



सत्यमेव जयते

File No: EC/SEIAA/2024-25/3401/2024

Government of India

Ministry of Environment, Forest and Climate Change  
(Issued by the State Environment Impact Assessment  
Authority(SEIAA), JHARKHAND)

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Dated 22/01/2025



To,

Mr Nitin Mundhra  
maheshwari carbons private limited  
Mouza-Nawadih, P.S.- Sariaikella, Thana No. 292, Halka No. -8, Khata No. -43, Plot No. 402, Sariaikela,  
Jharkhand, Sariaikela, SARAIKELA KHARSAWAN, JHARKHAND, 833219  
maheshwaricarbon@gmail.com

**Subject:** Grant of Terms of Reference under the provision of the EIA Notification 2006-regarding.

**Sir/Madam,**

This is in reference to your application for Grant of Terms of Reference under the provision of the EIA Notification 2006-regarding in respect of project Grain based Distillery to produce Ethanol with installed capacity 40 KLPD under 100% EBP program by M/s Maheshwari Carbons Private Limited at Mouza-Nawadih, P.S.- Sariaikella, Thana No-292, Halka No - 8, Khata No-43, Plot No.-402 (P), Jharkhand – 833 219. submitted to Ministry vide proposal number SIA/JH/IND2/503037/2024 dated 11/12/2024.

2. The particulars of the proposal are as below :

(i) TOR Identification No.	TO24B0000JH5558913N
(ii) File No.	EC/SEIAA/2024-25/3401/2024
(iii) Clearance Type	TOR
(iv) Category	B1
(v) Project/Activity Included Schedule No.	5(ga) Grain based distilleries Grain based Distillery to produce Ethanol with installed capacity 40 KLPD under 100% EBP program by M/s Maheshwari Carbons Private Limited at Mouza-Nawadih, P.S.- Sariaikella, Thana No-292, Halka No - 8, Khata No-43, Plot No.-402 (P), Jharkhand – 833 219.
(vii) Name of Project	
(viii) Name of Company/Organization	maheshwari carbons private limited
(ix) Location of Project (District, State)	SARAIKELA KHARSAWAN, JHARKHAND
(x) Issuing Authority	SEIAA
(xii) Applicability of General Conditions	no
(xiii) Applicability of Specific Conditions	no

3. In view of the particulars given in the Para 1 above, the project proposal interalia including Form-1(Part A and B) were submitted to the Ministry for an appraisal by the State Environment Impact Assessment Authority(SEIAA) Appraisal Committee (SEIAA) in the Ministry under the provision of EIA notification 2006 and its subsequent amendments.
4. The above-mentioned proposal has been considered by State Environment Impact Assessment Authority(SEIAA) Appraisal Committee of SEIAA in the meeting held on 30/12/2024. The minutes of the meeting and all the Application and documents submitted [(viz. Form-1 Part A, Part B, Part C EIA, EMP)] are available on PARIVESH portal which can be accessed by scanning the QR Code above.
5. The brief about configuration of plant/equipment, products and byproducts and salient features of the project along with environment settings, as submitted by the Project proponent in Form-1 (Part A, B and C)/EIA & EMP Reports/presented during SEIAA are annexed to this EC as Annexure (1).
6. The SEIAA, in its meeting held on 30/12/2024, based on information & clarifications provided by the project proponent and after detailed deliberations recommended the proposal for grant of Terms of Reference under the provision of EIA Notification, 2006 and as amended thereof subject to stipulation of specific and general conditions as detailed in Annexure (2).
7. The SEIAA has examined the proposal in accordance with the Environment Impact Assessment (EIA) Notification, 2006 & further amendments thereto and after accepting the recommendations of the State Environment Impact Assessment Authority(SEIAA) Appraisal Committee hereby decided to grant Terms of Reference for instant proposal of M/s. Mr Nitin Mundhra under the provisions of EIA Notification, 2006 and as amended thereof.
8. The Ministry reserves the right to stipulate additional conditions, if found necessary.
9. The Terms of Reference to the aforementioned project is under provisions of EIA Notification, 2006. It does not tantamount to approvals/consent/permissions etc. required to be obtained under any other Act/Rule/regulation. The Project Proponent is under obligation to obtain approvals /clearances under any other Acts/ Regulations or Statutes, as applicable, to the project.
10. This issues with the approval of the Competent Authority.

**Copy To**

N/A

**Annexure 1**

**Specific Terms of Reference for (Grain Based Distilleries)**

**1. No Forest Land Involved.**

S. No	Terms of Reference
1.1	Conditions uploaded.

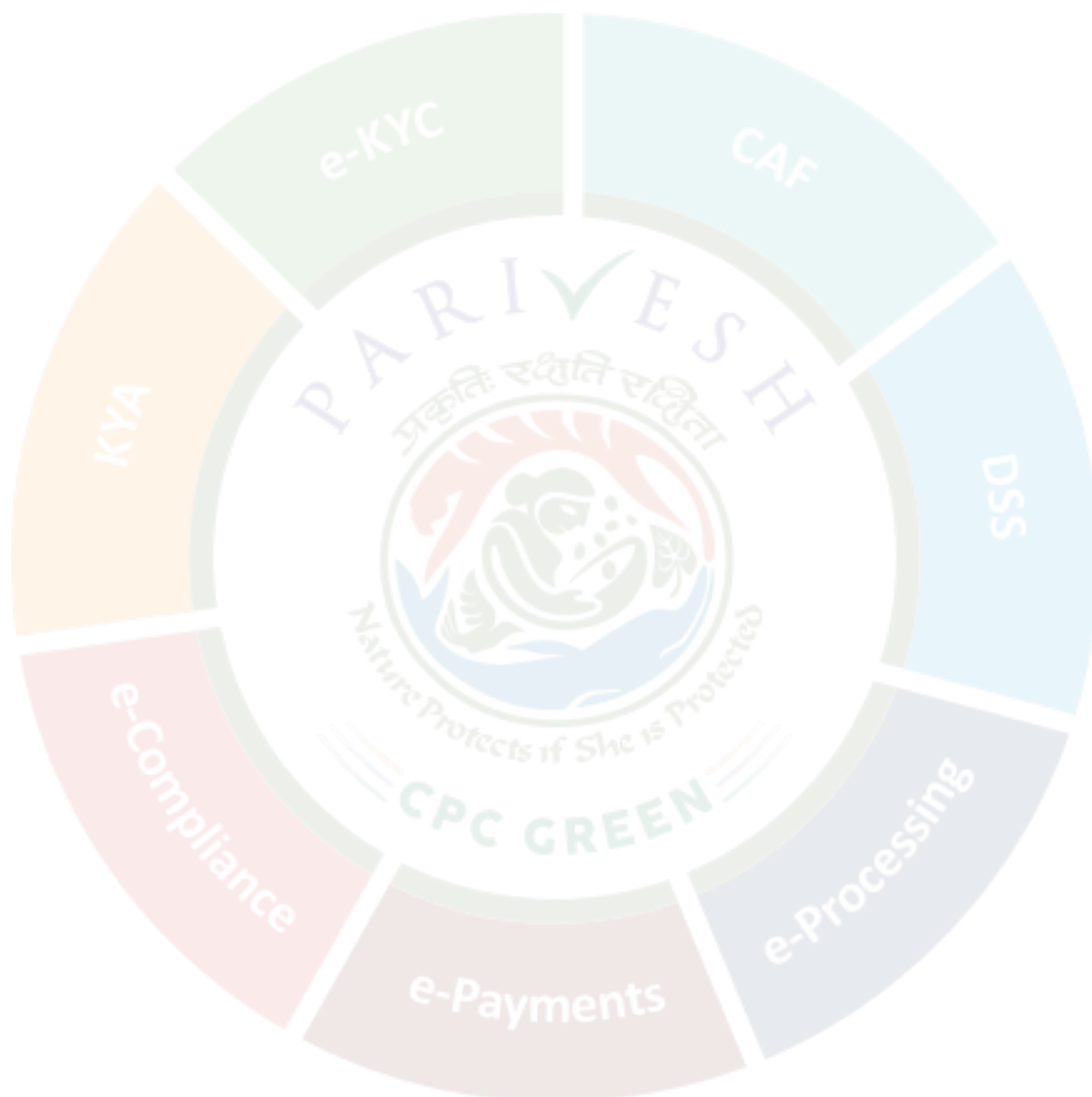
**Additional Terms of Reference**

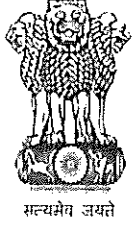
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**Annexure 2**

**Details of Products & By-products**

Name of the product /By-product	Product / By-product	Quantity	Unit	Mode of Transport / Transmission	Remarks (eg. CAS number)
Ethanol	Ethanol	40	Kilo Litre per Day (KLD)	Road	





**State Level Environment Impact Assessment Authority, Jharkhand**

Nursery Complex, Near Dhurwa Bus Stand, P.O+P.S-Dhurwa, Ranchi, Jharkhand-834 004

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website: [www.jseiaa.org](http://www.jseiaa.org)

Letter No.- EC/SEIAA/2024-25/3401/2024

Ranchi, Date:

To: Shri Nitin Mundhra  
(Director),  
M/s Maheshwari Carbons Private Limited,  
Mouza : Nawadih, P.S. : Saraikella,  
Thana No. : 292, Halka No. : 8,  
Khata No. : 43, Plot No. : 402(P)  
Jharkhand : 833219.

Sub: Prescribing of ToR to "Grain based Distillery to produce Ethanol with installed capacity 40 KLPD under 100% EBP program by M/s Maheshwari Carbons Private Limited at Village : Nawadih, Thana : Saraikela, Thana no. : 292, District : Saraikela-Kharsawan, Jharkhand" (Proposal No. : SIA/JH /IND2/503037/2023) - regarding.

Ref: Your application no.- Nil, dated – 11.12.2024.

Sir,

It is in reference to the project "Grain based Distillery to produce Ethanol with installed capacity 40 KLPD under 100% EBP program by M/s Maheshwari Carbons Private Limited at Village : Nawadih, Thana : Saraikela, Thana no. : 292, District : Saraikela-Kharsawan, Jharkhand" submitted by you for seeking Terms of Reference (ToR).

This is a new project which has been taken for appraisal on 20.12.2024.

**Project Sector: 5(ga) Grain Based Distilleries, Category: B1.**

**Application for Terms of Reference (ToR) as per EIA Notification, 2006.**

The proposal was considered by the committee to determine the "Terms of Reference (ToR)" for undertaking detailed EIA study for the purpose of obtaining environmental clearance in accordance with the provisions of the EIA Notification, 2006 and amendments thereafter. For this purpose the Project Proponent has submitted the prescribed Form - I & PFR. The proposed project falls under item 5 (ga) **Grain Based Distilleries** as per EIA Notification, 2006.

M/s Maheshwari Carbons Private Limited has proposed to set up a Greenfield Grain based Distillery of 40 KLPD capacity under 100% EBP program along with 870 KW Cogeneration Power Plant and Zero Liquid Discharge system. The plant will be based on latest technology of Multi Pressure Distillation and MSDH for dehydration process to achieve good quality of fuel grade Ethanol.

The proposed ethanol plant will be based on grains such as maize, broken rice, surplus FCI rice and damaged grain as basic raw materials. Other inputs will be water, enzymes, antifoam agents, Active Dry Yeast, Urea/DAP, Antibiotics, Sterilant etc. Biomass [rice husk, bagasse etc.] will be used as fuel in boiler.

The project proposes to implement Zero Liquid Discharge system by decantation, multi-effect evaporation [MEE] plant & ETP with Reverse Osmosis (RO) technology. The solids stream from decanter [Wet Cake] consisting of majority of suspended solids is directly conveyed to the Dryer to form Distiller's Dried Grain with Solubles [DDGS] which is sold as cattle/animal feed.

The grain-based distillery is proposed by M/s Maheshwari Carbons Private Limited at Mouza- Nawadih, P.S.- Sariaikella, Thana No-292, Halka No - 8, Khata No-43, Plot No.-402 (P), Jharkhand – 833 219. Geographical coordinate at the centre of the site is Latitude: 22°41'49.51"N /Longitude: 85°57'23.85"E. Proposed land is almost flat without major undulation with average elevation of 180 m MSL. The site is connected through a kachha road [approx. 550 m] to the main road which is further connected to NH 43 at a distance of approx. 2.2 Km on NW. Nearest Town & District Headquarter Saraikela is situated at an aerial distance of 1.81 Km on West. Nearest Railway Station: Sini Junction – 10.19 Km on North and Jamshedpur Airport is located at an aerial distance of approx. 25.32 Km on NE of the project site. Estimated cost of the proposed project is INR 44 Crore.

Total plot area of the proposed site is 12,145.58 sqm [3 acre]. Land details are as follows –

Thana No.	Halka No.	Khata No.	Plot No.
292	8	43	402 (P)

#### Manufacturing & Production Details –

Unit	Product	Production Capacity
Distillery	Ethanol	40 KLPD
Cogeneration power plant	Power	870 KW
No of Days of Operation	340 days	
Distilleries dry grain with soluble DDGS and CO2 will be generated		

as by-Product		
Byproducts	DDGS	19 TPD
	CO <sub>2</sub>	29 TPD
	Fusel Oil	60 Lit/day

#### Raw materials consumption –

S N	Raw Material	Consumption
1.	Broken Rice [68% starch] or - Maize [60% starch]	90 MT/day 102 MT/day
2.	Chemicals & Additives a) Liquefying Enzyme b) Saccharifying Enzyme c) Anti Foam d) Active Dry Yeast e) Urea/DAP f) Antibiotics g) Sterilant	25 kg/day 26 kg/day 10 kg/day 20 kg/day 140 kg/day 1.7 kg/day 150 gm/day
3.	Biomass/Coal	48/ 43 TPD

As proposed, number of operating days of the plant is 340 days/Annum.

#### Pollution Control Measures

The proposed grain-based distillery will implement Zero Liquid Discharge system. Fresh water requirement for the project during operation phase will be sourced through onsite groundwater abstraction. Efforts will be made to conserve fresh water to the extent possible by recycling and reuse. Closed water recirculation system and plan process is designed to achieve minimum fresh water requirement.

#### **Wastewater Generation & Treatment**

Spent wash from the distillation section is passed through horizontal high-speed Decanters, which separate suspended solids from spent wash and split the spent wash feed stream into two streams –

**Wet Cake:** it is the solids stream from decanter consisting of majority of suspended solids. It has approx. 28 - 30 % solids and 70 - 72 % water.

**Thin Slop:** liquid stream consisting of mainly water with all dissolved solids and remaining suspended solids. The wet cake is directly conveyed to the DDGS Dryer and thin slop is pumped

to Evaporators where it is concentrated to a solids content of about 28 - 30% w/w, in an Multi-effect Evaporator thermally integrated with Multi-pressure Distillation.

The thick slop (concentrated thin slop syrup) from evaporator will be mixed with wet cake from spent wash decanter. The mixture is known as DWGS (Distillers Wet Grains and Solubles). This is then fed at a constant rate to the DDGS Dryer, via a screw feeder to produce DDGS at 88-90% w/w solids which will be sold as cattle/animal feed.

Process condensate from evaporation section will be partly recycled in the process and balance will be treated in Condensate Polishing Unit [CPU]. Treated water will be used in process and cooling water make up. Rejects from the CPU along with other effluents like cooling tower & boiler blowdown, WTP backwash, DM plant reject etc. will be treated in proposed onsite ETP and entirely recycled for cooling water make up.

#### Air Pollution Source and Control Measures

- To minimize the stack emission load and to comply with the prescribed stack emission standard due to the operation of proposed cogeneration boiler [8 TPH], dust collector and bag filters followed by stack of adequate height will be provided.
- CO<sub>2</sub> produced during fermentation process will be collected, scrubbed, liquefied and sold to end users.
- Diesel generator set [250 KVA] which will be used as emergency backup will be provided with stack of adequate height as per CPCB standard.
- All the internal roads will be paved.
- Approx. 0.99 acre [33% of the plot area] would be developed as dedicated green area. Plantation around the periphery and within the premises will help in attenuating the pollutants.

#### Solid Waste Management

Solid waste	Approx. Quantity	Disposal
ETP sludge	300 kg/day	ETP sludge in liquid form will be used in boiler ash quenching.
Boiler ash	17 TPD from coal or 7.5 TPD from biomass	Boiler ash will be local fly to brick manufacturer or cement plant

**Raw material required along with estimated quantity, Likely source, Marketing area of Final products, mode of transport of raw material & finished goods**

S N	Raw Material	Consumption
1.	Broken Rice [68% starch] or - Maize [60% starch]	90 MT/day 102 MT/day
2.	Chemicals & Additives h) Liquefying Enzyme i) Saccharifying Enzyme j) Anti Foam k) Active Dry Yeast l) Urea/DAP m) Antibiotics n) Sterilant	25 kg/day 26 kg/day 10 kg/day 20 kg/day 140 kg/day 1.7 kg/day 150 gm/day
3.	Biomass/Coal	48/ 43 TPD
4.	Fresh Water	194 KLD

**Water Requirement**

Total WATER CONSUMPTION	QUANTITY	UOM
PROCESS WATER	172	KLD
DM WATER-BOILER	40	KLD
COOLING TOWER LOSSES	189.6	KLD
SOFT WATER-SEALING, SCRUBBER	13	KLD
CIP WATER	5	KLD
FO WASHING WATER	3	KLD
WTP BACKWASH	10	KLD
Total	432	KLD

EFFLUENT GENERATION	QUANTITY	UOM
PROCESS CONDENSATE	23	KLD
DRYER CONDENSATE	44	KLD
SPENT LESS + FO WASHING	45	KLD
SEALING WATER	5	KLD
TO ETP (CT & BOILER BLOWDOWN, WTP BACKWASH, CPU REJECT,	61	KLD

DM REJECT, CIP WATER)		
TOTAL	178	KLD

EFFLUENT RECYCLE	QUANTITY	UOM
PROCESS CONDENSATE	102	KLD
DRYER CONDENSATE		KLD
SPENT LESS + FO WASHING		KLD
FROM ETP	55	KLD
TOTAL	157	KLD

- Total Fresh water demand – 194 KLD [Industrial – 184 KLD + domestic– 4 KLD + green area – 6 KLD].
- Recycled treated effluent from proposed onsite ETP + steam condensate + Spent lees + thin slop returns etc. - 248 KLD.

#### Power Requirement and Source

Estimated power demand - 870KW

**Source**-Proposed cogeneration power plant of 870 kW.

Emergency backup - 1 DG set [250 KVA].

#### Steam Requirement

Steam requirement will be met from biomass/coal based boiler of capacity 8 TPH. AFBC boiler of will be provided with dust collector and bag filters followed by stack of adequate height.

#### Coal Fired Boiler

S.No	Steam requirement	Kg/L of Total Spirit
1)	Liquefaction, distillation, MSDH (wash to AA mode) , integrated evaporation, DWGS Dryer	2.0 Kg/ Lit of TS

#### Boiler Details

Steam Requirement will be sourced from 8 TPH boiler

Steam Consumption ( Dry and Saturated)	Proposed Scheme
1. Cooking and Liquefaction	1.5 kg/lit of TS
2. Distillation	2.4 kg/lit of TS
3. Ethanol	1.5 kg/lit of TS
4. DWGS Dryer	2.2 kg/lit of TS
Total Steam requirement	7.6 kg/lit of TS

#### Fuel Consumption -

100% Biomass [rice husk, bagasse etc.] – 48 TPD

or

100% Coal – 43 TPD

### Proposed Boiler details

HP boiler of 8 TPH capacity along with Bag filters as air pollution control equipment followed by Adequate stack height will be installed as per CPCB and JSPCB guidelines. Details regarding proposed boiler are mentioned in the table given below.

S. No		Details
1	Type of Fuel	Rice Husk / Biomass/coal
2	Capacity of Boiler	8 TPH
3	Stack height	As per CPCB requirement

### Waste Water Generation & Treatment:

The spent wash from proposed grain based distillery will be subjected to decantation to separate out wet cake and 6-7% w/w solid thin slop will be fed to evaporator. The thick syrup @ 35-40% solids after the evaporation would then fed to DWGS drier to produce DDGS at 88-90% w/w solids which will be sold as Cattle feed.

The boiler blow down, DM plant, softener regeneration water will be treated in a neutralization tank and after treatment it will be used as cooling water makeup water. Process condensate from evaporation section will be partly recycled and balance will be treated in process condensate treatment plant, treated water will be used as dilution water in slurry preparation and as cooling water makeup water and steam condensate will be recycled back to the boiler.

### STATUTORY CLEARANCES:

1	LOI/Lease docs	:	Land for Maheshwari Carbons Private Limited.
2	CO	:	The CO, Saraikela vide letter no. 1226A, dated 09.10.2024 has mentioned the plot no. of the project is not recorded as "Jungle Jhari" in R.S. Khatiyani.
3	DFO Wild Life	:	DFO, Dalma Elephant Project vide letter no. 4944, dated 02.12.2024 certified that the proposed project site is outside Eco Sensitive Zone of Dalma Wildlife Sanctuary.
4	DFO Territorial	:	DFO, Saraikela Forest Division, Saraikela vide letter no. 1704, dated 21.10.2024 certified that the distance of reserved / protected forest is more than 250 metre from project site.

SEAC, Jharkhand has recommended the ToRs in its 119<sup>th</sup> meeting held on 17<sup>th</sup>, 18<sup>th</sup>, 19<sup>th</sup>, 20<sup>th</sup>, 21<sup>st</sup> and 22<sup>nd</sup> December, 2024 for undertaking detailed EIA / EMP study and SEIAA, Jharkhand has granted the ToRs in its 119<sup>th</sup> meeting held on 30<sup>th</sup> & 31<sup>st</sup> December, 2024. The SEAC has recommended following conditions

The TORs prescribed for undertaking detailed EIA study are as follows:

**A. Standard Terms of Reference**

**1. Executive Summary**

**2. Introduction:**

- i. Details of the EIA Consultant including NABET accreditation.
- ii. Information about the project proponent.
- iii. Importance and benefits of the project.

**3. Specific Conditions:**

- i. In compliance of OM no.F.No. IA3-22/3/2024-IA.III (E-241594) dated 24.07.2024 of MoEF&CC, Govt. of India plantation of saplings shall be carried out in the earmarked green belt area as the part of tree plantation campaign “*Ek Ped Ma Ke Naam*” and the details of the same shall be uploaded in the MeriLiFE Portal (<https://merilife.nic.in>).
- ii. Permission for drawal of ground water will be obtained from CGWA before submitting the final EIA for consideration for EC.

**4. Project Description:**

- i. Cost of project and time of completion.
- ii. Products with capacities for the proposed project.
- iii. If expansion project, details of existing products with capacities and whether adequate land is available for expansion, reference of earlier EC if any.
- iv. List of raw materials required and their source along with mode of transportation.
- v. Other chemicals and materials required with quantities and storage capacities
- vi. Details of Emission, effluents, hazardous waste generation and their management.
- vii. Requirement of water, power, with source of supply, status of approval, water balance diagram, man-power requirement (regular and contract)
- viii. Process description along with major equipments and machineries, process flow sheet (quantative) from raw material to products to be provided.
- ix. Hazard identification and details of proposed safety systems.
- x. Expansion/modernization proposals:
  - a. Copy of all the Environmental Clearance(s) including Amendments thereto obtained for the project from MOEF/SEIAA shall be attached as an Annexure. A certified copy of the latest Monitoring Report of the Regional Office of the Ministry of Environment and Forests as per circular dated 30th May, 2012 on the status of compliance of conditions stipulated in all the existing environmental clearances including Amendments shall be provided. In addition, status of compliance of Consent to Operate for the ongoing / existing

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operation of the project from SPCB shall be attached with the EIA-EMP report.

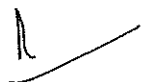
- b. In case the existing project has not obtained environmental clearance, reasons for not taking EC under the provisions of the EIA Notification 1994 and/or EIA Notification, 2006 shall be provided. Copies of Consent to Establish/No Objection Certificate and Consent to Operate (in case of units operating prior to EIA Notification 2006, CTE and CTO of FY 2005-2006) obtained from the SPCB shall be submitted. Further, compliance report to the conditions of consents from the SPCB shall be submitted.

#### 5. Site Details:

- i. Location of the project site covering village, Taluka/Tehsil, District and State, Justification for selecting the site, whether other sites were considered.
- ii. A toposheet of the study area of radius of 10km and site location on 1:50,000/1:25,000 scale on an A3/A2 sheet. (including all eco-sensitive areas and environmentally sensitive places).
- iii. Details w.r.t. option analysis for selection of site
- iv. Co-ordinates (lat-long) of all four corners of the site. .
- v. Google map-Earth downloaded of the project site.
- vi. Layout maps indicating existing unit as well as proposed unit indicating storage area, plant area, greenbelt area, utilities etc. If located within an Industrial area/Estate/Complex, layout of Industrial Area indicating location of unit within the Industrial area/Estate.
- vii. Photographs of the proposed and existing (if applicable) plant site. If existing, show photographs of plantation/greenbelt, in particular.
- viii. Landuse break-up of total land of the project site (identified and acquired), government/ private - agricultural, forest, wasteland, water bodies, settlements, etc shall be included. (not required for industrial area)
- ix. A list of major industries with name and type within study area (10km radius) shall be incorporated. Land use details of the study area
- x. Geological features and Geo-hydrological status of the study area shall be included.
- xi. Details of Drainage of the project upto 5km radius of study area. If the site is within 1 km radius of any major river, peak and lean season river discharge as well as flood occurrence frequency based on peak rainfall data of the past 30 years. Details of Flood Level of the project site and maximum Flood Level of the river shall also be provided. (mega green field projects)
- xii. Status of acquisition of land. If acquisition is not complete, stage of the acquisition process and expected time of complete possession of the land.
- xiii. R&R details in respect of land in line with state Government policy.

#### 6. Forest and Wildlife related issues (if applicable):

- i. Permission and approval for the use of forest land (forestry clearance), if any, and recommendations of the State Forest Department. (if applicable).



- ii. Landuse map based on High resolution satellite imagery (GPS) of the proposed site delineating the forestland (in case of projects involving forest land more than 40 ha)
- iii. Status of Application submitted for obtaining the stage I forestry clearance along with latest status shall be submitted.
- iv. The projects to be located within 10 km of the National Parks, Sanctuaries, Biosphere Reserves, Migratory Corridors of Wild Animals, the project proponent shall submit the map duly authenticated by Chief Wildlife Warden showing these features vis-à-vis the project location and the recommendations or comments of the Chief Wildlife Warden-thereon
- v. Wildlife Conservation Plan duly authenticated by the Chief Wildlife Warden of the State Government for conservation of Schedule I fauna, if any exists in the study area
- vi. Copy of application submitted for clearance under the Wildlife (Protection) Act, 1972, to the Standing Committee of the National Board for Wildlife.

#### 7. Environmental Status:

- i. Determination of atmospheric inversion level at the project site and site-specific micro- meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall.
- ii. AAQ data (except monsoon) at 8 locations for PM10, PM2.5, SO2, NOX, CO and other parameters relevant to the project shall be collected. The monitoring stations shall be based CPCB guidelines and take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests.
- iii. Raw data of all AAQ measurement for 12 weeks of all stations as per frequency given in the NAQQM Notification of Nov. 2009 along with - min., max., average and 98% values for each of the AAQ parameters from data of all AAQ stations should be provided as an annexure to the EIA Report.
- iv. Surface water quality of nearby River (100m upstream and downstream of discharge point) and other surface drains at eight locations as per CPCB/MoEF & CC guidelines.
- v. Whether the site falls near to polluted stretch of river identified by the CPCB/MoEF & CC, if yes give details.
- vi. Ground water monitoring at minimum at 8 locations shall be included.
- vii. Noise levels monitoring at 8 locations within the study area.
- viii. Soil Characteristic as per CPCB guidelines.
- ix. Traffic study of the area, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.
- x. Detailed description of flora and fauna (terrestrial and aquatic) existing in the study area shall be given with special reference to rare, endemic and endangered species. If Schedule- I fauna are found within the study area, a Wildlife Conservation Plan shall be prepared and furnished.
- xi. Socio-economic status of the study area.







## 8. Impact and Environment Management Plan:

- i. Assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. In case the project is located on a hilly terrain, the AQIP Modelling shall be done using inputs of the specific terrain characteristics for determining the potential impacts of the project on the AAQ. Cumulative impact of all sources of emissions (including transportation) on the AAQ of the area shall be assessed. Details of the model used and the input data used for modelling shall also be provided. The air quality contours shall be plotted on a location map showing the location of project site, habitation nearby, sensitive receptors, if any.
- ii. Water Quality modelling - in case of discharge in water body.
- iii. Impact of the transport of the raw materials and end products on the surrounding environment shall be assessed and provided. In this regard, options for transport of raw materials and finished products and wastes (large quantities) by rail or rail-cum road transport or conveyor- cum-rail transport shall be examined.
- iv. A note on treatment of wastewater from different plant operations, extent recycled and reused for different purposes shall be included. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the prescribed standards of discharge under E(P) Rules.
- v. Details of stack emission and action plan for control of emissions to meet standards.
- vi. Measures for fugitive emission control.
- vii. Details of hazardous waste generation and their storage, utilization and management. Copies of MOU regarding utilization of solid and hazardous waste in cement plant shall also be included. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
- viii. Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 2009. A detailed plan of action shall be provided.
- ix. Action plan for the green belt development plan in 33 % area i.e. land with not less than 1,500 trees per ha. Giving details of species, width of plantation, planning schedule etc. shall be included. The green belt shall be around the project boundary and a scheme for greening of the roads used for the project shall also be incorporated.
- x. Action plan for rainwater harvesting measures at plant site shall be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources.
- xi. Total capital cost and recurring cost/annum for environmental pollution control measures shall be included.
- xii. Action plan for post-project environmental monitoring shall be submitted.
- xiii. Onsite and Offsite Disaster (natural and Man-made) Preparedness and Emergency Management Plan including Risk Assessment and damage control. Disaster management plan should be linked with District Disaster Management Plan.



## **9. Occupational health:**

- i. Plan and fund allocation to ensure the occupational health & safety of all contract and casual workers.
- ii. Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations give the details of the same. Details regarding last month analyzed data of above mentioned parameters as per age, sex, duration of exposure and department wise.
- iii. Details of existing Occupational & Safety Hazards. What are the exposure levels of hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,
- iv. Annual report of health status of workers with special reference to Occupational Health and Safety.

## **10. Corporate Environment Policy:**

- i. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
- ii. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
- iii. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.
- iv. Does the company have system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism shall be detailed in the EIA report.

**11.** Details regarding infrastructure facilities such as sanitation, fuel, restroom etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase.

## **12. Enterprise Social Commitment (ESC):**

- i. Adequate funds (at least 2.5 % of the project cost) shall be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan shall be included. Socio-economic development activities need to be elaborated upon.

**13.** Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof shall also be included. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air

*aff*

*h*

and Water Acts? If so, details thereof and compliance/ATR to the notice(s) and present status of the case.

14. A tabular chart with index for point wise compliance of above TOR.

**B. SPECIFIC TERMS OF REFERENCE FOR EIA STUDIES FOR DISTILLERIES:**

1. List of existing distillery units in the study area along with their capacity and sourcing of raw material.
2. Number of working days of the distillery unit.
3. Details of raw materials such as molasses/grains, their source with availability.
4. Details of the use of steam from the boiler.
5. Surface and Ground water quality around proposed spent wash storage lagoon, and compost yard.
6. Plan to reduce spent wash generation within 6-8 KL/KL of alcohol produced.
7. Proposed effluent treatment system for molasses/grain based distillery (spent wash, spent lees, condensate and utilities) as well as domestic sewage and scheme for achieving zero effluent discharge (ZLD).
8. Proposed action to restrict fresh water consumption within 10 KL/KL of alcohol production.
9. Details about capacity of spent wash holding tank, material used, design consideration. No. of peizometers to be proposed around spent wash holding tank.
10. Action plan to control ground water pollution.
11. Details of solid waste management including management of boiler ash, yeast, etc. Details of incinerated spent wash ash generation and its disposal.
12. Details of bio-composting yard (if applicable).
13. Action plan to control odour pollution.
14. Arrangements for installation of continuous online monitoring system (24x7 monitoring device).
15. The Prescribed ToRs is valid as per O.M. F. No. IA3-22/10/2022-IA.III[E177258], dated 08.06.2022 of MoEF&CC, Govt. of India.

Sd/-  
Member Secretary  
State Level Environment Impact  
Assessment Authority, Jharkhand.

Memo No.-EC/SEIAA/2024-25/3401/2024/ 521

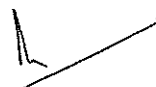
Dated: 13/01/2025

Copy to:

1. Member Secretary, Jharkhand State Pollution Control Board, Ranchi for information and necessary action.







2. Regional Office, Ministry of Environment, Forest and Climate Change, Govt. of India, 2<sup>nd</sup> Floor, Jharkhand State Housing Board (HQ), Harmu Chowk, Ranchi, Jharkhand – 834002.
3. Member Secretary, SEAC, Jharkhand, Ranchi for information and necessary action.

Member Secretary  
State Level Environment Impact  
Assessment Authority, Jharkhand

18/01/2025

