



Government of India
Ministry of Environment, Forest and Climate Change
(Impact Assessment Division)

To,

The VicePresident

KARTHIK AGRO INDUSTRIES PRIVATE LIMITED

Sy No. 92 Hoolgeri Village Tal. Badami Dist. Bagalkot,,Bagalkot,Karnataka
-587902

Subject: Grant of Environmental Clearance (EC) to the proposed Project Activity under the provision of EIA Notification 2006-regarding

Sir/Madam,

This is in reference to your application for Environmental Clearance (EC) in respect of project submitted to the Ministry vide proposal number IA/KA/IND2/282034/2022 dated 02 Aug 2022. The particulars of the environmental clearance granted to the project are as below.

- | | |
|--|---|
| 1. EC Identification No. | EC22A022KA134736 |
| 2. File No. | J-11011/224/2008-IA-II(I) |
| 3. Project Type | Expansion7 |
| 4. Category | A |
| 5. Project/Activity including Schedule No. | 5(g) Distilleries |
| 6. Name of Project | Expansion of distillery capacity from 180 KLPD to 245 KLPD to produce Ethanol using molasses or grains and increase capacity of captive power plant from 5.4 MW to 8.4 MW |
| 7. Name of Company/Organization | KARTHIK AGRO INDUSTRIES PRIVATE LIMITED |
| 8. Location of Project | Karnataka |
| 9. TOR Date | N/A |

The project details along with terms and conditions are appended herewith from page no 2 onwards.

Date: 06/10/2022

(e-signed)
A N Singh
Scientist E
IA - (Industrial Projects - 2 sector)

Note: A valid environmental clearance shall be one that has EC identification number & E-Sign generated from PARIVESH. Please quote identification number in all future correspondence.

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This has reference to your online proposal no. IA/KA/IND2/282034/2022, dated 02nd August, 2022 for environmental clearance to the above mentioned project.

2. The Ministry of Environment, Forest and Climate Change has examined the the projectexpansion of existing distillery unit from 180 KLPD to 245 KLPD distillery & co-generation power plant from 5.4 MW to 8.4 MW (biomass based) located at Village Hoolageri, Tehsil Badami, District Bagalkot, State Karnataka by M/s. Karthik Agro Industries Private Limited.

3. As per the MoEF&CC Notification S.O. 2339(E), dated 16th June, 2021, a special provision in the EIA Notification, 2006, Category B2) is made wherein expansion of molasses based distilleries & grain based distilleries 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.

4. The details of products and capacity for proposed project are as under:

S. No.	Name of the unit	Name of the product/ by-product	Existing production capacity	Additional production capacity	Total production capacity
1	Distillery (molasses/ grain)	Ethanol/ENA/RS	180 KLPD Ethanol/ENA/RS	65 KLPD Ethanol	180 KLPD Ethanol/ENA/RS and 65 KLPD Ethanol
2	Co-generation power plant for distillery	Power	5.4 MW	3 MW	8.4 MW
3	DWGS dryer	DDGS	103 TPD	37 TPD	140 TPD
4	Fermentation unit	Carbon di-oxide	74 TPD	30 TPD	104 TPD

In any case capacity of distillery shall not be increased beyond 245 KLPD during operation.

5. Ministry has issued Environmental Clearance to the existing Industry for a capacity of 180 KLPD vide File No. J-11011/224/2008-IA-II(I) dated 17/03/2022. Certified Compliance report of existing EC for 65 KLPD has been obtained from Integrated Regional Office, MoEFCC, Bangalore vide File no. EP/12.1/619/KAR/571 dated 07/09/2021 during the expansion proposal from 65 KLPD to 180 KLPD. Establishment work is under progress for 180 KLPD distillery. Since, the

application is now made for grant of EC within six months of the previous EC, hence PP has submitted self certified six monthly compliance as per provisions of MOEFCC OM dated 08th June, 2022.

6. 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 no litigation is pending against the proposal.

7. Total plant area after expansion will be 16.18 Ha which is under possession of the company and converted to industrial use. No additional land will be acquired for the expansion project as the same will be done within existing plant premises. Out of the total plant area 6.4 Hectares i.e., 39.52 % of the total plant area has already been developed as greenbelt and the same will be maintained. The estimated project cost is Rs. 69.37 Crores. Capital cost of EMP would be Rs. 24.65 Crores and recurring cost for EMP would be Rs. 2.46 Crores per annum. Industry proposes to allocate Rs. 2.0 Crores towards extended EMP (Corporate Environment Responsibility). Total employment after expansion will be 253 persons as direct & indirect.

8. There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance. Reserve forest: Unnamed Reserve Forest is located adjacent to project site in North direction. Water bodies: Ghataprabha river is flowing at a distance of 8 Km in North direction.

9. AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 3.52 $\mu\text{g}/\text{m}^3$, 0.418 $\mu\text{g}/\text{m}^3$ and 1.73 $\mu\text{g}/\text{m}^3$ with respect to PM₁₀, SO₂ and NO_x respectively. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

10. Total fresh water requirement after expansion of grain based distillery will be 1278 m³/day and molasses based distillery will be 1007 m³/day which will be met from Ghataprabha river. NOC has been granted by Department of Water Resource vide letter no. Ja. Sam. E. 47 NIN 2018 dated 07/09/2020.

11. Effluent generation from the existing 180 KLPD molasses-based distillery is 1721 m³/day and from grain-based distillery effluent generation is 1157 m³/day. Effluent comprising of MEE condensate, boiler blow down and cooling tower bleed, CO₂ scrubber reject and softener effluent is treated in Condensate Polishing Unit of capacity of 1000 m³/day. Total effluent generation after expansion from molasses-based distillery will be 1841 m³/day and grain-based distillery will be 1821 m³/day. Effluent comprising of MEE condensate, spent Leese (during the molasses as feed stock), Boiler blow down and cooling tower bleed, CO₂ scrubber reject and softener effluent will be treated in Condensate Polishing Unit of capacity 2000 m³/day (existing capacity 1000 m³/day and proposed additional capacity 1000 m³/day). The treated effluent will be recycled for cooling tower water makeup and for grain soaking/molasses dilution. In molasses-based operation, spent wash will be concentrated in Multi Effect Evaporator and concentrated spent wash will be burnt as fuel in incineration boiler. In grain-based operation, raw stillage (1490 KLPD) 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 8 KLD. The plant is being/will be based on Zero Liquid discharge system and treated effluent/water is being/will not be discharged outside the factory premises.

12. Total power requirement of distillery after expansion will be 7 MW which will be sourced from existing 5.4 MW and proposed 3 MW co-generation power plant. Existing distillery has 16 TPH biomass fired boiler. 55 TPH biomass fired boiler will be installed for the grain based distillery. If the distillery operates on molasses as feedstock, an additional incineration boiler of 40 TPH will be installed and the existing 16 TPH boiler will be converted to incineration boiler to meet the steam requirement and dispose the concentrated spent wash. ESP with a common stack of height 52 m is installed with the existing and proposed boiler for controlling the particulate emissions within the statutory limit of 50 mg/Nm³. ESP with stack height 100 m will be installed with the proposed 40 TPH boiler for molasses based distillery operations. 1x 500 KVA DG set will be used as standby during power failure and stack height (3 m ARL) is provided as per CPCB norms to the DG set.

13. Details of process emissions generation and its management:

- ESP with a common stack of height 52 m is installed with the 16 TPH boiler for controlling particulate emissions within the statutory limit of 50 mg/Nm³. The proposed 55 TPH bagasse/rice husk boiler will have ESP as control device and connected to the existing 52 m stack, ESP with stack height 100 m will be installed with the proposed 40 TPH incineration boiler for molasses based distillery operations.
- Online Continuous Emission Monitoring System is being installed with the stack and data will be transmitted to CPCB/SPCB servers.
- CO₂ (104 TPD) generated during the fermentation process will be collected in installed bottling plant.

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

- Concentrated spent wash (247 m³/day) will be burnt in incineration boiler.
- DDGS (Distillery Dried Grain Solubles) (140 TPD) is being/will be sold as cattle feed.
- Boiler ash (139 TPD) will be given to farmers to be used as manure/ sold to brick manufacturers.
- Used oil (0.2 Kilolitres per annum) is being/will be sold to authorized recyclers.
- CPU sludge (3 TPD) is being/will be used 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 expanded capacity of 65 KLPD will be used for manufacturing fuel ethanol only.

16. EAC also discussed the following issues during its meeting held during 23rd - 24th August, 2022:

- Clarification regarding existing and proposed boiler. PP explained the air pollution control measures to be taken for the boilers.
- MOU with brick manufacturers shall be submitted.
- Commitment that CER budget shall be spent before commissioning of the plant operations.
- 10% of total power requirement shall be sourced from solar energy.
- Revised greenbelt species shall be submitted. Additional greenbelt towards forest side in North.
- No coal shall be used as fuel. PP agreed the same.
- EMC head shall report directly to Head of Organization.
- Filter press shall be installed for sludge drying.

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: IA/IND2/13313/23/08/2022 held during 23rd - 24th August, 2022 in the Ministry, wherein the project proponent and their environmental consultant namely M/s. Samrakshan, presented the case under B2 category. 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 to the proposed project for expansion of existing distillery unit from 180 KLPD to 245 KLPD distillery & co-generation power plant from 5.4 MW to 8.4 MW (biomass based) located at Village Hoolageri, Tehsil Badami, District Bagalkot, State Karnataka by M/s. Karthik Agro Industries Private Limited, under the provisions of the EIA Notification, 2006, and the amendments therein, subject to compliance of the terms and conditions as under:-

A. Specific Condition:

- (i) As per the Notification S.O. 2339(E), dated 16th June, 2021, project falls in category B2 and the proposed capacity of 65 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) NOC from the Concerned Local authority for surface water supply shall be obtained before starting construction of plant, State Pollution Control Board / Pollution Control Committees shall not issue the Consent to Operate (CTO) under Air (Prevention and Control of Pollution) Act and Water (Prevention and Control of Pollution) Act till the project proponent shall obtain such permission.
- (iv) Total fresh water requirement shall not exceed 4.0 KL/KL of ethanol production and will be met from Ghataprabha river. No ground water recharge shall be permitted within the premises. Industry shall construct a storage pond having 60 days capacity and the accumulated water to be used as fresh water thereby reducing fresh water consumption.

- (v) Spent wash shall be concentrated and dried to form DDGS to be used as cattle feed in grain based operations and in molasses based operations, spent wash shall be concentrated and incinerated in boiler. The condensate, spentlees and utilities effluent shall be treated in the ETP comprising tertiary treatment (Condensate Polishing Unit). Treated effluent will be recycled/reused for makeup water of cooling towers/process etc. and no waste or treated water shall be discharged outside the premises. STP shall be installed to treat sewage generated from factory premises.
- (vi) ESP/ bag house along with common stack 52m height shall be provided with the existing 16 TPH and proposed 55TPH to biomass fired boiler to control particulate emission within 50mg/Nm³ for biomass as fuel. ESP/ bag house along with stack 100m of height shall be provided with the proposed 40 TPH Incineration boiler. Particulate matter emission from boilers shall be less than 30mg/Nm³. SO₂ and NO_x emissions from the Incineration boiler shall be less below 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.
- (vii) Boiler ash shall be supplied to brick manufacturers in covered trucks/given to farmers to be used as manure. PP shall use biomass like rice husk/bagasse as fuel for the proposed boiler. No coal shall be used as fuel in the boilers except for the 40 TPH incineration boiler. PP shall meet 10% of the total power requirement from solar power by generating power inside plant premises/adjacent/nearby areas.
- (viii) Adequate numbers of ground water quality monitoring stations by providing piezometers around the project area shall be set up. Sampling and trend analysis monitoring must be made on monthly a basis and report submitted to SPCB and RO, MOEFCC. The ground water quality monitoring for pH, BOD, COD, Chloride, Sulphate and Total Dissolve Solids shall be monitored and report submitted to the Ministry's Regional Office.
- (ix) CO₂ generated will be bottled and supplied to manufacturers of beverages /collected in proposed bottling plant.
- (x) PP shall allocate 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 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. Filter press shall be installed for drying of sludge.
- (xiv) The company shall undertake waste minimization measures as below (a) Metering and control of quantities of active ingredients to minimize waste; (b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes. (c) Use of automated filling to minimize spillage. (d) Use of Close Feed system into batch reactors. (e) Venting equipment through vapour recovery system. (f) Use of high pressure hoses for equipment clearing to reduce wastewater generation.
- (xv) The green belt of at least 5-10 m width shall be developed in 6.4 Ha i.e. nearly 39.52% of the total project area with tree density @ 2500 trees per hectares, mainly along the plant periphery. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department and native species shall be developed. Records of tree canopy shall be monitored through remote sensing map. Greenbelt shall be developed before commissioning of the plant. Additional greenbelt shall be developed of 20 m width towards forest side in North.
- (xvi) PP proposed to allocate Rs. 2.0 Crores for Extended EMP (CER) which shall be spent as submitted in CER plan for monitorable activities like up-gradation of schools with provision of facilities e.g. Class rooms, playground, Laboratory, Library, Computer class, toilets, Drinking Water Facilities, solar light/solar power support for uninterrupted power supply 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 shall be allowed outside on public places. Out of the total project area, 15% shall be allotted solely for parking purposes with facilities like rest rooms etc.

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

B. General Condition:

- (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.

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.

(A. N. Singh)
Scientist-'E'

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, Bagalkot District, Karnataka
7. Guard File/Monitoring File/Parivesh portal/Record File

(A. N. Singh)
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