitator (5 field & 99.9% efficiency) with a stack height of 60 meters will be installed with 30 TPH Biomass like Rice Husk briquette 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 (42 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. PP shall meet 10% of the total power requirement from solar power by generating power inside plant premises/adjacent/nearby areas. Approach to the project site to the nearest highway will be maintained by the Industry.
- (ix). CO₂ (65 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 3.17 hectares i.e., 44 % of total project area with tree density @ 2500 trees per hectares, mainly along the plant periphery. Greenbelt of at least 20 m width will be developed inside the plant boundary towards Kriamba Reserve Forest. 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. 1.5 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. 10

Proposed 120 KLPD Grain based Distillery project at Gram - Ghurasiya & Manakpur, Pacheti Dem Road, Agar Malwa, Madhya Pradesh by M/s. Satv Refinery Pvt. Ltd- Consideration of Environmental Clearance.

[IA/MP/IND2/407495/2022, IA-J-11011/507/2022-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 120 KLPD Grain based Ethanol Plant located at Gram - Ghurasiya & Manakpur, Pacheti Dem Road, Agar Malwa, Madhya Pradesh by M/s. Satv Refinery Pvt. Ltd.

As per the MoEF&CC Notification S.O. 2339(E), dated 16th June, 2021, a special provision in the EIA Notification, 2006-(Schedule 5 (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 and by-product	Production capacity
1	Distillery	Ethanol	120 KLPD
2	Captive Power Plant	Power	3.0 MW
3	DWGS Dryer	DDGS	60 TPD
4	Fermentation unit	Carbon di-oxide	60 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 10.75 hectares. Greenbelt will be developed in Total area of 3.59 hectares i.e. 33% of total project area. The estimated project cost is Rs. 134 Crore. Capital cost of EMP would be Rs. 9.6 Crores and recurring cost for EMP project would be Rs. 87.5 Lakhs per annum. Industry proposes to allocate Rs. 2.01 Crores towards Extended EMP (Corporate Environmental Responsibility). Total Employment will be 127 as direct and indirect.

There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance. Water bodies: Tilar River is at a distance of 2.87 Km in SSE direction and Tilar Reservoir is at a distance of 2.20 km in SSW. Water permission obtained for 800 KLPD from Water Resources Department, Sahajapur, Ujjain (M.P).

AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 1.11 $\mu\text{g}/\text{m}^3$, 0.191 $\mu\text{g}/\text{m}^3$, 0.014 $\mu\text{g}/\text{m}^3$, 0.005 $\mu\text{g}/\text{m}^3$, with respect to NO_x , SO_2 , PM_{10} , $\text{PM}_{2.5}$. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

Total fresh water requirement will be 491 CMD which will be met from Water Resources Department, Sahajapur. Permission obtained from Water Resources Department, Sahajapur, Ujjain (M.P) dated 28.11.2022. Effluent (Condensate/spent lees/blowdown etc.) of 824 CMD quantity will be treated through Condensate Polishing Unit of capacity 850 CMD. Raw stillage 712 KLPD quantity of (raw spent wash from distillation) will be sent to decanter followed by MEE and dryer to produce DDGS. 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 3.0 MW and will be met from own 3.0 MW captive power plant. 32 TPH boiler will be installed. APCE ESP with a stack height of 45 m will be installed for controlling the particulate emissions within the statutory limit of 50 mg/Nm^3 for the proposed

boiler. 1000 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:

- APCE Electro Static Precipitator with a stack height of 45 m is 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 (60 TPD) generated during the fermentation process will be collected by CO₂ recovery plant and it shall be sold to authorized vendors/ collected in proposed bottling plant.

Details of solid waste/Hazardous wastegeneration and its management:

- DDGS (Distilled Dried Grains Stillage) (60TPD) will be sold as cattle feed.
- Biomass/ Bagasseash (37.08 TPD) will be used as a manure.
- Spent oil (0.002) TPD) will be sold to authorized recyclers.
- CPU sludge (1.05 TPD) and STP Sludge (0.319 kg/d) 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 120 KLPD will be used for manufacturing fuel ethanol only.

Total land of 10.75 Hectares is under possession of the company and land use conversion received from Government of Madhya Pradesh dated 29.11.2022.

During deliberations, EAC discussed following issues:

- PP shall submit details revised EMP as it is found on lower side. Accordingly, PP submitted revised EMP with a budget of 13.71 Crore.
- Approach to the project site to the nearest highway will be maintained by the Industry. PP agreed to it.

Details of capital and recurring cost of EMP:

S. No	Construction phase (with Break-up)	Capital Cost	O & M
		(Amount in lakhs)	(Amount in lakhs)
1.	Environmental monitoring	–	1.5
2.	During site preparation	5	0
3.	Noise and solid waste management	2	0
4.	Water and waste water	5	0
	Occupational health	3	2.5
5	Greenbelt development	5	5
	Total A	20	9
Sr. No	Operation Phase (with Break-up)	Capital Cost	O & M
		(Amount in lakhs)	(Amount in lakhs)
1	Air and Noise pollution	400	15
2	OCEMS	50	20
3	CPU	400	15
4	Environmental Monitoring (Air, water, waste water, Soil, Solid waste, Noise)	150	5
5	Occupation health	50	20
6	Green belt	35	6
7	Solid waste	15	2
8	Rain water harvesting	50	4.5
9	CER	201	0
	Total B	1351	87.5
	Total [A+B]	1371	96.5

Details of CER activities:

S r. No.	CER Activity	Location	Details	Quantities	Total Amount in Rs	1 st Year 2023-2024	2 nd Year 2024-2025
						1	Providing
		Internal village road of	8	11,95,000	5,97,500	5,97,500	

	Solar street lamps on nearby roads	Bada Beed Jagatpura	LED bulb/solar panels		00	0	0
		Internal village road of Manakpur		9	13,05,000	6,52,500	6,52,500
				27	40,00,000	20,00,000	20,00,000
2	Providing RO Water filters in nearby schools	School Agar - Agar, Madhya Pradesh	Providing RO Water filters in nearby schools & villages	3	6,00,000	3,00,000	3,00,000
		Govt.Senior Secondary School - Agar, Madhya Pradesh		3	6,00,000	3,00,000	3,00,000
		Kv school - Agar, Madhya Pradesh		3	6,00,000	3,00,000	3,00,000
		Ghusariya		3	6,00,000	3,00,000	3,00,000
		Bada Beed Jagatpuriya		3	6,00,000	3,00,000	3,00,000
		Manakpur		3	6,00,000	3,00,000	3,00,000
		Govt. Model HS School, Chhawani, M.P.		2	4,00,000	2,00,000	2,00,000
				20	40,00,000	20,00,000	20,00,000
3	Providing Ambulance to the nearby Gov. Hospitals	Gov Hospital- Chhawani Madhya Pradesh	Providing Ambulance to the nearby Gov. Hospitals	4	24,00,000	12,00,000	12,00,000
		New govt Hospital Mali Khedi, Madhya Pradesh		4	24,00,000	12,00,000	12,00,000
		District Hospital Agar Malwa		4	24,00,000	12,00,000	12,00,000
		District Hospital Agar Malwa ChhotaGosipura Agar, Madhya Pradesh		4	20,00,000	10,00,000	10,00,000
				16	92,00,000	46,00,000	46,00,000
5	Providing computers in nearby school /	School Agar - Agar, Madhya Pradesh	Infrastructure and auditorium for schools	9	8,00,000	3,50,000	4,50,000
		Govt.Senior Secondary School - Agar, M.P.		7	7,00,000	3,50,000	3,50,000
		Kv school - Agar, Madhya Pradesh		7	7,00,000	3,50,000	3,50,000
		Govt. Model HS School, Chhawani, Madhya Pradesh		7	7,00,000	3,50,000	3,50,000

	colleges, necessary furniture, projectors, Air conditioners for computer lab, science lab equipment							
						29,00,000	14,00,000	15,00,000
	TOTAL AMOUNT Rs.					2,01,00,000	1,00,00,000	1,01,00,000

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 120 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 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. No ground water shall be used for the plant operations.
- (v). Total fresh water requirement shall not exceed 491 m³/day, which will be met from Water Resources Department, Sahajapur. 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/stillage shall be sent to the decanter followed by the Multiple Effect Evaporator and dryer to form DDGS. DDGS to be used as cattle feed. The MEE & Drier condensate, spent lees, WTP Rejects, Boiler & Cooling tower blowdowns, washings etc., is shall be treated in the 'Condensate Polishing Unit' (CPU). STP shall be installed to treat domestic wastewater. The plant will be based on 'Zero Liquid Discharge' system and no effluent/treated water will be discharged outside factory premises.
- (vii). ESP (five fields) with a stack height of 45 meters will be installed with the 32 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.

- (viii). Boiler ash (37.08 TPD) shall be supplied to authorised vendor for manufacturing manure for which MoU has been submitted. 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. Approach to the project site to the nearest highway will be maintained by the Industry. PP agreed to it.
- (ix). CO₂ (60 TPD) generated during the fermentation process is being/will be collected by utilizing CO₂ scrubbers and 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 3.59 hectares i.e., 33.0 % of 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.
- (xvi). PP proposed to allocate Rs. 2.01 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). 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.
- (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. 11

Establishment of 300 KLPD Molasses / Sugarcane juice based Distillery, 5,000 TCD Sugar Factory & 20 MW Co-generation Plant located At/post: Ghatsawali, Tal & Dist. Beed, Maharashtra State by M/s. SP Sugar & Agro Pvt. Ltd. (SPSAPL) – Re-consideration of Environmental Clearance

[IA/MH/IND2/404438/2022, IA-J-11011/199/2022-IA-II(I)]

This proposal was earlier considered by the EAC (Ind-2) in its Meeting ID:.IA/IND2/13394/28/11/2022held during 28th November, 2022 wherein EAC deferred the proposal and desired certain requisite information/inputs. Information desired by the EAC and responses submitted by the project proponent is as under:

No.	ADS by MoEFCC	Reply by PP
1.	It was noted that natural nalla is bisecting the proposed project site. Therefore, EAC suggested to furnish NOC from the irrigation department for the same. EAC also suggested to furnish additional measures to protect the nalla.	<ul style="list-style-type: none"> ▪ Two natural streams are located on east & west sides of the industrial plot which further meet the Manyarwadi MI Tank located on north of the project site. ▪ In respect of the streams, NOCs have been procured from Executive Engineer, Jayakwadi Irrigation Division No. 3. Beed, Maharashtra vide letter No. JID-3/Beed/TB 3/3039 dated 08.12.2022. A copy of same is enclosed at Annexure – I with ADS Letter. ▪ No industrial activities related to actual manufacturing, storage of raw materials / products etc. will be carried out near the streams. In fact, Green Belt of appropriate type & density will be developed near the streams.
2	PP shall submit detailed time bound action plan along with budgetary allocation for addressing all the issues raised in Public Hearing.	<ul style="list-style-type: none"> ▪ Public Hearing for the project was conducted by MPCB on 29.08.2022 at Project Site. ▪ The same was chaired by ADM; Beed. The main issues raised during the public hearing, action plan and their budgetary allocation were submitted in EIA/EMP report and same were discussed in the EAC meeting during earlier EC presentation. ▪ As per directions of Hon. Committee Members, certain elaboration has been done in previously presented information and same is given in ADS Letter.
3	Discrepancies were observed in the baseline ambient air quality data submitted by PP. PP shall conduct 15 days baseline study again.	<ul style="list-style-type: none"> ▪ In the EAC meeting, it was directed to submit additional 15 days baseline data. Accordingly, once again 15 days AAQ data was collected through a MoEFCC approved & NABL accredited laboratory. The summary of data collected for 15 days & that of the earlier monitoring period is presented in ADS Letter.
4	PP shall also provide justifications for high background levels of AAQM	<ul style="list-style-type: none"> ▪ The somewhat higher levels of pollutants observed in AAQM results are attributable to certain reasons namely – <ol style="list-style-type: none"> 1. Vicinity of major highways & roads like NH, SH & MDRs to industry site & monitoring villages whereon there is heavy traffic of vehicles (trucks, tractors, multi-axel vehicles, buses, cars etc.) 2. The NH-361-F passing right in front of industry site connects Maharashtra to Karnataka & Telangana States and same forms a vital corridor of economic development. Recently, other main roads in study area have been expanded & converted in to 4-Lane Routes permitting high speed communication while taking care of increased Traffic Densities of vehicles.

No.	ADS by MoEFCC	Reply by PP
		<p>3. Presence of variety of industries like - Oil Refineries, Cotton Mills, Yarn Processing Units, Jaggery Plants, Paper Manufacturing Unit, Stone Crushers (with heavy earthmoving machinery employed), Road Metal Asphalted Plants etc.</p> <p>4. Common practice of open burning of cane trash in the farms</p> <p>5. Heavy traffic of sugarcane carrying vehicles (tractors, trucks, harvesters etc.) on almost all village & district roads connecting to the SH & NH. The highways & roads in study area include - (1) NH-361-F (passing in front of the Industry plot), (2) NH-52 (Near Dhekanmoha Village; on West), (3) SH-144 (Near Manyarwadi & Ghatjawala villages; on North), (4) District Road (Near Ghatjawala village; on North), (5) District Road (Through Ghatsawali village). The traffic on these roads mainly comprises of trucks, tractors, buses and heavy vehicles running on diesel as fuel.</p>
5	Impact of vehicles to be considered in the study. Traffic management plan to be provided	<ul style="list-style-type: none"> ▪ A detailed description of Impact of the traffic attributable to the sugar factory vehicles is presented in ADS Letter collected & allied calculations presented w.r.t. the TD status and impact due to traffic loads of sugar factory during proposed activities. ▪ Therein, the description w.r.t. impacts from viewpoints of traffic congestion (considering traffic densities, PCU values etc.) on all relevant routes & that of pollutants emitted from the sugar factory vehicles on AAQ in study area have been given. ▪ Traffic Density Plan and impact due to traffic loads of sugar factory during proposed activities was presented in Annexure - III with ADS Letter.
6	PP shall submit action plan to control odour nuisance.	<ul style="list-style-type: none"> ▪ Different odor prone areas in Sugar Factory & Distillery as well as control measures thereat are presented in table in ADS letter.
7	PP shall explore the possibility to install air cooled condenser.	<ul style="list-style-type: none"> ▪ Due to introduction of air cooled condensers there will be saving in overall water requirement in the project complex. Accordingly, under proposed project Air Cooled Condensers will be installed.
8	20% biomass pellets shall be used as fuel.	<ul style="list-style-type: none"> ▪ Only Bagasse will be used as fuel for the proposed 140 TPH Boiler. As per suggestion of Hon. Committee Members, we hereby commit to use 20% biomass pellets along with bagasse as fuel. In no case, coal will be used.

No.	ADS by MoEFCC	Reply by PP
9	PP shall allocate at least Rs. 1.00 crore for OHS	As communicated in Form-II and EIA / EMP report as well as presented during the EAC meeting; we hereby commit to earmark Rs. 1 Crore budget for OHS.

EAC was satisfied with the responses submitted by the PP above.

The Project Proponent and the accredited Consultant M/s. Equinox Environments (I) Pvt. Ltd. (NABET certificate no. NABET/EIA/2124/SA 0177 and validity 10.10.2024) made a detailed presentation on the salient features of the project and informed that the proposal is for Environmental Clearance to the Establishment of 300 KLPD Molasses / Sugarcane juice based Distillery, 5,000 TCD Sugar Factory & 20 MW Co-generation Plant located At/post: Ghatsawali, Tal & Dist. Beed, Maharashtra State by M/s. SP Sugar & Agro Pvt. Ltd. (SPSAPL).

As per the provision of "EIA Notification No. S. O. 1533 (E)" dated 14.09.2006 as amended vide Notification No S.O. 3067 (E); dated 13.06.2019, the proposed project is listed as activity 5(g)(i)(ii)-Distillery at Centre Level & 5 (j)& 1(d) – Sugar Factory & Co-generation Plant respectively; Category 'B' at State Level. As the Sugar Factory, Co-generation Plant & Distillery projects are located in same premises as an integrated project complex, the entire proposal of establishment of Sugar Factory, Co-generation Plant & Distillery is being submitted at 'Ministry of Environment, Forests and Climate Change (MoEFCC); New Delhi' for grant of EC.

The details of products and capacity as under:

Industrial Unit	Product & By-product	Quantity (MT/ M)
Sugar Factory (5000 TCD)	Sugar (12%)*	18,000
	By-product	
	Molasses (4%)*	6,000
	Bagasse (30%)*	45,000
	Press Mud (4%)*	6,000
Co-Gen (20 MW)	Electricity (MW)	20
Distillery (300 KLPD)	Ethanol /RS/ ENA (KLPM)	9,000
	By-product	
	CO ₂ Gas	6,750
	Fusel Oil	18

Standard Terms of Reference have been obtained vide F. No. IA-J-11011/199/2022-IA-II(I) dated 15.06.2022. It was informed that no litigation is pending against the proposal.

Public Hearing for the proposed project had been conducted by Maharashtra Pollution Control Board on 29.08.2022 at project site and chaired by Additional District Magistrate, Beed. The main issues raised during the public hearing and their action plan:

No	Person's Name & Issue	Response, Action Plan, Budget & Timeline	Elaboration
1	<p><i>Shri Dhananjay Mundekar; Ambesawali, Beed.</i> Congratulating the PP & supporting project, it was asked that-</p> <ul style="list-style-type: none"> ▪ While surveying, Ambesawali village 700 M from site was not considered. ▪ Forest Dept. land not mentioned in said survey. ▪ Information about air pollution given but SO₂ & NO_x not mentioned. ▪ Information about ETP & STP and disposal of treated effluent should be given. ▪ No information given about local nala flowing nearby village ultimately meeting to Mankarnika River. ▪ Soil testing in Ambesawali not done during survey. 	<ul style="list-style-type: none"> ▪ It was stated that during survey, villages have been selected for study according to the wind directions, impact possibilities, monitoring season & primary data was collected. ▪ Subsequently, after project commissioning also, it is required to conduct routine monitoring w.r.t. various environmental parameters & it is necessary to prepare a report in this regards every 6 months. At that time the said village will be included in the monitoring. ▪ The consultant replied that it is not stated that there is no forest in said area. Reserved forest area, protected forest area & social forestry are types of forest and there is no forest area notified as WLS by the Govt. In fact, there is a reserved forest at 3.75 Km on South and same is mentioned in EIA (Pg. No. 21, Table 2.2). ▪ Ht. of chimney is 72 M & APC is ESP. Due to this there will be no problem of air pollution in the area. Concentrations of SO₂ & NO_x in AA is mentioned in presentation & EIA Report (Pg. No. 86, Table 3.17) along with those in stack emissions and GLC modelling presented for same (Pg. No. 135-146). ▪ In drainage pattern map of the area, the local nalla is shown. (Pg. No. 72). It was dry during monitoring hence sampling was not done there. ▪ Latest STP will be provided for sewage treatment, latest ETP will be set up for industrial effluent which will be used for GB within premises of industry. The details w.r.t. these points have been presented in EIA (Pg. No. 36-37) & shown 	<p>During EIA Study & Monitoring, the villages – Mankurwadi (3.36 Km on NW from Project Site), Manyarwadi (3.5 Km on NE) & Ghat Sawali (4.79 Km on NE) were selected.</p> <p>The Ambesawali village comes at about 3.5 Km on N of the Project Site. As the village Manyarwadi which is almost at the same distance & direction on upwind from the project site was considered, there was no need of Ambesawali village selection which is farther than Manyarwadi from the project site.</p>

No	Person's Name & Issue	Response, Action Plan, Budget & Timeline	Elaboration
		<p>during presentation.</p> <ul style="list-style-type: none"> Distillery will be ZLD. Consultant explained all tech. aspects in detail to public <p>Action Plan: Sp.wash of 2400 CMD will be bio-methanated, concentrated in MEE and dried for Powder. Spent lees (412 CMD), condensate (2112 CMD) & blow downs (188 CMD) will be treated in CPU. Treated effluent (2543 CMD) will be reused in process for achieving ZLD. Sugar Factory & Co-gen Plant effluent (335 CMD) shall be treated in ETP and reused for in own factory achieving ZLD. Domestic effluent 15 CMD to be treated in STP; reused for GB. 140 TPH bagasse boiler will be with ESP & 72 M stack.</p> <p>Budget: STP, ETP, 2 CPUs, Bio-methanation Plant, 5 Days Spentwash Storage Tank - Rs. 53 Cr.</p> <p>Timeline: After grant of EC and before CTO award.</p>	
2	<p><i>Shri Chandrakant Shivaji Phad; Ghatsavali, Beed</i></p> <p>Supported above project, raised points - (1) Care should be taken that water in the area will not be polluted due to industrial effluent (2) industry does not affect health of the citizens in area, (3) By using CSR funds, dense forest shall be develop on govt. land in the area. Play ground & other such activities shall be carried out by using CSR (4) local road passing tho' project area shall be cleared for villagers.</p>	<p>Project consultant replied that STP will be provided for treatment of sewage & ETP for industrial effluent. Also industry project will be ZLD. It was assured that health of villagers around project will not have any negative impact.</p> <p>Chairman of the Industry Shri Suresh Patil said that CSR Fund will be utilized with guidance of District Collector; Beed. He also assured that various social projects in the area will be developed. Also the chairman of the committee (ADC) informed that separate representation shall be submitted to the collector office Beed regarding the local road issue.</p> <p>Budget & Timeline: Same as in Point No. 1.</p>	<p>A local trail passes by the plot boundary on east side. PP has agreed to keep 5 M set-back from Plot boundary along the trail.</p>
3	<p><i>Shri Prakash Thakur; Sarpanch, Dhekanmoha, Beed</i></p> <p>While supporting to the project has raised the question about the smell nuisance due to the process in the area.</p>	<p>Consultant replied that project is being built on advanced technology. Spent wash from distillation plant will be collected in a closed tank & after Bio-methanation processed in a dryer to make powder so there will be no problem of smell in the area.</p> <p>Budget: Biomethanation, Spwash Tank, Dryer: Rs.40 Cr. Timeline: After grant of EC & before CTO award.</p>	<p>Due to spentwash conversion from liquid to powder state in 8 hours; no decomposition will occur leading to odour problem.</p>

No	Person's Name & Issue	Response, Action Plan, Budget & Timeline	Elaboration
4	<i>Shri Arun M. Lande; Ghatsavali, Beed</i> Supported to the above project and mentioned that the precaution in the presentation shall be strictly followed.	Response: Mr. Suresh Patil Chairman of the Industry agreed to this.	--
5	<i>Shri Prahlad Lande; Ghatsavali, Beed</i> Supported to project and saying that his farm is adjacent to same and requested that the Panand road be cleared for local villagers.	Response: Chairman of the industry Shri Suresh Patil suggested that the issue will be resolved by consensus.	--
6	<i>Shri Sunanda Reddy; Hyderabad</i> Congratulated PP & presented a letter for suggestions.	Shri S. M. Kurmude, convener accepted the letter of instructions in written and informed that a record had been taken in this regard.	There were few general suggestions which already covered in EIA

Total land area required is 17.56 hectares. Greenbelt will be developed in total area of 5.79 hectares i.e., 33% of total project area. The estimated project cost is Rs. 210 Crores. Capital cost of EMP would be Rs. 64.20 Crores and recurring cost for EMP would be Rs. 3.0 Crores per annum. Industry proposes to allocate Rs. 5.30 Crores towards Extended EMP (Corporate Environment Responsibility). Total Employment will be 322 persons as direct & indirect.

There is no presence of national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors. Reserve forests is at a distance of 3.75 Km from project site. Water bodies: Kundaka River is at a distance of 6 Km in West to East direction.

Ambient air quality monitoring was carried out at 8 locations during October – December 2020 and the baseline data indicates the ranges of concentrations as: PM₁₀ (48.7–61 µg/m³), PM_{2.5} (11.8-24.3 µg/m³), SO₂ (12-20.8 µg/m³) and NO_x (14.9-27.8 µg/m³) and CO (0.10-0.90 mg/m³). AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.615 µg/m³, 0.154 µg/m³, 3.85 µg/m³ and 0.162 µg/m³ 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 will be 670 M³/day which will be met from Upper Kundalika Medium irrigation Project (Sonna Kota dam. Application has been submitted to Irrigation Department, Beed, Maharashtra dated 10.06.2022). Effluent generated from Sugar & Co-gen unit will be 335 M³/day quantity will be treated through Proposed Effluent Treatment Plant of capacity 500 KLPD. Raw spentwash generated after establishment of distillery will be @ 2400 CMD will be concentrated in MEE. Concentrated spentwash @480 CMD will be Dried for powder formation. Other effluent generated after distillery establishment will be @ 2712 CMD in the form of lees, MEE condensate, cooling & boiler blowdown, lab & wash effluent. Same will be treated in CPU. Treated effluent will be fully recycled in process; ZLD will be achieved. STP of capacity 15 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 8.5 MW and will be met from proposed 20 MW cogeneration power plant. 140 TPH Bagasse fired boiler will be installed. APCE as ESP with a stack of height of 72 M will be installed for controlling the particulate emissions within the statutory limit of 50 mg/Nm³ for the proposed boiler. 1000 KVA DG set will be used as standby during power failure and stack height (16 M) will be provided as per CPCB norms to the proposed DG set.

Details of Process emissions generation and its management:

- Process emissions in the form of CO₂ shall be generated.
- After establishment of distillery, CO₂ @ 225 MT/D will be bottled and supplied to manufacturers of beverages /secondary uses.

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

a. Solid Waste:

- Sugar & Co-gen- Solid waste generated in the form of ETP sludge 10MT/M; used as manure. Boiler ash 1260 MT/M; Used as manure / Sold to Brick manufactures.
- Distillery- Yeast sludge 1920 MT/M & CPU sludge 81 MT/M; used as manure.

b. Hazardous Waste:

- Spent Oil 0.5 MT/Yr,; to Forwarded to authorized re-processor.

Total land of 17.56 Hectares is under possession of the company and Out of this land 13.85 Ha land conversion has been completed vide letter no. 5188 dated 15.09.2022. Remaining land (3.86 Ha) land conversion application has been submitted to Revenue Department dated 07.10.2022.

During deliberations, EAC discussed following issues:

- The natural streams within the vicinity of the industry plot shall not be obstructed & polluted by means of proposed industrial activities. Green Belt of adequate density shall be developed in the industrial plot adjoining to the streams. PP agreed to the same and submitted NOC for the streams obtained from Executive Engineer, Jayakwadi Irrigation Division No. 3. Beed, Maharashtra vide letter No. JID3/Beed/TB 3/3039 dated 08.12.2022.
- Approach road to the industry from the nearest highway on which traffic of Sugar Factory & Distillery takes place shall be maintained by the PP. PP agreed to it and informed that a careful attention will be provided towards appropriate & adequate traffic management through industrial staff to be appointed at the 9 Gat Offices in the command area of Sugar Factory.

Details of capital and recurring cost of EMP:

No.	Description	Capital; Rs. Lakhs	O & M/Yr Rs. Lakhs
1	APC System: ESP – 1 No.; Stack Ht. 72 M & OCMS	720	60
2	WPC: Sp.wash Storage Tanks, MEE, CPUs, ETP, STP, Dryer, Bio-methanation Plant, OCMS	5300	190
3	Noise Pollution Control	50	10
4	Environmental Monitoring & Management	50	10
5	Occupational Health & Safety	100	15
6	Green Belt Development & Rain Water Harvesting	200	15
	(31% of Rs. 210 Cr. Capital Investment) Total	Rs. 6,420	Rs. 300

Details of activities of CER:

No.	CER Activity Details	Amt. (Lakhs)
1	Solar Photovoltaic Electricity Generation System: (10 Villages-Ghatsawali, DhekanMoha, Mauj, Bakarwadim, Manyarwadi, Pokhri, Kanobachiwadi, Juj Gavhan, Mankurwadi, Mhalasapur): 40 KW @ Rs. 0.5 Lakh per KW to be installed at grampanchayat / school building in 10 villages X 40 KW X Rs.50,000/- = Rs. 200 Lakh	Rs. 200
2	Allocation of funds for Educational Infrastructure in Schools (5 Nos): Distance education infrastructure: (Computers, Camera, Speakers, Wi-Fi & wiring arrangements etc.); Rs.15 Lakhs Safe	Rs. 150
3	Arrangement of Drinking Water Supply Infrastructure: (10 Kanobachiwadi, Mankurwadi, Ambesawali, Ganganathwadi, Mankurwadi, Nalwandi, Walipur): 20 Nos. of Safe Drinking Water Units, RO Module & Storage Tank, Piping, Electrical Control Panel etc. with dispensing & metering systems. Capacity:500 Lit/Hr each. (2 Unit/ Village @ 500 Lit/Hr) - 20 Units X Rs. 3 Lakhs = Rs. 60 Lakhs	Rs. 60
4	Non- Conventional Energy Promotions (10 Villages- Ghatsawali, Mauj, Kanobachiwadi, Ambesawali, Mankurwadi, Bakarwadi, Devla Bk, Nirmalwadi, Khadki, Tokewadi): Provision of Solar Street Lights with Gadget - 1 MS Pole, 18-20 W LED Lamp, Battery, Solar Panel, Wiring etc. 10 Villages X 40 Nos./Village = Total 400 Solar Street Lights Rs.30,000/- per No. = Rs.120 Lakhs	Rs. 120
	Total Amount	Rs. 530

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

The EAC, constituted under the provision of the EIA Notification, 2006 and comprising of Experts Members/domain experts in various fields, have examined the proposal submitted by the Project Proponent in desired form along with the EIA/EMP report prepared and submitted by the Consultant accredited by the QCI/ NABET on behalf of the Project Proponent. The EAC noted that the Project Proponent has given undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the 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 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.
- (iv). Total fresh water requirement shall not exceed 670 m³/day which will be met from Upper Kundalika Medium irrigation Project. 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). Raw spentwash generated after establishment of distillery shall be concentrated in MEE. Concentrated spentwash shall be Dried for powder formation. Other effluent generated after distillery establishment will be in the form of lees, MEE condensate, cooling & boiler blowdown, lab & wash effluent, which shall be treated in 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 integrated unit of sugar mill and 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. PP shall ensure to implement Zero Liquid Discharge (ZLD) in existing and

expansion of sugar factory and cogeneration plant including proposed Distillery.

- (vi). APCE as ESP (5 fields) with a stack of height of 72 M will be installed with 140 TPH bagasse fired boiler for controlling the particulate emissions within the statutory limit of 50 mg/Nm³. At no time, the emission 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.
- (vii). Boiler ash (42 TPD) will be transported in closed trucks to nearby brick manufacturers. 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.
- (viii). CO₂ (225 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.
- (ix). 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.
- (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. Firefighting 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. Filter press shall be installed for drying of sludge.
- (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 has already been developed in 5.79 hectares i.e., 33% of total project area which will be maintained in and around plant premises 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. Reserve forest is adjacent to project site, 20 m wide greenbelt towards Reserve Forest shall be developed. Greenbelt development shall be completed in 1 year.
- (xvi). PP proposed to allocate Rs. 5.30 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.

- (xvii). 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.
- (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/Managing 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.

10th January, 2023 (Tuesday)

Agenda No. 01

Expansion of Distillery from 200 KLPD (140 KLPD Grain/Molasses & 60 KLPD Grain based) to 400 KLPD along with Co-Generation Power Plant from 3.0 MW to 8.5 MW by new installation of 200 KLPD Grain based Distillery along with 5.5 MW Co-Generation Power Plant located at D-192 to D-195, MIDC Shendra Five Star Industrial Area, Tehsil & District Aurangabad, Maharashtra by M/s Radico NV Distilleries Maharashtra Limited – Consideration of amendment of Environmental Clearance

[IA/MH/IND2/282999/2022, IA-J-11011/137/2014- IA II (I)]

The proposal is for amendment in the Environment Clearance granted by the Ministry vide letter no. J-11011/58/2018-IA-II(I) dated 18th September, 2022 in favour of M/s. Rajasthan Liquors Limited transferred on 14th September, 2020 to M/s. Aarti Distilleries Private Limited for Setting up of 125 KLPD Grain Based Distillery, 25 KLPD Malt Spirit Plant and 4.5 MW Co-Generation Power Plant located at Village Chiraura, Tehsil Akbarpur, District Kanpur Dehat, Uttar Pradesh.

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

Para of EC issued by MoEF&CC	Details as per the EC	To be revised/read as	Justification/ reasons
Specific Condition iv, Page 7 of 11 (EC letter no. J-11011/137/2014-IA II (I) dated 06/07/2022)	During molasses based operation, spent wash shall be bio-methanated and used in bio-composting and during grain based	During molasses based operation, spent wash shall be bio-methanated and used in bio-composting and during grain based operation, spent wash shall be	1. Company has an existing 140 KLPD molasses based distillery which is operating on bio-composting route to achieve ZLD. For this MoEFCC, New Delhi granted EC vide No. J-11011/137/2014-IA II (I) dated 25 th June, 2015 with

	<p>operation, spent wash shall be concentrated and dried to form DDGS to be used as cattle feed.</p> <p><u>Bio-composting shall be stopped phase wise within 3 years.</u> ESP shall be installed with the boiler. Ash is being/will be supplied to brick manufacturers and PP shall explore installation of brick manufacturing unit within/outside premises. PP shall use biomass like rice husk/bagasse as fuel for the proposed boiler. Low sulphur coal with</p>	<p>concentrated and dried to form DDGS to be used as cattle feed.</p> <p><u>Existing covered bio-composting to be continued to achieve ZLD.</u> ESP shall be installed with the boiler. Ash is being/will be supplied to brick manufacturers and PP shall explore installation of brick manufacturing unit within/outside 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 only in case of biomass unavailability. PP shall meet 10% of the total power requirement from solar power.</p>	<p>EC condition, <i>spent wash from Molasses based distillery shall be treated in bio-methanation plant followed by concentration in Multiple Effect Evaporator (MEE) and concentrated spent wash shall be bio-composted with press mud to achieve Zero effluent discharge.</i></p> <p>2. In 2021, company applied for expansion in MoEFCC, New Delhi by addition of 200 KLPD in its existing distillery and EC for the same was obtained from MoEFCC, New Delhi vide F. No. J-11011/137/2014-IA II (I) dated 06/07/2022. Now, in this latest EC, we have been given a condition for the existing distillery operations in molasses route to stop bio composting phase wise within 3 years. Thus, the company has applied for amendment in EC w.r.t. continuation of the existing covered bio-composting to achieve ZLD. We would once again submit that this latest EC obtained from MoEFCC, New Delhi in which amendment is applied is for additional 200 KLPD which is grain based and since the</p>
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	<p>maximum sulphur content of 0.5% shall only be used only in case of biomass unavailability. PP shall meet 10% of the total power requirement from solar power.</p>		<p>distillery is grain based there is no bio composting required and for the treatment of spent wash, dryer will be installed to achieve Zero Liquid Discharge.</p> <p>3. In view of the above submission, it is resubmitted that the amendment applied is for ongoing bio composting in the existing 140 KLPD molasses based distillery for which the company has already obtained EC from MoEFCC, New Delhi. The company is operating bio-composting in existing plant as per the guidelines and procedures laid by MoEFCC as well as CPCB and will continue doing the same. The expansion applied is for additional 200 KLPD which is completely grain based and bio-composting is not applicable/ proposed for the same.</p>
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During deliberations EAC opined that project authorities of distilleries should voluntarily take steps towards abandoning the bio composting as it possesses ill effects of odour pollution etc. In this regard, PP requested to increase the time to abandon bio composting from 3 years to 5 years. However, EAC informed that 3 years to abandon bio composting is sufficient and project authorities should take effective measures to achieve the compliance of the condition within the timeline given.

Accordingly, proposal was returned in present form.

Agenda No. 02

Proposed 100 KLD Grain Based Ethanol plant along with 3.0 MW Cogeneration Power Plant at Survey No. 37, 38/1, & 38/2 Village Jaisingpura, District-Neemuch, Madhya Pradesh by M/s. Mangal Synthesis Private Limited - Consideration of Environmental Clearance.

[IA/MP/IND2/410769/2022, IA-J-11011/433/2022-IA-II(I)]

The Project Proponent and the accredited Consultant M/s. Envisolve LLP (NABET certificate no. NABET/EIA/2124/IA0088 and validity 19/08/2024) made a detailed presentation on the salient features of the project and informed that the proposal is for environmental clearance to the project for 100 KLPD Grain based Ethanol Plant & 3 MW Co-generation power plant (Rice Husk) located at Survey No. 37, 38/1, & 38/2, Village Jaisingpura, Tehsil- Neemuch, District Neemuch, State MP by M/s. Mangal Synthesis 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/by-product	Production capacity
1.	Distillery (Raw material- Grains such as rice and maize)	Ethanol	100 KLPD
2.	Co-generation power plant	Power	3 MW

3.	DWGS dryer	DDGS	50 TPD
4..	Fermentation unit	Carbon Di-Oxide	55 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 4.913 hectares. Greenbelt will be developed in total area of 1.62 hectares i.e., 33.03% of total project area. The estimated project cost is Rs. 110 Crores. Capital cost of EMP would be Rs. 14.85 Crores and recurring cost for EMP would be Rs. 1.78 Crores per annum. Industry proposes to allocate Rs. 1.65 Crores towards Extended EMP (Corporate Environment Responsibility). Total Employment will 150 persons as direct & indirect.

There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance. No Reserve forests/protected forests, No national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. from project site. No Eco sensitive around the boundary. NBWL application has been submitted dated NA (if applicable). Conservation plan for schedule I species- Not Applicable. Water bodies: River Retum is at a distance of 0.67Km in North West direction and Jaju Sagar Dam is at distance of 9.29 Km in South East direction. River Retum is at a distance of 0.67 Km for which, we have received the NOC for proximity of river vide letter No. 2473/work/IA/2022 date 20.09.2022 from WRD.

AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 78.51 $\mu\text{g}/\text{m}^3$, 10.86 $\mu\text{g}/\text{m}^3$ and 19.58 $\mu\text{g}/\text{m}^3$ with respect to PM_{10} , SO_2 and NO_x . The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

Total fresh water requirement will be 1077 m^3/day which will be met from River Retum. Application has been submitted to WRD dated 12.09.2022. Effluent (Condensate/spent lees/blowdown etc.) of 602 m^3/day quantity will be treated through Condensate Polishing Unit/Effluent

Treatment Plant of capacity 700 KLPD. Raw stillage (626 KLPD: quantity of raw spent wash from distillation) will be sent to decanter followed by MEE and dryer to produce DDGS. 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 2.6 MW and will be met from proposed 3 MW cogeneration power plant. 25 TPH Rice husk fired boiler will Be installed. Bag filter with a stack height of 45m will be installed for controlling the particulate emissions within the statutory limit of 50 mg/Nm for the proposed boiler. 2 DG sets of 500 kVA each will be used as standby during power failure and stack height (30 m) 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 45 m 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 (55 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 wastegeneration and its management:

- DDGS (Distilled Dried Grains Stillage) (50 TPD) will be sold as cattle feed / fish feed / prawn feed.
- Boiler ash (40 TPD) 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.
- Used oil (0.5 Kiloliters per annum) will be sold to authorized recyclers.
- CPU sludge (0.23 TPD) and STP Sludge (0.0002 TPD) 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 100 KLPD will be used for manufacturing fuel ethanol only.

Total land of 4.913 Hectares is under possession of the company and land use conversion has been completed vide letter no. patwari halka no. 05.

During deliberations, EAC discussed following issues:

- As informed by the PP that level difference of project site and HFL of the river is 10 m within an aerial distance of 670 m, which does not seem to be correct as per Toposheet. Therefore, the Committee suggested that PP shall provide HFL of the Retum River and RL of project site, which should be authenticated by Irrigation Department.
- It was informed that project site is located at a distance of 500 m away from the airport. Therefore, the Committee suggested that PP should obtain clearance from DGCA/Airport Authority for installation of proposed project, which has 45 m stack height.
- Commitment for approach road to Industry shall be maintained by PP.
- Revised list along with budgetary break up of extended EMP (CER).
- A total of 180 existing trees is located in the proposed site. PP should provide commitment that no tree will be cut.

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

Agenda No. 03

Greenfield Project of Grain Based Distillery Plant of 360 KLD and Cogeneration Power Plant of 9.0 MW located near Vill. Panimura Jungle, Block- Tarbha, Dist- Subranpur of Odisha State by M/s Mash Bio-fuels Private Limited (MBFPL)– Consideration of amendment of Environmental Clearance

[IA/OR/IND2/293940/2022, IA-J-11011/368/2021-IA-II(I)]

PP has informed that an amendment proposal with same details is for consideration at Agenda No. 08 and requested to withdraw this proposal.

Accordingly, proposal was returned in present form.

Agenda No. 04

Proposed 300 KLPD Grain based Ethanol Plant & 7 MW Co-generation power plant (biomass based) located at village Balluana, Tehsil and District Bathinda, Punjab by M/s WEWIN Biofuels - Consideration of Environmental Clearance.

[IA/PB/IND2/409506/2022, IA-J-11011/389/2022-IA-II(I)]

The project proponent and the accredited Consultant M/s. Enviro Infra Solutions Pvt. Ltd. (NABET certificate no. NABET/EIA/1922/RA 0157 and validity upto 14th May, 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 300 KLPD Grain based Ethanol Plant & 7 MW Co-generation power plant (biomass based) located at village Balluana, Tehsil and District Bathinda, Punjab by M/s WEWIN Biofuels.

PP has informed that total land of 6.55 Hectares is under possession of the company through a lease deed of 10 years. In this regard, EAC opined that PP should submit the proposal after acquiring the land in the name of Industry or after making land lease agreement for at least 20 years or more.

Accordingly, proposal was returned in present form.

Agenda No. 05

Proposed Grain Based Distillery of 199 KLPD along with 5 MW Co-generation Captive Power Plant located at Village : Lingampally and Janagaon, District : Kamareddy, State - Telangana – 503145 by M/s Vivek Bio Products Private Limited - Consideration of Environmental Clearance.

[IA/TG/IND2/404175/2022, IA-J-11011/466/2022-IA-II(I)]

The Project Proponent M/s Vivek Bio Products Private Limited and the accredited Consultant M/s Anacon Laboratories Pvt. Ltd. (NABET Certificate No: NABET/EIA/2023/SA 0160 dtd. 13 April 2022 Valid till

March 29, 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 Grain Based Distillery of 199 KLPD along with 5 MW Co-generation Captive Power Plant located at Village : Lingampally and Janagaon, District : Kamareddy, State - Telangana – 503145 by M/s Vivek Bio Products 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:

Sl.	Name of unit	Type of Product	Name of the product/by-product	Production capacity
1.	Grain Based Bio Distillery	Main Product	Bio Ethanol	199 KLD
	Biomass Based Co-generation Plant	Essential Utility	Power	5 MW
2.	DWGS dryer	Main-Product	Animal Feed Grade Protein (DDGS)	110 TPD
3.	Fermentation unit	By- Product	CO ₂ (Carbon Di-oxide)	110 TPD
4.	Fly ash Brick Plant	By- Product	Fly Ash Bricks	24000 BPD

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 8.112 hectares. Greenbelt will be developed in total area of 2.76 hectares i.e., 34.10 % of total project area. The

estimated project cost is Rs. 196 Crores. Capital cost of EMP would be Rs. 31.4 Crores and recurring cost for EMP would be Rs. 5.2 Crores per annum. Industry proposes to allocate Rs. 3.91 Crores towards Extended EMP (Corporate Environment Responsibility). Total Employment will be 200 persons as direct & indirect.

There are No national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance. Some Water bodies: Kalojiwadi lake is at a distance of 6.49 Km in SE direction, Sangojiwadi lake is at a distance of 6.17 KM in SE direction, Karadpally lake is at a distance of 3.12 KM in S direction, Demi lake is at a distance of 7.30 KM in SE direction, Nandiwada lake is at a distance of 13.25 KM in SSW direction, Tekrial Cheruvu is at a distance of 9.65 KM in SE direction, Banapoor Cheruvu is at a distance of 13.06 KM in SW direction, Uppalwai Cheruvu is at a distance of 14.32 KM in ENE direction, Kaleshwaram Lift Irrigation Canal is at a distance of 1.95 KM in E direction available in study area.

AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 1.02 $\mu\text{g}/\text{m}^3$, 0.31 $\mu\text{g}/\text{m}^3$, 1.79 $\mu\text{g}/\text{m}^3$, 1.94 $\mu\text{g}/\text{m}^3$ with respect to $\text{PM}_{2.5}$, PM_{10} , SO_2 , NO_x . The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

Total fresh water requirement will be 1154 KLD which will be met from Kaleshwaram Lift Irrigation Canal. Application has been submitted to Telangana State Industrial Infrastructure Corporation on dated 06.11.2022. Effluent will be treated through Condensate Polishing Unit/Effluent Treatment Plant of capacity 900 KLPD. STP of capacity 15 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 5 MW and will be met from proposed 5 MW cogeneration power plant. 45 TPH steam boiler will be installed. APCE Electro Static Precipitator with a stack of height of 50 m will be installed for controlling the particulate emissions within the statutory limit of 50 mg/Nm^3 for the proposed boiler. 5 x 500 KVA DG set will be used as standby during power failure and stack height (30 m) will be provided as per CPCB norms to the proposed DG sets.

Details of Process emissions generation and its management:

- APCE Electrostatic Precipitators (ESP) with a Chimney and Bag Filters with a stack height of 50 meters will be installed for controlling the particulate emissions.
- Online Continuous Emission Monitoring System will be installed with the stack and data will be transmitted to CPCB/SPCB servers.
- CO₂ (110 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 wastegeneration and its management:

- Yeast Sludge (2 TPD) will be sold as cattle feed.
- Boiler ash (48 MT/Day in case of Rice husk or 68 MT/Day in case of Coal) will be used for brick manufacturing in proposed brick manufacturing plant inside plant premises.
- Used oil (4 Kilolitres per annum) will be sold to authorized recyclers.
- CPU sludge (1572 TPA) and STP Sludge (17 TPA) 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 199 KLPD will be used for manufacturing fuel ethanol only.

Total land of 8.112 Hectares is under possession of the company and land use conversion is not required as the land is located in notified industrial area for which EC is already obtained from SEIAA Telangana vide File No. SIA/TG/MIS/80821/2022 dated 29.07.2022.

During deliberations, EAC discussed following issues:

- EAC suggested that incremental GLCs for the proposed boiler should be revised for PM_{2.5} and PM₁₀ separately instead of PM. Accordingly, PP submitted AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 1.02 µg/m³, 0.31 µg/m³, 1.79 µg/m³, 1.94 µg/m³ with respect to PM_{2.5}, PM₁₀, SO₂ and NO_x.

- Total fresh water requirement for the project shall not exceed 4 kL/kL of alcohol produced i.e 796 KLPD.
- EAC desired the details of stillage treatment plan. Accordingly, PP submitted Grain Slops (Spent Wash) will be taken through Decanters Centrifuge for separation of Suspended Solids separated as Wet Cake. Thin Slops from the Decanter Centrifuge will be partly (20%) recycled back to Liquefaction Process), partly (20%) used in Analyser Column Reboiler for flash steam generation under vacuum and the balance (60%) taken to Multi Effect Evaporation Plant for concentration of thin slop to form a Syrup. This Syrup as Condensed Distillery Solubles (CDS) is mixed with the Wet Cake coming out of Decanter Centrifuge and the mixture is known as Distillers Wet Grain with Solubles (DWGS). DWGS will be fed to Dryers operating on steam and is dried to make it DDGS – Distillers Dried Grain with Solubles.

Details of capital and recurring cost of EMP:

SI.	Activities	Cost (Rs. In	
		Capital	Recurring
1	Pollution Control during Construction Stage (Water	5	0.64
2	Air Pollution Control Measures, ESP; Bag House, dust extraction systems, online monitor, etc.	7.5	1.3
3	Water and Wastewater Management (ETP, STP, Sedimentation Tank, Oil Traps, etc.) and Rain Water Harvesting Structure	7.2	1.7
4	Solid waste Management	0.7	0.2
5	Noise Reduction Systems	1.25	0.05
6	Occupational Health & Safety (Provision of PPE, Medical	1.0	0.4
7	Greenbelt Development (Plantation and maintenance)	0.8	0.5
8	Provision of Solar Panel – Renewable energy plant (10	3.2	0.06
9	Environmental Monitoring Program	0.90	0.35
10	Corporate EnvironmentResponsibility (to spend in commissioning)	3.91	--
	Total	31.4	5.2

Details of CER activities:

Head of expense	Amount to be spent for head (Rs. In Lakhs)
Education	70.55
Independent Anganwadi and school building village schools	

Maintenance / Repair of village school buildings and digitization of schools.	
Donation of stationary, books, scholarships in schools.	
Renovation of playground and school building protection wall.	
Medical	146.08
Donation of Sanitary Napkin Vending Machines , furniture, necessary equipment to nearby Public Health Centers	
Medical Camps in nearby villages.	
Drinking water facilities	55.39
Water filtration/treatment plant is necessary.	
Solar Drinking water structure (Motor fitting) including Soak Pit for Water Recharging in villages/schools.	
Plantation	21.69
Tree plantations along the nearby villages	
Public Amenities-	45.99
Ladies Gym/Health Club/ Green gym.	
Beautification of Garden at nearest village	
Infrastructure	51.3
Strengthening/maintenance of internal village roads in nearby village.	
Provision of solar street lights	
Maintenance and management of Dumping ground.	
Total	391

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 199 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 796 m³/day, which will be met from Kaleshwaram Lift Irrigation 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.
- (vi). Spent Wash/stillage shall be sent to the decanter followed by the Multiple Effect Evaporator and dryer to form DDGS. DDGS to be used as cattle feed. The MEE & Drier condensate, spent lees, WTP Rejects, Boiler & Cooling tower blowdowns, washings etc., is shall be treated in the 'Condensate Polishing Unit' (CPU). STP shall be installed to treat domestic wastewater. The plant will be based on 'Zero Liquid Discharge' system and no effluent/treated water will be discharged outside factory premises.
- (vii). ESP (5 fields) with a stack height of 50 meters will be installed with 45 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.
- (viii). Boiler ash (48 TPD) shall be supplied to authorised vendor for manufacturing manure for which MoU has been submitted. 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 (110 TPD) generated during the fermentation process is being/will be collected by utilizing CO₂ scrubbers and 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 2.76 hectares i.e., 34.10 % of 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.

- (xvi). PP proposed to allocate Rs. 3.91 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). 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.
- (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

Proposed Expansion of distillery project (Ethanol) from 45 KLPD to 150 KLPD by using raw material as Syrup/ B-Heavy Molasses / C-Molasses at Amdapur, Post: Shingnapur, Tal. & Dist.: Parbhani by M/s. Shree Laxmi Narshinha Sugars LLP (SLNSLLP)- Consideration of Environmental Clearance.

[IA/MH/IND2/ 400649/2022, IA-J-11011/252/2020-IA II (I)]

The Project Proponent and the accredited Consultant M/s. Technogreen Environmental Solutions (NABET certificate no. NABET/EIA/2124/IA0081 and validity 05th July 2024) made a detailed presentation on the salient features of the project and informed that the proposal is for environmental clearance to the Proposed Expansion of distillery from 45 KLPD to 150 KLPD by using raw material as Syrup/ B-Heavy Molasses / C-Molasses - Environmental Clearance by M/s. Shree Laxmi Narshinha Sugars LLP (SLNSLLP).

At the start of presentation EAC sought explanation from consultant that why kml file submitted in the proposal is not matching with the layout plan submitted in document. In this regard, consultant has not given any response. EAC opined that consultant has not even made a site visit. Therefore, EAC suggested that proposal cannot be appraised due to lack of correct layout map indicating all the proposed manufacturing units. Further, the Committee suggested PP to provide monthwise action plan for non compliance point to achieve greenbelt of 33 %, which is presently 26.5 % as

reported by IRO. The Committee suggested that Ministry should issue warning to the Environmental Consultant namely M/s. Technogreen Environmental Solutions with a copy to QCI/NABET. Further, EAC recommended the project to be returned in present form.

Accordingly, proposal was returned in present form.

Agenda No. 07

Proposed establishment of Grain based Ethanol Distillery of capacity 500 KLD along with Co gen power plant – 13.5 MW at khasra no. 401/Min, 429/Min, 431/Min, 433/Min, 443/Min, 441/1, 445/Min, 446, 354/1, 355, 356, 357, 358, 361, 361/Min, 362, 362/Min, 362/1 Min, 363, 364, 364/Min, 365, 366/Min, 367/Min, 368/Min, 369/2, 369/3, 369/3 Min, Village: Dilra Raipur, Tehsil & Distt – Moradabad, U.P. by M/s Maa Sheetla Ventures Limited- Consideration of Environmental Clearance.

[IA/UP/IND2/406732/2022, IA-J-11011/349/2022-IA-II(I)]

The Project Proponent M/s. Maa Sheetla Ventures Limited and the accredited Consultant M/s. Environmental and Technical Research Centre (NABET certificate no.NABET/EIA/1922/IA0050 and validity 01stNovember 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 500 KLPD Grain based Ethanol Plant 13.5 MW Co-generation power plant (fuel to be used) located at khasra no. 401/Min, 429/Min, 431/Min, 433/Min, 443/Min, 441/1, 445/Min, 446, 354/1, 355, 356, 357, 358, 361, 361/Min, 362, 362/Min, 362/1 Min, 363, 364, 364/Min, 365, 366/Min, 367/Min, 368/Min, 369/2, 369/3, 369/3 Min, Village: Dilra Raipur, Tehsil & Distt – Moradabad, U.P. by M/s Maa Sheetla Ventures Limited.

During deliberations, EAC noted that land area of 7.08 Ha is very less for establishment of 500 KLPD distillery, keeping in view for compliance of statutory requirement such as development of greenbelt, adequate distance between units from safety angle etc. Committee suggested to revise the proposal by increasing the proposed land area to atleast 26 acres for 500 KLPD distillery.

Accordingly, proposal was returned in present form.

Agenda No. 08

Greenfield Project of Grain Based Distillery Plant of 360 KLD and Cogeneration Power Plant of 9.0 MW located near Vill. Panimura Jungle, Block- Tarbha, Dist- Subranpur of Odisha State by M/s Mash Bio-fuels Private Limited (MBFPL)- Consideration of amendment of Environmental Clearance

[IA/OR/IND2/244936/2021, IA-J-11011/368/2021-IA-II(I)]

The proposal is for amendment in the Environmental Clearance granted by the Ministry vide letter no. EC22A060OR158403 dated 04.03.2022 for the project Grain Based Distillery Plant of 360 KLD and Cogeneration Power Plant of 9.0 MW located at Vill. Panimura Jungle, Block- Tarbha, Dist- Subranpur of Odisha State by M/s Mash Bio-fuels Private Limited (MBFPL).

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

S. No.	Para of EC issued by MoEF&CC	Details as per the EC	To be Revised / read as	Justification / Reasons
1.	Specific Condition, (v)	PP shall use biomass only as a fuel of boiler	Coal and agro waste briquette including rice husk (based on availability) to be used as Fuel of Boiler	Major Source of Rice Husk is Par-boiled Rice Mills, which themselves use their own husk as fuel in their own boiler, which results in scarcity / non-availability of Rice Husk.
2.	Specific Condition, (iv)	Industry shall construct a storage pond of 60 days capacity and the accumulated water to be used as fresh water thereby reducing fresh water	To construct water storage pond of 30 days storage capacity	Ground Water will not be used as source of fresh water in proposed project, only surface water will be used with due permission from Statutory Authorities.

		consumption.		
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During deliberations, EAC discussed following issues:

- EAC suggested that incremental GLCs for the proposed boiler using coal as a fuel should be submitted. Accordingly, PP submitted AAQ modelling study, which indicates that the maximum incremental GLCs after use of coal would be 3.031 $\mu\text{g}/\text{m}^3$, 4.799 $\mu\text{g}/\text{m}^3$, 4.2939 $\mu\text{g}/\text{m}^3$ and 5.3042 $\mu\text{g}/\text{m}^3$ with respect to $\text{PM}_{2.5}$, PM_{10} , SO_2 and NO_x .
- Stack height shall be increased from 69 to 71 m. ESP (5 fields) will be installed with the boilers of capacity 75 TPH Biomass/coal fired boiler for controlling the particulate emissions within the statutory limit of 30 mg/Nm^3 .

After detailed deliberations EAC found the justification for amendment sought satisfactory and recommended for amendment in EC as proposed by the project proponent with the following additional condition:

- ESP (5 fields) with a stack height of 71 meters will be installed with the boilers of capacity 75 TPH Biomass/coal fired boiler for controlling the particulate emissions within the statutory limit of 30 mg/Nm^3 . SO_2 and NO_x emissions shall be less than 100 mg/Nm^3 . At no time, the emission levels shall exceed the prescribed standards. In the event of failure of any pollution control system adopted by the unit, the respective unit shall not be restarted until the control measures are rectified to achieve the desired efficiency. Performance assessment of pollution control devices/ systems will be conducted annually.
- 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.

- 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.
- 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.

All other terms and conditions in the EC issued vide letter no. EC22A060OR158403 dated 04.03.2022 remain unchanged.

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.	Dr. Onkar Nath Tiwari	Member
5.	Shri. J.S. Kamyotra	Member
6.	Dr. Rahul Ramesh Rao Mungikar	Member
7.	Dr. Sanjay V. Patil (VSI)	Member
8.	Dr. Siddhartha Singh (IMD)	Member
9.	Shri A. N. Singh, Scientist 'E'	Member Secretary
MoEFCC		
10.	Dr. Mahendra Phulwaria	Scientist 'C'
11.	Mr. Kanaka Teja	Research Assistant
