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File No: J-11011/191/2007-IA-II(I)
Government of India
Ministry of Environment, Forest and Climate Change
IA Division
****

Dated **08/12/2023**

To,

Sh. Suhas Uttam Godage
M/s. GODAVARI BIOREFINERIES LTD
At post Sameerwadi, Tal: Mudhol, Dist: Bagalkot , Sameerwadi, BAGALKOTE, KARNATAKA, Sameerwadi, 587316
suhas@somaiya.com

Subject: **Expansion of distillery capacity from 600 KLPD to 1000 KLPD using sugarcane syrup or 400 KLPD to 600 KLPD using B Heavy Molasses or 320 KLPD to 400 KLPD using C Heavy Molasses and 200 KLPD grain based/sugarbeet as raw material to produce ethanol and to enhance captive power plant from 14 MW to 22 MW and expansion of Sugarcane crushing capacity from 20000 TCD to 25000 TCD to augment the requirement of sugar syrup to the distillery under EBP scheme by M/s. Godavari Bio Refineries Ltd. - Consideration of Environment Clearance reg.**

Sir/Madam,

This is in reference to your application for Grant of EC under the provision of the EIA Notification 2006-regarding in respect of project Expansion of distillery capacity from 600 KLPD to 1000 KLPD using sugarcane syrup or 400 KLPD to 600 KLPD using B Heavy Molasses or 320 KLPD to 400 KLPD using C Heavy Molasses and 200 KLPD grain based/sugarbeet as raw material to produce ethanol. And to enhance captive power plant from 14 MW to 22 MW and expansion of Sugarcane crushing capacity from 20000 TCD to 25000 TCD to augment the requirement of sugar syrup to the distillery under EBP scheme by M/s Godavari Bio Refineries Ltd. submitted to Ministry vide proposal number IA/KA/IND2/441345/2023 dated 27/09/2023.

2. The particulars of the proposal are as below :

(i) EC Identification No.	EC23C2503KA5460915N
(ii) File No.	J-11011/191/2007-IA-II(I)
(iii) Clearance Type	EC
(iv) Category	B2
(v) Project/Activity Included Schedule No.	5(g) Distilleries,5(j) Sugar Industry
(vi) Sector	Industrial Projects - 2
(vii) Name of Project	Expansion of distillery capacity from 600 KLPD to

	1000 KLPD using sugarcane syrup or 400 KLPD to 600 KLPD using B Heavy Molasses or 320 KLPD to 400 KLPD using C Heavy Molasses and 200 KLPD grain based/sugarbeet as raw material to produce ethanol. And to enhance captive power plant from 14 MW to 22 MW and expansion of Sugarcane crushing capacity from 20000 TCD to 25000 TCD to augment the requirement of sugar syrup to the distillery under EBP scheme by M/s Godavari Bio Refineries Ltd.
(viii) Name of Company/Organization	GODAVARI BIOREFINERIES LTD
(ix) Location of Project (District, State)	BAGALKOTE, KARNATAKA
(x) Issuing Authority	MoEF&CC
(xii) Applicability of General Conditions	no
(xiii) Applicability of Specific Conditions	no

3.The Ministry of Environment, Forest and Climate Change has examined the proposal seeking environmental clearance for expansion of existing distillery unit to produce Ethanol from 600 KLPD to 1000 KLPD using sugarcane syrup or 400 KLPD to 600 KLPD using B Heavy Molasses or 320 KLPD to 400 KLPD using C Heavy Molasses and 200 KLPD using grain or sugar beet as raw material to produce ethanol and to enhance captive power plant capacity from 14 MW to 22 MW and expansion of Sugarcane crushing capacity from 20000 TCD to 25000 TCD to augment the requirement of sugar syrup to the distillery under EBP scheme by M/s. Godavari Bio Refineries Ltd.

4. 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.

5.The details of products and capacity are placed at Annexure-II.

6.The Ministry has issued Environmental Clearance to the existing distillery for a capacity of 600 KLPD Distillery using sugarcane syrup by expanding the sugarcane crushing capacity from 15000 TCD to 20000 TCD vide File No. J-11011/191/2007-IA II (I) dated 09.04.2021 and Amendment to EC vide File No. J-11011/191/2007-IA II (I) dated 20.04.2023 to produce ethanol of 400 KLPD using B/C heavy molasses or 200 KLPD using grains as feedstock so that ultimate production capacity will not exceed 600 KLPD and increase in captive power plant capacity from 5.5 MW to 14 MW. A latest certified Compliance report of Amendment to EC has been obtained from the Integrated Regional Office, MoEF CC, Bangalore vide File No. e-file. No. EP/12.1/2021-22/307/KAR/701 dated 18.09.2023. EAC was satisfied with response of PP.

7. 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 pending against the project.

8. 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, 154.61 Hectares i.e. 34.2% of the total plant area have already been developed as greenbelt & plantation, and the same will be maintained in and around plant premises. The estimated project cost is Rs. 317.58 Crores for the sugar plant and Rs.459.42 Crores for the distillery and captive power plant. The capital cost of EMP in the present proposal is Rs. 14.65 Crores, after expansion, the total capital cost of EMP will be Rs.110.825 Crores and the recurring cost for EMP will be Rs.5.578 Crores. Industry proposes to allocate Rs. 1.5 Crores towards extended EMP (Corporate Environment Responsibility). Total Employment after expansion will be 1822 persons as direct & indirect.

9.There is no national park, wildlife sanctuary, Biosphere Reserve, Tiger/Elephant Reserve, Wildlife Corridor, etc. within

a 10 km radius distance. Reserve forests are located at Kalatippi Reserve Forest (8.0 km) and Golbhavi Reserve Forest (8.5 km) towards the North. River Ghataprabha is at a distance of 6.5 km towards the south.

10. AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 2.87 µg/m3, 1.27 µg/m3, and 3.68 µg/m3 with respect to PM, SO2, and NOx. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

11.Total freshwater requirement after expansion will be maximum 4803 CMD (sugar mill 1975 CMD and distillery 2828 CMD) which will be met from Ghatapharbha River. The Committee suggested that fresh water requirement during cane crushing season will be restricted to 2800 KLD and during off season fresh water requirement will be restricted to 2900 KLD. Excees condensate shall be treated in the tertiary CPU and recycled the treated effluent in the distillery manufacturing process in order to reduce the fresh water requirment. Application for renewal of water withdrawal permission has been submitted to Chief Engineer, Karnataka Neeravari Nigam limited dated 26.07.2022 for which water withdrawal permission was valid till 31.01.2023.

Sugar plant effluent management:
Existing 20000 TCD plant effluent management:
• The sugar plant effluent and utility effluent 1825 KLD is treated in an Effluent Treatment Plant of capacity 2500 m3 /day and treated effluent is utilized for irrigation and green belt. The Committee suggested to treated the effluent with tertiary treatment and recycle the treated effluent for distillery manufacturing process.
After expansion of 25000 TCD plant process condensate management:
3110.4 KL excess condensate is treated in (2500 KLD+ 1500 KLD) Biological Treatment Plant (BTP). Treated condensate is reused in Co-gen Cooling towers, raw water makeup & chemical cleaning of evaporator vessels, vacuum pans, juice heaters as well as also as service water makeup
• There is no additional process effluent generated from the sugarcane crushing mill from 20000 TCD to 25000 TCD.
• The sugar plant is provided with a 2500 m3 /day capacity ETP, this will be adequate to treat the cooling tower bleed and boiler blowdown from the expansion project as well. The Committee suggested to treated the effluent with tertiary treatment and recycle the treated effluent for distillery manufacturing process.
Distillery plant effluent:
In Scenario 1: Ethanol using Sugarcane syrup or B- Heavy Molasses or C-Heavy or Sugar Beet:
• Raw spent wash will be partially recycled back to the fermentation process and the remaining will be treated in Biodigester and followed by MEE.
• Concentrated spent wash will be sent to the incineration boiler.
• Spent lees, boiler blowdown and MEE condensates in the existing facility are taken to condensate polishing unit (CPU) at present.
• Additional CPU of 1440 m3/day will be provided in the proposed expansion
• Cooling tower blowdown will be treated recycled back to the Cooling tower for water makeup and used for green belt.
• Treated effluent from CPU is reused in cooling tower makeup and in process.
In Scenario 2: Ethanol using Grains
• Raw spent wash – thin slop decanted and concentrated in MEE to get thick slop.
• Concentrated spent wash (thick slop) from MEE will be dried to get DDGS
• DDGS will be given for Cattle feed.
• Spent lees and MEE condensates are treated in condensate polishing unit at existing unit.
• Treated effluent from the CPU is reused in cooling tower makeup and process.
Domestic wastewater is being treated in the STP of 600 KLPD. The distillery plant is based on Zero Liquid discharge (ZLD) system and treated effluent will not be discharged outside the factory premises.

12. The total power requirement of the internal sugar Cogen distillery complex after expansion will be 25.7MW which will be sourced from the existing sugar cogeneration 46 MW and the proposed distillery 22 MW captive power plant. In the existing sugar mill, there are boilers of capacities 2 X 37.5 TPH, 1X20 TPH &1X 45 TPH bagasse-fired boilers. 1X37.5 TPH boiler will be replaced by proposed 160 TPH boiler. 1X130 TPH, 1X120 TPH existing cogen boilers are present. An incineration boiler of 40 TPH concentrated spent wash-fired boiler exists in the distillery. 1X 75 TPH incineration boiler is proposed for the expanded capacity.

Air Pollution Sources and Control devices details are placed at Annexure- III

13.Details of Process emissions generation and its management:

• APCE – A wet scrubber with a stack height of 42m is installed for the existing 37.5 TPH x 2 Nos. boilers for controlling the particulate emissions within the statutory limit of 50 mg/Nm3. APCE – A wet scrubber with a stack height of 42m is installed with the existing 20 TPH boiler for controlling the particulate emissions within the statutory limit of 50 mg/Nm3. APCE – Venturi scrubber with a stack height of 45m is installed with the existing 45 TPH boiler for controlling the particulate emissions within the statutory limit of 50 mg/Nm3.SO2 and NOx emissions from all the 04 boilers shall be maintained below 100mg/Nm3
• APCE -ESP with a stack of height of 70 m for 130 TPH boiler, APCE- ESP with a stack of height of 70 m for 120 TPH boiler and APCE -ESP with a stack of height of 90 m for 160 TPH boiler will be installed
• APCE ESP with a stack height of 81m for 40 TPH is installed with the existing incineration boiler for controlling the particulate matter emissions within the statutory limit of 115 mg/Nm3 APCE –ESP / Bag filter with a stack of 85m will be installed for controlling the particulate emissions within the statutory limit of 50 mg/Nm3 for the proposed 75 TPH incineration boiler with bagasse as a auxiliary fuel.
• An Online Continuous Emission Monitoring System is installed with the stack and data is transmitted to CPCB/SPCB servers.
• CO2 generated during the fermentation process will be collected by utilizing CO2 scrubbers and sold to authorized vendors.

14.Details of solid waste/Hazardous waste generation and its management:
• Concentrated spent wash 285 m3/day will be burnt in an incineration boiler
• DDGS (Distilled Dried Grains Stillage) 140 TPD will be sold as cattle feed.
• Incineration Boiler ash 7410 tons/month will be Sold to brick manufacturers and with potash manufacturing units.
• Sugar and Cogen Boiler ash 2505 tons/month will be supplied to brick manufacturers.
• Used oil maximum 1.25 Kilolitres per annum (distillery plant) is being sold to authorized recyclers.
• Used oil maximum 0.1 Kilolitres per annum (sugar and cogen plant) is being sold to authorized recyclers.
• CPU sludge 1.75 TPD and STP Sludge 0.05 TPD is being used as manure.
• Press mud 1000 TPD mixed with yeast sludge and given to farmers as manure.
• Bagasse generated 7500 TPD will be used as fuel in boilers.
• Molasses 1735 TPD will be used as raw material in the distillery plant.
• Yeast sludge maximum 60 TPD mixed with press mud and given to farmers as manure.

15.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 400 KLPD will be used for manufacturing fuel ethanol only.

16.During deliberations, EAC discussed following issues:
• PP clarified that the application for EC is made for expansion of distillery capacity from 600 KLPD to 1000 KLPD to produce Ethanol only. PP confirmed that the expansion is for production of Ethanol only. The error in the presentation slide is regretted.
• PP confirmed that for air emission control, the proposed new boilers shall be provided with ESP and fuel shall be bagasse. For the existing boilers of 37.5 TPH and 45 TPH provided with wet scrubber and ventury scrubber respectively shall be replaced by ESP to achieve the emission norm of Particulate <50 mg/Nm3. A provision of Rs 10 Cr. Has been earmarked for the same.
• PP informed that they have revised the CER and the action plan.
• PP submitted the information regarding condensate Balance for Sugar factory for existing and for the expansion. Further it was confirmed that excess condensate shall be used for recycling in the distillery manufacturing process.
• PP submitted the revised EHS policy.
• PP informed that the company is already having an occupational health centre. The same will be further upgraded with health care facilities like laboratory, ECG, audiometry test centre, eyecare centre, inpatient facility with 10 beds and allied facilities. A budget of Rs 1 cr/year is made for the period of 5 years.
• PP submitted the Domino Effect, fault tree analysis, Threat Analysis – Also to work for two scenarios one for the predominant wind flow and for the other wind pattern.
• PP committed that the green belt to be strengthened all along the periphery of the plant boundary. PP submitted the revised green belt plan.

• PP committed that the ash generated from the sugar plant boiler will be given to the farmers along with the press mud as soil conditioner. Also, they already having a brick manufacturing facility for brick making and to use for the internal requirement. PP informed that they have agreement with eight external brick manufacturers who also lift ash from the plant. Incineration ash will be given to manure manufacturers to use it for potash enrichment.
• PP submitted the revised dispersion model for AAQ for the line source and the point source.
• During presentation, PP informed that they will use excess condensate in distillery, accordingly, fresh water requirement during cane crushing season will be 2800 KLD and during off season fresh water requirement will be 2900 KLD.
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.

17.The proposal was considered by the EAC (Meeting ID: EC/AGENDA/EAC/477189/9/2023) held on 06th October, 2023 in the Ministry, wherein the project proponent and the accredited Consultant M/s. Samrakshan (NABET certificate no. NABET/EIA/2225/RA 0265 (Rev.01) and validity 25 July 2025), presented the case. The Committee recommended the project for grant of environmental clearance.

18. 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.

19. 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.

20.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.

21.Based on the proposal submitted by the project proponent and recommendations of the EAC (Industry-2), Ministry of Environment, Forest and Climate Change hereby accords environmental clearance for Expansion of distillery capacity from 600 KLPD to 1000 KLPD using sugarcane syrup or 400 KLPD to 600 KLPD using B Heavy Molasses or 320 KLPD to 400 KLPD using C Heavy Molasses and 200 KLPD grain based/sugarbeet as raw material to produce ethanol and to enhance captive power plant from 14 MW to 22 MW and expansion of Sugarcane crushing capacity from 20000 TCD to 25000 TCD to augment the requirement of sugar syrup to the distillery under EBP scheme by M/s. Godavari Bio Refineries Ltd., under the provisions of the EIA Notification, 2006, and the amendments therein, subject to compliance of the terms and conditions.

22.The Ministry reserves the right to stipulate additional conditions, if found necessary at subsequent stages and the project proponent shall implement all the said conditions in a time bound manner. The Ministry may revoke or suspend the environmental clearance, if implementation of any of the above conditions is not found satisfactory.

23.Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.

24.Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period

of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

25.The above conditions will be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, the Hazardous Waste (Management, Handling and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 read with subsequent amendments therein.

26.This issues with the approval of the competent authority.

Copy To

1. The Secretary, Department of Forest, Environment & Ecology, Government of Karnataka, Room No. 708, Gate 2, Multi Storey Building, Dr. Ambedkar Veedhi, Bangalore - 1
2. The Regional Officer, Ministry of Env., Forest and Climate Change, Integrated Regional Office, Kendriya Sadan, 4th Floor, E&F Wings, 17th Main Road, Koramangala II Block, Bangalore - 34
3. The Member Secretary, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex East Arjun Nagar, Delhi - 32
4. The Member Secretary, Karnataka State Pollution Control Board, Parisara Bhavan, #49, 4th& 5th Floor, Church Street, Bangalore -1
5. Monitoring Cell, Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi
6. The District Collector, District Bagalkote, Karnataka
7. Guard File/Monitoring File/Parivesh portal/Record File

Annexure 1

Specific EC Conditions for (Distilleries)

1. Specific Condition

S. No	EC Conditions
1.1	1.As per the Notification S.O. 2339(E), dated 16th June, 2021, project falls in category B2 and the proposed expansion capacity of 400 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. 2. 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 (**Annexure - IV)**. 3. 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. 4. NOC from the Concerned Local authority shall be obtained before start of the construction of

S. No	EC Conditions
	plant and drawing water from surface water. State Pollution Control Board 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. 5. Total Fresh water requirement for the integrated project after expansion, during cane crushing season shall not exceed 2800 KLD, whereas during off season, fresh water requirement shall not exceed 2900 KLD, which will be met from Ghataprabha River. During crushing season, treated effluent from sugar condensate shall be used for distillery manufacturing process in order to reduce the fresh water requirement. 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. 6. The spent wash from molasses-based distillery shall be treated in biomethanation and concentrated in MEE followed by incineration. Spent wash/stillage from grain based distillery shall be decanted followed by the multiple effect evaporator and dryer to form DDGS. Other lean effluents Spent lees, MEE Condensates and utility effluents shall be treated in the condensate polishing unit (CPU) comprising of three stage RO. Condensate Polishing Unit of sugar unit shall be upgraded to recycle the excees treated effluent for distillery manufacturing process. STP shall be installed to treat sewage generated from factory premises. Sludge drying beds shall be replaced by Filter press. Capacity storage of concentrated spent wash shall not exceed 5 days. No wastewater or treated water from integrated unit of sugar mill and distillery shall be discharged outside the premises and Zero Liquid Discharge shall be maintained for all the units namely sugar, Distillery and Cogen Power Plant. As proposed, bio-composting shall be stopped by March 2024 and complance report shall be submitted to IRO and SPCB. 7. 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. 8. ESP (Five Fields) with a stack height of 90 m shall be provided with bagasses fired 160 TPH boiler to control the particulate emissions within the statutory limit of 50 mg/Nm^3. As proposed, existing 20 TPH and 37.5 TPH boilers will be dismantled. In the existing 1X37.5 TPH and 45 TPH boilers, Wet scrubber shall be replaced with ESP to control the particulate emissions within the statutory limit of 50 mg/Nm^3 by 31st December, 2024. ESP with a stack height of 81m for is provided with the existing 40 TPH incineration boiler to control the particulate emissions within the statutory limit of 50 mg/Nm^3. ESP with a stack of 85m shall be installed with the proposed 75 TPH incineration boiler with bagasse as a auxiliary fuel to control the particulate emissions within the statutory limit of 50 mg/Nm^3.Coal shall not be used even as auxillary fuel. 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. 9. Incineration ash ash generation 7410 Tons per month will be sent and to potash manufacturing units. PP shall meet 15% of the total power requirement from solar power by generating power inside plant premises/adjacent/nearby areas. 10. CO_2 (737 TPD) generated during the fermentation process will be collected by utilizing CO_2 scrubbers and it shall be sold to authorized vendors/collected in proposed bottling plant.

S. No	EC Conditions
	11. PP shall allocate at least Rs. 1 Crore 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. 12. 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. 13. 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. Location of ethanol storage tanks shall be placed in such a way that in the event of any fire, accident, explosion or any unforeseen conditions the impact of such event should not go beyond the boundary of the plant i.e. the risk should be tolerable (acceptable) at the boundary. 14. 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. 15. 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. 16. Out of the total plant area, 154.61 Hectares i.e. 34.2% of the total plant area have already been developed as greenbelt & plantation, and the same will be densified with tree density @ 2500 trees per hectares, mainly along the plant periphery. Indigenous species shall only be developed as part of greenbelt and non-indigenous / alien species shall be replaced with native species. No invasive or alien or non-native tree species shall be selected for plantation. PP shall develop at least 20 variety of species as a part of greenbelt. Saplings 4-6 feet high shall be planted. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department and native species shall be developed. Records of tree canopy shall be monitored through remote sensing map. Greenbelt development shall be completed before commissioning of the plant. 17. PP proposed to allocate Rs. 5 Crores towards Extended EMP (CER) which shall be spent as submitted in CER plan (**Annexure - V)**. Further, all the proposed activities under CER shall be completed before the commissioning of the plant in consultation with District Administration. 18. 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. 19. 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

S. No	EC Conditions
	with process plant/machinery for shutdown in case of operational failure of Air Pollution Control Equipment. 20. Continuous online (24x7) monitoring system for stack emissions/effluent shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises. 21. 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. 22. 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.

Standard EC Conditions for (Distilleries)

1. General Conditions

S. No	EC Conditions
1.1	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.
1.2	The energy source for lighting purpose shall be preferably LED based, or advanced having preference in energy conservation and environment betterment.
1.3	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).
1.4	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.
1.5	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

S. No	EC Conditions
	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.
1.6	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.
1.7	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.
1.8	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.
1.9	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.
1.10	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.
1.11	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.

Additional EC Conditions

N/A

Annexure 2

Details of Products & By-products

Name of the product /By-product	Product / By-product	Existing	Proposed	Total	Unit	Mode of Transport / Transmission
co generation	co generation	46	0	46	MW	grid
ethanol	ethanol	600	400	1000	Kilo Litre per Day (KLD)	Road
sugar crushing	sugar crushing	20000	5000	25000	Tons Crushed per	Conveyor Belt

Name of the product /By-product	Product / By-product	Existing	Proposed	Total	Unit	Mode of Transport / Transmission
					Day (TCD)	
captive power plant	captive power plant	14	8	22	Mega Watt (MW)	through cable

Annexure –II

The details of products and capacity as under:

S. No.	Name of unit	Name of the product /byproduct	Existing Production capacity	Additional Production capacity	Total production capacity
1.	Distillery (using sugarcane syrup as raw material)	Ethanol	600 KLPD	400 KLPD	1000 KLPD
	Distillery (using B Heavy Molasses as raw material)	Ethanol	400 KLPD	200 KLPD	600 KLPD
	Distillery (using C Heavy Molasses as raw material)	Ethanol	320 KLPD	80 KLPD	400 KLPD
	Distillery (using Grains as raw material)	Ethanol	200 KLPD	-	200 KLPD
	Distillery (using Sugar Beet as raw material)	Ethanol	-	200 KLPD	200 KLPD
2.	The captive power plant for a distillery	Power	14	8 MW	22 MW
3.	The co-generation power plant for sugar mill	Power	46 MW	-	46 MW
4.	Sugar mill	Sugar	20,000 TCD	5,000 TCD	25,000 TCD
5.	DWGS dryer	DDGS	140 TPD	-	140 TPD
6.	From Fermentation unit	Carbon dioxide	442 TPD	295 TPD	737 TPD

Note: Production shall not exceed 1000 KLD at any point of time.

Annexure –III

Air Pollution Sources and Control devices details are as under;

	Distillery			
Sl. No	**Air Pollution Source**	**Chimney height provided (m) AGL**	**APC Equipment Installed**	**Remarks**
1	Existing 40 TPH Boiler (Incineration Boiler)(80:20)	81	ESP	Online Monitoring Connected to CPCB server
2	DG Set – 320 kVA	6(ARL)	Acoustic measures	-
3	Proposed DG Set – 750 kVA	7(ARL)	Acoustic measures	
4	Coal Mill	18	Bag filter	-
5	Proposed 75 TPH incineration boiler(75:25)	85	ESP/ Bag filter	Propose to provide the OCMS for emission of particulate
	Sugar plant			
1	37.5 TPH Boiler	42	High efficiency wet Scrubber Meeting emission norms Particulate < 50mg/Nm^3	Existing
2	20 TPH Boiler	42	High efficiency wet Scrubber	Existing
3	37.5 TPH Boiler	42	High efficiency wet Scrubber	Proposed for dismantling
4	45 TPH Boiler	45	Venturi wet Scrubber	Kept Stand by
5	160 TPH boiler	90	ESP	Proposed
	Cogeneration plant			
1	130 TPH boiler	70	ESP	Existing
2	120 TPH boiler	70	ESP	
	Details of Diesel generator sets			
1	1010 kVA	30m AGL	Acoustic measures	
2	1010 kVA	30m AGL		
3	625 kVA	7m ARL		
4	380 kVA	6m ARL		
5	330 kVA	6m ARL		

Annexure - IV

Capital cost and recurring cost of EMP are given below:

Sl. No.	Application	Amount spent towards EMP, Rupees in Lakhs (Existing)	Budget towards EMP, Rupees in Lakhs (proposed)	Budget towards EMP, Rupees in Lakhs, (After expansion)
1.0	Capital Investment (both sugar, co-gen and distillery)			
1.1	Air pollution control facilities (ESP, Chimney, ESP and ash handling facility)	762	500	1262
1.2	Wastewater treatment facilities	8049	950	8999
1.3	Noise pollution control	15	-	15
1.3	Green belt	50	10	60
1.4	Laboratory and monitoring facilities	15	5	20
1.5	Online monitoring system	30	-	30
1.6	Occupational Health & safety	51	-	51
1.7	Management of solid waste	28.5	-	28.5
1.8	Rainwater harvesting	617	-	617
	Subtotal	9617.5	1465	11082.5
2.0	Recurring Cost of Operation and Maintenance			
	Air pollution control	47.13	-	47.13
	Water pollution control	487.43	-	487.43
	Monitoring cost	3.58	14.74	18.32
	Maintenance and calibration of online monitors	5.0	-	5.00
	Sub total	**543.14**	**14.74**	**557.88**

Annexure - V

Details of extended EMP (CER) with proposed activities and budgetary allocation:

Sl.No	Proposed Activities	Proposed Budget in Lakhs	Time bound to complete the task
1	Drinking water facility - Kappalguddi, Handigund, Bisnal, Kesargoppa, Saidapur and Madabhavi	75	2023-2026

2	Solar street Lights- Kappalguddi, Handigund, Bisnal, Kesargoppa, Saidapur and Madabhavi	75	2023-2026
3	Solid waste management facility Kappalguddi, Handigund, Bisnal, Kesargoppa, Saidapur and Madabhavi	50	2023-2025
4	Contribution to help a child project of GBL	100	2023-2026
5	Self-employment training program-Tailoring classes	50	2025-2027
6	Health Care - K J Somaiya Medical Trust	100	2023-2028
7	Promoting Education	50	2024-2026
	Total	**500**	

Signature Not Verified

Digitally Signed by : Dr Vimal Kumar Hatwal
Member Secretary, MoEFCC (EC)

Date: 08/12/2023