

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

Dated: 27.02.2023

**Meeting ID: IA/IND2/13448/23/02/2023
MINUTES OF MEETING OF THE EXPERT APPRAISAL COMMITTEE
(INDUSTRY-2 SECTOR PROJECTS)
HELD ON 23rd February, 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/IND2/13444/13/02/2023) held on 13th -14th February, 2023 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: -

23th February, 2023 (Thursday)

Agenda No. 01

Greenfield project of 100 KLPD Grain-based Ethanol Plant along with 3 MW Co-generation Power Plant by M/s. Mangal Synthesis Private Limited at 37, 38/1, & 38/2 Village Jaisingpura, District-Neemuch, Madhya Pradesh- Re-consideration of Environmental Clearance.

[IA/MP/IND2/ 410769/2022, IA-J-11011/433/2 022-IA-II(I)]

The proposal was earlier considered by the EAC (Ind-2) in its EAC meeting ID: IA/IND2/13414/09/01/2023 held on 09th -10th January, 2023 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 of PP
1.	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	The HFL of the Retum river and RL of project site from the irrigation department has been submitted vide letter No. 290 dated 31.01.2023. HFL 1578 m from Mean Sea Level(MSL) whereas project location is at 1594 m above MSL
2.	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.	The NOC from the PWD department regarding the establishment of 45 m stack height has been submitted vide letter no. 367 dated 01.02.2023. PP informed that air strip exists at 522 m away from the project site which is under PWD.
3.	Commitment for approach	Commitment for approach road

	road to Industry shall be maintained by PP.	maintenance from nearest SH/NH to industry has been submitted by the PP.
4.	Revised list along with budgetary breakup of extended EMP (CER).	Revised list along with budgetary breakup of extended EMP (CER) has been submitted by the PP.
5.	A total of 180 existing trees is located in the proposed site. PP should provide commitment that no tree will be cut	Commitment for no tree cutting has been submitted by the PP.

EAC found the response submitted by PP for ADS satisfactory.

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

The details of products and capacity as under:

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 powerplant	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 inNorth 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, PP has 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 1.81 $\mu\text{g}/\text{m}^3$, 3.71 $\mu\text{g}/\text{m}^3$ and 1.87 $\mu\text{g}/\text{m}^3$ 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 400 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 matter 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 waste generation 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 16 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. EAC found the information satisfactory.

Capital cost and recurring cost of EMP are given below:

S.NO.	ITEM	CAPITAL COST INR CRORES	RECURRING COST INR CRORES/ANNUM
1.	Air emission control systems (Bag Filters, dust suppression, etc.)	2.5	0.1
2.	Effluent Treatment Plant (MEE)	6.0	1.0
3.	Condensate Policing unit	1.75	0.2
4.	Environment all equipment & OCEMS- Online Continuous Emission/Effluent Monitoring System	0.50	0.01
5.	Solid & hazardous Waste Management	0.65	0.05
6.	Ash handling & management	0.5	0.05
7.	Occupational Health & Safety	0.60	0.07
9.	Green belt development	0.6	0.2
10.	Fire fighting	0.5	0.07
11.	Rainwater harvesting systems	0.10	0.03
12.	CER (Education, Health, Solar Light and Drinking water.	1.65	-
TOTAL		14.85	1.78

Details of CER with proposed activities and budgetary allocation:

S. No	CER Activities	1st Year
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		(Cost in Lakhs)
1	Tube wells / Drinking Water facility in nearby Jaisinghpura village in consultation with local Panchayat's.	40
2	7500 No. of Solar light distribution in Deokheda village.	85
3	Plantation cum maintenance Program around 5 km alongside Retum River (around 10000 trees) with consultation from local authority.	40
	Total	165

During deliberations, EAC discussed following issues:

- PP shall submit revised layout map showing inventory of existing trees along with revised plantation scheme.
- PP shall submit stack height justification. PP has submitted the calculation of the stack height.
- PP shall submit Revised CER details. Revised CER details are submitted by PP.
- PP shall submit rain water harvesting calculation.
- PP shall commit that approach road from Industry to nearest State Highway/National Highway will be maintained by the Industry.

PP has not submitted above clarification sought by the EAC members during the meeting.

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 Grain Based Ethanol Plant from 200 KLPD to 500 KLPD along with Co-generation Power Plant from 10 MW to 20 MW under Ethanol Blending Programme at Village: Jawaharpur, Tehsil: Misrikh, District: Sitapur, Uttar Pradesh by M/s. Dalmia Bharat Sugar and Industries Limited, Grain Distillery Unit-Jawaharpur– Re-consideration of Environmental Clearance.

[IA/UP/IND2/414564/2023, J- 11011/341/2006-IA-II (I)]

The proposal was earlier considered by the EAC (Ind-2) in its EAC meeting ID: IA/IND2/13429/24/01/2023 held on 24th - 25th January, 2023 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.	Points	Reply
1	3 Existing effluent lagoons shall be dismantled	The company will dismantle all three lagoons.
2	Sludge drying bed shall be replaced with filter press.	As per recommendation of the committee, the company will replace Sludge drying bed with filter press/decanter.
3	CER budget shall be increased to Rs. 3.00 Crores. Accordingly, revised details shall be submitted	CER budget is revised to Rs 3 Crores for complete project.
4	PP shall justify usage of 200 KLPD water for the horticulture purpose	The capacity of the existing STP is 200 KLPD. However, the quantity of sewage input is 60 KLPD & treated water to the tune of 56 KLPD will be/is being used in greenbelt of plant and adjacent colony.
5	PP shall elaborate the process of capturing CO2 from the plant.	The company will install CO2 plant or will take with other possible technology to capture the carbon.
6	APCE Electrostatic Precipitator (ESP) with a stack of height of 50 m is installed with the existing boiler for controlling the particulate emissions within the statutory limit of 30 mg/Nm3 as coal is used as a fuel.	The company is/will not use coal at any stage. Hence, APCE Electrostatic Precipitator (ESP) with a stack of height of 50 m installed with the existing boiler is designed for controlling the particulate emissions within the statutory limit of 50 mg/Nm3 & sufficient.

EAC found the response submitted by PP for ADS satisfactory.

The Project Proponent and the accredited Consultant M/s. JM EnviroNet Pvt. Ltd. (NABET/EIA/2023/SA 0172 and validity till 7th August, 2023) made a detailed presentation on the salient features of the project and informed that the proposal is for environmental clearance to the project for Expansion of existing Distillery unit from 200 KLPD to 500 KLPD & Co-generation Power Plant from 10 MW to 20 MW (Rice Husk/Bagasse/Biomass based) located at Village: Jawaharpur, Tehsil: Misrikh, District: Sitapur, Uttar Pradesh by M/s Dalmia Bharat Sugar and Industries Limited, Grain Distillery Unit- Jawaharpur.

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

The details of products and capacity as under:

S. No	Name of unit	Name of the product/byproduct	Existing Production capacity	Additional Capacity	Total production capacity
1	Distillery (Grains like broken rice, maize, barley & sorghum)	Ethanol	200 KLPD	300 KLPD	500 KLPD
2	Co-generation Power Plant for distillery	Power	10 MW	10 MW	20 MW
3	DWGS dryer	DDGS	91 TPD	144 TPD	235 TPD
4	Fermentation unit	Carbon di-oxide	150 TPD	225 TPD	375 TPD

Ministry has issued Environmental Clearance to the existing industry for a capacity of 200 KLPD Grain based Ethanol plant & 10 MW Co-generation Power Plant vide F. No. J- 11011/341/2006-IA II(I) dated 21st September, 2021. Certified Compliance report of Existing EC has been obtained from Integrated Regional Office, MoEFCC, Lucknow vide F. no. IV/ENV/UP/Ind-30/591/2021 dated 06.01.2023. EAC found the information satisfactory.

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

Total plant area after expansion will be 10.5 Ha (existing plant area - 7.5 Hectares and additional land required - 3.0- Hectares for proposed capacity) which is under possession of the company and converted to industrial use. Out of the total plant area 2.48 Hectares i.e. 33% of the total plant area has already been developed as greenbelt & plantation and the same will be maintained. As a part of expansion, 1.0 ha i.e., 33% of the additional land will be developed as greenbelt in and around plant premises & will be densified and maintained. Hence, total greenbelt area after expansion will be 3.48 ha. The estimated project cost for expansion project is Rs. 120 Crores. Capital cost of EMP would be Rs. 20 Crores and recurring cost for EMP would be Rs. 2.0 Crores per annum. Industry proposes to allocate Rs. 3.0 Crores towards extended EMP (Corporate Environment Responsibility). Total Employment after expansion will be 150 persons.

There are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves within 10 km distance. 2 unnamed Reserved Forests and 7 unnamed Protected Forests lies within 10 km radius. Water bodies: Saunri Nadi is at a distance of ~7.5 km in South direction, Beta Nadi is at a distance of ~8.0 km in South direction, Sarayan River is at a distance of ~8.5 km in ENE direction, Kaimahra Distributary is at a distance of ~1.0 km in SE direction), Arthana Distributary is at a distance of ~2.0 km in West direction, Ramkot Distributary is at a distance of ~4.5 km in NNE direction, Sitapur Branch is at a distance of ~5.5 km in WSW direction, Machhrehta Distributary is at a distance of ~6.5 km in ESE direction, Behat Distributary is at a distance of ~7.0 km in SE dirction, Islamnagar Distributary is at a distance of ~7.0 km in WNW direction & Pirai Nala is at a distance of ~9.0 km in NE direction are present within 10 km radius.

AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the expansion project would be $0.62 \mu\text{g}/\text{m}^3$, $0.248 \mu\text{g}/\text{m}^3$, $1.30 \mu\text{g}/\text{m}^3$ and $2.11 \mu\text{g}/\text{m}^3$ with respect to PM_{10} , $\text{PM}_{2.5}$, SO_2 and NO_x . The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

Existing fresh water requirement is 946 KLPD and after expansion total freshwater will be 1946 KLPD. The additional fresh water requirement for expansion project will be 1000 KLPD which will be sourced from groundwater. Application has been submitted to Ground water Department (Namami Gange & Rural Water Supply Department) Ministry of Jal Shakti Government of Uttar Pradesh for freshwater withdrawal of $365100 \text{ m}^3/\text{annum}$ vide application no. STPR0123NIN0051 dated 11.01.2023 and is under process. Existing effluent generation is 1067 CMD from distillery which is treated through Condensate Polishing Unit/Effluent Treatment Plant (capacity 1300 CMD). Proposed effluent generation will be 1565 CMD from distillery which will be treated through proposed/upgraded Condensate Polishing Unit (capacity in 1700 CMD). Raw stillage (2655 KLPD) will be sent to decanter followed by MEE followed by dryer to produce DDGS. Domestic waste water is being/will be treated in existing STP of capacity 200 KLPD. The plant is being/will be based on Zero Effluent 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 13.0 MW which will be sourced from proposed 20 MW Co-generation power plant in distillery. Existing distillery has 60 TPH Rice Husk/Bagasse/Biomass fired boiler. 60 TPH Rice Husk/Bagasse/Biomass based fired boiler will be installed in distillery. APCE Electrostatic Precipitator (ESP) with a stack of height of 50 m is installed with the existing boiler for controlling the particulate emissions within the statutory limit of $50 \text{ mg}/\text{Nm}^3$. APCE Electrostatic Precipitator (ESP) with a stack height of 50 m will be installed for controlling the particulate emissions within the statutory limit of $50 \text{ mg}/\text{Nm}^3$ for the proposed boiler. Industry has 2 x 1500 KVA DG sets which will be used as standby during power failure and stack height (10 m) has been provided as per CPCB norms.

Details of Process emissions generation and its management:

- APCE Electrostatic Precipitator (ESP) with a stack of height of 50 m is installed with the existing boiler for controlling the particulate emissions within the statutory limit of 50 mg/Nm³. APCE Electrostatic Precipitator (ESP) with a stack height of 50 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 (375TPD) generated during the fermentation process will be collected and sold to authorized vendors or mitigated through environment friendly measure.

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

- DDGS (Distilled Dried Grains Stillage) (235 TPD) is being/will be sold as cattle feed.
- Boiler ash (122 TPD) is being/will be given to farmers & brick manufactures in covered vehicles only.
- Used oil (0.5 Kiloliters per annum) is being/will be sold to authorized recyclers.
- CPU sludge (3 TPD) and STP Sludge (0.1TPD) is being/will be used as manure.

As per Notification S.O 2339(E), dated 16th June, 2021, PP has submitted self-certification in the form of notarized affidavit declaring that the proposed expansion capacity of 300 KLPD will be used for manufacturing fuel ethanol only.

Details of capital and recurring cost of EMP are given below:

Sl. No.	Description	Capital Cost in Crores	Recurring Cost in Crores/annum
1.	Air Management Boiler stack+ ESP & Ash	8	0.94

2.	Spent wash Treatment	MEE & Dryer	7	0.5
3.	Fugitive Emission Management	Internal Road & Grain Handling System	2	0.01
4.	Effluent Treatment	Condensate Polishing Unit & STP	1	0.5
5.	Environment monitoring	Lab instrument, Monitoring instruments	0.5	0.02
6.	Greenbelt & plantation	Plantation for greenbelt &	0.5	0.02
7.	Rain water	Rooftop & runoff	1	0.01
	Total		20	2.0

Details of CER with proposed activities and budgetary allocation:

S. No.	PROPOSED ACTIVITIES	IMPLEMENTATION OF EMP FOR SOCIAL AND INFRASTRUCTURE DEVELOPMENT ON THE BASIS OF PHYSICAL TARGETS		TOTAL BUDGET ALLOCATED (RS. IN LAKHS)
		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. 50 Lakhs Village-Jawaharpur (1.0 km stretch-Chini Mill road)	Rs. 50 Lakhs Village-Moharavan (1.0 km stretch-village road)	100
2	Social Infrastructure Development- Installation of Solar Street Light, Solar Lanterns, assistance to Anganwadi centres, Village Pond Infrastructure Development, Municipal Council hand over Electric Autorikshaw for awareness clean India Campaign, etc.	Rs. 25 Lakhs Village-Jheuri, Pipri, Chaina, & Arthana (Community center)	Rs. 25 lakhs Village-Jheuri, Pipri, Chaina, & Arthana (Community center)	50
3	Densification of plantation- Gap Filling of existing plantations/ Avenue	Rs. 15 lakhs Village-Pipri,	Rs. 15 Lakhs Village-	30

	plantation along roadside, tree plantation in nearby schools/colleges/vacant land/Panchayat bhavan, etc.	Chaina, & Arthana (1500 no. of plants to be planted)	Pipri & Chaina (1500 no. of plants to be planted)	
4	Skill development for youth- Organising Training programmes for youth/residents in Skill Development centre	Rs. 30 Lakhs Village-Sitapur, Jheuri, Pipri, Chaina, & Arthana (Benefit to be extended to 500 persons)	Rs. 30 Lakhs Village-Sitapur, Jheuri, Pipri, Chaina, & Arthana (Benefit to be extended to 500 persons)	60
5	Up gradation of health centre facilities- Donation of medical instruments to PHC& health checkup camps	Rs. 10 Lakhs (Village Ramkot)	Rs. 10 Lakhs (Village Ramkot)	20
6	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 materials, school bags, water bottles, sports equipments etc. to students, Seating Benches, installation of water purifiers, construction of sanitized toilets, School roof sheet fixing, Construction School Cultural Hall, Support Athlete sports person- Rifles, School Playground, Informal Education center, etc.	Rs. 20 Lakhs (Village-Ramkot, lilsa Gauara, Feriha, Arseni)	Rs. 20 Lakhs (Village-Ramkot, lilsa Gauara, Feriha, Arseni)	40
TOTAL				300

Site Visit Report

Subject: Expansion of Grain Based Ethanol Plant from 200 KLPD to 500 KLPD along with Co-generation Power Plant from 10 MW to 20 MW under Ethanol Blending Programme at Village: Jawaharpur, Tehsil: Misrikh, District: Sitapur, Uttar Pradesh by M/s Dalmia Bharat Sugar and Industries Limited, Grain Distillery Unit- Jawaharpur – Site Visit reg.

As per minutes of the Expert Appraisal Committee (Industry-2) meeting held during 24th - 25th January, 2023, site visit of **M/s Dalmia Bharat Sugar and Industries Limited, Grain Distillery Unit- Jawaharpur** was undertaken by the sub-Committee comprising Dr. Sanjay V. Patil, Dr. J. S. Sharma, Shri. J.S. Kamyotra, members, EAC (Ind.-2) and Shri A N Singh, Scientist 'E' MoEF&CC to assess the existing environmental scenario of the proposed project site.

The Sub-Committee alongwith Dr. Satya, Scientist 'E' Regional Office, MoEF&CC, Lucknow visited the site of M/s Dalmia Bharat Sugar and Industries Ltd., Grain distillery Unit on 6.02.2023.

(A) From M/s Dalmia Bharat Sugar and Industries Limited, Grain Distillery Unit- Jawaharpur following officials were present at site:

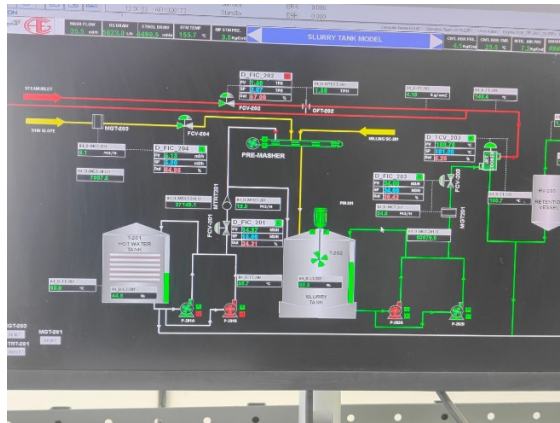
- (i) Mr. Pradeep Mittal, Assistant Executive Director
- (ii) Mr. T N Singh, Plant Head
- (iii) Mr. Sudhir Verma (Distillery Head)
- (iv) Mr. Dinesh Yadav, Environmental Consultant

At the outset, **M/s Dalmia Bharat Sugar and Industries Limited, Grain Distillery Unit welcomed the Sub-committee and** briefed the Sub-Committee about the Distillery plant facilities, products storage facilities, air emissions status, effluent management system, greenbelt etc. The Sub-Committee visited the ethanol storage area, existing effluent lagoon area, ETP and its Control room, distillery unit as well as had general round of the plant. During site visit, following observations were made:

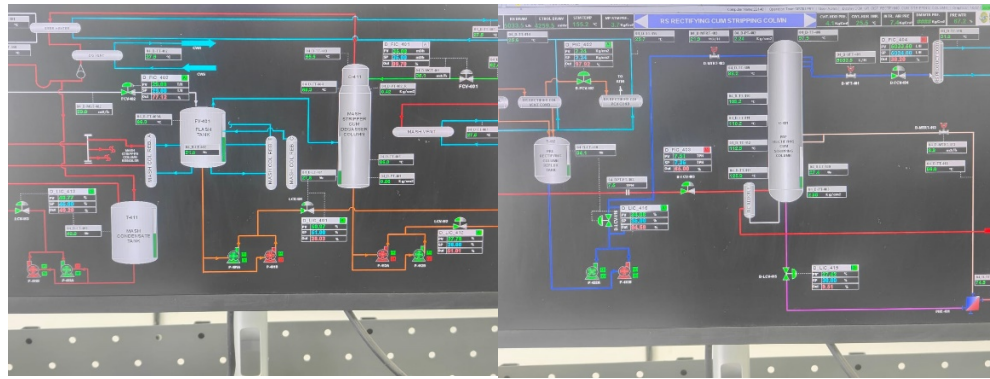
- M/s. Dalmia Bharat Sugar and Industries Limited has obtained Environmental Clearance for the existing 200 KLPD Grain based Distillery for Ethanol along with 10 MW Co-generation power plant at Dalmia Bharat Sugar and Industries Limited, Grain Distillery Unit- Jawaharpur, Village Jawaharpur, Tehsil Misrikh, District Sitapur, Uttar

Pradesh vide letter no. J- 11011/341/2006- IA II(I) dated 21st September, 2021.

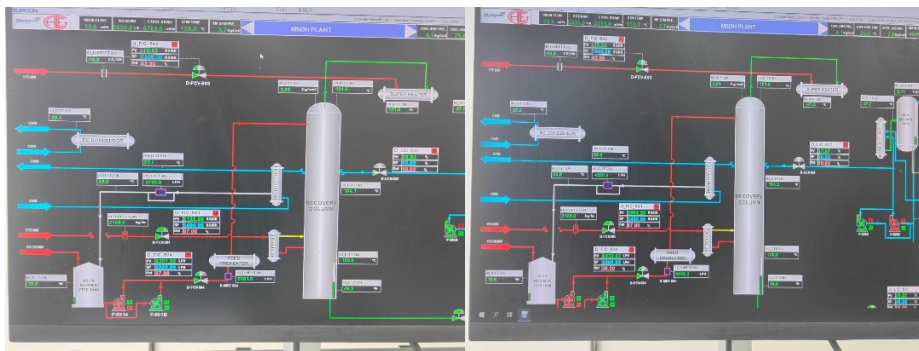
- M/s. Dalmia Bharat Sugar and Industries has obtained Consent to Operate under both the Air & Water Acts from UPPCB for the capacity of 200 KLPD Distillery and 10 MW power plant vide Letter no. 160894/UPPCB/Lucknow(UPPCBRO)/CTO/both/SITAPUR/2022 dated 27.08.2022 valid till 31.12.2023.
- Certified Compliance report of the Existing EC has been obtained from Regional Office, MoEFCC, Lucknow vide File no. IV/ENV/UP/Ind-30/591/2021 dated 06.01.2023.
- PP intends to expand to the existing distillery from 200 KLPD to 500 KLPD and Cogeneration Power Plant from 10 MW to 20 MW and the proposal is to be considered under Ethanol Blending Programme.
- While going round the plant the Committee found the housekeeping was good except for the road cleaning and the existing greenbelt. At present, bagasse storage area is partly uncovered, which was under construction.
- No display board was found installed at the gate providing details of required environmental compliance parameters.
- Two silos for storage of grain having capacity of 3000 MT and 6000 MT, total storage capacity – 9000 MT with proper unloading and pre-cleaning system are installed. Presently broken rice is stored in the silos at around 96% of the capacity.
- 02 no of mills are installed with pre-cleaner, de-stoner, magnetic separator, flour silo, bucket elevators and conveyers. During visit one mill was in operation, the flour from mill into flour silo and is then fed to the slurry vessel through pre-masher with hot water injection and Enzyme Alpha Amylase are added in to slurry vessel to get flour slurry liquefied. At that time the slurry flow rate is 34 m³/hr (This will result into 110-125 KLPD of Ethanol production).



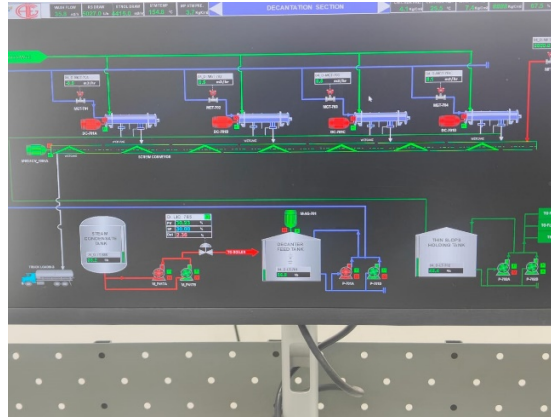
- Liquefaction - Slurry from slurry vessel are fed to jet cooker to raise the temperature from 65 deg C to 108 deg C instantly to avoid gelatinization of slurry. After 8 to 10 minutes retention in retention vessel so that polysaccharide chains completely break into disaccharide and mono saccharide and finally cooked slurry is sent to liquefaction tanks to liquify completely. As per PP, the retention time in liquefaction tank is between 2.5 hrs to 3.0 hrs.
- Fermentation – Slurry from liquefaction tanks are fed to Fed batch reactors after cooling up to 30 to 32 deg C through wide gap plate heat exchangers. Temperature in fermentation reactor is maintained through cooling water via cooling tower. Enzyme -Aminoglycoside is added and yeast from Pre-fermenters are further blended with slurry to convert sugar present in slurry into alcohol. In fermentation process 14.5% alcohol is achieved ..
- Distillation – Fermented slurry are fed to Analyzer column in distillation section and from analyzer column top concentrated vapor are fed to rectifier column to further concentrate. At the time of visit fermented wash feed to column was 35 M3/hr having alcohol concentration 14.5 % and final draw from rectifier column as Rectified Spirit was 5033 Lt /hr i.e. RS plant was running at 120.79 KLPD



- Ethanol Plant (MSDH)- Rectified spirit are fed to recovery column to vaporize the RS and vapors are passes through superheater to maintain temperature 135 deg C. The RS vapor of 135 deg C are finally fed to Molecular sieve beds to get final product Ethanol. At the time of visit Rectified Spirit- 5032 Liter/Hr feed was running in plant and final Draw from Ethanol plant was coming 4768 Liter/Hr i.e. Ethanol plant was running at 114.4 KLPD.



- Spent wash from bottom of analyzer column are fed to decanters to recover grain slurry and supernatant from decanters are fed to integrated Evaporators ((3+1) Nos Falling film and 02 Nos Force Circulation evaporators) to concentrate the supernatant from decanters up to 30 Brix and this 30-brix slurry again mixed with decanters sludge to feed in to the dryers. At the time of visit spent wash flow was observed 25.1 m³/hr.



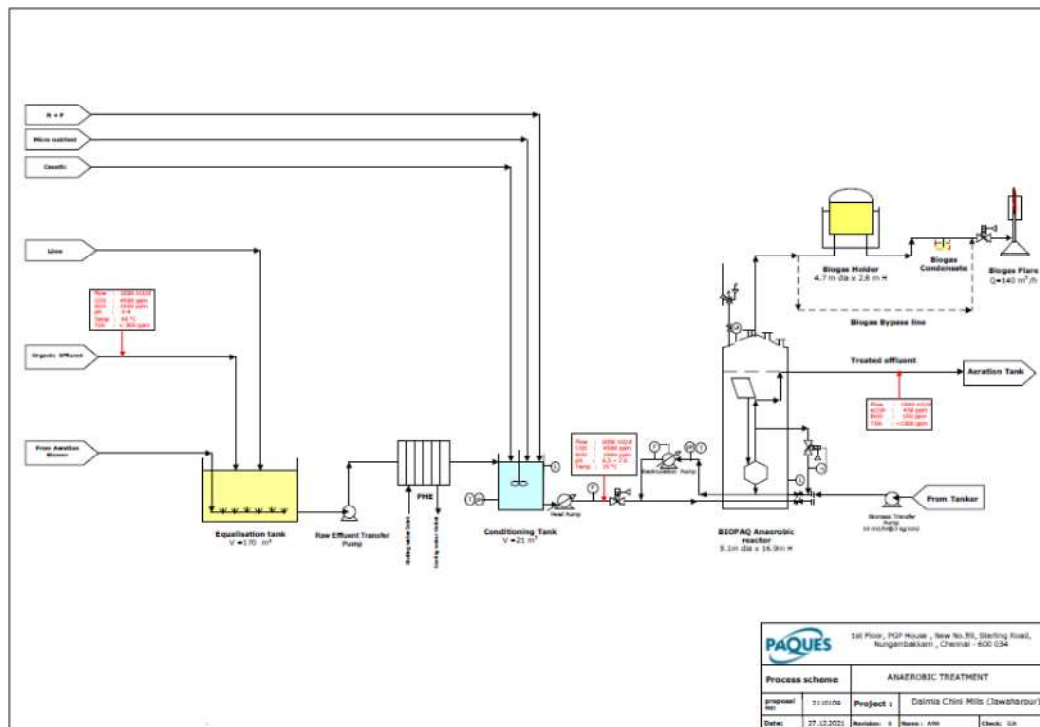
- Dryer- Decanter sludge and Evaporator syrup having brix 30 are fed to tube bundle dryers to dry it from 70% moisture to 10%. This dried material is called DDGS (Drum Dried Grain soluble) which is sold for cattle field. At the time of visit DDGS was calculated at the rate of 2Ton/Hr.
- During the visit, it is observed that Condensate Polishing unit (CPU Unit) was installed as per submitted EMP by the project proponent of the capacity 1300 KLPD which comprises of following units;
 - Equalization tank
 - Neutralization tank
 - Anaerobic digester
 - Aerobic digester
 - Tertiary treatment like carbon and sand filter
 - Filtration section
 - Pressure sand filter
 - Dual media filter
 - UF/RO system
 - RO CIP system
 - Complete System run from DCS(SCADA) as seen at site

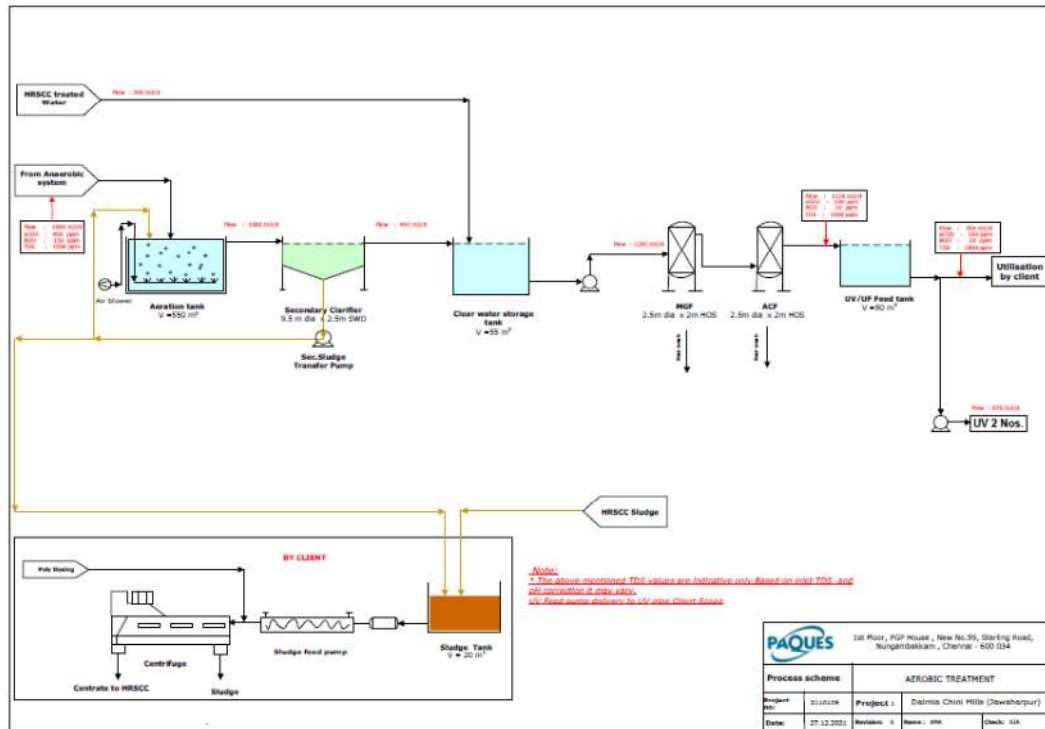
PP furnished the following details :

S. No	Particular	Flow	PH	COD	TSS	TDS	Conductivity	Turbidity
		M ³ /Hr		PPM	PPM	PPM	µs/cm	NTU
Input								

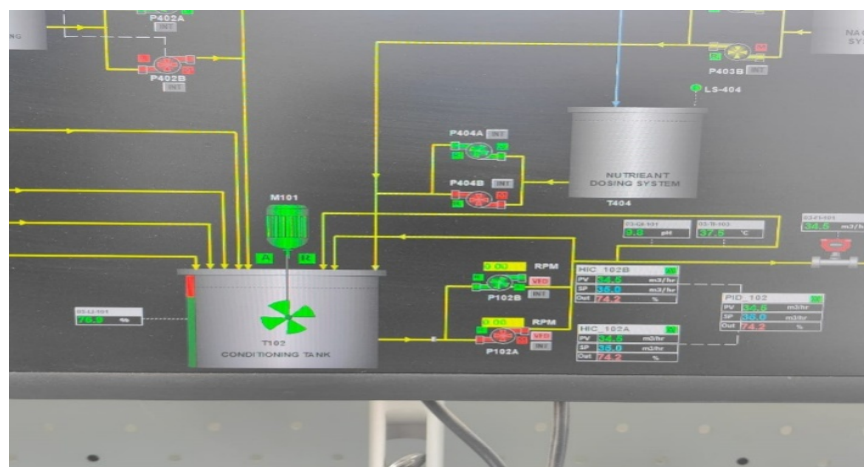
1	Inlet Parameters for ICX reactor (Leese, Evaporator condensate, Dryer Vapor)	34.5	4	3360	95	174	267	
2	Inlet Parameters to HRCC from Cooling Tower Blow down	9.5	8	95	90	1014	1560	
Output								
3	Output Parameters from UV -water recycled for slurry dilution	22	8	40	18	872	1342	7.3
4	Output Parameter from RO permeate - recycled in CT make up	18	5	0	0	42	64	0
5	Output parameter from RO reject- recycled to evaporator and slurry dilution	4	8	320	6	4414	6790	

Treatment scheme is as follows.





Evaporator condensate and lease are received in equalization tank from plant having PH-3.5 to 4.0 then it is sent to conditioning tank to maintain PH to 6.5 to 7.5 and for addition of nutrients. From conditioning tank effluent is fed to ICX -anaerobic reactor where COD of effluent is reduced to 90 % and after ICX effluent is passed into aerobic reactor then through clarifier,ACF MGF and finally to clear water tank. Cooling tower blow down are fed to HRCC then in to clear water tank. At the time of the visit, flow rate to ICX reactor was 34.5 m³/hr as per SCADA.



Treated liquid are fed from clear water tank to UV and UF/RO, UV treated water are recycled for dilution of flour and RO treated water are recycled in to cooling towers.

Committee has noticed that PP is maintaining fresh water consumption below 4KL/KL with above scheme.





- For the utility purpose project proponent has installed boiler and turbine in a separate area which is around 100 meters away from distillery area. Bagasse as a fuel is observed at site and as per PP, it is the only fuel used till date in power plant.
- As informed by PP, boiler has already been installed with ESP as APCE & 50.0m high stack to control the particulate matter emissions within the statutory limit of 50 mg/Nm³.



- Fly ash generated from boiler being rich in silica is given to the farmers for soil enrichment and there is a heavy demand for it. A portion of fly ash is used for brick manufacturing noticed at site as per below photographs. It was observed that bagasse storage yards was partly covered.
- Under CSR initiative, PP informed that DBSIL has undertaken initiatives like Diksha centers for skill development, Sikho-Sikhao initiatives for rural education, Farm ard manure &vermi-Compost production, Nutritional kit distribution etc.


- Total plant area with DBSIL after expansion will be 10.5 Ha (existing plant area - 7.5 Hectares and additional land required - 3.0- Hectares for proposed capacity) which is under possession of the company and is converted to industrial use.
- Old spent wash lagoons in the existing grain distillery area were found filled
- The area under green belt development needs further improvement.
- Environmental and Safety messages need to be mentioned in the plant premises and offsite.

The sub-committee desired the following information for preparation of site visit report :

- (a) Plot area of the existing unit of molasses based distillery and grain based distillery. Layout map indicating distillery plant alongwith greenbelt of both units.
- (b) Time bound Action plan (i) to treat the spent wash stored in the lagoon through incineration process (ii) disposal of sludge present in the lagoon (iii) demolition of existing 3 nos of spent wash lagoon.
- (c) Design details of the incinerator boiler.
- (d) Lay out plan of the unit after expansion, with clear demarcation of the existing 7.5 Ha. area and the 3.0 Ha. Area being added.
- (e) Action plan with layout map to achieve 33 % greenbelt in the grain distillery unit. Details of plant species to be provided.
- (f) Copy of EC of the PP's adjacent Molasses based distillery unit , from where 3.0 Ha. land isto be taken for the proposed expansion of M/s. Dalmia Bharat Sugar and Industries
- (g) Action plan with time line to cover baggase storage yard.
- (h) Action plan for construction of paved road within the plant premises.
- (i) Installation of display board at the gate providing details of required environmental compliance parameters.
- (j) Delineate additional ethanol storage tank area considering perceived risk, cumulative risk and societal risk.
- (k) Delineate rain water storage area.

- (l) To get the EC amendment for the molasses based distillery from which 3.0 Ha. Of land is hived for the present proposed expansion of Dalmia Bharat Sugar and industries Limited.
- (m) Details of the total area under green belt in the molasses based distillery and the area under green belt in the 3.0 Ha. To be shifted to Dalmia Bharat Sugar and industries Limited
- PP has furnished reply to some of the points raised by the Committee during the visit dated- 06.02.2023 at Dalmia Bharat Sugar and industries Limited, Grain Distillery Unit-Jawaharpur. The Project Proponent's reply are summarized below;

S. No.	Sub-Committee's Points	Project Proponent Reply
(a)	Plot area of the existing unit of molasses-based distillery and grain-based distillery. Layout map indicating distillery plant along with greenbelt of the both units.	Total area of both distilleries is 20.23 Ha in which 9.73 Ha is earmarked for existing molasses-based distillery & 10.5 Ha is earmarked for Grain based Distillery after expansion. In the existing molasses-based distillery, 4.53 ha land i.e., 46% of total area is developed as greenbelt. In grain-based distillery (after expansion to 500 KLPD) 3.48 ha land i.e., 33% of total area will be developed as greenbelt. Layout is attached herewith as annexure-1.
(b)	Action plan with time line (i) To treat spent wash stored in the lagoon through incineration process. (ii) Disposal of sludge present in the lagoon.	Action plan with timelines attached herewith as annexure-2; (i) Treatment of stored rain water from lagoon have been started. Company will treat complete lagoon water with MEE along with incineration process and CPU within 30 days. (ii) Bottom sludge present in lagoon will be minimal after treatment of all water through MEE and incineration boiler. That sludge will be mixed with available press mud/K-Ash and will be given to the farmers as manure/compost.

	<p>(iii) Demolition of the existing 3 nos of spent wash lagoons.</p> <p>(iv) Disposal of C&D waste generated.</p>	<p>(iii) Company will dismantle all lagoons within 2 months.</p> <p>(iv) Company will be disposed construction debris as per C&D/MSW rules in covered vehicles.</p>
(c)	<p>Action plan with layout map to achieve 33% green belt in the grain distillery unit. Details of plant species to be planted.</p>	<p>33% (3.48 Ha) of total area (after expansion) of 10.5 Ha will be developed in upcoming monsoon season within 6 months from now @ 2500 plants/hectare. Details of month-wise plan with budget is along with plant species attached herewith as annexure-3.</p>
(d)	<p>Action plan with time line to cover Bagasse Storage Yard.</p>	<p>Bagasse storage yard already have been covered with profiling sheeting. Here is attached photographs;</p> 
(e)	<p>Layout Map clearly indicating proposed unit of distillery.</p>	<p>Layout map clearly indicting proposed unit of distillery attached herewith as annexure-4.</p>
(f)	<p>Action plan for construction of pucca road within the plant premises.</p>	<p>They have already constructed RCC roads in plant at maximum places wherever is required to avoid fugitive emissions however siding can be</p>

		made with the grass carpet or our own bricks to avoid generation of dust. Additional road will be constructed during expansion as required.
(g)	Location of additional storage tanks based on perceived risk, cumulative risk and societal risk.	Company will carry out Hazop study, accordingly new storage will be decided.



Annexure-2

Lagoon Liquid disposal plan:

Planning Table:

S. No	Particulars	Volume-KL	Sludge @2 %	Rain water	Feed to MEE/day	Thick Brix mix from Eva/day	Condensate water	No of Day to Treat for recycle into system	No of days to dismantle and dispose	Total no of days
1	Lagoon-1	1500	45	1455	260	15.6	244	6	10	16
2	Lagoon-2	3000	90	2910	260	15.6	244	11	10	21
3	Lagoon-3	3000	90	2910	260	15.6	244	11	10	21
							Total Days	28	30	58

Disposal of Condensate after MEE:

Evaporator Feed Capacity	1728
Actual feed per Day	1368
Balance Capacity Available	360
Feed from lagoon	250
CPU Capacity	1250
Actual feed per Day	750
Balance possible lagoon condensate	500
Extra feed due to lagoon water	235

Disposal of Thick Liquid after MEE through incineration:

Designed Capacity of Incineration Boiler to consume thick brix liquid firing.	17.5 TPH
Presently Incineration boiler consuming thick brix liquid for firing.	8.0 TPH
Remaining capacity in incineration boiler of Molasses based distillery to consume thick brix liquid for firing @ 1 TPH only.	9.5 TPH

Action Plan of Bottom Sludge:

1.	Bottom Sludge present in lagoon will be minimal after treatment of all water through MEE and incineration boiler. That sludge will be mixed with available press mud/K-Ash and will be given to the farmers as manure/compost.
2.	Given to farmers but may be very small quantity at one time only.

Disposal of C&D Waste:

1.	Lagoon wall to be dismantle mechanically without any human intervention in a safe and sound way with all safety measures.
2.	Company will be disposed construction debris as per C&D/MSW rules in covered vehicles.

Annexure-3

The company has planted approx. 4000 saplings, if required the company proposes to replace the number of non-survived species with the new one in the coming monsoon season.

Detailed monthly action plan for achieving 8700 trees (3.48 ha land as per 2500 trees per ha) is shown below:

Month	Total number of trees	Local species
June	1500	<i>Gamhar (Gmelinaarborea), Neem (Azadirachta indica), Shisham (Dalbergia sissoo), Mango (Mangifera indica), Jamun (Java Plum), Sagwan (Tectonagrandis), Arjun (Terminalia arjuna), Ashoka (Saracaasoca), Mulberry (Morus alba), Gulmohar (Delonixregia) etc.</i>
July	2000	
August	1200	
	4700	
Estimated budget of above plantation is 15 lacs.		

Recommendations of the Sub-Committee:

- (i) PP shall develop greenbelt as per action plan furnished to achieve 8700 trees on 3.48 ha land at plant density of per 2500 trees per ha by December 2023. The saplings planted shall be 4-6 feet in height.

- (ii) PP shall treat the spent wash stored in three lagoons in the incinerator within the existing premises of grain based distillery in 58 days. Bottom sludge should be composted with press mud and shall be disposed as per norms. Action taken report along with photographs to be submitted to RO MoEFCC.
- (iii) The lagoon area shall not be used for fresh water storage The lagoons safter emptying shall be demolished and the demolition waste disposed in compliance with the provisions specified in Construction and Demolition waste 2016
- (iv) PP shall pave all roads within the plant.
- (v) PP shall procure industrial vaccuum cleaner for sweeping of the internal roads regularly (daily basis).
- (vi) PP shall make arrangement to keep ETP log book within the environmental laboratory. Apparatus available at the site seems to be old. PP shall upgrade the ETP as per Norms.
- (vii) PP shall undertake assessment of risk (perceived risk) for the proposed storage facilities (ethanol tank) and assessment of cumulative risk incorporating risk from the existing facilities include societal risk. Location of storage facilities shall be determined in such a way that in case of any adverse or abnormal situations there shall not be any impact beyond the boundary of the of the company.
- (viii) PP shall install display board at the entrance depicting environmental parameter details
- (ix) Company shall provide the environmental and safety messages as a part of awareness creation within the plant premises and outside the plant premises.
- (x) PP shall provide details of the total area under green belt in the molasses based distillery and the area under green belt in the 3.0 Ha. to be shifted to Dalmia Bharat Sugar and industries Limited .
- (xi) PP shall give undertaking that area of green belt even if more than 33% in the molasses based distillery after hiving of 3.0 Ha. for the proposed expansion of grain based distillery of M/s. Dalmia Bharat Sugar and Industries Limited shall not be reduced .
- (xii) PP shall get the EC amendment for the molasses based distillery from which 3.0 Ha. of land is hived for the present proposed expansion of Dalmia Bharat Sugar and industries Limited .
- (xiii) PP shall provide Copy of EC of the adjacent Molasses based distillery unit , from where 3.0 Ha. land is to be taken for the

proposed expansion of M/s. Dalmia Bharat Sugar and Industries Limited .

During deliberations, EAC discussed following issues:

The Committee deliberated the site visit report and response of PP on the comments/suggestions of the Sub Committee. Response of PP on recommendations of Subcommittee is as given below:

S. No	EAC Committee points	Project Proponent Reply
1.	PP shall develop greenbelt as per action plan furnished to achieve 8700 trees on 3.48 ha land at plant density of per 2500 trees per ha by December 2023. The saplings planted shall be 4-6 feet in height.	Company will develop greenbelt of 4-6 feet saplings in height to achieve 8700 trees on 3.48 ha land at plant density of per 2500 trees per ha by December 2023 as per action plan attached herewith as Annexure-1.
2.	PP shall treat the spentwash stored in three lagoons in the incinerator within the existing premises of grain-based distillery in 58 days. Bottom sludge should be composted with press mud and shall be disposed as per norms. Action taken report along with photographs to be submitted to RO MoEFCC.	Company will treat the spent wash stored in three lagoons in the incinerator within the existing premises of grain-based distillery in 58 days and bottom sludge should be composted with press mud/K-Ash and shall be disposed as compost. Company will also submit action taken report along with photographs to RO MoEFCC after complete development.
3.	The lagoon area shall not be used for fresh water storage. The lagoons safer emptying shall be demolished and the demolition waste disposed	Company agreed the same and will do the safer emptying of lagoons and will be demolished as per Construction and Demolition waste 2016. The demolition waste will be disposed off in compliance with the provisions

	in compliance with the provisions specified in Construction and Demolition waste 2016.	specified in Construction and Demolition waste rules 2016.
4.	PP shall pave all roads within the plant.	Company has already constructed RCC roads in plant at maximum places wherever is required to avoid fugitive emissions however siding can be made with the grass carpet or our own bricks to avoid generation of dust. Additional road will be constructed during expansion as required.
5.	PP shall procure industrial vacuum cleaner for sweeping of the internal roads regularly (daily basis).	Company will procure industrial vacuum cleaner for sweeping of the internal roads regularly (on daily basis) to avoid fugitive emission.
6.	PP shall make arrangement to keep ETP log book within the environmental laboratory. Apparatus available at the site seems to be old. PP shall upgrade the ETP as per Norms.	Company is maintaining all ETP log book in SCADA and physical form as per scanned copy attached herewith as Annexure-2 . Company will upgrade the Apparatus in the ETP as per Norms.
7.	PP shall undertake assessment of risk (perceived risk) for the proposed storage facilities (ethanol tank) and assessment of cumulative risk incorporating risk from the existing facilities include societal risk. Location of storage facilities shall be determined in such a way that in case of any adverse or abnormal	Company will install ethanol storage facilities after HAZOP study which will be done within 3 months from now. Undertaking of same is attached herewith as Annexure-3 .

	situations there shall not be any impact beyond the boundary of the of the company.	
8.	PP shall install display board at the entrance depicting environmental parameter details.	Company has already installed display board at the entrance depicting environmental parameter details as per Annexure-4.
9.	Company shall provide the environmental and safety messages as a part of awareness creation within the plant premises and outside the plant premises.	Company has already started the work and few of the photographs attached herewith as Annexure-5. It will be further get strengthen as well.
10	PP shall provide details of the total area under green belt in the molasses-based distillery and the area under green belt in the 3.0 Ha to be shifted to Dalmia Bharat Sugar and industries Limited.	Total greenbelt in molasses based distillery is 4.53 ha, i.e., 46% of total revised area (9.73 ha) & the same will be maintained. There is no greenbelt in the proposed 3.0 ha area likely to be shifted.
11	PP shall give undertaking that area of green belt even if more than 33% in the molasses-based distillery after hiving of 3.0 Ha. for the proposed expansion of grain-based distillery of M/s. Dalmia Bharat Sugar and Industries Limited shall not be reduced.	Undertaking of greenbelt is attached herewith as Annexure-3.
12	PP shall get the EC amendment for the molasses-based distillery from which 3.0 Ha. of land is hived for the	Amendment in molasses-based distillery's EC has already applied vide proposal no. IA/UP/IND2/297963/2023. Copy attached as Annexure-6.

	present proposed expansion of Dalmia Bharat Sugar and industries Limited.	
13	PP shall provide Copy of EC of the adjacent Molasses based distillery unit, from where 3.0 Ha. land is to be taken for the proposed expansion of M/s. Dalmia Bharat Sugar and Industries Limited.	Copy of EC of Molasses based distillery is attached herewith as Annexure-7 .
14	PP shall maintain <10 ppm BOD in existing STP.	Company will maintain <10 ppm BOD in the existing STP.
15	PP shall provide picture of piezometer in grain-based distillery along with report.	Pictures of recently installed piezometer in grain-based distillery along with report is attached herewith as Annexure-8 .

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 expansion of 300 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). PP shall treat the spentwash stored in the existing three lagoons in the incinerator within the existing premises of grain based distillery in 58 days. Bottom sludge should be composted with press mud and shall be disposed as per norms. Action taken report alongwith photographs to be submitted to RO MoEFCC.
- (v). The lagoon area shall not be used for fresh water storage The lagoons after emptying shall be demolished and the demolition waste disposed in compliance with the provisions specified in Construction and Demolition Waste 2016.
- (vi). 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. No ground water shall be used for the plant operations.
- (vii). Total fresh water requirement after expansion shall not exceed 1946 m³/day, which will be met sourced 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.
- (viii). 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). 200 KLPD 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.

- (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). Electro Static Precipitator (5 field) with a stack of height of 50 m will be installed with proposed 60 TPH Rice Husk/Bagasse/Biomass fired boiler for controlling the particulate emissions within the statutory limit of 50 mg/Nm³. Electro Static Precipitator with a 50 m high stack is installed with the existing 50 TPH biomass based boiler for controlling the particulate emissions within the statutory limit of 50 mg/Nm³. No coal shall be used as fuel. In the event of failure of any pollution control system installed 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.
- (xi). Boiler ash (122 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.
- (xii). CO₂ (375 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.
- (xiii). 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.
- (xiv). 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.

- (xv). 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.
- (xvi). 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.
- (xvii). PP shall pave all roads within the plant. PP shall procure industrial vacuum cleaner for sweeping of the internal roads regularly (daily basis). PP shall keep ETP log book within the environmental laboratory. Laboratory apparatus available at the site seems to be old and shall be replaced. PP shall upgrade the ETP as per Norms. PP shall install display board at the entrance depicting environmental parameter details. Company shall provide the environmental and safety messages as part of awareness creation within the plant premises and outside the plant premises.
- (xviii). PP shall undertake assessment of risk (perceived risk) for the proposed storage facilities (ethanol tank) and assessment of cumulative risk incorporating risk from the existing facilities including societal risk. Location of storage facilities shall be determined in such a way that in case of any adverse or abnormal situations there shall not be any impact beyond the boundary of the of the company.
- (xix). 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.
- (xx). The green belt of at least 5-10 m width shall be developed in 2.48 hectares i.e., 33.00 % 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. PP shall develop greenbelt as per action plan furnished to achieve 8700 trees on 3.48 ha land at plant density of per 2500 trees per ha by December 2023. The saplings planted shall be 4-6 feet in height.

- (xxi). PP proposed to allocate Rs. 3.0 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.
- (xxii). 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.
- (xxiii). 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.
- (xxiv). Continuous online (24x7) emissions/effluent monitoring system 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.

- (xxv). 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.
- (xxvi). 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 200 KLPD Grain based Ethanol Plant & 5.3 MW Captive power plant (Fuel: Bagasse and Coal) located at Village Jeevanagi, Hobali Mahagaon, Tal. Kamalapur, Dist. Kalaburagi, State Karnataka by M/s. Maashree Distillery Pvt. Ltd-Consideration of Environmental Clearance.

[IA/KA/IND2/417182/2023; IA-J11011/434/2022-IA-II(I)]

The Project Proponent and the accredited Consultant. M/s. MITCON Consultancy and Engineering Services Ltd. (NABET certificate no. NABET/EIA/2124/RA 0229_Rev 02 and validity 05.02.2024) made a detailed presentation on the salient features of the project and informed that the proposal is for environmental clearance to the project for 200 KLPD Grain based Ethanol Plant & 5.3 MW Captive power plant (Fuel: Bagasse and Coal) located at Village Jeevanagi, Hobali Mahagaon, Tal. Kamalapur, Dist. Kalaburagi, State Karnataka by M/s. Maashree Distillery 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	Total Production capacity
1	Distillery (Maize, broken rice and other grain, etc.)	Ethanol	200KLPD
2	Captive power plant	Power	5.3 MW
3	DWGS Dryer	DDGS	90MT/D

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 11.77 hectares. Greenbelt will be developed in total area of 3.88 hectares i.e., 33% of total project area. The estimated project cost is Rs. 220.01 Crores. Capital cost of EMP would be Rs. 22.135 Crores and recurring cost for EMP would be Rs. 1.72 Crores per annum. Industry proposes to allocate Rs. 3.30 Crores towards Extended EMP (Corporate Environment Responsibility). Total Employment will be 270 persons as direct & indirect.

There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance. Nagur Halla is at a distance of 1.28 Km in south direction. Belkote canal is at a distance of 1.77 km.

AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.036 µg/m³, 0.022 µg/m³, 1.92 µg/m³ and 0.956 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 807 CMD which will be met from Ground water. Permission shall be obtained from the government after receiving the copy of Environmental Clearance. Effluent (Condensate/spent

lees/blowdown etc.) of 971 CMD quantity will be treated through Condensate Polishing Unit of capacity 1000 CMD. Raw stillage 1491 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 5.3 MW and will be met from own 5.3 MW captive power plant. 45 TPH biomass/coal 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. 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 60 m height stack shall be installed for controlling particulate matter emissions.
- Online Continuous Emission Monitoring System will be installed with the stack and data will be transmitted to CPCB/SPCB servers.
- CO₂ (160 TPD) generated during the fermentation process is being/will be collected by utilizing CO₂ scrubbers and it shall be collected in proposed bottling plant

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

- DDGS (Distilled Dried Grains Stillage) (90TPD) will be sold as cattle feed.
- Boiler ash (25.7 TPD) will be used for brick manufacturing and supplied to brick manufacturers
- Used oil (2.0 Kilolitres per annum) will be sold to authorized recyclers
- CPU sludge (2.2TPD), STP Sludge (0.4 TPD) and Bagasse Ash (52.2TPD) will be used as manure.

As per Notification S.O 2339(E), dated 16th June, 2021, PP has submitted self- certification in the form of notarized affidavit declaring that the

proposed capacity of 200 KLPD will be used for manufacturing fuel ethanol only.

Total land of 11.77 Hectares is under possession of the company and land use conversion application has been submitted to Government of Karnataka dated 28.07.2022. EAC found the response satisfactory.

Capital cost and recurring cost of EMP are given below:

Sr. No	Construction phase (with Break-up)	Capital Cost	O & M (Annual)
		(Amount in Crore)	(Amount in Crore)
1.	Environmental monitoring	—	0.015
2.	During site preparation	0.015	0
3.	Noise and solid waste management	0.01	0
4.	Water and waste water	0.04	0
5.	Occupational health	0.03	0.02
6.	Greenbelt development	0.04	0.04
A	Total	0.135	0.075
Sr. No	Operation Phase (with Break-up)	Capital Cost	O & M
		(Amount in Crore)	(Amount in Crore)
1.	Air (ESP, Stack and supplementary requirements)	8.40	0.70
2.	Water (CPU, Dryer and Decanter)	7.00	0.65
3.	Environmental Monitoring (Air, water, waste water, Soil, Solid waste, Noise)	0.85	0.05
4.	Occupational Health	0.80	0.08
5.	Green belt	0.55	0.055
6.	Solid waste	0.60	0.06
7.	Rain water harvesting	0.50	0.05
8.	CER Cost	3.30	0
B	Total	22.00	1.645
TOTAL (A +B)		22.135	1.72

Details of CER with proposed activities and budgetary allocation:

CER activity	2022-23	2023-24	Total (Lacs)
	(Lacs)	(Lacs)	

Lighting by LED bulb/ solar panels	30	30	60
Tree plantation along the road side	35	20	55
Provision of infrastructure facilities such as auditorium halls, Laptops and filtered drinking water facilities in schools	40	30	70
Plastic ban Awareness in nearby villages	30	15	45
Providing RO Water filters in nearby schools	25	25	50
Rainwater harvesting and provision of toilets in schools	25	25	50
Total	185	145	330

During deliberations, EAC discussed following issues:

- PP shall submit measures that shall be taken to mitigate NO_x and SO₂ emissions along budgetary allocation in EMP and CER.
- Risk assessment plan.

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

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

The Committee noted that the EMP report is in compliance of the PFR. The Committee deliberated on the CER plan and found to be addressing the issues in the study area. The EAC has deliberated the proposal and has made

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

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

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

- (i). As per the Notification S.O. 2339(E), dated 16th June, 2021, project falls in category B2 and the proposed capacity of 200 KLPD shall only be used for fuel ethanol manufacturing as per self-certification in form of a notarized affidavit by the Project Proponent. Provided that subsequently if it is found that the ethanol, produced based on the EC granted as per this dispensation, is not being used completely for EBP Programme, or if ethanol is not being produced, or if the said distillery is not fulfilling the requirements based on which the project has been appraised as category B2 project, the EC shall stand cancelled.
- (ii). The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented.
- (iii). EC granted for a project on the basis of the submitted documents shall become invalid in case the actual land for the project site turns out to

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

- (iv). 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 807 m³/day, which will be sourced 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/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 shall be based on 'Zero Liquid Discharge' system and no effluent/treated water shall be discharged outside factory premises.
- (vii). ESP (five fields) with 60 meters high stack will be installed with the 45 TPH biomass /Coal fired boiler for controlling the particulate matter emissions within the statutory limit of 30 mg/Nm³. SO₂ and NO_x emissions shall be less than 100 mg/Nm³. At no time, the emission levels shall exceed the prescribed standards. In the event of failure of any pollution control system installed 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 (25.7 TPD) will be used for brick manufacturing and supplied to brick manufacturers. PP shall use biomass like rice husk/bagasse as

fuel for the proposed boiler. Low sulphur coal with maximum sulphur content of 0.5% shall only be used. PP shall meet 10% of the total power requirement from solar power by generating power inside plant premises/adjacent/nearby areas. Approach to the project site to the nearest highway will be maintained by the Industry.

- (ix). CO₂ (160 TPD) generated during the fermentation process is being/will be collected by utilizing CO₂ scrubbers and it shall be 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 3.88 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. PP shall maintain the connecting road from the plant to the Highway.

- (xvi). PP proposed to allocate Rs. 3.30 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, 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) system for monitoring of stack emissions/effluent quality shall be installed for measurement of flue gas emissions and the pollutants concentration, and the data shall 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. 04

Expansion of Grain based distillery from 100 KLPD to 205 KLPD by new installation of 105 KLPD Grain based Ethanol plant along with Co-generation power plant from 3.0 MW to 4.6 MW at Village Chulkana, Tehsil Samalkha, District Panipat, Haryana by M/s. Haryana Organics (A Division of Globus Spirits Limited)- Consideration of Environmental Clearance.

[IA/HR/IND2/408610/2022; IA-J-11011/714/2009-IA II (I)]

The Project Proponent and the accredited Consultant J.M. EnviroNet Pvt Ltd. (NABET certificate no. NABET/EIA/2023/SA 0172 and validity till 7th August, 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 Grain based distillery from 100 KLPD to 205 KLPD by new installation of 105 KLPD Grain based Ethanol plant along with Co-generation power plant from 3.0 MW to 4.6 MW at Village Chulkana, Tehsil Samalkha, District Panipat, Haryana by M/s Haryana Organics (A Division of Globus Spirits Limited).

As per the MoEF&CC, Notification number S.O. 345(E), dated 17th January, 2019, notification number S.O. 750(E), dated 17th February, 2020, S.O. 980 (E) dated 02nd March, 2021 & S.O. 2339(E), dated 16th

June, 2021 a special provision in the EIA Notification, 2006 (Schedule 5 (g)), a special provision in the EIA Notification, 2006-(Schedule 5(g)) "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 unit	Name of the product/by product	Existing Production capacity	Additional Production capacity	Total production capacity
1	Distillery (Grain -broken rice, maize, barley & sorghum based)	Existing: ENA/RS/CL/IMFL Additional: Ethanol only	100 KLPD ENA/RS/CL (12000 Cases/day) &IMFL (10000 Cases/day)	105 KLPD Ethanol only	205 KLPD (ENA/RS/CL & IMFL and Ethanol)
3.	Co-generation power plant for distillery	Power	3.0 MW	1.6 MW	4.6 MW
3	DWGS Dryer	DDGS	58 TPD	46 TPD	104 TPD
4	Fermentation unit	Carbon di-oxide	76 TPD	81 TPD	157 TPD

Ministry has issued Environmental Clearance to the existing industry for expansion of Grain/Molasses based distillery unit (25 KLPD) to Grain (100 KLPD) or Grain (75 KLPD) and Molasses (25 KLPD) with Cogeneration Power Plant (3 MW) vide File No. J-11011/714/2009-IA II (I) dated 28th February, 2011. Certified compliance report of existing EC has been obtained from Regional Office, MoEFCC, Chandigarh vide File no. 4-954/2011/ENV/PART-II dated 10.08.2022. Closure Report has been obtained by IRO, MOEFCC, Chandigarh Vide File no. 4-954/2011-IRO dated 20.01.2023. EAC was satisfied with the response.

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 6.878 ha (17 acres) which is under possession of the company and converted to industrial use. No additional land is required for the expansion, as the same will be done within the existing plant premises. Out of the total plant area, 2.427 ha i.e., more than 33 % of total plant area already been developed and the same will be maintained. The estimated cost of the proposed Expansion project is Rs. 98 Crores. Capital cost of EMP would be Rs. 17.25 Crores and recurring cost for EMP would be Rs. 2.0 Crores per annum. Industry proposes to allocate additional Rs. 1.0 Crore towards Extended EMP (Social developmental activities). Total Employment after expansion will be 200 persons as direct.

There are no National Parks, Reserved Forests (RF) / Protected Forests (PF), Wildlife Sanctuaries, Biosphere Reserves, Tiger/ Elephant Reserves, Wildlife Corridors etc. within 10 km radius. Water bodies: Samalkha Drain adjacent to plant site in East direction, Samalkha Distributary is located at a distance of 0.5 km in WNW direction, Ganaur Distributary is located at a distance of 3.5 km in WSW direction, Western Distributary is located at a distance of 5 km in WNW direction, Narayana Distributary is located at a distance of 7.0 km in WNW direction & Rajpura Distributary is located at a distance of 8.5 km in SSW direction. NOC has been obtained for Samalkha drain from Sub Divisional officer, Samalkha W.S Sub Division, Panipat vide letter no. 16/NOC dated 27.01.2023 stating that there is no problem of flood in flood season since 25 years.

AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be $0.656 \mu\text{g}/\text{m}^3$, $0.262 \mu\text{g}/\text{m}^3$, $0.729 \mu\text{g}/\text{m}^3$ and $0.84 \mu\text{g}/\text{m}^3$ with respect to PM_{10} , $\text{PM}_{2.5}$, SO_2 and NO_x . The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

Total fresh water requirement after expansion will be 952 CMD which will be met from ground water. Combined application has been submitted to HWRA for renewal of existing NOC and for additional abstraction of 400 KLPD groundwater vide Application No. HWRA/IND/R/2022/197 dated 19.06.2022 & is under process. Existing effluent generation is 548 CMD which is treated through Condensate Polishing Unit /Effluent Treatment Plant of capacity 600 CMD. Proposed effluent generation (Process Condensate 436 CMD, CT blowdown 15 CMD, DM plant reject & washing 55 CMD, Boiler blow-down 13

CMD) will be 519 CMD will be treated through additional Condensate Polishing Unit /Effluent Treatment Plant of capacity 600 CMD. Raw stillage (1215 TPD) will be sent to decanter followed by MEE and dryer to produce DDGS. Domestic waste water is being/will be treated in STP of capacity 20 KLPD. The plant is being/will be based on Zero Effluent discharge system and treated effluent/ water is being/will not be discharged outside factory premises.

Total power requirement after expansion will be 4.6 MW which will be sourced from 4.6 MW Co-generation power plant. Existing distillery has 25 TPH & 10 TPH Biomass/Rice husk/Agro waste fired boiler. 30TPH Biomass/Rice husk/Agro waste fired boiler will be installed by replacing 10 TPH boiler. APCE ESP with a stack height of 44.2 m & 42.67 m is installed with the existing boiler for controlling the particulate emission within the statutory limit of 50 mg/Nm³. APCE ESP with stack height of 50 m will be installed for controlling the particulate emissions within the statutory limit of 50 mg/Nm³ for the proposed boiler. Industry has existing 1x380 KVA DG set & one proposed 1x750 KVA DG set will be used as power backup during power failure and stack height (5.5 m) will be provided as per CPCB norms to the proposed DG set.

Details of Process emissions generation and its management:

- APCE ESP with a stack height of 44.2 m & 42.67 m is installed with the existing 25 TPH & 10 TPH Biomass/Rice husk/Agro waste fired boiler respectively for controlling the particulate emissions within the statutory limit of 50 mg/Nm³. APCE ESP with a stack height of 50 m will be installed for controlling the particulate emissions within the statutory limit of 50 mg/Nm³ for the proposed 30 TPH Biomass/Rice husk/Agro waste fired boiler by replacing existing 10 TPH boiler.
- Online Continuous Emission Monitoring System is being/will be installed with the stack and data will be transmitted to CPCB/SPCB servers.
- CO₂ (157 TPD) generated during the fermentation process is being/will be collected and sold to authorized vendors as per local demand

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

- DDGS (Distilled Dried Grains Stillage) (104 TPD) is being/will be sold as cattle feed.
- Boiler ash (57 TPD) generated from the boiler is being/will be supplied to brick manufacturers in covered vehicles and given to farmers also.
- Used oil & grease (0.5 Kilolitres per annum) is being/ will be sold to authorized recyclers.
- ETP/CPU sludge (1.2 TPD) and STP Sludge (0.01 TPD) is being/will be used as manure.

As per Notification S.O 2339(E), dated 16th June, 2021, PP has submitted self- certification in the form of notarized affidavit declaring that the proposed expansion capacity of 105 KLPD will be used for manufacturing fuel ethanol only.

Capital cost and recurring cost of EMP are given below:

S. No.	Description		Capital Cost (Crores)	Recurring Cost/annum (Crores)
1	Air Pollution Management	ESP + Stack+ up gradation in existing ESP, online monitoring system	8.6	0.55
2	Effluent Treatment	Condensate polishing unit/ ETP and STP	5.5	0.8
3	Environment Monitoring	Lab instrument, Online Monitoring System, Third party monitoring, audit	0.5	0.10
4	Solid waste Management	Ash Handling & Management, Others	2.4	0.45
5	Greenbelt & Plantation Development	Plantation for Greenbelt	0.25	0.10
Total			17.25	2.0

Details of CER with proposed activities and budgetary allocation:

Proposed Activities	Proposed	Proposed	Total
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	budget in 1st Year	budget in 2nd Year	Expenditure (lakhs)
Health facilities- Distribution of medical instruments, oxygen cylinders to nearby health centre and hospitals	Rs. 10 Lakhs (PHC in Village-Chulkana)	Rs. 10 Lakhs (PHC in Village-Kiwana)	Rs. 20.0
Education - Infrastructure Renovation of Govt schools & classroom development, Provision of digital education in school & laptop distribution, sanitation facilities, safe drinking water etc.	Rs. 20 Lakhs (Govt school in Village-Kiwana)	Rs. 10 Lakhs (Govt school in Village-Chulkana)	Rs. 30.0 Lakhs
Skill Development - Establishment of Skill Development centre for Youth & organising Training programmes for youth/residents.	Rs. 7.5 Lakhs (Village-Kiwana)	Rs. 7.5 Lakhs (Village-Chulkana)	Rs. 15.0 Lakhs
Infrastructure Construction/Renovation- Solar power installation in schools & Panchayat bhavan, rainwater harvesting system, development of community halls & nearby plantations etc	Rs. 20 Lakhs (Village-Chulkana)	Rs. 15 Lakhs (Village-Kiwana)	Rs. 35.0 Lakhs
TOTAL			Rs.100 Lakhs

During deliberations, EAC discussed following issues:

- EAC suggested that the company will increase provisions of solar power within plant and to the nearby areas from 10% to 15% of total power consumption of the unit in form of solar lights/solar panels/solar gadgets etc. as a part of socio economic developmental activities.
- Existing distillery has 25 TPH & 10 TPH Biomass/Rice husk/Agro waste fired boiler. The company will dismantle the existing 10 TPH boiler & install 30 TPH Biomass/Rice husk/Agro waste fired boiler. For this proposed 30 TPH boiler, 50 meters stack height & ESP as APCE will be installed & designed for the statutory limit of 50 mg/Nm³ for controlling the particulate emissions.
- EAC suggested to revise EMP details considering the modification/up gradation in ESP along with allied utilities. Accordingly, PP has

increased the EMP Capital cost from Rs. 12.0 Crores to Rs. 17.25 Crores and EMP recurring cost from Rs. 1.5 Crores per annum to Rs. 2.0 Crores per annum.

- EAC suggested that existing greenbelt in 33% of total project area, i.e., 2.427 ha will be densified@2500 trees/ha & the same will be achieved within December, 2023.

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 expansion capacity of 105 KLPD shall only be used for fuel ethanol manufacturing as per self-certification in form of a notarized affidavit by the Project Proponent. Provided that subsequently if it is found that the ethanol, produced based on the EC granted as per this dispensation, is not being used completely for EBP Programme, or if ethanol is not being produced, or if the said distillery is not fulfilling the requirements based on which the project has been appraised as category B2 project, the EC shall stand cancelled.
- (ii). The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented.
- (iii). EC granted for a project on the basis of the submitted documents shall become invalid in case the actual land for the project site turns out to be different from the land considered at the time of appraisal of project. Conversion of land use (CLU) certificate shall be obtained before start of construction activities.
- (iv). NOC from the Central Ground Water Authority (CGWA)/ Concerned Local authority shall be obtained before start of the construction of plant and drawing of the ground water for the project activities. State Pollution Control Board / Pollution Control Committees shall not issue the Consent to Operate (CTO) under Air (Prevention and Control of Pollution) Act and Water (Prevention and Control of Pollution) Act till the project proponent shall obtain such permission. No ground water shall be used for the plant operations.

- (v). Total fresh water requirement after expansion shall not exceed 952 m³/day, which will be sourced 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/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 shall be based on 'Zero Liquid Discharge' system and no effluent/treated water shall be discharged outside factory premises.
- (vii). ESP with a stack height of 44.2 m is already installed with the existing 25 TPH Rice husk/Agro waste fired boiler for controlling the particulate emissions within the statutory limit of 50 mg/Nm³. ESP (five fields) with a stack height of 50 meters will be installed with the 30 TPH Biomass/Rice husk/Agro waste fired boiler for controlling the particulate emissions within the statutory limit of 50 mg/Nm³. Coal shall not be used as fuel. At no time, the emission levels shall exceed the prescribed standards. In the event of failure of any pollution control system installed 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. As proposed existing 10 TPH boiler shall be dismantled and disposed in an environmentally sound manner.
- (viii). Boiler ash (57 TPD) will be used for brick manufacturing and supplied to brick manufacturers. PP shall use biomass like rice husk/agro waste as fuel for the proposed boiler. PP shall meet 15% 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 (157 TPD) generated during the fermentation process will be collected by utilizing CO₂ scrubbers and shall be sold to authorized vendors.
- (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 has been developed in 2.427 hectares i.e., 35.28 % of total project area with tree density @ 2500 trees per hectares, mainly along the plant periphery and same will be maintained. 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. 1.00 Crores towards Extended EMP (CER) which shall be spent as submitted in CER plan for monitorable activities like up-gradation of schools with provision of facilities e.g. Class rooms, playground, Laboratory, Library, Computer class, toilets, potable drinking water facilities, solar light/solar power support for uninterrupted power supply, soil nutrient management etc. Further, all the proposed activities under CER shall be completed before the commissioning of the plant in consultation with District Administration.
- (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) system for monitoring of stack emissions/effluent quality shall be installed for flue gas emissions and the pollutants concentration, and the data shall 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. 05

Proposed Expansion of Sugar Crushing Plant from 3500 TCD to 6000 TCD, Co-generation from 14 MW to 38 MW and B Heavy Molasses/Sugar Juice based Distillery of 200 KLPD by Shri Bhima Shankar Sahakari Sakkare Karkhane Ltd- Consideration of Environmental Clearance.

[IA/KA/IND2/415602/2023; IA-J-11011/125/2022-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 2 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 expansion of Sugar Crushing Plant from 3500 TCD to 6000 TCD, Co-generation from 14 MW to 38 MW and B Heavy Molasses/Sugar Juice based Distillery of 200 KLPD located at Village Maraguru, Tehsil Indi, District Vijayapur, State Karnataka by M/s. Shri. BhimaShankar Sahakari Sakkare Karkhane Ltd.

All molasses based distillery projects of more than 100 KLD capacity are listed at item 5(g) under Category "A", whereas Sugar industries \geq 5000 TCD cane crushing capacity and Thermal Power plants are listed at item 5(j) and 1(d) under Category "B" in the Schedule of Environment Impact Assessment (EIA) Notification, 2006. As an integrated project the proposal is appraised at Central Level by Expert Appraisal Committee (EAC).

The details of products and capacity as under:

S. No	Unit	Product/by-product	Existing Quantity	Proposed Quantity	Total Quantity
1	Sugarcane crushing plant	Sugar cane	3500 TCD	2500 TCD	6000 TCD
2	Distillery	Ethanol/RS/ENS/AA	-	200 KLPD	200 KLPD
3	Cogeneration	Power	14 MW	16 MW	30 MW
4	Captive power plant (distillery)	Power	-	8 MW	8 MW
5	By products	Bagasse	1125 MTD	801 MTD	1926 MTD
6		Molasses	158 MTD	112 MTD	270 MTD
7		Press mud	140 MTD	100 MTD	240 MTD
8		CO ₂	-	135 TPD	135 136 TPD

Existing industry is operating on the basis of Consent to operate since sugar unit's crushing capacity (3500 TCD) is below the threshold limit (5000 TCB) of requirement of EC. Certified CTO compliance report has been issued dated from KSPCB dated 21 Jan 2023.

Standard Terms of Reference have been obtained vide F. No. IA/J-11011/125/2022-IA-II (I) dated 19th April 2022. It was informed that there is no litigation is pending against the project. Public hearing for the proposed project had been conducted by the Karnataka State Pollution Control Board on 29/10/2022 at Project Site Chaired by Additional Deputy Commissioner (ADC). The committee suggested to submit comprehensive action plan with time line and budget to address the issues raised in the Public Hearing.

Total plant area after expansion will be 71 Ha (existing plant area 3.73 Hectares for sugar mill and 2.12 Hectares for required for proposed distillery) 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 71 Hectares 33% of the total plant area, existing 8.2 ha has already been developed as greenbelt & plantation and the same will be maintained and additional proposed area of 15.2 ha will be developed under greenbelt & plantation in and around plant premises. The estimated project cost is Rs. 338.84 Crores. Capital cost of EMP would be Rs. 18.55 Crores and recurring cost for EMP would be Rs.1.6 Crores per annum. Industry proposes to allocate Rs. 2.5 Crores towards extended EMP (Corporate Environment Responsibility). Total Employment after expansion will be 270 persons as direct & indirect.

There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance. Water bodies, Krishna Bhagya canal is at a distance of 5.02 km in SW direction & Kal halla at 4.9 KM (SE). River Bhima is at a distance of 2.5 KM in NW.

Ambient air quality monitoring was carried out at eight locations during 1st March 2022 to 31st May 2022 and the baseline data indicates the ranges of concentrations as: PM₁₀ (51.6 – 65.5 µg/m³), PM_{2.5} (22.3 – 27.9 µg/m³), SO₂ (5.85 – 11.7 µg/m³) and NO₂ (9.4 -16.2 µg/m³). AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.244 µg/m³, 0.183 µg/m³, 6.17 µg/m³ and 2.32 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 1266 CMD which will be met from Bhima River. NOC has been obtained from Irrigation Dept vide letter no. WRD 131 KBS 2016 dated. 11/08/2016. Existing effluent generation is 528 CMD which is treated through ETP of capacity 700 KLD. Proposed effluent generation will be 2070 CMD which will be treated through proposed Condensate Polishing Unit of capacity 2100 CMD. Domestic waste water will be treated in 15 CMD STP. The plant will be based on Zero Liquid discharge system and treated effluent will not be discharged outside the factory premises.

Total power requirement of distillery/ sugar mill after expansion will be 18.6 MW which will be sourced from existing 14 MW and proposed 16 MW co-generation power plant & 8 MW (distillery captive unit). The existing 90 TPH Biomass/coal fired boiler will be upgraded to 110 TPH Biomass/coal fired boiler with 70 m stack for sugar unit and additional 45 TPH incineration boiler with 60 m stack will be installed. APCE ESP with a stack of height of 55 m is installed with the existing boiler for controlling the particulate emissions within the statutory limit of 50 mg/Nm³. APCE as ESP will be installed for both proposed boiler for controlling the particulate emissions within the statutory limit of 50 mg/Nm³. Industry has 550 KVA DG set X 2 no.s, which will be used as standby during power failure and stack height (11 m) will be provided as per CPCB norms to the proposed DG sets.

Details of Process emissions generation and its management:

- 135 TPD CO₂ generated from process will be scrubbed and bottled/dry ice.
- The emissions from the stack will be monitored continuously through online monitoring system for exit concentration of the suspended particulate matter, SO₂ µg/m³ and NO_x µg/m³. Also, sampling ports will be provided in the stacks as per CPCB guidelines. If the concentration of these pollutants exceeds the limits, necessary control measures will be taken. Stack height of 70 m with ESP will be provided for 110 TPH boiler (sugar). Stack height of 60m with ESP will be provided for 45 TPH boiler (distillery)
- DG Sets will be provided with stack height of 11 m.
- Stack emissions will be regularly monitored by factory through third party on periodic basis to check the efficiency of air polluting control devices and necessary action

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

- Bagasse ash (25.8 TPD) and spent wash ash (19 TPD) contain high percentage of potash it is good nutrient for plant growth in agro-field.
- Coal ash (54.9 TPD) will send to brick manufacturer. Ash disposal agreement will be made accordingly
- Spent oil (1 TPA) will be send to authorized recyclers.

Capital cost and recurring cost of EMP are given below:

Construction Phase:

Sr. No.	Description	Capital Cost	O & M (Annual)
		Amount in crores	Amount in crores
1.	Environmental monitoring	0.00	0.05
2.	During site preparation	0.25	0.08
3.	Solid waste management	0.10	0.05
4.	Water and waste water	0.10	0.05
5.	Occupational health	0.10	0.05
6.	Greenbelt development	0.10	0.05
Total		0.65	0.33

Operation Phase

Sl.No	Description	Capital Cost in Crores	Recurring Cost in Crores/Annum
1.	Air (ESP, stack, OCEMS and supplementary requirements)	5.00	0.25
2.	CPU & STP	7.00	0.15
3.	Environmental Monitoring (Air, water, waste water, Soil, Solid waste, Noise)	0.15	0.07
4.	Occupation health & safety	0.50	0.25
5.	Green belt	1.25	0.20
6.	Solid waste	0.50	0.10
7.	Rain water harvesting	1.00	0.25
8.	CER	2.50	0
Grand Total		17.90	1.27

Details of CER with proposed activities and budgetary allocation:

CER activity	2024-25 (Amount in lakhs)
Solar for street lightning	40
Ambulance for Hospitals	15
Water filters	100

Provision of infrastructure facilities such as auditorium halls, Laptops and filtered drinking water facilities in schools	100
Grand Total	255

During deliberations, EAC discussed following issues:

- The committee suggested PP to submit comprehensive action plan with time line and budget to address the issues raised in the Public Hearing.
- EAC noted that the existing 90 TPH boiler is generating 14 MW power whereas it is proposed that by upgradation of boiler from 90 TPH to 110 TPH additional power of 16 MW will be generated. Therefore , the Committee suggested them to justify by Energy balance that further 16 MW will be created by enhancing 20 TPH.
- It was noted that several village roads are intersecting through the project site. PP shall commit to maintain all internal road within the plot area.
- The station location for monitoring of ambient air quality is not correct, as no monitoring was conducted in the predominant upwind direction.
- EAC noted that all sampling locations for air, ground water and noise pollution are at same points. EAC sought explanation for choosing all sampling locations identical. PP shall carry out 15 days air quality monitoring of base line at all stations including additional station in the predominant wind direction. Comparative analysis of data to be submitted.
- The Committee noted that BOD, COD data of Surface water sampling are completely wrong BOD values being more than COD values. It was suggested to examine the existing monitoring data and carry out fresh monitoring of surface water quality of river. The TDS values in Surface water are high , similar to the concentration in Ground water for which no clarification provided.
- PP shall reuse and recycle of entire treated water of sugar plant in the proposed distillery and cogen power plant in order to reduce the water requirements. PP shall give action plan for connecting treated water outlet of sugar unit with the raw water inlet of distillery unit along with installation of flow meter.
- Action plan for traffic management and impact of vehicular pollution on ambient air quality.
- Action plan to meet the norms of 30mg/Nm³ for PM and 100mg/ Nm³

for SO₂ and NO_x , as coal is proposed to be used as fuel.

- Revised CER and EMP budget.
- PP has not responded to the issues of jobs, water scarcity, reduction in sugarcane output raised during Public Hearing.
- PP shall submit the action plan for non compliance issues mentioned in certified CTO compliance.

In view of above, committee suggested to return the proposal in present form. Accordingly, proposal was returned in present form.

Agenda No. 06

Greenfield Project of 300 KLD Grain Based Ethanol Plant along with 6 MW Co-generation Power Plant located at Plot No. 140, 142B,153, 181, 183min, Village- Mohammad Ganj, Tehsil-Thakurdwara, Dist.- Moradabad, Uttar Pradesh by M/s. Pasupati Acrylon Limited- Consideration of Environmental Clearance.

[IA/UP/IND2/417651/2023, IA-J-11011/66/2023-IA-II(I)]

The Project Proponent and the accredited Consultant M/s GRC India Pvt Ltd (NABET certificate no. NABET/EIA/2124/RA0213 and valid till 15.02.2024) made a detailed presentation on the salient features of the project and informed that the proposal is for environmental clearance to the project Greenfield Project of 300 KLD Grain Based Ethanol Plant along with 6 MW Co-generation Power Plant located at Plot No. 140, 142B,153, 181, 183min, Village- Mohammad Ganj, Tehsil-Thakurdwara, Dist.- Moradabad, Uttar Pradesh by M/s Pasupati Acrylon 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	Ethanol	300 KLPD
2	Co-generation power plant	Power	6 MW
3	DWGS dryer	DDGS	130 TPD
4	Fermentation unit	Carbon di-oxide	225 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 8.09 hectares. Greenbelt will be developed in total area of 2.77 hectares i.e., 34.25% of total project area. The estimated project cost is INR Rs. 240 Crores. Capital cost of EMP would be INR Rs. 40.0 Crores and recurring cost for EMP would be INR Rs. 8.5 Crores per annum. Industry proposes to allocate Rs. 2.40 Crores towards Extended EMP (Corporate Environment Responsibility). Total Employment will be 160 persons as direct & indirect.

There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance. The RFs in the study area are as: Tumaria Ravines RF (4.1 km, N), Sheorajpur RF (7.5 km, N), Jaspur RF (9.5 km, N). Water bodies: Dhandhi River is at a distance of 0.01 Km in N direction. Tumaria Nadi is at a distance of 1.2 km in N direction, Dhela River is at a distance of 2.4 km in SE direction from the project site, Nachna Nala is at distance of 2.5 km in East direction, Pachhana Nala is at a distance of 2.7 km in East Direction, Lapkana Nala is at a distance of 6.7 km in West Direction, Jabdi Nala is at a distance of 7.9 km in West Direction. The flood NOC has been obtained from Afzalgarh Irrigation Section vide letter no. 1508 dated 19.07.2022.

AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be $0.14\mu\text{g}/\text{m}^3$, $0.05\mu\text{g}/\text{m}^3$, $1.67\mu\text{g}/\text{m}^3$, $0.84\mu\text{g}/\text{m}^3$ and $0.31\mu\text{g}/\text{m}^3$ with respect to PM_{10} , $\text{PM}_{2.5}$, SO_2 , NO_2 and CO. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

Total fresh water requirement including CPP will be 1200 KLD which will be met from Ground water. The permission for withdrawal of ground water has obtained from Uttar Pradesh Ground Water Department vide No. MRBDD422NIN0135 and MRBD0422NIN0136 dated 29.04.2022. Effluent (Condensate/spent lees/blowdown etc.) of 1220 KLD quantity will be treated through Condensate Polishing Unit/Effluent Treatment Plant of capacity 1500 KLD. Raw stillage will be sent to decanter followed by MEE and dryer to produce DDGS. STP capacity of 20 KLD will be installed to treat sewage generated from factory premises. The plant will be based on Zero Liquid discharge system and no effluent/treated water will be discharged outside factory premises.

Power requirement will be 6 MW and will be met from proposed 6 MW cogeneration power plant. 50 TPH Coal based/Biomass boiler will be installed. Stack height of 60 m will be installed for controlling the particulate emissions within the statutory limit of 30 mg/Nm³ for the proposed boiler. 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:

- Online Continuous Emission Monitoring System will be installed with the stack and data will be transmitted to CPCB/SPCB servers.
- Stack height of 60 meters will be installed for controlling the particulate emissions from DG Set.
- 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 proposed bottling plant.

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

- DDGS (Distilled Dried Grains Stillage) (130 TPD) will be sold as cattle feed/fish feed/ prawn feed.
- Boiler ash (70 TPD) will be used for brick manufacturing in proposed brick manufacturing plant.
- Used oil (2 Kilolitres per annum) will be sold to authorized re-cycler.
- ETP sludge (0.12 TPD) and STP Sludge (0.00273 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 300 KLPD will be used for manufacturing fuel ethanol only.

Total land is 8.09 Hectare, and the Land is taken under lease by M/s Pasupati Acrylon Limited. EAC found the response satisfactory.

Capital cost and recurring cost of EMP are given below:

S. No	Particulars	Capital Cost (In INR Cr)	Annual Recurring (Cost in INR Cr)
1	Air pollution control system ESP with stack, Industrial vacuum cleaner, road sweeping machine, etc.	6.5	0.85
2	Continuous Emission Monitoring System and Ambient Air Quality Monitoring System	0.85	0.3
3	Scrubbing system, compressing system, liquefying system and storage for CO2 removal	3.5	0.45
4	Treatment system for spent wash, DWGS centrifuge decanter, DDGS dryer for ZLD system, Construction of Garland drains, Water Reservoir	11.5	3.5
5	Condensate Polishing unit for water treatment and recycle, STP	4.5	1.05
6	Ash handling and management	2.5	0.45
7	Fire Fighting measures	1.55	0.35
8	In-house Solar power Plant	3.5	0.25
9	Rainwater harvesting systems	0.65	0.15
10	Occupational Health Management	0.5	0.32
11	Noise Reduction Systems	0.85	0.15
12	Green Belt Development	0.85	0.35
13	Environment monitoring	0	0.08
14	Environment management cell	0.35	0.25
15	CER	2.4	0

	Total	40	8.5
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Details of CER with proposed activities and budgetary allocation:

S. No	Description	Value in INR (Cr)
1.	a. Development of Village roads. b. Upgradation of drinking water facility by Installation of RO and water Purifier in nearby in nearby Village Bhuraghat, Mudapada, Gautampur and Bhagabanpur	0.85
2.	Installation of solar panels (15 nos.) in Village Babarkhera, Shahganj and Faridnagar	0.55
3.	Upgradation of medical facility in nearby hospital such as Donating medical equipment like Beds, Stretcher, Portable Oxygen Cylinder (330 Litre), Oxygen Concentrator (0.5 to 5 Ltr), AC (Window AC of 1.5 Ton) in Govt Hospital, Thakurdwara .	0.6
4.	Development of smart class, distribution of benches, Fans, drinking water facility, Upgradation of sanitary facility (One for male and one for female), Distribution of IT gadgets (students of class 12), Printers, Computers in schools present in nearby in nearby villages i.e., Primary Government School, Babarkhera 2.1 km (N), Primary School, Dhakiagulabo: 6.2 km (E) and Primary School, Kalewala: 6.45 km(SW)	0.4
	Total	2.40

During deliberations, EAC discussed following issues:

- EAC noted that Ministry has already granted EC vide EC Identification No EC22A060UP132849 letter dated 31.08.2022 for setting up of 150 KLPD Grain based Ethanol Plant & 4.0 MW Co-generation power plant (Biomass Based) for the same proposed site. PP has informed that Industry is planning to go for 300 KLPD distillery and 6 MW cogen power plant instead of 150 KLPD and 4 MW cogen power plant.

Therefore, PP has submitted application for surrendering existing EC Identification No EC22A060UP132849 letter dated 31.08.2022. Accordingly, Committee suggested to consider the instant proposal for enhanced capacities of 300 KLPD and 6 MW cogen power plant superseding earlier EC granted.

- PP shall submit measures that shall be taken to mitigate NO_x and SO₂ emissions along budgetary allocation in EMP.
- PP shall reduce net fresh water requirement to 4 kL/kL of Ethanol produced for distillery unit.
- Existing trees in the proposed plot shall be retained.
- No treated/ untreated effluent shall be discharged into the Dhandhi River. 20 m thick green belt buffer should be provided towards the Dhandhi River.
- PP shall revise the capital and recurring cost of EMP as suggested by EAC.

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 300 KLPD shall only be used for fuel ethanol manufacturing as per self-certification in form of a notarized affidavit by the Project Proponent. Provided that subsequently if it is found that the ethanol, produced based on the EC granted as per this dispensation, is not being used completely for EBP Programme, or if ethanol is not being produced, or if the said distillery is not fulfilling the requirements based on which the project has been appraised as category B2 project, the EC shall stand cancelled.
- (ii). The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented.
- (iii). EC granted for a project on the basis of the submitted documents shall become invalid in case the actual land for the project site turns out to be different from the land considered at the time of appraisal of project. Conversion of land use (CLU) certificate shall be obtained before start of construction activities.

- (iv). NOC from the Central Ground Water Authority (CGWA)/ Concerned Local authority shall be obtained before start of the construction of plant and drawing of the ground water for the project activities. State Pollution Control Board / Pollution Control Committees shall not issue the Consent to Operate (CTO) under Air (Prevention and Control of Pollution) Act and Water (Prevention and Control of Pollution) Act till the project proponent shall obtain such permission. No ground water shall be used for the plant operations.
- (v). Total fresh water requirement shall not exceed 1200 m³/day, which will be sourced 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/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 shall be based on 'Zero Liquid Discharge' system and no effluent/treated water shall be discharged outside factory premises.
- (vii). ESP (five fields) with a stack height of 60 meters will be installed with the 50 TPH biomass /Coal fired boiler for controlling the particulate emissions within the statutory limit of 30 mg/Nm³. SO₂ and NO_x emissions shall be less than 100 mg/Nm³. At no time, the emission levels shall exceed the prescribed standards. In the event of failure of any pollution control system adopted by the unit, the respective unit shall not be restarted until the control measures are rectified to achieve the desired efficiency. Performance assessment of pollution control devices/ systems will be conducted annually.
- (viii). Boiler ash (70 TPD) will be used for brick manufacturing in proposed brick manufacturing plant. PP shall use biomass like rice husk/bagasse as fuel for the proposed boiler. Low sulphur coal with maximum sulphur content of 0.5% shall only be used. PP shall meet 15% 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 (225 TPD) generated during the fermentation process is being/will be collected by utilizing CO₂ scrubbers and it shall be collected in proposed bottling plant.
- (x). PP shall allocate at least Rs. 50 Lakhs/annum for Occupational Health Safety. Occupational Health Centre for surveillance of the worker's health shall be set up. The health data shall be used in deploying the duties of the workers. All workers & employees shall be provided with required safety kits/mask for personal protection.
- (xi). Training shall be imparted to all employees on safety and health aspects of chemicals handling. Safety and visual reality training shall be provided to employees.
- (xii). The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire fighting system shall be as per the norms. PESO certificate shall be obtained.
- (xiii). Process organic residue and spent carbon, if any, shall be sent to Cement and other suitable industries for its incinerations. ETP sludge, process inorganic & evaporation salt shall be disposed of to the TSDF.
- (xiv). The company shall undertake waste minimization measures as below
(a) Metering and control of quantities of active ingredients to minimize waste; (b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes. (c) Use of automated filling to minimize spillage. (d) Use of Close Feed system into batch reactors. (e) Venting equipment through vapour recovery system. (f) Use of high pressure hoses for equipment clearing to reduce wastewater generation.
- (xv). The green belt of at least 5-10 m width shall be developed in 2.77 hectares i.e., 34.25 % 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. 2.40 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% of plant area i.e 1.21 Ha 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) system for monitoring of stack emissions/effluent quality shall be installed for measurement of flue gas emissions and the pollutants concentration, and the data shall 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. 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/IND2/417139/2023, 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.

As per the EIA Notification 2006 (Schedule 5 (g) Category A); however as per in the MoEFCC 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) dated 16th June, 2021, a special provision in the EIA Notification, 2006 "Expansion of sugar manufacturing units or distilleries for production of ethanol, having Prior Environment Clearance (EC) for existing unit, to be used completely for Ethanol Blended Petrol (EBP) Programme only, as per self-certification in

form of an affidavit by the Project Proponent, shall be appraised as category 'B2' projects.

The details of products and capacity as under:

S. No	Name of unit	Name of the product/by-product	Production capacity
1	Distillery (using grains as Raw material)	Ethanol	120 KLPD
2	Co-generation power plant	Power	3.4 MW
3	DWGS dryer	DDGS	54 TPD
4	Fermentation unit	Carbondi-oxide	66 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 4.99 hectares. Greenbelt will be developed in total area of 1.65 hectares i.e., 33.0 % of total project area. The estimated project cost is Rs. 110 Crores. Capital cost of EMP would be Rs 11.40 Crores and recurring cost for EMP would be Rs. 2.40 Crores per annum. Industry proposes to allocate Rs. 1.1 Crores towards Extended EMP (Corporate Environment Responsibility). Total Employment 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: Protected Forest at a distance of 13.22 km in West direction. The No national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors, Eco-sensitive Zone etc. Water bodies: Retam River is at a distance of 0.09 Km towards NW for which H.F.L Certificate has been obtained from Office of the Executive Engineer, Water Resources Division, Mandsaur (M.P.) vide letter no. 1966/tak/2022- dated 25/11/2022. Harikhayal Dam is at a distance of 6.98 Km in W direction.

AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.24 µg/m³, 0.06 µg/m³ and 0.6 µg/m³ with respect to PM₁₀, SO₂ and NO_x. The resultant

concentrations are within the National Ambient Air Quality Standards (NAAQS).

Total fresh water requirement will be 630 KLD which will be met from Retam River, permission for withdrawal of water from Retam Barrage has been obtained vide letter no. 1521/Karya/Aavantana/2022 dated 06.09.2022. Effluent (Condensate/spent lees/blowdown etc.) of 797 KLD quantity will be treated through Condensate Polishing Unit of capacity 800 CMD. Raw stillage (830.6 KLD : quantity of raw spent wash from distillation) will be sent to decanter followed by MEE and dryer to produce DDGS. 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 3.4 MW and will be met from co-generation power plant. 34 TPH biofuel as rice husk 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. 1000 KVA DG set will be used as standby during power failure and stack height (14 m) 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 matter emissions from 34 TPH rice husk fired boiler.
- Online Continuous Emission Monitoring System will be installed with the stack and data will be transmitted to CPCB/SPCB servers.
- CO₂ (66 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) (54 TPD) will be sold as cattle feed / fish feed / prawn feed.
- Boiler ash (48 TPD) will be used for brick manufacturing and supplied

to brick manufacturers.

- Used oil (0.5 Kiloliters per annum) will be sold to authorized recyclers.
- CPU sludge 0.20 TPD) and STP Sludge (0.0001TPD) 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 4.99 Hectares is under possession of the company and land use conversion has been completed vide letter no.278/Rider-1/2022 dated 14/10/2022. EAC found the response satisfactory.

Capital cost and recurring cost of EMP are given below:

S. No	Description	Capital Cost In Rs lacs	Annual Recurring Cost in Rs lacs
1	Air pollution control system (ESP) on 34 TPH low pressure boiler	175	35
2	Spent wash treatment including concentration using MEE (Multiple effect evaporator).	200	60
3	Scrubbing system, compressing system, liquefying system and storage for CO2 removal	150	30
4	CPU (Condensate Polishing Unit)	350	70
5	Installation of Water treatment plant (RO) and STP	35	5
6	Rainwater harvesting systems	20	5
7	OCEMS- Online Continuous Emission/Effluent Monitoring System	20	5
8	Occupational Health Management	40	10
9	Green Belt Development	25	5
10	Environment monitoring	-	10
11	Solid/ hazardous waste management	15	5
12	CER	110	-
	Total	1140	240

Details of CER with proposed activities and budgetary allocation:

S. No.	Proposed Activities	1st Year (Rs. In Lakhs)	2nd Year (Rs. In Lakhs)	Expenditure (Rs. In Lakhs)
1	Infrastructure development in Govt schools & classroom development, Provision of digital education in school & laptop distribution, sanitation facilities, safe drinking water, Solar power installation in schools & Panchayat bhavan, rainwater harvesting system etc.	20	20	40
2	Health facilities- Distribution of medical instruments, oxygen cylinders to nearby health centre and hospitals	25	25	50
3	Infrastructure development- development of community halls & nearby plantations	10	10	20
	Total			110

During deliberations, EAC discussed following issues:

- PP shall revise water balance by reducing net fresh water requirement to 4 kL/kL of Ethanol produced.
- PP shall submit agreement with brick manufacturing for supplying boiler ash.
- PP shall submit revised EMP and CER details.
- PP shall submit details of air quality modelling.
- PP shall submit risk assessment plan identifying potential threat zone along with safety plan.
- PP shall add one additional tank for rain water storage.
- No activity will be undertaken below the Power transmission lines.
- PP shall ensure no direct entry and exit of vehicles from the road and it shall be through slip roads only.
- PP shall develop additional 20.0 m wide green belt towards the river side.
- PP shall store rice husk in covered sheds.

PP has not submitted the above information sought by EAC.

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. 08

Proposed Grain Based Distillery for manufacturing of capacity 100KLD of ENA/ETHANOL, Brewery Unit for manufacturing of 75 KLD (2.5Lakh HLPa) of Beer, IMFL bottling Plant and 3MW Co-generation Plant by M/s. RKV Spirits Private Limited- Consideration of Environmental Clearance.

[IA/HP/IND2/417821/2023; IA-J-11011/110/2022-IA-II(I)]

The Project Proponent and the accredited Consultant M/s. Chandigarh Pollution Testing Laboratory (Certificate No. – NABET/EIA/2225/ RA 0250 valid upto 12th February, 2025 made a detailed presentation on the salient features of the project and informed that the proposal is for environmental clearance to the project for 100KLD of ENA/ETHANOL, Brewery Unit for manufacturing of 75 KLD (2.5Lakh HLPa) of Beer, IMFL bottling Plant and 3MW CO-generation Plant located village-Beed Plassi, Tehsil-Nalagarh, District-Solan, State-Himachal Pradesh by M/s. RKV Spirits Private Limited.

All Grain based distilleries up to 200 KLPD are listed at S.N. 5(g) of Schedule of Environment Impact Assessment (EIA) Notification under category 'B' and are appraised at State Level by Expert Appraisal Committee (SEAC). Due to applicability of General Condition i.e the Interstate boundary of Punjab and Himachal Pradesh within a distance of 5 km, the project is appraised as Category 'A' at Central Level by Expert Appraisal Committee (EAC).

The details of products and capacity as under:

S.No.	Name of Unit	Name of product/by-product	Production capacity
1.	Distillery	ENA ETHANOL	42 KLPD 58 KLD

2.	Brewery	BEER	75 KLD
3.	Bottling	IMFL bottling	4243 cases per day (14 lakh cases per annum)
3.	Co-generation power plant	Power	3.0 MW
4.	DWGS dryer	DDGS	152 TPD
5.	Fermentation Unit	Carbon di-oxide	70 TPD

Standard TOR was issued vide letter no. IA-J-11011/110/2022-IA-II(I) on dated 31st March, 2022. It was informed that there is no litigation is pending against the project.

Public Hearing for the proposed project had been conducted by the Himachal Pollution Control Board on 25.08.2022 at project site located in the revenue estate of Village Beed Plassi, Tehsil Nalagarh, District Solan, Himachal Pradesh chaired by Additional Deputy Commissioner and other officials. The main issues raised in Public Hearing along with budgetary allocation to resolve them are given below:

Sr No.	Issues	Action Plan	Budget Allocation	Timeline
1.	With the establishment of this plant, the local people will get employment. First of all, I would like to thank the Additional Deputy Commissioner, Solan, Sub-Divisional Magistrate Nalagarh and the other officers for setting up this plant.	Construction Phase – Construction of the distillery unit will be started after obtaining environmental clearance under EIA notification; 2006. About 60 persons will be employed for carrying out construction, fabrication and erection of the machinery of the distillery unit. Out of these, 60 persons, 10 persons will be employed on permanent basis and the remaining will be employed purely on contract basis. Operation Phase - Before starting commissioning of the unit, about 50 persons will be	Rs. 15 Lakhs for training	9 Months

		employed in addition to 10 persons already employed on permanent basis during construction phase. As soon as the production is started remaining 65 persons will be employed. Preference will be given to the residents of the local area as per their qualification and experience.		
2.	What will be done with the waste that will be generated this plant? When this plant will be operation.	<p>Wastewater From distillation section, about 493 KLD of spent wash will be generated which will be pass through decantator to get wet cake (79 KLD) and thin slop (414 KLD). The thin slop will be passed through MEE for concentration of the same. The concentrate (46 KLD) of MEE will be mixed with wet cake for further passing through drier to get 44 TPD of DDGS. The MEE condensate to the tune of 285 KLD will be partly used directly in the liquefaction section and remaining will be treated in CPU for further reuse in the process/utility. The drier condensate to the tune of 81 KLD will be treated in CPU and after treatment the same will be used in the process/utility. DDGS will be sold out to the cattle feed manufacturing unit. There will be generation of wastewater to the tune of 364 KLD from other sections of distillery, which will be used in the</p>	Capital Cost – Rs. 250 Lakhs Recurring Cost- Rs. 60 Lakhs for STP, ETP and MEE Drier.	Within 6 months

		<p>process/utility. From brewery section about 259 KLD of wastewater will be generated which will be treated in ETP and treated wastewater will be utilized for irrigation of plantation area.</p> <p>Solid waste</p> <ul style="list-style-type: none"> - 18 TPD of spent grain shall be sold out to the farmers for using the same as cattle feed. - Ash from the boiler based on rice husk/paddy straw will be given to brick kilns/farmers as soil conditioner. However, ash storage of adequate capacity shall be in place before commissioning of plant. - Therefore, there will be proper management of solid waste. <p>Hazardous waste</p> <ul style="list-style-type: none"> - The meagre quantity of spent oil/grease will be generated, which will be given to the registered recyclers. Prior to disposal the same, the same will be stored in M.S Drum and placed in secured covered shed with impervious flooring. 		
3.	I thank the officers for setting up this unit. I have spoken to the	No environmental issue was raised by the person.	---	

	representatives of the company, we do not have complete information about this company.			
4.	What kind of employment will be given to the local people in this unit?	The action plan is given in point no. 1 above.	--	
5.	First of all I thank everyone. When the work of this unit starts, will we get the work of vehicle? The installation of this unit does not spread pollution in the air.	1x30 TPH capacity boiler will be installed, in the furnace of which rice husk will be used as fuel and this boiler will be equipped with ESP and a stack of 30m height to achieve the emission standard of 150 mg/Nm ³ . The maximum pollution load of particulate matter will be 0.233 g/s and the maximum GLC estimated with mathematical modeling will be 0.4 µg/m ³ . The measure baseline concentration of particulate matter in the ambient air is 80.4 µg/m ³ . Thus, the concentration of particulate matter in the ambient air after establishment of the unit will become 80.8 µg/m ³ which shows that there will be insignificant impact on the ambient air quality.	Capital Cost:- Rs. 150 Lakhs and Recurring Cost- Rs. 50 Lakhs for installation and Maintainace of ESP and Canopy.	Within 6 Months
6.	What will be done by this unit for the welfare of the	The budget provision of 72.0 Lakhs will be made to carry out activities for the welfare of the local people	Capital Cost -Rs 72.0 Lakhs for CER	Within 2 years

	local people?	under CER programme. The proposed activities to be carried out and the funds to be spent for the same are given as under.	activities																																		
		<table border="1"> <thead> <tr> <th data-bbox="544 376 746 495">Activity</th> <th colspan="2" data-bbox="746 376 989 495">Year Wise allocation in Rs lakhs</th> </tr> <tr> <td data-bbox="544 495 746 568"></td> <th data-bbox="746 495 868 568">2023-2024</th> <th data-bbox="868 495 989 568">2024-2025</th> </tr> </thead> <tbody> <tr> <td data-bbox="544 568 746 797">Street lights (60 stand alone solar lights)</td> <td data-bbox="746 568 868 797">3.75</td> <td data-bbox="868 568 989 797">3.75</td> </tr> <tr> <td data-bbox="544 797 746 909">Plasters in school & toilet</td> <td data-bbox="746 797 868 909">1.0</td> <td data-bbox="868 797 989 909">2.0</td> </tr> <tr> <td data-bbox="544 909 746 1021">Plantation in village land</td> <td data-bbox="746 909 868 1021">12.5</td> <td data-bbox="868 909 989 1021">12.5</td> </tr> <tr> <td data-bbox="544 1021 746 1218">Providing 10 no. of Plastic waste Shredder</td> <td data-bbox="746 1021 868 1218">15.0</td> <td data-bbox="868 1021 989 1218">15.0</td> </tr> <tr> <td data-bbox="544 1218 746 1330">Mobile ambulance facility</td> <td data-bbox="746 1218 868 1330">1.35</td> <td data-bbox="868 1218 989 1330">1.35</td> </tr> <tr> <td data-bbox="544 1330 746 1487">Skill down centre for self help groups</td> <td data-bbox="746 1330 868 1487">1.25</td> <td data-bbox="868 1330 989 1487">1.25</td> </tr> <tr> <td data-bbox="544 1487 746 1671">Providing Health equipment to nearby PHC</td> <td data-bbox="746 1487 868 1671">1.2</td> <td data-bbox="868 1487 989 1671">1.2</td> </tr> <tr> <td data-bbox="544 1671 746 1749">TOTAL (Rs in Lakhs)</td> <td data-bbox="746 1671 868 1749">36.0</td> <td data-bbox="868 1671 989 1749">36.0</td> </tr> <tr> <td data-bbox="544 1749 746 1852">TOTAL Cost to be spent in 2</td> <td colspan="2" data-bbox="746 1749 989 1852">72.00</td> </tr> </tbody> </table>	Activity	Year Wise allocation in Rs lakhs			2023-2024	2024-2025	Street lights (60 stand alone solar lights)	3.75	3.75	Plasters in school & toilet	1.0	2.0	Plantation in village land	12.5	12.5	Providing 10 no. of Plastic waste Shredder	15.0	15.0	Mobile ambulance facility	1.35	1.35	Skill down centre for self help groups	1.25	1.25	Providing Health equipment to nearby PHC	1.2	1.2	TOTAL (Rs in Lakhs)	36.0	36.0	TOTAL Cost to be spent in 2	72.00			
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		years (2023- 2025)			
7.	I would like to state that the people of this Panchayat do not have complete information about the establishment of this unit. So please give details in details.	No environmental issue was raised by the person.			

Total land area required is 121130.97 sqm. Greenbelt will be developed in total area of 41865.17 sqmi.e., 34.56 % of total project area. The estimated project cost is Rs. 164.49 Cr. Total capital cost earmarked towards environmental pollution control measures is Rs.17.105 Cr. and the recurring cost (operation and maintenance) will be about Rs 3.124 Crore. Industry proposes to allocate Rs. 0.72 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. However, there are Hatra protected forest is located a distance of 7.4 km in in North-East direction, Bir Palasi protected forest is located a distance of 20 m in south direction, Khol Nalagarh protected forest is located a distance 5.5 km in South-East direction and Thakurdwara reserve forest is located at a distance of 5.5 km in South-East direction from Project Site. One water body at i.e Sutlej Canal at a distance of 7.8 km in West direction. Another water body Bhakhra Canal at a distance of 2.5 Km in West direction. Letter from Directorate of Industries is obtained. NOC has been obtained from forest department, Himachal Pradesh dated 30.01.2023 stated its no objection mentioning that the proposed site does not attract provisions of FCA, 1980. Further, it was stated that the Industry shall not seek access/passage to its site through any forest land/deemed to be forest land. PP submitted NOC letter JSD-NLG-CB-WA-1/2022-15628-30 dated 23.01.2023 from Jal Shakti

Division, Nalagarh, Solan district, HP mentioning that RL of the proposed land total measuring 160-19 bighas is situated at 300 m and HFL corresponding to the site is 287.5 m. Further, PP informed that proposed is located at higher altitude than HFL.

Ambient air quality monitoring was carried out at 8 locations during March to May, 2022. The baseline data indicates the ranges of concentrations as: PM₁₀ (61.2 to 85.7 µg/m³), PM_{2.5} (32.1 to 44.7 µg/m³), SO₂ (3.4 to 6.3 µg/m³) and NO₂ (12.2 to 20.4 µg/m³). AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 80.2 µg/m³ with respect to PM₁₀ at the project site. The resultant concentrations are within the National Ambient Air.

Total fresh water requirement will be 412 KLD which will be met from Tubewell. Application for abstraction of ground water has been filed. NOC from Directorate of Industries has been obtained. Total quantity of wastewater to be generated from grain-based distillery and brewery, will be about 364+259=623 KLD, which will be treated in ETP of capacity 700 KLD.

During construction phase, about 3.2 power will be required which will be met from temporary connection from HPSPCL / Own Captive Power Plant 3.0MW. There is proposal to install a co-generation power plant of 3.2 MW capacity to meet the power requirement during operation phase. The total power requirement during operation phase will be 3200 KWH. Electro Static Precipitator (ESP) with a stack height of 30 m will be installed for controlling the particulate emissions within the statutory limit of 50 mg/Nm³ for the proposed three boiler of capacity 30 TPH. 2x1000 kVA DG set will be used as standby during power failure and stack height (3 m) will be provided as per CPCB norms to the proposed DG sets.

Details of Process emissions generation and its management:

- Electro Static Precipitator (ESP) with a stack height of 30 m will be installed for controlling the particulate matter emissions
- Online Continuous Emission Monitoring System will be installed with the stack and data will be transmitted to CPCB/SPCB servers.
- CO₂ (70 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) (44TPD) which will be sold in market as a cattle feed additive.
- Boiler ash (60 TPD) will be used for brick manufacturing in proposed brick.

Total land of 160.19 Bigha or 121130.97 sqm is under possession of the company. CLU has been obtained vide letter no. REV.B.F. (10)-277/2021 dated February, 2022 from revenue department, Government of Himachal Pradesh. EAC found response satisfactory.

Capital cost and recurring cost of EMP are given below:

Sr. No.	Details		Capital Cost (In Lakhs)	Recurring Cost (In lakhs/annum)
1.	APCD		250	75
2.	Wastewater treatment	MEE plant	200	20
3.		Decanter, Centrifuge, DDGS, CPU/ETP, dryer	1000	165
4.	Green belt development with maintenance plan		26.0	26.0
5.	Occupational hazard and safety		50.0	10.0
6.	Environment Monitoring		0.5	0.4
7.	Solid Waste Management		5.00	5.00
8.	Fire and Safety		80.0	5.0
9.	RWH		2.00	1.00
10.	Laboratory		25.0	5.00

11.	CER Activities	72.00	
	Total	1710.5	312.4

Details of CER with proposed activities and budgetary allocation:

Activity	Year Wise allocation in Rs lakhs	
	2023-2024	2024-2025
Street lights (60 stand alone solar lights)	3.75	3.75
Plasters in school & toilet	1.0	2.0
Plantation in village land	12.5	12.5
Providing 10 no. of Plastic waste Shredder	15.0	15.0
Mobile ambulance facility	1.35	1.35
Skill down centre for self help groups	1.25	1.25
Providing Health equipment to nearby PHC	1.2	1.2
TOTAL (Rs in Lakhs)	36.0	36.0
TOTAL Cost to be spent in 2 years (2023-2025)	72.00	

During deliberations, EAC discussed following issues:

- PP shall submit revised details of EMP as funds allocated towards EMP is on the lower end.
- Effluent from brewery section shall be treated in common CPU rather than utilizing it for green belt purpose so that ZLD can be maintained.

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

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

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

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

- (i). The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of

environmental management, and risk mitigation measures relating to the project shall be implemented.

- (ii). 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.
- (iii). PP shall ensure that no treated/untreated effluent/solid waste shall be discharged into waterbodies. 20 m thick greenbelt shall be developed towards river side.
- (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. No ground water shall be used for the plant operations.
- (v). Total fresh water requirement shall not exceed 412 m³/day, which will be sourced 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/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 shall be based on 'Zero Liquid Discharge' system and no effluent/treated water shall be discharged outside factory premises.
- (vii). ESP (five fields) with a stack height of 30 meters will be installed with the proposed 30 TPH biomass boiler for controlling the particulate

emissions within the statutory limit of 30 mg/Nm³. Coal shall not be used as fuel. At no time, the emission levels shall exceed the prescribed standards. In the event of failure of any pollution control system installed 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 (60 TPD) will be used for brick manufacturing and supplied to brick manufacturers. PP shall use biomass like rice husk/bagasse as fuel for the proposed boiler. PP shall meet 15% of the total power requirement from solar power by generating power inside plant. Approach to the project site to the nearest highway will be maintained by the Industry.
- (ix). CO₂ (70 TPD) generated during the fermentation process is being/will be collected by utilizing CO₂ scrubbers and it shall be 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 41865.17 sqm i.e., 34.56 % 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. 0.72 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) system for monitoring of stack emissions/effluent quality shall be installed for measurement of flue gas emissions and the pollutants concentration, and the data shall 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. 09

Proposed 100 KLPD Grain Based Distillery along with 2.5 MW Co-generation Power Plant under Ethanol Blended Petrol Programme (EBP) by M/s. Shradhanika India Corporation at Khasra No. 429, 431, 434, 435, 437, 438, 439, 440, 442, 443, 444, 445, 454, 460, 461 Village Shivrukh Kalan, Tehsil Mahmudabad, Sitapur District, Uttar Pradesh- Consideration of Environmental Clearance.

[IA/UP/IND2/417253/2023; IA-J-11011/51/2023-IA-II(I)]

The Project Proponent and the accredited Consultant M/s. AmplEnviron Pvt. Ltd. (NABET certificate No. NABET/EIA/2023/IA0061 and validity 22nd October, 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 100 KLPD Grain based Ethanol Plant & 2.5 MW Co-generation

power plant located at Khasra No. 429, 431, 434, 435, 437, 438, 439, 440, 442, 443, 444, 445, 454, 460, 461 Village Shivrukh Kalan, Tehsil Mahmudabad, Sitapur District, Uttar Pradesh by M/s. Shradhanika India Corporation.

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 (Grain based)	Ethanol	100 KLPD
		Fusel Oil	0.15 KLD
2	Co-generation power plant	Power	2.5 MW
3	DDGS dryer	DDGS	51 TPD
4	Fermentation unit	Carbon di-oxide	78 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 6.707 hectares. Greenbelt will be developed in total area of 2.849 hectares i.e., 42.47% of total project area. The estimated project cost is Rs. 148.38 Crores. Capital cost of EMP would be Rs. 28.8522 Crores and recurring cost for EMP would be Rs. 2.464 Crores per annum. Industry proposes to allocate Rs. 2.2257 Crores towards Extended EMP (Corporate Environment Responsibility). Total Employment will be 100 persons as direct & indirect.

There are no National parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors, protected forest & Reserve etc. within 10 km distance. Water bodies: Canals are present at a distance of 62 & 305 meters from project plot boundary in West & South direction respectively (NOC has been obtained for the same from Irrigation department, Sitapur), Sarada Sub Poshak canal is present at a distance of 3.10 km in West direction from project site, Bakwa river is present at a distance of 8.0 km in NE direction and Ull river is present at a distance of 8.85 km in NE direction.

AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be $0.02 \mu\text{g}/\text{m}^3$, $0.005 \mu\text{g}/\text{m}^3$, $0.354 \mu\text{g}/\text{m}^3$ and $0.813 \mu\text{g}/\text{m}^3$ with respect to PM_{10} , $\text{PM}_{2.5}$, SO_2 and NO_x . The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

Total fresh water requirement will be 400 KLD, which will be met from Ground water. Application has been submitted to CGWA Vide application number: STPR0223NIN0052 dated 03.02.2023. Effluent (Condensate/spent lees/dryer process condensate, sealing water etc.) of 515 m³/day quantity will be treated through Condensate Polishing Unit of capacity 600 CMD and Effluent (Boiler & Cooling tower blowdown/Domestic sewage/DM reject/CIP water/CPU RO Reject) of 218 m³/day quantity will be treated through Effluent Treatment Plant of capacity 250 CMD. Raw stillage (561 KLPD) will be sent to decanter followed by MEE and dryer to produce DDGS. CPU of capacity 600 KLPD will be installed to treat Condensate, Spent Lees, Dryer process condensate & sealing water and ETP of capacity of 250 CMD will be installed to treat sewage, blowdowns, DM reject and CIP water. 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 2.195 MW and will be met from proposed 2.5 MW Co-generation power plant. 22 TPH Rice Husk/Coal fired boiler will be installed. APCE- ESP with 99.9% efficiency with a stack height of 45 m will be installed for controlling the particulate emissions within the statutory limit of $30 \text{ mg}/\text{Nm}^3$ for the proposed boiler and Dry-FGD system for SO_2 removal. 500 kVA DG set will be used as standby during power failure and stack height (5.0 m above roof) will be provided as per CPCB norms to the proposed DG sets.

Details of Process emissions generation and its management:

- ESP with 99.9% efficiency with a stack height of 45 meters will be installed for controlling the particulate matter emissions.
- Dry-FGD system for SO₂ removal
- Online Continuous Emission Monitoring System will be installed with the stack and data will be transmitted to CPCB/SPCB servers.
- CO₂ (78 TPD) generated during the fermentation process will be collected by utilizing CO₂ scrubbers and it shall be sold to authorized vendors/collected in installed bottling plant.

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

- DDGS (Distilled Dried Grains Stillage) (51 TPD) will be sold as cattle feed / fish feed / prawn feed.
- Boiler ash (35.73 TPD) during coal firing and (18.92 TPD) during Rice Husk firing will be used for proposed in-house brick manufacturing plant.
- Used oil (0.1 Kilolitres per annum) will be sold to authorized recyclers.
- Sludge from Waste water treatment (0.05 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 6.707 Hectares is under possession of company and land use conversion application has been submitted to Revenue Department, Mahmudabad, Sitapur, Uttar Pradesh. EAC found the response satisfactory.

Capital cost and recurring cost of EMP are given below:

SR. NO.	COMPONENT	PARTICULARS	CAPITAL INVESTMENT (IN Crores)	RECURRING INVESTMENT (IN Crores)
1.	Air	➤ Construction of	8.50	0.90

		<p>Stack of 45 meters height</p> <ul style="list-style-type: none"> ➤ Installation of ESP with 99.9% efficiency ➤ Installation of CO2 Bottling Plant ➤ Installation of FGD system for SO2 removal 		
2.	Water	<ul style="list-style-type: none"> ➤ Construction of CPU with RO ➤ Construction of ETP with RO ➤ Installation of MEE ➤ Installation of Decanter ➤ Installation of DDGS dryer 	16.75	0.95
3.	Noise	Acoustic enclosures, Silencer pads, ear plugs etc.	0.10	0.03
4.	Environment monitoring and Management	<p>Environment monitoring and Management</p> <ul style="list-style-type: none"> ➤ Quarterly Environment Monitoring ➤ Installation of OCMS 	0.15	0.06
5.	Occupational Health	Gloves, Breathing Masks, Gloves, Boots, Helmets, Ear Plugs etc. & annual health-medical checkup of workers, Occupational Health (training, OH center)	0.50	0.14
6.	Greenbelt	Green belt development activity and Maintenance of green belt	0.5722	0.0242
7.	Solid Waste Management	Solid Waste Management- Brick	0.40	0.08

		Manufacturing unit etc.		
8.	Rain water harvesting	Provision of rain water harvesting tank with 60 days storage capacity	1.0	0.10
9.	Solar system	Installation of in-house solar system of 220 KW capacity	0.88	0.18
		TOTAL COST (INR, LAKHS)	28.8522	2.4642

Details of CER with proposed activities and budgetary allocation:

S.N.	Proposed Activity	Proposed Budget in (IN Crores) (INR)
1.	Providing Basic Amenities To Junior High School Sarayan Chalankapur, Govt. Primary School, Alaypur and Govt. Primary School Khapura.	0.7419
2.	Provision of Solar Lights to Manikapur, Mahmudabad and Lodhaura Village.	1.4838
	Grand Total	2.2257

During deliberations, EAC discussed following issues:

- Industry shall meet 15 % of the total power requirement from solar energy.
- Fresh water requirement for gardening proposed is around 100 KLD which is very high. Net fresh water requirement shall be revised to 400 KLD.
- Existing 158 trees present in project site shall be retained.

PP agreed to the above suggestions made by EAC.

The committee was satisfied with the response provided by PP on above information.

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

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

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

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

- (i). As per the Notification S.O. 2339(E), dated 16th June, 2021, project falls in category B2 and the proposed capacity of 100 KLPD shall only be used for fuel ethanol manufacturing as per self-certification in form of a

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

- (ii). The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented.
- (iii). Existing 158 trees present in project site shall be retained.
- (iv). EC granted for a project on the basis of the submitted documents shall become invalid in case the actual land for the project site turns out to be different from the land considered at the time of appraisal of project. Conversion of land use (CLU) certificate shall be obtained before start of construction activities.
- (v). 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. No ground water shall be used for the plant operations.
- (vi). Total fresh water requirement shall not exceed 400 m³/day, which will be sourced 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 shall be installed to treat domestic wastewater. The plant shall be based on 'Zero Liquid Discharge' system and no effluent/treated water shall be discharged outside factory premises.

- (viii). ESP with 99.9% efficiency with a stack height of 45 meters will be installed with the 22 TPH biomass /Coal fired boiler for controlling the particulate emissions within the statutory limit of 30 mg/Nm³. SO₂ and NO_x emissions shall be less than 100 mg/Nm³. At no time, the emission levels shall exceed the prescribed standards. In the event of failure of any pollution control system adopted by the unit, the respective unit shall not be restarted until the control measures are rectified to achieve the desired efficiency. Performance assessment of pollution control devices/systems will be conducted annually.
- (ix). Boiler ash (35.73 TPD) will be used for brick manufacturing in proposed in-house brick manufacturing plant. Low sulphur coal with maximum sulphur content of 0.5% shall only be used. Industry shall meet 15 % of the total power requirement from solar energy. Approach to the project site to the nearest highway will be maintained by the Industry.
- (x). CO₂ (78 TPD) generated during the fermentation process is being/will be collected by utilizing CO₂ scrubbers and it shall be collected in proposed bottling plant.
- (xi). PP shall allocate at least Rs. 50 Lakhs/annum for Occupational Health Safety. Occupational Health Centre for surveillance of the worker's health shall be set up. The health data shall be used in deploying the duties of the workers. All workers & employees shall be provided with required safety kits/mask for personal protection.
- (xii). Training shall be imparted to all employees on safety and health aspects of chemicals handling. Safety and visual reality training shall be provided to employees.
- (xiii). The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire fighting system shall be as per the norms. PESO certificate shall be obtained.

- (xiv). Process organic residue and spent carbon, if any, shall be sent to Cement and other suitable industries for its incinerations. ETP sludge, process inorganic & evaporation salt shall be disposed of to the TSDF.
- (xv). The company shall undertake waste minimization measures as below (a) Metering and control of quantities of active ingredients to minimize waste; (b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes. (c) Use of automated filling to minimize spillage. (d) Use of Close Feed system into batch reactors. (e) Venting equipment through vapour recovery system. (f) Use of high pressure hoses for equipment clearing to reduce wastewater generation.
- (xvi). The green belt of at least 5-10 m width shall be developed 2.849 hectares i.e., 42.47 % 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.
- (xvii). PP proposed to allocate Rs. 2.2257 Crores towards Extended EMP (CER) which shall be spent as submitted in CER plan for monitorable activities like up-gradation of schools with provision of facilities e.g. Class rooms, playground, Laboratory, Library, Computer class, toilets, potable drinking water facilities, solar light/solar power support for uninterrupted power supply, soil nutrient management etc. Further, all the proposed activities under CER shall be completed before the commissioning of the plant in consultation with District Administration.
- (xviii). There shall be adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products and no parking to be allowed outside on public places. Out of the total project area, 15% i.e. 1.023623 Ha 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) system for monitoring of stack emissions/effluent quality shall be installed for measurement of flue gas emissions and pollutants concentration, and the data shall be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.
- (xxi). A separate Environmental Management Cell (having qualified person with Environmental Science/Environmental Engineering/specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions. EMC head shall report directly to Head of Organization/ Director/CEO as per company hierarchy.
- (xxii). PP shall sensitize and create awareness among the people working within the project area as well as its surrounding area on the ban of Single Use Plastic in order to ensure the compliance of Notification published by MOEFCC on 12th August, 2021. A report along with photographs on the measures taken shall also be included in the six-monthly compliance report being submitted to concerned authority.

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