GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE
(IA DIVISION-INDUSTRY-2 SECTOR)
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Dated: 13.04.2023

Meeting ID: IA/IND2/13477/08/04/2023

MINUTES OF MEETING OF THE EXPERT APPRAISAL COMMITTEE

(INDUSTRY-2 SECTOR PROJECTS)

HELD ON 08th April, 2023

Venue: Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi-110003 through Video Conferencing (VC)

(i) Opening Remarks by the Chairman: The Chairman made hearty welcome to the Committee members and appreciated the efforts of the Committee. After opening remarks, the Chairman opened the EAC meeting for further deliberations.

(ii) Confirmation of minutes: The EAC, having taken note that final minutes were issued after incorporating comments received from the EAC members on the minutes of its Meeting (ID: IA/IND2/13474/05/04/2023) held on 05th – 06th April, 2023 conducted through Video Conferencing (VC), confirmed the same. After welcoming the Committee Members, discussion on each of the agenda items was taken up ad-seriatim.

(iii) Details of the proposals considered during the meeting conducted through Video Conferencing (VC), deliberations made and the recommendations of the Committee are explained in the respective agenda items as under: -

08th April, 2023 (Saturday)

Agenda No. 01

Integrated development of offshore blocks KG/OSDSF/CHANDRIKA/2021 (Chandrika) & KG/OSDSF/GS49/2021 (GS49) by drilling of 10 development wells, setting up of 2 unmanned platforms, laying of offshore pipeline and establishment of Onshore Gas Processing facility at Odalarevu, Konaseema

district, Andhra Pradesh by M/s. Oil and Natural Gas Corporation Ltd. – Consideration of Terms of Reference.

[IA/AP/IND2/422746/2023, IA-J-11011/144/2023-IA-II(I)]

All Offshore and onshore oil and gas exploration, development & production proposals are listed at S.N. 1(b) of Schedule of Environment Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC).

The Project Proponent made a detailed presentation on the salient features of the project and informed that the proposal is for Terms of Reference to the integrated development of offshore blocks KG/OSDSF/CHANDRIKA/2021 (Chandrika) & KG/OSDSF/GS49/2021 (GS49) by drilling of 10 development wells, setting up of 2 unmanned platforms, laying of offshore pipeline and establishment of Onshore Gas Processing facility at Odalarevu, Konaseema district, Andhra Pradesh by M/s. Oil and Natural Gas Corporation Ltd.

PP informed that Letter of Award (LOA) for Offshore Oil and Gas Contract areas KG/OSDSF/CHANDRIKA/2021 (Chandrika) & KG/OSDSF/GS49/2021 (GS49) in East coast were issued by DGH on 01st Sept 2022. Contract Areas KG/OSDSF/CHANDRIKA/2021 & KG/OSDSF/GS49/2021 are adjacent and ONGC is the operator for both the areas. Considering proximity of the locations and potential cost optimization in joint development by sharing of facilities, it is proposed to develop Chandrika & GS49 contract areas as Integrated Development. The development of Chandrika along with GS49 has a total production potential of 5.03 MMm3/d (peak) of gas with 10 producer wells (9 for Chandrika & 1 for GS49) to deliver a cumulative gas production of around 12.16 (11.14+1.02) BCM over a period of 12 years.

The integrated proposal comprises the following components:

a. Integrated Development of block Chandrika and GS 49 field in KG Offshore with new onshore processing facilities at Odalarevu, Konaseema Dist. AP.
b. Drilling and completion of 9 wells in Chandrika and 1 well in GS49.
c. Subsea pipeline and umbilical from offshore to new onshore terminal at Odalarevu.
d. Installation of one monopod at GS-49 well location and one 4-legged platform at CN-DB location.
e. Installation of new onshore terminal at Odalarevu to process the well fluid production with a capacity of 5.03 MMSCMD.

Duration of drilling	45 to 60 days for each well
Water requirement during drilling	20 KLD
Water requirement during operation	50 KLD
Cost of the project	Rs. 460635 Lakhs

PP informed that All wells are located in CRZ IV-A. Pipeline is passing through CRZ-III and crossing through inter tidal zone CRZ-I (B). Detailed CRZ maps are under preparation for obtaining recommendation of SCZMA. PP informed that TOR {ref no. IA-J-11011/191/2019-IA-II(I)} was obtained for Integrated Development of Block KG OSN 2004/1 (NELP) (block area 1131 sq. km) and GS49/2 (PML) (block area 141 sq. km) on 18/06/2019. Based on the TOR, the baseline environmental studies were carried out by M/s Vimta during the period Oct. 2020 to Jan. 2021. In the meantime, ONGC relinquished the Blocks KG-OSN-2004/1(NELP) & GS-49-2(PML). Later these blocks were considered in the Discovered Small Fields Round III (DSF-III) bidding commenced in June 2021. Hence the process for obtaining Environmental clearance was kept on hold. The development area considered in KG-OSN-2004/1 & GS49/2 is now part of Contract Areas KG/OSDSF/CHANDRIKA/2021 (area 697 sq. km) & KG/OSDSF/GS49/2021 (area 148 sq. km) awarded to ONGC in the DSF III bidding process on 01/09/2022. This necessitated application for fresh TOR. Project location i.e well locations and the onshore terminal in the development plan remain same.

❖ **Broad Facilities envisaged for Chandrika**

➢ **Drilling & completion of 9 Wells (8 new wells and 1 re-entry well):**

✓ 2 wells in Saveri : SA-DA (WD : 15.5 mtrs) & SA-DB (WD :18 mtrs)

✓ 1 well in NL-2 field: NANL-2DA (WD : 11.5 mtrs)

✓ 1 well in Alankari field: AL-DA (WD : 20.5 mtrs)

✓ 3 wells in Chandrika field: CN-DA (WD: 14.5 mtrs), CN-DB (WD:22 mtrs) & CS-DA (WD:138 mtrs)

✓ 1 well in Sarangi (re-entry well SG-1, WD – 65m)

✓ 1 well in Malhar (ML-DA, WD – 320m)

➢ **Offshore Facilities:**

✓ Well Head Platform : 1 four legged Platform (CN-DB)

✓ Trunkline : 20 inch 44 km from CNDB platform to Onshore Terminal

✓ Infield Pipelines : `56 kms

- ✓ Umbilicals : `30 kms. for MLC wells & `26 Kms. For subsea wells

➢ **SPS Package:**

- ✓ Dry X-Mas tree : 01 no
- ✓ Mud-Line Completions : 5 nos. (AL-DA, CN-DA, NANL-2DA, SA-DA & SA-DB)
- ✓ 3 Subsea Wells (CS-DA, SG-1 & ML-DA)
- ✓ Sub-sea Control system (Electro-hydraulic Control from WHP CN-DB)
- ✓ Subsea composite Electrical Cable (44 kms)

➢ **Controls**

✓ **Mud Line Completions:** The mud line trees will be controlled from the host platform CN-DB. One main umbilical is taken from the TUTA to subsea distribution assembly (SDA) located at seabed close to the WHP. Infield umbilicals connect the trees to the SDA. The umbilical distribution for wells NANL-2DA & CN-DA will be daisy chained. Similarly, for wells SA-DB and SA-DA also umbilical distribution will be daisy chained. Umbilical services to well AL-DA will be catered independently from the SDA.

✓ **Subsea wells:** Control systems for well control are proposed to be hosted on the Wellhead Platform (WHP) at (CN-DB) with telemetric control from the shore based facility. Control for subsea wells are conveyed through umbilicals from CN-DB platform to UTAs near wells.

The final configuration for control systems will be decided during FEED stage.

❖ **Broad Facilities for GS-49-2**

- Number of wells: 1
- 1 Monopod platform at location with 1 dry tree completion wells.
- Pipeline from GS-49-2 platform to CN-DB platform (13 kms).
- Control system

a. <u>Description of Pipelines</u>

Following pipelines are envisaged

S/N	**Pipeline Segment**	Nom. Dia	Approx. length, km.	No. of Risers	Service	Material of Construction.
1	SA-DB to SA-DA	10”	2.80 km	Nil Sub-sea	Gas Well Fluid	X-60 CS NACE

2	SA-DA to CN-DB	10"	12.11km	1	Gas Well Fluid	X-60 CS NACE
3	NANL-2DA to CN-DA	10"	7.22km	Nil Sub-sea	Gas Well Fluid	X-60 CS NACE
4	CN-DA to CN-DB	10"	5 km	1	Gas Well Fluid	X-60 CS NACE
5	AL-DA to CN-DB	8"	3.3 km	1	Gas Well Fluid	X-60 CS NACE
6	CS-DA TO CN-B	8"	7.4 km	1	Gas Well Fluid	X-60 CS NACE
7	ML-DA to SG-1	10"	11.65 km	Nil Sub-sea	Gas Well Fluid	X-60 CS NACE
8	SG-1 to CN-DB	10"	6.89 km	1	Gas Well Fluid	X-60 CS NACE
9	CN-DB to Odalarevu	20"	44 km	1	Gas Well Fluid	X-60 CS NACE
10	GS49 to CN-DB	8"	12	2	Gas Well Fluid	X-60 CS NACE

After deliberations, the Committee recommended the project proposal for prescribing following specific ToRs alongwith public hearing for undertaking detailed EIA and EMP study in addition to the Standard ToR for offshore and onshore oil and gas exploration, development and production projects (Annexure-II).

a) Integrated EIA shall be prepared considering all the proposed development facilities.
b) CRZ mapping study shall include demarcation of HTL and LTL at / near the project site; Demarcation of ecologically sensitive entities such as Mangroves, Sand dunes, etc; Superimposition of HTL, LTL and ecologically sensitive areas along with the project site from the authorized institutes.
c) Submit a copy of layout superimposed on the HTL/LTL map demarcated by an authorized agency on 1:4000 scale.
d) Detailed surveys for coastal biodiversity along the sea shore, mudflat areas and marine fishes, invertebrates, mammals and plants shall be conducted in

the project area and in the vicinity of 2 NM

e) Identification of crucial marine habitats in the project area

f) Study of the impact of drilling noise on the existing biodiversity in this area

g) Socio economic survey shall be conducted to understand the impact of the project on the local fishermen or the people dependent on various bio-resources from this area.

h) Short term and long term impact of the project on the local fishermen and other communities dependent upon the various marine bio-resources. The study shall include the impact during project development and after completion of project

i) Recommendation from SCZMA shall be incorporated in Final EIA/EMP Report.

j) 2D Risk assessment modelling shall be conducted. Risk assessment shall include prevailing risk from existing facilities, perceived risks from proposed facilities, societal risk and mitigation measures. Disaster management plan for cyclone shall be detailed.

k) Air quality modelling should also include the impact on water boundary layer.

l) Oil Spill Risk Assessment to be undertaken from passing out vessel, supply vessel, leakage of fluid from the pipeline along with preventive measures put in place for oil spill response handling in terms of containment, recovery and safe disposal. Accordingly Oil Spill Response Management need to be prepared specific to this project.

m) A comprehensive plan for disaster management including natural disasters like flood, cyclone etc and mitigation be developed taking in to account the products, processes and hazardous waste management and disposal. Risk assessment of onland terminal shall be undertaken as given in (l) and also from adverse weather point of view because the area is cyclone prone beside potential risk from offshore operations. The plan should also include financial provisions for the same and integrate these within EIA/EMP.

n) Project proponent shall submit Final integrated EIA/EMP Report incorporating action plan of issues raised in Public Hearing and SCZMA recommendations.

Agenda No. 02

Establishment of 75 KLD grain-based Ethanol plant with 2.5 MW co-genaration power plant under Ethanol Blended with petrol programme Survey No-9/3/1/2, Bamhani gadiha Village, Semaria Tehsil, Rewa District, Madhya Pradesh by M/s. Shri Dadani Biofuels Private Ltd. - Consideration of Environmental Clearance.

[IA/MP/IND2/422819/2023, IA-J-11011/131/2023-IA-II(I)]

The Project Proponent and the accredited Consultant M/s. SAMRAKSHAN (NABET certificate No. NABET/EIA/2225/RA0265 and validity 25.07.2025) made a detailed presentation on the salient features of the project and informed that the proposal is for environmental clearance to the project for 75 KLPD grain based Ethanol Plant & 2.5 MW cogenration power generation power plant located at Village Bamhani gadiha Village, Tehsil Semaria, District Rewa, Madhya Pradesh State by M/s. Shri Dadani Biofuels Private Ltd.

As per the MoEF&CC Notification S.O. 2339(E), dated 16th June, 2021, a special provision in the EIA Notification, 2006-(Schedule 5 (ga), Category B2) is made, wherein for all applications made for Grain based distilleries with Zero Liquid Discharge producing ethanol; solely to be used for Ethanol Blended Petrol Programme of the Government of India shall be considered under B2 Category and appraised at Central Level by Expert Appraisal Committee (EAC) with condition that the project proponent shall file a notarized affidavit that ethanol produced from proposed project shall be used completely for EBP Programme.

The details of products and capacity as under:

. No.	**Name of unit**	**Name of the product/ by-product**	**Production capacity**
1	Distillery (broken rice)	Ethanol	75 KLPD
2	Co-generation power plant	Power	2.5 MW
3	DWGS dryer	DDGS	38 TPD
4	Fermentation unit	CO_2	45 TPD

Standard ToR and Public Hearing is not applicable as the project falls under category B_2 as per OM dated 16th June, 2021. It was informed that there is no litigation is pending against the project.

Total land area required is 4.046 hectares. Greenbelt will be developed in total area of 1.68-hectares i.e., 42% of total project area. The estimated project cost is Rs. 117.8 Crores. Capital cost of EMP would be Rs. 8.81 Crores and recurring cost for EMP would be Rs. 1.115 Crores per annum. Industry proposes to allocate Rs 1.00 Crores towards Extended EMP (Corporate Environment Responsibility). Total Employment will be 50 persons as direct & indirect.

PP informed that project site is 244 metres away from Munara forest area and NOC letter Number/M.C/2294 dated 15.03.2023 has been obtained from DFO, Rewa division, Madhya Pradesh subject to certain conditions. Ranipur Wildlife Sanctuary (Ranipur Tiger reserve) is located in the jurisdictional area of the State of Uttar Pradesh. ESZ for same is finalized vide Notification No. S.O. 3573(E) dated 09.11.2017. The Eco-sensitive Zone is spread over an area of 193.43 square kilo meters. Eco-sensitive Zone an extent of upto 1.0 kilometre all around the boundary of the Ranipur Wildlife Sanctuary. The nearest boundary of the sanctuary is at 5.29 km from the project site and the nearest distance from the Eco sensitive zone is 4.28 km.

AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 1.3 $\mu g/m^3$, 2.59 $\mu g/m^3$ and 2.59 $\mu g/m^3$ with respect to PM, SO_2 and NO_x. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

Total fresh water requirement will be 364 KLPD which will be met from Piyaman Nalla located at a distance of 2.0 km in the direction to the project site. Permission letter for lifting water from Piyaman nalla has been obtained by Office of Executive Engineer Teonthar Canal, Sirmour Division, Rewa District, Madhya Pradesh with vide letter no. No-200/karya/2023 dated 15/02/2023.

Effluent (MEE Condensate/Cooling tower bleed/ boiler blowdown/ DM plant rejects/ lab washings etc.) of 714 m3/day quantity will be treated through Condensate Polishing Unit of capacity 800 KLPD. Raw stillage/spent wash 450 KLPD will be sent to decanter and 90 KLPD will be recycled back to process and remaining 324 KLPD will be sent to MEE for concentration. Concentrated slop from MEE 118 KLD and 36 KLD of thin slop from decanter will be sent to DWGS for dryer to produce DDGS of 38 TPD. A modular STP of capacity 10 KLPD will be installed to treat sewage

generated from factory premises. The plant will be based on Zero Liquid discharge system and no effluent/treated water will be discharged outside factory premises.

Power requirement will be 1975 KW and will be met from proposed 2.5 MW co-generation power plant. 18.5 TPH (biomass and coal) fired boiler will be installed. ESP with a 45 m high stack will be installed for controlling the particulate matter emissions within the statutory limit of 30 mg/Nm^3 with the proposed boiler. 250 kVA DG Set will be used as standby during power failure and stack height (5 m ARL) will be provided as per CPCB norms to the proposed DG set.

Details of Process emissions generation and its management:

- ESP with 45 meters high stack will be installed for controlling the particulate matter emissions.
- Online Continuous Emission Monitoring System will be installed with the stack and data will be transmitted to CPCB/SPCB servers.
- CO_2 (45 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.

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

- DDGS (Distilled Dried Grains Stillage) 38 TPD will be sold as cattle feed.
- Boiler ash 2.4 TPD will be used for brick manufacturing in proposed brick.
- Used oil (0.15 Kiloliters per annum) will be sold to authorized recyclers.
- CPU sludge (0.5 TPD) and STP Sludge (0.1 TPD) will be used as manure.

As per Notification S.O 2339(E), dated 16th June, 2021, PP has submitted self-certification in the form of notarized affidavit declaring that the proposed capacity of 75 KLPD will be used for manufacturing fuel ethanol only.

Total land of 4.046 Hectares is under possession of the company and land use conversion has been completed vide letter no. 22045419508 dated 27/12/2022. EAC found the information satisfactory.

Capital cost and recurring cost of EMP are given below:

Sl.No.	Description	Financial provision Rs.

		In Lakhs	
		Capital cost	**Recurring cost per annum**
1	Air Pollution		
a.	APC equipment – ESP and Chimney	250	15
b.	OCMS	50	5
c.	CO2 Bottling Plant	50	5
d.	Solid waste storage and disposal – DDGS dyer plant, yeast sludge,	30	10
2	Water Pollution		
a.	Installation of DWAT system	60	1.5
b.	Installation of MEE	200	15
c.	Installation of CPU	50	10
d.	Dryer for DDGS	60	14
3	Noise Pollution – Control PPE	10	5
4	Occupational health and safety annual health check-up, Occupational health centre	40	10
5	Environmental Monitoring	-	7
6	Greenbelt Development @ Rs. 500 / sapling initial and annual maintenance @ Rs. 200 /sapling	21	9
7	Rainwater Harvesting Tank	10	5
8	Corporate Environment Responsibility	50	-
	Total	**881**	**111.5**

During deliberations, EAC discussed following issues:

a) Industry shall take up establishment of distillery of 75 KLD in one phase instead of two phases of 37.5 KLD each.
b) Capacity of the Ethanol storage tank to be reduced to 2000 m^3 storage capacity and the relocation of the storage tanks shifting should be examined. Accordingly, PP informed that the ethanol storage tank capacity will be reduced to maximum of 20 day instead of 30 days with maximum storage capacity of 2000 m^3 and the tanks will be re located towards North East. The entire western and northern part area will be used for green belt all along the boundary of the project site. The committee suggested that storage of Ethanol should be located at a safe distance from the parking area.
c) For greenbelt species as existing in the nearby forest will be planted and the height of the trees will be 6 feet and above. Additional 20 m thick greenbelt area shall be developed towards forest side.

d) Total fresh water consumption should be restricted to 300KLPD i.e 4 kl/kl of ethanol produced. Accordingly, PP has submitted water balance reducing the specific water use to 4 kl/kl of ethanol by increasing the treated CPU reuse in liquefaction and for CO_2 scrubbing.

e) EAC suggested that sludge drying beds should be replaced with filter in condensate polishing unit.

f) EAC suggested to revise the Air modelling studies as the predictions of the pollutants are on the higher side. Accordingly, PP submitted air quality prediction considering the worst-case scenario i.e., using coal as fuel and the following input data is as under;

- Chimney height 45 m
- Chimney diameter 1.2 m
- Flue gas velocity 9 m/s
- As per the stipulated norms for stack emission for coal fired boiler inputs are taken viz., particulate emission shall not exceed 30 mg/Nm^3, SO_2 shall not exceed 100 mg/Nm^3 and NO_x shall not exceed 100 mg/Nm^3.

g) PP has submitted revised AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 1.3 µg/m3, 2.59 µg/m3 and 2.59 µg/m3 with respect to PM, SO2 and NOx.

h) As suggested by EAC PP has revised the budget for CER activities to Rs. 100 lakhs. The breakup of activities is as under;

Sl. No**.**	**Activity**	Amount ₹ Lakhs
1	Infrastructure development program in government schools in viz., school blocks, computers, desk and table smart board in nearby Mukunda village at 2.46 km	20
2	Solar Street lighting facility to nearby Dadha village at 3.23 km	30
3	Sanitary facility to nearby Gahilwar kalan village at 3.75 km	30
4	Skill development programmes for villages	20
Total		100

i) Severity mapping due to ethanol storage and accidental release in three scenarios 10 mm, 15 mm and 25 mm hole has to take for running the model and also considering rupture of pipeline should be worked out and its results to be submitted.

- The revised severity mapping has been carried out using the ALOHA Areal Locations of Hazardous Atmospheres) software 5.4.3
- A technique used to generate an incident list is to consider potential leaks and major releases from storage facilities.

j) The study displays its estimate as a threat zone, which is an area where a hazard (such as toxicity, flammability, thermal radiation, or damaging overpressure) has exceeded a user-specified Level of Concern (LOC). The software is run for three different scenario and as well as release through rupture of pipe line is run through results output isotherms and its extent of threat zone are provided

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

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

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

The environmental clearance granted to the project/activity is strictly under the provisions of the EIA Notification 2006 and its amendments. It does not tantamount/construe to approvals/consent/ permissions etc. required to be obtained or

standards/conditions to be followed under any other Acts/ Rules/ Subordinate legislations, etc., as may be applicable to the project. The project proponent shall obtain necessary permission as mandated under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, as applicable from time to time, from the State Pollution Control Board, prior to construction & operation of the project.

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

(i). As per the Notification S.O. 2339(E), dated 16th June, 2021, project falls in category B2 and the proposed capacity of 75 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). PP shall adhere to conditions laid in NOC letter Number/M.C/2294 dated 15.03.2023 has been obtained from DFO, Rewa division, Madhya Pradesh.

(iv). EC granted for a project on the basis of the submitted documents shall become invalid in case the actual land for the project site turns out to be different from the land considered at the time of appraisal of project. Conversion of land use (CLU) certificate shall be obtained before start of construction activities.

(v). NOC from the Concerned Local authority shall be obtained before start of the construction of plant and drawing water from surface water for the distillery activities, State Pollution Control Board / Pollution Control Committees shall not issue the Consent to Operate (CTO) under Air (Prevention and Control of Pollution) Act and Water (Prevention and Control of Pollution) Act till the project proponent shall obtain such permission. No ground water shall be used for the plant operations.

(vi). Total Fresh water requirement shall not exceed 300 m^3/day which will be met from Piyaman Nalla. No ground water recharge shall be permitted within the premises. Industry shall construct a rain water storage pond of 60 days capacity and the accumulated water to be used as fresh water thereby reducing fresh water consumption.

(vii). Spent Wash/stillage shall be sent to the decanter followed by the Multiple Effect Evaporator and dryer to form DDGS. DDGS to be used as cattle feed. The MEE & Drier condensate, spent lees, WTP Rejects, Boiler & Cooling tower blowdowns, washings etc., is shall be treated in the 'Condensate Polishing Unit' (CPU). STP shall be installed to treat domestic wastewater. The plant will be based on 'Zero Liquid Discharge' system and no effluent/treated water will be discharged outside factory premises.

(viii). ESP (5 field) with 45 meters high stack will be installed with the Rice Husk/Biomass (with 15% coal usage as auxiliary fuel) fired 18.5 TPH boiler for controlling the particulate matter emissions within the statutory limit of 30 mg/Nm^3. SO_2 and NO_x emissions shall be less than 100 mg/Nm^3. At no time, the emission levels shall exceed the prescribed standards. In the event of failure of any pollution control system adopted by the unit, the respective unit shall not be restarted until the control measures are rectified to achieve the desired efficiency. Performance assessment of pollution control devices/ systems will be conducted annually.

(ix). Boiler ash 2.4 TPD will be used for brick manufacturing in proposed brick. PP shall use Rice husk / Biomass / Coal as fuel for the proposed boiler. Low sulphur coal with maximum sulphur content of 0.5% shall only be used. PP shall meet 15% of the total power requirement from solar power by generating power inside plant premises/adjacent/nearby areas.

(x). CO_2 (45 TPD) generated during the fermentation process will be collected by utilizing CO2 scrubbers and it shall be sold to authorized vendors/collected in proposed bottling plant.

(xi). PP shall allocate at least Rs. 0.4 Crore/annum for Occupational Health Safety. Occupational Health Centre for surveillance of the worker's health shall be set up. The health data shall be used in deploying the duties of the workers. All workers & employees shall be provided with required safety kits/mask for personal protection.

(xii). Training shall be imparted to all employees on safety and health aspects of chemicals handling. Safety and visual reality training shall be provided to employees.

(xiii). PP shall ensure that location of the storage tanks should be decided in such a way that impact of the risk under abnormal conditions/ worst case scenario shall remain within the plant boundary level. The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire fighting system shall be as per the norms. PESO certificate shall be obtained.

(xiv). Process organic residue and spent carbon, if any, shall be sent to Cement and other suitable industries for its incinerations. ETP sludge, process inorganic & evaporation salt shall be disposed of to the TSDF.

(xv). The company shall undertake waste minimization measures as below (a) Metering and control of quantities of active ingredients to minimize waste; (b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes. (c) Use of automated filling to minimize spillage. (d) Use of Close Feed system into batch reactors. (e) Venting equipment through vapour recovery system. (f) Use of high pressure hoses for equipment clearing to reduce wastewater generation.

(xvi). The green belt of at least 5-10 m width shall be developed in nearly 1.68 hectares i.e., 42 % of the total project area 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 atleast 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.

(xvii). PP proposed to allocate Rs. 1.0 Crores towards Extended EMP (CER) which shall be spent as submitted in CER plan. Further, all the proposed activities under CER shall be completed before the commissioning of the plant in consultation with District Administration.

(xviii). There shall be adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products and no parking to be allowed outside

on public places. Out of the total project area, 15% shall be allotted solely for parking purposes with facilities like rest rooms etc.

(xix). Storage of raw materials shall be either in silos or in covered areas to prevent dust pollution and other fugitive emissions. All stockpiles should be constructed over impervious soil and garland drains with catch pits to trap runoff material shall be provided. Biomass shall be stored in covered sheds and wind breaking walls/curtains shall be provided around biomass storage area to prevent its suspension during high wind speed. All Internal roads shall be paved. Industrial vacuum cleaner shall be provided to sweep the internal roads. The Air Pollution Control System shall be interlocked with process plant/machinery for shutdown in case of operational failure of Air Pollution Control Equipment.

(xx). Continuous online (24x7) monitoring system for stack emissions/effluent shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.

(xxi). A separate Environmental Management Cell (having qualified person with Environmental Science/Environmental Engineering/specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions. EMC head shall report directly to Head of Organization/ Director/CEO as per company hierarchy.

(xxii). PP shall sensitize and create awareness among the people working within the project area as well as its surrounding area on the ban of Single Use Plastic in order to ensure the compliance of Notification published by MOEFCC on 12th August, 2021. A report along with photographs on the measures taken shall also be included in the six-monthly compliance report being submitted to concerned authority.

Agenda No. 03

Establishment of 150 KLPD Grain based distillery along with 3.5 MW Electricity Generation at: Survey No. 32/2, 3, 4 & 33/2, 4, 5, At/post: Nagral SP village, Tal.: Guledgudda, Dist.: Bagalkot, Karnataka by M/s. Vismaya Bio-Refineries & Allied Industries Pvt. Ltd. (VBRAIPL) - Consideration of Environmental Clearance.

[IA/KA/IND2/423939/2023, IA-J-11011/57/2023-IA-II(I)]

The Project Proponent and the accredited Consultant M/s. Equinox Environments (I) Pvt. Ltd. (NABET certificate no. NABET/EIA/2124/SA 0177 and validity 10.10.2024) made a detailed presentation on the salient features of the project and informed that the proposal is for Environmental Clearance to the project for Establishment of 150 KLPD Grain based distillery along with 3.5 MW Electricity Generation at: Survey No. 32/2, 3, 4, & 33/2, 4, 5, At/post: Nagral SP village, Tal.: Guledgudda, Dist.: Bagalkot, Karnataka by Vismaya Bio-Refineries & Allied Industries Pvt. Ltd. (VBRAIPL).

As per the MoEF&CC Notification S.O. 2339(E), dated 16th June, 2021, a special provision in the EIA Notification, 2006-(Schedule 5 (ga), Category B2) is made, wherein for all applications made for Grain based distilleries with Zero Liquid Discharge producing ethanol; solely to be used for Ethanol Blended Petrol Programme of the Government of India shall be considered under B2 Category and appraised at Central Level by Expert Appraisal Committee (EAC) with condition that the project proponent shall file a notarized affidavit that ethanol produced from proposed project shall be used completely for EBP Programme.

The details of products and capacity as under:

. No.	Name of unit	Name of the product/by-product	Production capacity
1	Distillery (Grain based)	Ethanol	150 KLPD
2	Cogeneration Power Plant	Power	3.5 MW
3	DWGS dryer	DDGS	120 TPD
4	Fermentation unit	Carbon di-oxide	112 TPD

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

Total land area required is 7.47 hectares. The committee noted that proposed site is divided by road into two parts i.e 6.5 ha land and 1.2 ha land. PP informed that proposed distillery unit is in 6.5 ha land. Greenbelt will be developed in total area of 2.46 hectares i.e., 33% of total project area. The estimated project cost is Rs. 150 Crores. Capital cost of EMP would be Rs. 21.05 Crores and recurring cost for EMP would be Rs. 2.42 Crores per annum. Industry proposes to allocate Rs. 2.50 Crores towards Extended EMP (Corporate Environment Responsibility). Total Employment will be 70 persons as direct & indirect.

There is no presence of National Parks, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance. Reserved Forest is at 0.7 Km; North from project site. PP has obtained NOC letter Sl. No: B-2/GFL/VISMAYA/BIO INDUSTRIES/2022-23 dated 08.03.2023 from DCF, Bagalkot division stating that proposed site is at a distance of 700 m from Reserved forest of Kotnalli village. Water bodies: Malprabha River is at a distance of 0.8 Km from site flows in South direction of project site. PP has obtained NOC dated 25.01.2023 from EE, KKNL, MLBCC Din 03, Badami stating that project is located at 800 m from Malprabha. HFL of Malprabha river is 100 m and the proposed site do not come under submergence of the flood plain.

AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.707 µg/m^3, 0.179 µg/m^3, 1.77 µg/m^3 and 0.073 µg/m^3 with respect to PM_{10}, $PM_{2.5}$, SO_2 and NOx. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

Total fresh water requirement will be 496 m^3 /day which will be met from Malaprabha River. NoC Granted by Karnataka Neeravari Nigam Ltd, dated 22.02.2023. Effluent (Condensate/spent lees/blowdown etc.) of 891 m^3 /day quantity will be treated through Condensate Polishing Unit of capacity 1200 m^3 /day. Raw stillage (736 T/D: quantity of raw spent wash from distillation) will be sent to decanter followed by MEE and dryer to produce DDGS. STP of capacity 5 KLPD will be installed to treat sewage generated from factory premises. The plant will be based on Zero Liquid discharge system and no effluent/treated water will be discharged outside factory premises.

Power requirement will be 3 MW and will be met from proposed 3.5 MW electricity generation plant. 35 TPH Bagasse fired boiler will be installed. APCE ESP of 70 m high stack will be installed for controlling the particulate emissions within the statutory limit of 50 mg/Nm^3 with the proposed 35 TPH boiler. 500 kVA DG set will be used as standby during power failure and stack height (5 m) will be provided as per CPCB norms to the proposed DG set.

Details of Process emissions generation and its management:

- APCE ESP with 70 meters high stack will be installed for controlling the particulate matter emissions with the proposed boiler.
- Online Continuous Emission Monitoring System will be installed with the stack and data will be transmitted to CPCB/SPCB servers.
- CO_2 (112 TPD) generated during the fermentation process will be collected by utilizing CO_2 scrubbers and it shall be collected in bottling plant.

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

- DDGS (Distilled Dried Grains Stillage) (120 TPD) will be sold as cattle feed.
- Boiler ash (13 TPD) will be used for brick manufacturing.
- CPU sludge (0.9 TPD) and STP Sludge (0.003 TPD) will be used as manure.

As per Notification S.O 2339(E), dated 16th June, 2021, PP has submitted self - certification in the form of notarized affidavit declaring that the proposed capacity of 150 KLPD will be used for manufacturing fuel ethanol only.

Total land of 7.47 Hectares is under possession of the company and land use conversion has been completed vide letter dated 03.03.2023 for Gat No. 32/2,3,4 & 33/4,5. For gat No. 33/2 is under process. EAC found the information satisfactory.

Capital cost and recurring cost of EMP are given below:

No.	Description	Capital Cost in Crores	Recurring Cost in Crores/ Annum
A.	**Proposed Project**		
1	**Air Pollution**:		
	1. APC Equipment's [ESP for boiler – 1 Nos. (Stack height 70 M)	5.25	0.50
	2.OCMS	0.20	0.05
	3. CO_2 bottling Plant	0.50	0.15
	4. Solid waste disposal (storage and disposal) Ash & CPU, Yeast Sludge	0.30	0.05
2	**Water Pollution**		
	1. Installation of STP	0.05	0.02
	2. Installation of MEE	2.50	0.25
	3. Installation of CPU	1.50	0.15
	4. Dryer for Grain	8.00	0.80
3	Noise Pollution Control PPE (Ear plugs, Ear Muff, Insulations, Barriers)	0.50	0.10
4	Occupational Health & Safety Annual Health checkup, Occupational health center	1.00	0.10
5	Environmental Monitoring	0.25	0.05
6	Green Belt Augmentation & Rain Water	1.00	0.20

No.	Description	Capital Cost in Crores	Recurring Cost in Crores/ Annum
	Harvesting Plan (6,150 nos of trees under greenbelt and Tank for rain water harvesting)		
	Total; (14% of Capital Investment of Rs. 150 Cr)	**21.05**	**2.42**

During deliberations, EAC discussed following issues:

- EAC suggested to incorporate trees in Greenbelt that are existing in the reserved forest area. Further, it was also suggested to enhance number of Madhuca longifolia trees which are more beneficial than Azardirachta indica. Accordingly, PP has submitted revised list of trees in green belt incorporating suggestions made by EAC.
- EAC suggested to develop denser green belt towards the side of Reserved forest located in North of Industry and also suggested to relocate RWH tank such that harvested water may be used for green belt plantation. Accordingly, PP has submitted revised plant layout incorporating suggestions of EAC.
- EAC suggested to increase CER budget to Rs. 2.50 Crores. Accordingly, PP has submitted revised CER detail along with budgetary provisions which is as under:

a) Sr. No.	Proposed Activity	Proposed Budget
b) 1	Non-Conventional Energy Promotions (5 Villages: Nagral SP, Pattadakal, Upnal, Khanapur SP, Parwati): Provision of Solar Street Lights with Gadget – 1 MS Pole, 18-20 W LED Lamp, Battery, Solar Panel, Wiring etc. 5 Villages X 40 Nos./Village = Total 200 Solar Street Lights X Rs.30,000/- per No. = Rs. 60 Lakhs	Rs. 60 Lakhs
c) 2	Solar Photovoltaic (10 Villages: Kelur, Upnal, Kotanalli, Chilapur, Nagral SP, Pattadakal, Bhimanagad, Benakanavi, Khanapur SP, Parwati): 310 KW @ Rs. 0.5 Lakh per KW at grampanchayat / school building. 310 KW X Rs.50,000/- = Rs. 155 Lakh	Rs. 155 Lakhs
d) 3	Drinking Water Supply Infrastructure (5 Villages: Chilapur, Kotanalli, Upnal, Nagral SP, Bhimanagad): Safe Drinking Water Units with Filtration, RO Module & Storage Tank (2 Unit/ Village @ 500 Lit/Hr) –10 Units X Rs. 3 Lakhs = Rs. 30 Lakhs	Rs. 30 Lakhs

e) 4	Afforestation in Nagaral SP Village: 1000 Trees X Rs.500/ No. = Rs. 5 Lakhs	Rs. 5 Lakhs
f) 5	**(1.7% of Capital Investment 150 Cr.) Total Amount**	**Rs. 250 Lakhs**

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

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

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

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

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

(i). As per the Notification S.O. 2339(E), dated 16th June, 2021, project falls in category B2 and the proposed capacity of 150 KLPD shall only be used for fuel ethanol manufacturing as per self-certification in form of a notarized affidavit by the Project Proponent. Provided that subsequently if it is found that the ethanol, produced based on the EC granted as per this dispensation, is not being used completely for EBP Programme, or if ethanol is not being produced, or if the said distillery is not fulfilling the requirements based on which the project has been appraised as category B2 project, the EC shall stand cancelled.

(ii). The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented.

(iii). EC granted for a project on the basis of the submitted documents shall become invalid in case the actual land for the project site turns out to be different from the land considered at the time of appraisal of project. Conversion of land use (CLU) certificate shall be obtained before start of construction activities.

(iv). NOC from the Concerned Local authority shall be obtained before start of the construction of plant and drawing water from surface water for the distillery activities, 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.

(v). Total Fresh water requirement shall not exceed 496 m^3/day which will be met from Malaprabha River. No ground water recharge shall be permitted within the premises. Industry shall construct a rain water storage pond of 60 days capacity and the accumulated water to be used as fresh water thereby reducing fresh water consumption.

(vi). Spent Wash/stillage shall be sent to the decanter followed by the Multiple Effect Evaporator and dryer to form DDGS. DDGS to be used as cattle feed. The MEE & Drier condensate, spent lees, WTP Rejects, Boiler & Cooling tower blowdowns, washings etc., is shall be treated in the 'Condensate Polishing Unit' (CPU). STP shall be installed to treat domestic wastewater. The plant will be based on 'Zero Liquid Discharge' system and no effluent/treated water will be discharged outside factory premises.

(vii). APCE ESP (5 field) with 70 meters high stack will be installed with the Biomass (with 15% coal usage as auxiliary fuel) fired 35 TPH boiler for controlling the particulate emissions within the statutory limit of 30 mg/Nm^3. SO_2 and NOx emissions shall be less than 100 mg/Nm^3. At no time, the emission levels shall exceed the prescribed standards. In the event of failure of any pollution control system adopted by the unit, the respective unit shall not be restarted until the control measures are rectified to achieve the desired efficiency. Performance assessment of pollution control devices/ systems will be conducted annually.

(viii). Boiler ash (13 TPD) will be used for brick manufacturing. PP shall use Biomass as fuel for the proposed boiler. PP shall meet 15% of the total power requirement from solar power by generating power inside plant premises/adjacent/nearby areas.

(ix). CO_2 (112 TPD) generated during the fermentation process will be collected by utilizing CO_2 scrubbers and it shall be collected in bottling plant.

(x). PP shall allocate at least Rs. 1.0 Crore/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). PP shall ensure that location of the storage tanks should be decided in such a way that impact of the risk under abnormal conditions/ worst case scenario shall remain within the plant boundary level. The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire fighting system shall be as per the norms. PESO certificate shall be obtained.

(xiii). Process organic residue and spent carbon, if any, shall be sent to Cement and other suitable industries for its incinerations. ETP sludge, process inorganic & evaporation salt shall be disposed of to the TSDF.

(xiv). The company shall undertake waste minimization measures as below (a) Metering and control of quantities of active ingredients to minimize waste; (b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes. (c) Use of automated filling to minimize spillage. (d) Use of Close Feed system into batch reactors. (e) Venting equipment through vapour recovery system. (f) Use of high pressure hoses for equipment clearing to reduce wastewater generation.

(xv). The green belt of at least 5-10 m width shall be developed in nearly 2.46 hectares i.e., 33 % of the total project area with tree density @ 2500 trees per hectares, mainly along the plant periphery. Denser greenbelt shall be developed towards reserved forest area and PP shall ensure that more trees species shall be developed that are existing in Reserved forest. 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 atleast 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.

(xvi). PP proposed to allocate Rs. 2.50 Crores towards Extended EMP (CER) which shall be spent as submitted in CER plan. Further, all the proposed activities under CER shall be completed before the commissioning of the plant in consultation with District Administration.

(xvii). There shall be adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products and no parking to be allowed outside on public places. Out of the total project area, 15% shall be allotted solely for parking purposes with facilities like rest rooms etc.

(xviii). Storage of raw materials shall be either in silos or in covered areas to prevent dust pollution and other fugitive emissions. All stockpiles should be constructed over

impervious soil and garland drains with catch pits to trap runoff material shall be provided. Biomass shall be stored in covered sheds and wind breaking walls/curtains shall be provided around biomass storage area to prevent its suspension during high wind speed. All Internal roads shall be paved. Industrial vacuum cleaner shall be provided to sweep the internal roads. The Air Pollution Control System shall be interlocked with process plant/machinery for shutdown in case of operational failure of Air Pollution Control Equipment.

(xix). Continuous online (24x7) monitoring system for stack emissions/effluent shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.

(xx). A separate Environmental Management Cell (having qualified person with Environmental Science/Environmental Engineering/specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions. EMC head shall report directly to Head of Organization/ Director/CEO as per company hierarchy.

(xxi). PP shall sensitize and create awareness among the people working within the project area as well as its surrounding area on the ban of Single Use Plastic in order to ensure the compliance of Notification published by MOEFCC on 12th August, 2021. A report along with photographs on the measures taken shall also be included in the six-monthly compliance report being submitted to concerned authority.

Agenda No. 04

Establishment of 105 KLPD Grain based distillery along with 3 MW Electricity Generation at: Gat No. 346, 350/1, At/Post: Vathar (Kiroli), Tal.: Koregaon, Dist.: Satara, Maharashtra State by M/s. Rahimatpur Vibhag Shetkari Producer Company Ltd. (RVSPCL) - Consideration of Environmental Clearance.

[IA/MH/IND2/423268/2023, IA-J-11011/145/2023-IA-II(I)]

The Project Proponent and the accredited Consultant M/s. Equinox Environments (I) Pvt. Ltd. (NABET certificate no. NABET/EIA/2124/SA 0177 and validity 10.10.2024)

made a detailed presentation on the salient features of the project and informed that the proposal is for Environmental Clearance to the project for Establishment of 105 KLPD Grain based distillery along with 3 MW Electricity Generation at: Gat No. 346, 350/1, At/Post: Vathar (Kiroli), Tal.: Koregaon, Dist.: Satara, Maharashtra State by Rahimatpur Vibhag Shetkari Producer Company Ltd. (RVSPCL).

Total land area required is 6.16 hectares. The committee noted that the proposed land is not in the name of company. Even company is not registered under The Companies Act and PP was not able to show the registration certificate of the company. Amid this, the Committee was of the view that PP should obtain registration certificate under The Companies Act and also PP should obtain possession of the proposed land for the said project.

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

Agenda No. 05

Proposed 300 KLPD Grain based Ethanol Plant & 7 MW Co-generation power plant (biomass based) located at Village Nodiyur, Taluka Gandarvakottai and District Pudukottai, Tamil Nadu by M/s. Big Star Fuels LLP - Consideration of Environmental Clearance.

[IA/TN/IND2/423385/2023, IA-J-11011/136/2023-IA-II(I)]

The proposal was earlier considered by the EAC (Ind-2) in its meeting/meeting ID IA/IND2/13462/15/03/2023 held during 15th March, 2023 wherein EAC returned the proposal and directed the consultant to prepare EMP report only after visiting and assessing the site conditions. Besides this, the EAC required certain requisite information/inputs. After site visit by Mr. Yashpal Jain, EIA co-ordinator of Enviro Infra Solutions Pvt. Ltd., EMP was revised and the same has been submitted as per the directions of the EAC. After submission of ADS reply by Project Proponent, proposal is again considered in EAC meeting (Meeting ID: IA/IND2/13477/08/04/2023) held on 08th April, 2023. Information desired by EAC and responses submitted by the project proponent are as follows:

S. No.	Requisite information/inputs	Undertaking/Reply

1.	Change in CER budget	The company hereby undertake to revise in the CER budget from Rs. 2.10 Cr. to Rs. 3.00 Cr. The budget will be spent within 3 years from the date of start of the project
2.	Rain Water Storage Lagoon	The company hereby undertake to construct rain water storage lagoon of 5000 m^3 capacity within the premises
3.	Tree Plantation Details within premises	The industry will not cut any grown trees within the premises (Teak, Mango, Tamarind) having a stem diameter of more than 6 inch. Further, the green belt area within the premises will be increased from 36400 m^2 to 40000 m^2
4.	Regarding Fuel Usage	The company hereby undertake that the industry will use only biomass/rice husk as fuel and coal will not be used in the boiler furnace
5.	Regarding Ethanol Storage	The company hereby undertake that the industry will store fuel ethanol in the storage tanks as mentioned in the EMP and also get the PESO approval before the commissioning of the plant
6.	Details of risk analysis for alcohol storage pipeline	Risk analysis for alcohol storage pipeline with isopleth for the project is enclosed are given in chapter – 4 of the EMP

The project proponent and the accredited Consultant M/s. Enviro Infra Solutions Pvt. Ltd. (NABET certificate no. NABET/EIA/1922/RA 0157 and validity upto 14th May, 2024) made a detailed presentation on the salient features of the project and informed that the proposal is for environmental clearance to the project for 300 KLPD Grain based Ethanol Plant & 7 MW Co-generation power plant (biomass based) located at village Nodiyur, Taluka Gandarvakottai and District Pudukottai, Tamil Nadu - 613402 by M/s Big Star Fuels LLP.

As per the MoEF&CC Notification S.O. 2339(E), dated 16th June, 2021, a special provision in the EIA Notification, 2006-(Schedule 5 (ga), Category B2) is made, wherein for all applications made for Grain based distilleries with Zero Liquid Discharge producing ethanol; solely to be used for Ethanol Blended Petrol Programme of the Government of India shall be considered under B2 Category and appraised at Central Level by Expert Appraisal Committee (EAC) with condition that the project proponent shall file a notarized affidavit that ethanol produced from proposed project shall be used completely for EBP Programme.

The details of products and capacity as under:

S. No.	Name of the Unit	Name of Product/By-product	Production Capacity
1.	Distillery (Grain based)	Fuel Ethanol	300 KLPD
2.	Cogeneration of Power	Power	7 MW
3.	Fermentation Unit	CO_2	230 TPD
4.	DWGS Dryer	DDGS	160 TPD

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

Total land area acquired is 11.02 hectares. Greenbelt will be developed in total area of 3.64 hectares i.e., 33 % of total project area. The estimated project cost is Rs. 275 Crores. Capital cost of EMP would be Rs. 51.25 Crores and recurring cost for EMP would be Rs. 4.15 Crores per annum. Industry proposes to allocate Rs. 3.0 Crores towards Extended EMP (Corporate Environment Responsibility). Total Employment will be 400 persons as direct & indirect.

There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance. There are no water bodies/river etc. within 10 km. radius of project site.

AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 2.17 µg/m^3 for particulate matter and 3.36 µg/m^3 for SO_2. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

Total fresh water requirement will be 1168 m^3/day which will be met from ground water supply. Application has been submitted to Chief Engineer (PWD), Ground Water Department, Chennai, Tamil Nadu dated 13/09/2022 vide receipt dated 20/02/2023 for the ground water extraction @ 1400 m^3/day. Spent wash @ 1584 MT/day would be generated during the proposed production of Ethanol @ 300 KL/day. The spent wash would be sent to the decanter where wet cake @ 320 MT/day would be separated and thin slops @ 1284 MT/day would be generated. Out of the total thin slops, the industry

will directly reuse 210 MT/day of thin slops for slurry preparation and the remaining thin slops @ 1054 MT/day will be treated in multi-effect evaporation system. Besides this, the MEE will also handle 35 MT/day of RO reject generated from the treatment of misc. streams effluent.

The industry will generate 1549 m^3/day of condensates from MEE, spent lees and dryer condensates and RO supernatant from misc. streams effluent @ 108 MT/day. Out of the total condensate generation, 800 MT/day of condensates would be directly reused in the liquification process. The remaining 857 MT/day would be sent to ETP for treatment, which after treatment would be reused in the cooling tower makeup water. The plant will be based on Zero Liquid discharge system and no effluent/treated water will be discharged outside factory premises.

Power requirement will be 6 MW and will be met from proposed 7 MW cogeneration power plant. 55 TPH biomass fired boiler will be installed. ESP with 50 m high stack will be installed with the boiler furnace for controlling the particulate emissions within the statutory limit of 50 mg/Nm^3 for the proposed 55 TPH boiler. 1 x 1000 kVA DG set will be used as standby during power failure and stack height (6.5 m) will be provided as per CPCB norms to the proposed DG sets.

Details of Process emissions generation and its management:

- ESP with 50 meters high stack will be installed for controlling the particulate matter emissions.
- Online Continuous Emission Monitoring System will be installed with the stack and data will be transmitted to CPCB/SPCB servers.
- CO2 (230 TPD) generated during the fermentation process will be collected by utilizing CO2 scrubbers and it shall be sold to authorized vendors/collected in proposed bottling plant.

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

- DDGS (Distilled Dried Grains Stillage) (160 TPD) will be sold as cattle feed/fish feed/prawn feed.
- Boiler ash (60 TPD) will be used for brick manufacturing in proposed brick manufacturing plant inside plant premises.
- Used oil (0.5 Kilolitres per annum) will be sold to authorized recyclers.
- ETP sludge (0.5 TPD) will be used as manure.

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

Total land of 11.02 Hectares is under possession of the company through a registered land deed and the land use conversion is not required as per Letter no. 188/2023-PDK dated 16.02.2023 issued by Deputy Director (Incharge), District Rural Urban Planning Office, Pudukottai. EAC found the information satisfactory.

Capital cost and recurring cost of EMP are given below:

Breakup of Capital Cost of Pollution Control Measures (EMP)

S. No.	Description	Cost (Rs. in Crores)
1.	Multiple Effect Evaporator	20.00
2.	New energy efficient Dryer	22.00
3.	ESP on proposed boiler	3.50
4.	Pneumatic ash handling system	0.75
5.	Shed on fuel storage space to avoid spillage/ flushing with rain water	1.00
6.	CPU	3.00
7.	Green belt development	0.50
	Environmental Monitoring Equipment	0.50
	Total	**51.25**

Breakup of Recurring Cost of Pollution Control Measures

S. No.	DESCRIPTION	Cost/Annum (Rs. in Crores)
1	Electricity cost (500 KWH @ Rs. 5.0/KWH)	2.50
2	Manpower Cost	0.35
3	Chemicals Cost	0.20
4	Cost of repair and maintenance	0.20
5	Cost of management of ash in scientific manner	0.60
6	Green Area Maintenance	0.15
7	Environmental Monitoring	0.15
	Total	4.15

During deliberations, EAC discussed following issues:

- PP informed that there is a Killukkottai Reserve Forest located at 1 km. aerial distance from the site.
- The committee suggested that no trees shall be cut. Accordingly, PP informed that there arearound 700 teak trees around the boundary wall of the land and around 50 mango and tamarind trees within the proposed project site and all the existing trees will be preserved..
- Regarding Fuel Usage PP informed that the industry will use only biomass/rice husk as fuel and coal will not be used in the boiler furnace.
- PP has submitted details of Risk analysis for leakage of valves in the alcohol storage tanks/pipeline as desired by EAC.
- PP has submitted details of ground level concentration due to rice husk/biomass burning in AFBC boiler of 55 TPH capacity as desired by EAC. Revised AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 2.17 µg/m^3 for particulate matter, 3.36 µg/m^3 for SO_2 and 2.83 µg/m3 for NO_x.
- PP has submitted revised CER budget from Rs. 2.10 Crores to Rs. 3.00 Cr with the breakup of budget and activities proposed with the details as under:

S. No.	**Particulars**	**Value**
1.	Names of villages to be adopted under Corporate Environmental Responsibility -	(i) Nodiyur, (ii) Killukkottai, (iii) Ulagangattanpatti, (iv) Nathamadipatti, (v) Achampatti, (vi) Malaiyapatti
2.	**Activity 1 to be undertaken**	**Improvements of infrastructure in schools**
3.	Budget for Improvements of infrastructure in schools	(Rs. In Lakhs)
a.	Provision of computers in the schools	30.00
b.	Development of library in the schools	25.00
c.	Provision of sports infrastructure	50.00
d.	Provision of infrastructure such as electrical fans, lights, water coolers/RO etc.	50.00
2.	Activity – 2: Solar Lighting of adjoining	95.00

	villages as mentioned above	
3.	Activity – 3: Skill development of local youth by adopting local ITI's of the area	50.00
	Total (Rs. in Lakhs)	**300.00**

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

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

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

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

applicable from time to time, from the State Pollution Control Board, prior to construction & operation of the project.

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

(i). As per the Notification S.O. 2339(E), dated 16th June, 2021, project falls in category B2 and the proposed capacity of 300 KLPD shall only be used for fuel ethanol manufacturing as per self-certification in form of a notarized affidavit by the Project Proponent. Provided that subsequently if it is found that the ethanol, produced based on the EC granted as per this dispensation, is not being used completely for EBP Programme, or if ethanol is not being produced, or if the said distillery is not fulfilling the requirements based on which the project has been appraised as category B2 project, the EC shall stand cancelled.

(ii). The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented.

(iii). EC granted for a project on the basis of the submitted documents shall become invalid in case the actual land for the project site turns out to be different from the land considered at the time of appraisal of project. Conversion of land use (CLU) certificate shall be obtained before start of construction activities.

(iv). NOC from the Concerned Local authority shall be obtained before start of the construction of plant and drawing water from ground water for the distillery activities, 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.

(v). Total Fresh water requirement shall not exceed 1168 m^3/day which will be met from ground water. No ground water recharge shall be permitted within the premises. Industry shall construct a rain water storage pond of 60 days capacity and the accumulated water to be used as fresh water thereby reducing fresh water consumption.

(vi). Spent Wash/stillage shall be sent to the decanter followed by the Multiple Effect Evaporator and dryer to form DDGS. DDGS to be used as cattle feed. The MEE & Drier condensate, spent lees, WTP Rejects, Boiler & Cooling tower blowdowns, washings etc., is shall be treated in the 'Condensate Polishing Unit' (CPU). STP shall be installed to treat domestic wastewater. The plant will be based on 'Zero Liquid Discharge' system and no effluent/treated water will be discharged outside factory premises.

(vii). ESP (5 field) with 50 meters high stack will be installed with the Biomass fired 55 TPH boiler for controlling the particulate emissions within the statutory limit of 50 mg/Nm^3. No coal shall be used. SO_2 and NOx emissions shall be less than 100 mg/Nm^3. At no time, the emission levels shall exceed the prescribed standards. In the event of failure of any pollution control system adopted by the unit, the respective unit shall not be restarted until the control measures are rectified to achieve the desired efficiency. Performance assessment of pollution control devices/ systems will be conducted annually.

(viii). Boiler ash (60 TPD) will be used for brick manufacturing in proposed brick manufacturing plant inside plant premises/supplied to brick manufacturers/ given to farmers to be used as manure. PP shall use Biomass as fuel for the proposed boiler. PP shall meet 15% of the total power requirement from solar power by generating power inside plant premises/adjacent/nearby areas.

(ix). CO_2 (230 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.

(x). PP shall allocate at least Rs. 0.5 Crore/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). PP shall ensure that location of the storage tanks should be decided in such a way that impact of the risk under abnormal conditions/ worst case scenario shall remain within the plant boundary level. The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire fighting system shall be as per the norms. PESO certificate shall be obtained.

(xiii). Process organic residue and spent carbon, if any, shall be sent to Cement and other suitable industries for its incinerations. ETP sludge, process inorganic & evaporation salt shall be disposed of to the TSDF.

(xiv). The company shall undertake waste minimization measures as below (a) Metering and control of quantities of active ingredients to minimize waste; (b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes. (c) Use of automated filling to minimize spillage. (d) Use of Close Feed system into batch reactors. (e) Venting equipment through vapour recovery system. (f) Use of high pressure hoses for equipment clearing to reduce wastewater generation.

(xv). The green belt of at least 5-10 m width shall be developed in nearly 3.64 hectares i.e., 33 % of the total project area 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 atleast 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.

(xvi). PP proposed to allocate Rs. 3.00 Crores towards Extended EMP (CER) which shall be spent as submitted in CER plan. Further, all the proposed activities under CER shall be completed before the commissioning of the plant in consultation with District Administration.

(xvii). There shall be adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products and no parking to be allowed

outside on public places. Out of the total project area, 15% shall be allotted solely for parking purposes with facilities like rest rooms etc.

(xviii). Storage of raw materials shall be either in silos or in covered areas to prevent dust pollution and other fugitive emissions. All stockpiles should be constructed over impervious soil and garland drains with catch pits to trap runoff material shall be provided. Biomass shall be stored in covered sheds and wind breaking walls/curtains shall be provided around biomass storage area to prevent its suspension during high wind speed. All Internal roads shall be paved. Industrial vacuum cleaner shall be provided to sweep the internal roads. The Air Pollution Control System shall be interlocked with process plant/machinery for shutdown in case of operational failure of Air Pollution Control Equipment.

(xix). Continuous online (24x7) monitoring system for stack emissions/effluent shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.

(xx). A separate Environmental Management Cell (having qualified person with Environmental Science/Environmental Engineering/specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions. EMC head shall report directly to Head of Organization/ Director/CEO as per company hierarchy.

(xxi). PP shall sensitize and create awareness among the people working within the project area as well as its surrounding area on the ban of Single Use Plastic in order to ensure the compliance of Notification published by MOEFCC on 12th August, 2021. A report along with photographs on the measures taken shall also be included in the six-monthly compliance report being submitted to concerned authority.

Agenda No. 06

Proposed 100 KLPD Grain Based Distillery along with 2.8 MW Co-gen Power Plant and Zero Liquid Discharge Unit at Plot No. A8, A10, A11, SIPCOT Industrial Park, Pelakuppam Village, Tindivanam Taluk, Viluppuram District,

Tamil Nadu by M/s. Tatsavi and Manikanta Ventures Private Limited - Consideration of Environmental Clearance.

[IA/TN/IND2/423712/2023, IA-J-11011/146/2023-IA-II(I)]

The Project Proponent and the accredited Consultant M/s. Enviro Care India Private Limited (NABET certificate no.NABET/EIA/2124/RA0249 and validity 14th December 2024) made a detailed presentation on the salient features of the project and informed that the proposal is for environmental clearance to the project for 100 KLPD Grain Based Distillery along with 2.8 MW Co-gen Power Plant and Zero Liquid Discharge Unit by M/s. Tatsavi and Manikanta Ventures Private Limited at Plot No. A8, A10, A11, SIPCOT Industrial Park, Pelakuppam Village, Tindivanam Taluk, Viluppuram District, Tamil Nadu.

As per the MoEF&CC Notification S.O. 2339(E), dated 16th June, 2021, a special provision in the EIA Notification, 2006-(Schedule 5 (ga), Category B2) is made, wherein for all applications made for Grain based distilleries with Zero Liquid Discharge producing ethanol; solely to be used for Ethanol Blended Petrol Programme of the Government of India shall be considered under B2 Category and appraised at Central Level by Expert Appraisal Committee (EAC) with condition that the project proponent shall file a notarized affidavit that ethanol produced from proposed project shall be used completely for EBP Programme.

The details of products and capacity as under:

<table>
<tr><th>S. No.</th><th colspan="2">Name of unit</th><th>Name of the product/ by-product</th><th>Production capacity</th></tr>
<tr><td rowspan="4">1</td><td colspan="2">Distillery</td><td rowspan="4">Ethanol</td><td rowspan="4">100 KLPD</td></tr>
<tr><td colspan="2">Raw Materials - Grains (Broken Rice, Maize)</td></tr>
<tr><td>Starch 68% - 245 TPD</td><td>Starch 60% - 260 TPD</td></tr>
<tr><td colspan="2"></td></tr>
<tr><td>4</td><td colspan="2">Co-generation Power Plant</td><td>Power</td><td>2.8 MW</td></tr>
<tr><td>5</td><td colspan="2">DWGS Dryer</td><td>DDGS</td><td>65 TPD</td></tr>
<tr><td>6</td><td colspan="2">Fermentation Unit</td><td>Carbon di-oxide</td><td>55 TPD</td></tr>
</table>

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

Total land area required is 5 hectares. Greenbelt will be developed in total area of 1.65 hectares i.e., 33% of total project area. The estimated project cost is Rs. 175 Crores. Capital cost of EMP would be Rs. 20 Crores and recurring cost for EMP would be Rs. 1.51 Crores per annum. Industry proposes to allocate Rs. 4 Crores towards Extended EMP (Corporate Environment Responsibility). Total Employment will be 150 persons as direct & indirect.

There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance. There is no Eco-sensitive Zone within 10 km distance from project area. There is no Schedule I species present within 10 km distance from the project site. Botheri lake at 2.78 km, vilukkam lake at 8.5 km, vairapuram lake at 7.7 km and kodiyan lake at 8.8 km are located within 10 km of project site.

AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 2.36 µg/m^3, 1.16 µg/m^3, 0.67 µg/m^3 and 1 . 2 µg/m^3 with respect to PM_{10}, $PM_{2.5}$, SO_2 and NO_X. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

Total fresh water requirement will be 400 m^3/day which will be met from SIPCOT water supply. Effluent (Condensate/spent lees/blow down etc.) of 486 m^3/day quantity will be treated through Condensate Polishing Unit/Effluent Treatment Plant of capacity 500 KLPD. Raw stillage (115 KLPD: quantity of raw spent wash from distillation) will be sent to decanter followed by MEE and dryer to produce DDGS. The plant will be based on Zero Liquid discharge system and no effluent/treated water will be discharged outside factory premises.

Power requirement will be 2.4 MW which is met from proposed 2.8 MW Co-generation Power Plant. A 30 TPH boiler will be installed. Electrostatic Precipitator with 50 m high stack will be installed for controlling the particulate matter emissions within the statutory limit of 30 mg/Nm^3 with the 30 TPH proposed boiler, 750 kVA DG set will be used as standby during power failure and stack height (15m) will be provided as per CPCB norms to the proposed DG sets. Coal and rice husk will be used as fuel.

Details of Process emissions generation and its management:

- APC Electrostatic Precipitator with 50 meters high stack will be installed for controlling the particulate matter emissions with the proposed boiler.
- Online Continuous Emission Monitoring System will be installed with the stack and data will be transmitted to CPCB/SPCB servers.
- One separate CO_2 recovery plant will be installed and CO_2 (55 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.

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

- DDGS-Distilled Dried Grains Stillage (65 TPD) will be sold as cattle feed.
- Boiler ash (19 TPD) will be used for brick manufacturing in proposed brick manufacturing plant inside plant premises/supplied to brick manufacturers.
- ETP Sludge (0.3 TPD) will be stored and disposed to authorized recyclers.

As per Notification S.O 2339(E), dated 16th June, 2021, PP has submitted self - certification in the form of notarized affidavit declaring that the proposed capacity of 100 KLPD will be used for manufacturing fuel ethanol only.

Total land of 5 Hectares is under possession of the company is allotted by the SIPCOT letter no. P-III/SIP-TDM/Tatsavi/2023 dated 25.03.2023. EAC found the information satisfactory.

Capital cost and recurring cost of EMP are given below:

No.	Particulars	Capital Cost In Crores	Recurring
1	Air pollution Management	2.2	0.3
2	Continuous Emission Monitoring	2.5	0.13
3	Noise Reduction System	0.5	0.05
4	Water and Wastewater Management	11.5	0.7
5	Solid Waste Management	0.35	0.02
6	Green Belt Development	0.75	0.12
7	Rainwater harvesting systems	0.2	0.02

8	Environment monitoring & Training	1.5	0.1
9	Occupational Health & Safety	0.5	0.07
Total		**20**	**1.51**

Details of CER with proposed activities and budgetary allocation:

	Activity	Fund allocated (Rupees in Crores)
	Health and Education to nearby villages (Kollar, Venmaniyathur etc.,)	1.4
	Electrification including solar power to nearby villages (Palakuppam, Vempundi etc.,)	0.6
	Water Treatment Plant and Toilet facility to nearby government schools of Melpakkam, Kattusiviri and Deevanur.	2.0
Total		**4.0**

During deliberations, EAC discussed following issues:

- PP informed that they will prepare On-site and Off-site Disaster Management Plan and submit to competent authority before commencement of any kind of activity on project site. They will obtain PESO Clearance before commencement of any kind of activity on project site. PP shall ensure that location of the storage tanks should be decided in such a way that impact of the risk under abnormal conditions/ worst case scenario shall remain within the plant boundary level. Further, all the safety measures shall be taken and permission from the PESO shall be obtained before construction of plant.
- The committee noted that the consultant did not upload the risk assessment report on the parivesh portal, which was presented before the committee. Further, the committee suggested that show cause notice should be issued to Consultant.
- PP has submitted capital and recurring cost of EMP. PP has also submitted details of CER along with budgetary provisions and proposed activities.
- PP shall meet 15% of the total power requirement from solar power by generating power inside plant premises.
- PP shall install filter press instead of sludge drying belt.
- Thick green belt shall be developed between the plant boundary and parking area. 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 atleast 20 variety of species as a part of greenbelt.

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

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

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

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

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

(i). As per the Notification S.O. 2339(E), dated 16th June, 2021, project falls in category B2 and the proposed capacity of 100 KLPD shall only be used for fuel ethanol manufacturing as per self-certification in form of a notarized affidavit by the Project Proponent. Provided that subsequently if it is found that the ethanol, produced based on the EC granted as per this dispensation, is not being used completely for EBP Programme, or if ethanol is not being produced, or if the said distillery is not fulfilling the requirements based on which the project has been appraised as category B2 project, the EC shall stand cancelled.

(ii). The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented.

(iii). EC granted for a project on the basis of the submitted documents shall become invalid in case the actual land for the project site turns out to be different from the land considered at the time of appraisal of project. Conversion of land use (CLU) certificate shall be obtained before start of construction activities.

(iv). NOC from the Concerned Local authority shall be obtained before start of the construction of plant and drawing water from SIPCOT Water Supply for the distillery activities, 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.

(v). Total Fresh water requirement shall not exceed 400 m^3/day which will be met from SIPCOT Water Supply. No ground water recharge shall be permitted within the premises. Industry shall construct a rain water storage pond of 60 days capacity and the accumulated water to be used as fresh water thereby reducing fresh water consumption.

(vi). Spent Wash/stillage shall be sent to the decanter followed by the Multiple Effect Evaporator and dryer to form DDGS. DDGS to be used as cattle feed. The MEE & Drier condensate, spent lees, WTP Rejects, Boiler & Cooling tower blowdowns, washings etc., is shall be treated in the 'Condensate Polishing Unit' (CPU). STP shall be installed to treat domestic wastewater. The plant will be based on 'Zero

Liquid Discharge' system and no effluent/treated water will be discharged outside factory premises.

(vii). ESP (5 field) with 50 meters high stack will be installed with the Biomass/ Coal fired 30 TPH boiler for controlling the particulate emissions within the statutory limit of 30 mg/Nm^3. SO_2 and NOx emissions shall be less than 100 mg/Nm^3. At no time, the emission levels shall exceed the prescribed standards. In the event of failure of any pollution control system adopted by the unit, the respective unit shall not be restarted until the control measures are rectified to achieve the desired efficiency. Performance assessment of pollution control devices/ systems will be conducted annually.

(viii). Boiler ash (19 TPD) will be used for brick manufacturing in proposed brick manufacturing plant inside plant premises/supplied to brick manufacturers. PP shall use Biomass / Coal as fuel for the proposed boiler. Low sulphur coal with maximum sulphur content of 0.5% shall only be used. PP shall meet 15% of the total power requirement from solar power by generating power inside plant premises/adjacent/nearby areas.

(ix). One separate CO_2 recovery plant will be installed and CO_2 (55 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.

(x). PP shall allocate at least Rs. 0.5 Crore/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). PP shall ensure that location of the storage tanks should be decided in such a way that impact of the risk under abnormal conditions/ worst case scenario shall remain within the plant boundary level. The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire fighting system shall be as per the norms. PESO certificate shall be obtained.

(xiii). Process organic residue and spent carbon, if any, shall be sent to Cement and other suitable industries for its incinerations. ETP sludge, process inorganic & evaporation salt shall be disposed of to the TSDF.

(xiv). The company shall undertake waste minimization measures as below (a) Metering and control of quantities of active ingredients to minimize waste; (b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes. (c) Use of automated filling to minimize spillage. (d) Use of Close Feed system into batch reactors. (e) Venting equipment through vapour recovery system. (f) Use of high pressure hoses for equipment clearing to reduce wastewater generation.

(xv). The green belt of at least 5-10 m width shall be developed in nearly 1.65 hectares i.e., 33 % of the total project area 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 atleast 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.

(xvi). PP proposed to allocate Rs. 4.0 Crores towards Extended EMP (CER) which shall be spent as submitted in CER plan. Further, all the proposed activities under CER shall be completed before the commissioning of the plant in consultation with District Administration.

(xvii). There shall be adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products and no parking to be allowed outside on public places. Out of the total project area, 15% shall be allotted solely for parking purposes with facilities like rest rooms etc.

(xviii). Storage of raw materials shall be either in silos or in covered areas to prevent dust pollution and other fugitive emissions. All stockpiles should be constructed over impervious soil and garland drains with catch pits to trap runoff material shall be provided. Biomass shall be stored in covered sheds and wind breaking

walls/curtains shall be provided around biomass storage area to prevent its suspension during high wind speed. All Internal roads shall be paved. Industrial vacuum cleaner shall be provided to sweep the internal roads. The Air Pollution Control System shall be interlocked with process plant/machinery for shutdown in case of operational failure of Air Pollution Control Equipment.

(xix). Continuous online (24x7) monitoring system for stack emissions/effluent shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.

(xx). A separate Environmental Management Cell (having qualified person with Environmental Science/Environmental Engineering/specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions. EMC head shall report directly to Head of Organization/ Director/CEO as per company hierarchy.

(xxi). PP shall sensitize and create awareness among the people working within the project area as well as its surrounding area on the ban of Single Use Plastic in order to ensure the compliance of Notification published by MOEFCC on 12th August, 2021. A report along with photographs on the measures taken shall also be included in the six-monthly compliance report being submitted to concerned authority.

Agenda No. 07

Greenfield Project of Grain Based Distillery Plant of 200 KLD along with Co-generation Power Plant of 4.5 MW located at Village- Pedda Dhanwada, Tehsil-Rajoli Mandal, District-Jogulamba Gadwal, Telangana by M/s. Gayathri Renewable Fuels and Allied Industries Pvt. Ltd. - Consideration of Environmental Clearance.

[IA/TG/IND2/423434/2023, IA-J-11011/137/2023-IA-II(I)]

The Project Proponent and the accredited Consultant M/s. GRC India Pvt Ltd (NABET certificate no. NABET/EIA/2124/RA0213 and valid till 15.02.2024) made a detailed

presentation on the salient features of the project and informed that the proposal is for environmental clearance to the Greenfield Project of "Grain Based Distillery Plant of 200 KLD along with Co-generation Power Plant of 4.5 MW" located at Village- Pedda Dhanwada, Tehsil-Rajoli Mandal, District-Jogulamba Gadwal, Telangana-509126 by M/s. Gayathri Renewable Fuels and Allied Industries Pvt. Ltd.

Total land area required is 7.76 hectares. Proposed site is in surrounded by agricultural fields and is located at 300 m away from the connecting road. The committee noted that there is no approach road for the proposed site and the connecting road. PP informed that they have purchased land from the surround fields to construct approach road. However, PP has not shown the evidence for the purchased land for the construction of approach road. Therefore, EAC was of the view that PP should aquire the land for approach road from the proposed site to the connecting road and submit credible evidence for consideration.

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

Agenda No. 08

Proposed 500 KLPD Grain based Ethanol plant along with 10 MW Co-generation power plant under Ethanol Blending Programme at Village Ismailpur, Tehsil Aonla, District Bareilly, Uttar Pradesh by M/s. Dalmia Bharat Sugar and Industries Limited Grain Distillery Unit- Ismailpur - Consideration of Environmental Clearance.

[IA/UP/IND2/421131/2023, IA-J-11011/100/2023-IA-II(I)]

The Project Proponent and the accredited Consultant J.M. EnviroNet Pvt. Ltd. (NABET certificate no. NABET/EIA/2023/SA 0172 and validity till 7th August, 2023) made a detailed presentation on the salient features of the project and informed that the proposal is for environmental clearance to the project for proposed 500 KLPD Grain Based Ethanol Plant along with 10 MW Co-generation Power Plant under Ethanol Blending Programme at Village Ismailpur, Tehsil Aonla, District Bareilly, Uttar Pradesh by M/s. Dalmia Bharat Sugar and Industries Limited Grain Distillery Unit- Ismailpur.

As per the MoEF&CC Notification S.O. 2339(E), dated 16th June, 2021, a special provision in the EIA Notification, 2006-(Schedule 5 (ga), Category B2) is made, wherein

for all applications made for Grain based distilleries with Zero Liquid Discharge producing ethanol; solely to be used for Ethanol Blended Petrol Programme of the Government of India shall be considered under B2 Category and appraised at Central Level by Expert Appraisal Committee (EAC) with condition that the project proponent shall file a notarized affidavit that ethanol produced from proposed project shall be used completely for EBP Programme.

The details of products and capacity as under:

No.	**Unit**	**Name of Product/by-product**	**duction Capacity**
1.	Grain Based Ethanol Plant	Ethanol	500 KLPD
2.	Co-generation Power Plant	Power	10 MW
3.	DWGS Dryer	DDGS	240 TPD
4.	Fermentation Unit	Carbon di-oxide	375 TPD

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

Total land area required is 10.68 hectares. Greenbelt will be developed in total area of 3.53 hectares i.e., 33 % of total project area. The estimated project cost is Rs. 300 Crores. Capital cost of EMP would be Rs. 30.0 Crores and Recurring cost for EMP would be Rs. 3.0 Crores per annum. Industry proposes to allocate Rs. 5.00 Crores towards Extended EMP (Corporate Environment Responsibility). Total Employment will be 150 persons as direct.

There are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Protected Forests (PF), Tiger/ Elephant Reserves, Wildlife Corridors etc. present within 10 km distanceradius area from the plant site. Sendh RF is at a distance of 9.5 km in South direction. Water bodies: Aril Nadi at a distance of 1.0 Km in SW direction, Nawab Nadi at a distance of 3.5 km in West direction, Pairiya Nadi at a distance of 7.5 km in West direction and Ram Ganga River is at a distance of 9.0 km in NE direction are present within 10 km study area. NOC has been obtained from Executive Engineer, Flood Division, Bareilly vide letter no. 514 /FDB dated 17.03.2023 stating that industrial location is free from flood zone.

AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.512 µg/m3, 0.20 µg/m3, 0.742

µg/m3 and 0.844 µg/m3 with respect to PM10, PM2.5, SO2 and NOx. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

Total fresh water requirement will be 1945 CMD (1900 CMD Grain based Ethanol Plant & Co-generation Power plant + 45 CMD for Domestic use & others). Application has been submitted to Groundwater Department, (Namami Gange & Rural Water Supply Department), Ministry of Jal Shakti, Uttar Pradesh vide Application No. BRLY0323NIN0091 & BRLY0323NIN0092 dated 03.03.2023. Effluent (Process Condensate/Floor/laboratory washing, Spent lees, WP reject, Boiler Blowdown, Cooling tower Blow down etc.) of 2636 CMD quantity will be treated through Condensate Polishing Unit/Effluents Treatment plant of capacity 3200 CMD. Raw Stillage (2570 KLPD) will be sent to decanter followed by MEE and dryer to produce DDGS. STP of capacity 40 KLPD will be installed to treat sewage generated from factory premises. The plant will be based on Zero Liquid discharge system and no Effluent will be discharge outside factory premises.

Power consumption for the proposed plant will be 10.0 MW which will be sourced from the proposed 10.0 MW Co-generation Power plant. 90 TPH Rice Husk (Biomass) / Bagasse (along with 15% coal as auxiliary fuel) fired boiler will be installed. APCE ESP with 64 m high stack will be installed for controlling the particular matter emissions within the statutory limit of 30 mg/Nm3 for the proposed 90 TPH boiler. 2 x 1500 KVA DG set will be used as standby during power failure and stack height (8 m each) will be provided as CPCB norms to the proposed DG sets.

Details of Process emissions generation and its management:

- APCE ESP with a stack height of 64 m will be installed for controlling the particulate emissions within the statutory limit of 30 mg/Nm3.
- Online Continuous Emission Monitoring System will be installed with the stack and data will be transmitted to CPCB/SPCB servers.
- CO2 (375 TPD) generated during the fermentation process will be collected by utilizing CO2 scrubbers and it shall be sold to authorized vendors.

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

- DDGS (Distilled Dried Grains Stillage) (240 TPD) will be sold as Cattle, poultry & fish feed ingredients.
- Boiler Ash (93 TPD) generated will be given to nearby brick manufacturers in covered vehicles only.

- Used oil & grease (0.5 KL/annum) generated from plant machinery/gear boxes as hazardous waste will be sold out to the CPCB authorized recyclers.
- CPU sludge (0.5 TPD) and STP Sludge (0.02 TPD) will be used as manure.

As per Notification S.O 2339(E), dated 16th June, 2021, PP has submitted self-certification in the form of notarized affidavit declaring that the proposed capacity of 500 KLPD will be used for manufacturing fuel ethanol only.

Total land of 10.68 hectares (26.4 Acres) is completely under the possession of the company and the land has been purchased for industrial use & can be used for industrial use only as per orders from the Divisional Commissioner, Bareilly vide letter No. 2999-3003/ Nau - 40 (2021-22) dated 28.12.2022. EAC found the information satisfactory.

Capital cost and recurring cost of EMP are given below:

No.	**Description**		**Capital Cost (Crores)**	**Recurring Cost/annum (Crores)**
1.	Air Pollution management	Boiler stack + ESP + Online Monitoring System	9.5	0.95
2.	Effluent Treatment Facilities	Spent wash treatment facilities, ZLD System, Condensate polishing unit, ETP and STP	10.2	1.47
3.	Fugitive Emission Management	Internal Road & Grain Handling System	5.0	0.05
4.	Environment monitoring	Lab instrument, Online monitoring System, Third party monitoring, audit	1.0	0.15
5.	Solid waste management	Ash handling & management Others	3.0	0.30
6.	Greenbelt & plantation development	Plantation for greenbelt	0.80	0.08
7.	Rain water harvesting	Required infrastructure	0.50	-
	Total		**30**	**3**

During deliberations, EAC discussed following issues:

- PP committed that proposed Ethanol plant will completely based on "Zero Effluent Discharge".
- PP has acquired the proposed 10.68 hectares land for which they have given reference of Divisional Commissioner, Bareilly vide letter No. 2999-3003/ Nau - 40 (2021-22) dated 28.12.2022 stating that the 40 ha land to be provided for integrated sugar mill, cogeneration power plant and other allied activities. Further, PP informed that the company will operate only 500 KLPD Grain based Ethanol plant along with 10 MW Co-generation power plant under Ethanol Blending Programme in total area of 10.68 hectares for which notarized self-certificate by the company. Further, PP clarified that letter dated 28.12.2022 permits installation of grain based distillery. The Committee suggested that EC recommendation is subject to NOC from the Divisional Commissioner, Bareilly for establishment of 500 KLPD Grain based Ethanol plant along with 10 MW Co-generation power plant.
- APCE ESP with a stack height of 64 m will be installed for the proposed 90 TPH boiler.
- The company shall increase provision of solar power within plant and to the nearby areas from 10% to 15% of total power consumption of the unit in form of solar lights/solar plant/solar panels/solar gadgets etc. as a part of socio-economic developmental activities.
- The company shall install fly ash briquetting unit inside plant premises or nearby areas for proper fly ash management.
- The company shall revise the Occupational Health & Safety budget from Rs. 50 lakhs to Rs. 1 Crore per annum.
- The total number of working days for the proposed plant will be 350 days/annum.
- The company will follow all the recommendations for risk mitigation as per the EMP report submitted.
- The revised budget of socio-economic developmental activities from Rs. 3 Crores to Rs. 5 Crores is submitted.
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S. No.	PROPOSED ACTIVITIES	IMPLEMENTATION OF EMP FOR SOCIAL AND INFRASTRUCTURE DEVELOPMENT ON THE BASIS OF PHYSICAL TARGETS		TOTAL BUDGET ALLOCATED (RS. IN LAKHS)
		Year 1	Year 2	
1	Up gradation of School infrastructure &	Rs. 100 Lakhs (Govt. school at	Rs. 100 Lakhs (Govt school at	Rs. 200.0 lakhs

	Educational facilities- Provide Interactive smart class equipments /gadgets/solar panels like desktop computers, projectors, Interactive White Boards and distributing study materials, school bags, sports equipments etc. to students, Seating Benches, installation of potable water facilities, construction of sanitized toilets etc.	Village Ismailpur) (5 nos potable water facilities - Rs.10 lakh, solar panels installation- Rs. 35 lakhs, Rs 20 lakhs for desktop computers, projectors, Interactive White Boards and distributing study materials, school bags, sports equipment, white washing of school walls, Rs. 15 lakhs for construction of sanitized toilets, Rs 20 lakhs for E-learning setup, Digital literacy mission-HP Wow Bus project etc.)	Village Fatehganj) (5 nos potable water facilities - Rs.10 lakh, solar panels installation- Rs. 35 lakhs, Rs 20 lakhs for desktop computers, projectors, Interactive White Boards and distributing study materials, school bags, sports equipments, white washing of school walls, Rs. 15 lakhs for construction of sanitized toilets, Rs 20 lakhs for E-learning setup, Digital literacy mission-HP Wow Bus project etc.)	
2	Social Infrastructure Development- Installation of Solar Street Light/Solar Lanterns & Village Pond & RWH pond Infrastructure Development, distribution of E-auto	Rs. 40.0 Lakhs Village Fatehganj (Rs. 15 Lakhs for 250 nos. solar street light/Solar equipment light, Rs. 15 Lakhs for local pond & RWH pond	Rs. 40.0 Lakhs Village Ismailpur (Rs. 15 Lakhs for 250 nos. solar street light/Solar equipment light, Rs. 15 Lakhs for local pond & RWH pond	Rs. 80.0 lakhs

	rickshaw for awareness of Clean India Campaign etc.	development, Rs. 10 lakhs for distribution of E-auto rickshaw)	development, Rs. 10 lakhs for distribution of E-auto rickshaw)	
3	Skill development for youth & Women empowerment- Organising Training programmes & Diksha centre development for youth/residents & women in Skill Development centre in collaboration with District administration.	Rs. 20.0 lakhs (Village Ismailpur- Benefit extended to approx. 200 persons) Rs. 20.0 lakhs (Village Ismailpur- Benefit extended to approx. 50 women)	Rs. 20.0 lakhs (Village Fatehganj- Benefit extended to 200 approx. persons) Rs. 20.0 lakhs (Village Fatehganj- Benefit extended to approx. 50 women)	Rs. 80.0 lakhs
4	Up gradation of Healthcare facilities- Provision of oxygen cylinders, Health Check-up camps, medical instruments etc.	Rs. 55 Lakhs (PHC at Village Fatehganj) (Provision of 7 oxygen cylinders- Rs. 5 lakhs, Health Check- up camps- Rs 15 lakhs, Medical instruments-Rs 35 lakhs etc.)	Rs. 55Lakhs (PHC at Village Ismailpur) (Provision of 7 oxygen cylinders- Rs. 5 lakhs, Health Check- up camps-Rs 15 lakhs, Medical instruments-Rs 35 lakhs etc.)	Rs. 110.0 lakhs
5	Plantation development– Plantation/ Avenue plantation along roadside, tree plantation in nearby schools/colleges/vacant land/Panchayat bhavan, etc.	Rs. 15.0 Lakhs (3000 nos in Village Ismailpur)	Rs. 15.0 Lakhs (3000 nos in Village Fatehganj)	Rs 30.0 lakhs

	TOTAL	**500.0 lakhs**

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

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

The Committee noted that the EMP report is in compliance of the PFR. The Committee deliberated on the CER plan and found to be addressing the issues in the study area. The EAC has deliberated the proposal and has made due diligence in the process as notified under the provisions of the EIA Notification, 2006, as amended from time to time and accordingly made the recommendations to the proposal. The Experts Members of the EAC have found the proposal in order and have **recommended** for grant of environmental clearance subject to NOC from the Divisional Commissioner, Bareilly for establishment of 500 KLPD Grain based Ethanol plant along with 10 MW Co-generation power plant.

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

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

(i). As per the Notification S.O. 2339(E), dated 16th June, 2021, project falls in category B2 and the proposed capacity of 500 KLPD shall only be used for fuel ethanol manufacturing as per self-certification in form of a notarized affidavit by the Project Proponent. Provided that subsequently if it is found that the ethanol, produced based on the EC granted as per this dispensation, is not being used completely for EBP Programme, or if ethanol is not being produced, or if the said distillery is not fulfilling the requirements based on which the project has been appraised as category B2 project, the EC shall stand cancelled.

(ii). The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented.

(iii). EC granted for a project on the basis of the submitted documents shall become invalid in case the actual land for the project site turns out to be different from the land considered at the time of appraisal of project. Conversion of land use (CLU) certificate shall be obtained before start of construction activities.

(iv). NOC from the Concerned Local authority shall be obtained before start of the construction of plant and drawing water from ground water for the distillery activities, 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.

(v). Total Fresh water requirement shall not exceed 1945 m^3/day which will be met from groundwater. No ground water recharge shall be permitted within the premises. Industry shall construct a rain water storage pond of 60 days capacity and the accumulated water to be used as fresh water thereby reducing fresh water consumption.

(vi). Spent Wash/stillage shall be sent to the decanter followed by the Multiple Effect Evaporator and dryer to form DDGS. DDGS to be used as cattle feed. The MEE &

Drier condensate, spent lees, WTP Rejects, Boiler & Cooling tower blowdowns, washings etc., is shall be treated in the 'Condensate Polishing Unit' (CPU). STP shall be installed to treat domestic wastewater. The plant will be based on 'Zero Liquid Discharge' system and no effluent/treated water will be discharged outside factory premises.

(vii). APCE ESP (5 field) 64 meters high stack will be installed with the Rice Husk/Biomass/ Bagasse (with 15% coal usage as auxiliary fuel) fired 90 TPH boiler for controlling the particulate matter emissions within the statutory limit of 30 mg/Nm^3. SO_2 and NOx emissions shall be less than 100 mg/Nm^3. At no time, the emission levels shall exceed the prescribed standards. In the event of failure of any pollution control system adopted by the unit, the respective unit shall not be restarted until the control measures are rectified to achieve the desired efficiency. Performance assessment of pollution control devices/ systems will be conducted annually.

(viii). Boiler Ash (93 TPD) generated will be given to nearby brick manufacturers in covered vehicles only. PP shall use Rice Husk/Biomass/ Bagasse (with 15% coal usage as auxiliary fuel) in the boiler. Low sulphur coal with maximum sulphur content of 0.5% shall only be used. PP shall meet 15% of the total power requirement from solar power by generating power inside plant premises/adjacent/nearby areas.

(ix). CO_2 (375 TPD) generated during the fermentation process will be collected by utilizing CO_2 scrubbers and it shall be sold to authorized vendors.

(x). PP shall allocate at least Rs. 1.00 Crore/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). PP shall ensure that location of the storage tanks should be decided in such a way that impact of the risk under abnormal conditions/ worst case scenario shall remain within the plant boundary level. The unit shall make the arrangement for

protection of possible fire hazards during manufacturing process in material handling. Fire fighting system shall be as per the norms. PESO certificate shall be obtained.

(xiii). Process organic residue and spent carbon, if any, shall be sent to Cement and other suitable industries for its incinerations. ETP sludge, process inorganic & evaporation salt shall be disposed of to the TSDF.

(xiv). The company shall undertake waste minimization measures as below (a) Metering and control of quantities of active ingredients to minimize waste; (b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes. (c) Use of automated filling to minimize spillage. (d) Use of Close Feed system into batch reactors. (e) Venting equipment through vapour recovery system. (f) Use of high pressure hoses for equipment clearing to reduce wastewater generation.

(xv). The green belt of at least 5-10 m width shall be developed in nearly 3.53 hectares i.e., 33 % of the total project area 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 atleast 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.

(xvi). PP proposed to allocate Rs. 5.0 Crores towards Extended EMP (CER) which shall be spent as submitted in CER plan. Further, all the proposed activities under CER shall be completed before the commissioning of the plant in consultation with District Administration.

(xvii). There shall be adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products and no parking to be allowed outside on public places. Out of the total project area, 15% shall be allotted solely for parking purposes with facilities like rest rooms etc.

(xviii). Storage of raw materials shall be either in silos or in covered areas to prevent dust pollution and other fugitive emissions. All stockpiles should be constructed over impervious soil and garland drains with catch pits to trap runoff material shall be provided. Biomass shall be stored in covered sheds and wind breaking walls/curtains shall be provided around biomass storage area to prevent its suspension during high wind speed. All Internal roads shall be paved. Industrial vacuum cleaner shall be provided to sweep the internal roads. The Air Pollution Control System shall be interlocked with process plant/machinery for shutdown in case of operational failure of Air Pollution Control Equipment.

(xix). Continuous online (24x7) monitoring system for stack emissions/effluent shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.

(xx). A separate Environmental Management Cell (having qualified person with Environmental Science/Environmental Engineering/specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions. EMC head shall report directly to Head of Organization/ Director/CEO as per company hierarchy.

(xxi). PP shall sensitize and create awareness among the people working within the project area as well as its surrounding area on the ban of Single Use Plastic in order to ensure the compliance of Notification published by MOEFCC on 12th August, 2021. A report along with photographs on the measures taken shall also be included in the six-monthly compliance report being submitted to concerned authority.

Agenda No. 09

Greenfield Project of 60 KLD Grain Based Distillery Plant along with 2 MW Co-generation Power Plant located at Village- Biladi, Tehsil- Tilda, District-Raipur, Chhattisgarh by M/s. Shri Sanjay Gupta and Others - Consideration of Environmental Clearance.

[IA/CG/IND2/423638/2023, IA-J-11011/148/2023-IA-II(I)]

The Project Proponent and the accredited Consultant M/s. GRC India Pvt. Ltd. (NABET certificate no. NABET/EIA/2124/RA0213 and valid till 15.02.2024) made a detailed presentation on the salient features of the project and informed that the proposal is for environmental clearance to the project Greenfield Project of 60 KLD Grain Based Ethanol Plant along with 2 MW Cogeneration Power Plant located at Village- Biladi, Tehsil- Tilda, District-Raipur, Chhattisgarh by M/s. Shri Sanjay Gupta and Others.

As per the MoEF&CC Notification S.O. 2339(E), dated 16th June, 2021, a special provision in the EIA Notification, 2006-(Schedule 5 (ga), Category B2) is made, wherein for all applications made for Grain based distilleries with Zero Liquid Discharge producing ethanol; solely to be used for Ethanol Blended Petrol Programme of the Government of India shall be considered under B2 Category and appraised at Central Level by Expert Appraisal Committee (EAC) with condition that the project proponent shall file a notarized affidavit that ethanol produced from proposed project shall be used completely for EBP Programme.

The details of products and capacity as under:

No.	Name of Unit	Name of the product /by-product	Production capacity
1	Distillery	Ethanol	60 KLPD
2	Co-generation power plant	Power	2 MW
3	DWGS dryer	DDGS	27 TPD
4	Fermentation unit	Carbon di-oxide	45 TPD

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

Total land area required is 5.65 hectares. Greenbelt will be developed in total area of 1.86 hectares i.e., 33% of total project area. The estimated project cost is INR Rs. 86.40 Crores. Capital cost of EMP would be INR Rs. 13.34 Crores and recurring cost for EMP would be INR Rs. 3.5 Crores per annum. Industry proposes to allocate Rs. 1 Crores towards Extended EMP (Corporate Environment Responsibility). Total Employment will be 103 persons as direct & indirect.

There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, and Wildlife Corridors etc. within 10 km distance. Reserve forest or protected area is present within 10 km study area. Bilari RF is at a distance of 1.5 km in NW

direction. Bilari Ghughua is at a distance of 2.5 km in North direction. Bhatpara Branch (Mahanadi Canal) is 0.4 km from the project site in West direction for which NOC has been obtained from Office of Executive Engineer Water Resource Department vide letter no. 997/Works/NOC/2023/Tilda dated 29.03.2023. Ghughua Tank is at a distance of 3.5 km in North direction. Sessional Jamuniya Nala is at a distance of 6 km in ENE direction. Seonath is at a distance of 9.5 km in West direction. Kirna Tank/Jasola Dam is at a distance of 10 km in South direction.

AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.15 µg/m^3, 0.1 µg/m^3, 2.29 µg/m^3, 1.4 µg/m^3 and 0.44 µg/m^3 with respect to PM_{10}, $PM_{2.5}$, SO_2, NO_2 and CO. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

Total fresh water requirement including CPP will be 240 KLD which will be met from ground water. The application for permission of withdrawal of ground water has been submitted to CGWA having application no. 21-4/8399/CT/IND/2023 dated 03/04/2023. Effluent (Condensate/spent lees/blowdown etc.) of 244 KLD quantity will be treated through Condensate Polishing Unit/Effluent Treatment Plant of capacity 300 KLD. Raw stillage will be sent to decanter followed by MEE and dryer to produce DDGS. STP capacity of 10 KLD will be installed to treat sewage generated from factory premises. The plant will be based on Zero Liquid discharge system and no effluent/treated water will be discharged outside factory premises.

Power requirement will be 2 MW and will be met from proposed 2 MW cogeneration power plant. 20 TPH Coal based and Biomass fired boiler will be installed. ESP with 45 m high stack will be installed for controlling the particulate matter emissions within the statutory limit of 50 mg/Nm^3 for the proposed boiler. 500 kVA DG set will be used as standby during power failure and stack height (10 m) will be provided as per CPCB norms to the proposed DG sets.

Details of Process emissions generation and its management:

- ESP (5 fields) with 45 meters high stack will be installed for controlling the particulate emissions.
- Online Continuous Emission Monitoring System will be installed with the stack and data will be transmitted to CPCB/SPCB servers.
- CO_2 (45 TPD) generated during the fermentation process will be collected by utilizing CO_2 scrubbers and it shall be sold to authorized vendors.

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

- DDGS (Distilled Dried Grains Stillage) (27 TPD) will be sold as cattle feed/fish feed/ prawn feed.
- Boiler ash (26.21 TPD) will be used for brick manufacturing in proposed brick manufacturing plant inside plant premises.
- Used oil (1 Kilo litres per annum) will be sold to authorized re-cycler.
- ETP sludge (10.99 TPA) and STP Sludge (0.36 TPA) will be disposed through local agency.

As per Notification S.O 2339(E), dated 16th June, 2021, PP has submitted self-certification in the form of notarized affidavit declaring that the proposed capacity of 60 KLPD will be used for manufacturing fuel ethanol only.

Total land is 5.65 hectare. Total land is under the possession of Shri Sanjay Gupta and land use conversion application has been submitted to Sub- Divisional Officer (Revenue) and Competent Authority Raipur Chhattisgarh Sn. No./80/A.V.A./ Reader/2023 dated 03/03/2023. EAC found the information satisfactory.

Capital cost and recurring cost of EMP are given below:

. No.	Particulars	Capital Cost (In Cr.)	Annual Recurring (In Cr.)
1	Air pollution control system ESP on 20 TPH boiler, Stack, Industrial vacuum cleaner, road sweeping machine.	3.25	1.0
2	Continuous Emission Monitoring System & Ambient Air Quality Monitoring System.	0.75	0.25
3	Scrubbing system, compressing system, liquefying system and storage for CO_2	2.2	0.45
4	Treatment system for spent wash, DWGS centrifuge decanter, DDGS dryer for ZLD system, Construction of Garland drains,	2.1	0.6
5	Condensate Polishing unit for water treatment and recycle, STP	2	0.5
6	Rainwater harvesting systems	0.24	0.1
7	Occupational Health Management	0.30	0.10
8	Noise Reduction Systems	0.35	0.1

9	Green Belt Development	0.65	0.1
10	Environment monitoring	---	0.20
11	Environment management cell	0.50	0.05
12	CER	1.0	---
	Total	**13.34**	**3.5**

Details of CER with proposed activities and budgetary allocation:

S. No.	Description	Budget (INR Cr.)
1.	a. Development of village road- Biladi Village road- 0.4 km b. Upgradation of drinking water facility in nearby Villages Sarora, Parsada, Bagdai.	0.35
2.	Installation of solar panels (15 nos.) in Villages Sarora, Parsada, Biladi.	0.25
3.	Donate medical equipment like Beds, Stretcher, Portable Oxygen Cylinder (330 Litre), Oxygen Concentrator (0.5 to 5 Ltr), Air Purifier (Honeywell Air Purifier with Capacity of 300m^3/hr), AC (Window AC of 1.5 Ton), Evangelical Mission Hospital.	0.20
4.	Development of smart class, distribution of benches, Fans, drinking water facilities, Upgradation of sanitary facility, Distribution of IT gadgets, Printers, Computers in Sasaholi School Tilda Newra and S.H.S.School Sarora Gosadan.	0.15
5.	Awareness programs (5 nos.) for farmers for increasing soil productivity and water conservation.	0.05
	Total	**1.0**

During deliberations, EAC discussed following issues:

- EAC observed that HT line is passing through the project site. The committee suggested that no infrastructure shall be established under HT line passing through the project site and safe distance shall be maintained. PP shall obtain NOC

from State electricity authority prior to construction of project w.r.t. HT line passing through the site.

- PP has submitted an undertaking that the proposed site does not fall in CPA/SPA and nearest CPA/SPA which is Siltara Industrial area is located at a distance of 25 km from the project site.
- PP informed that cogeneration power plant shall be based on biomass with 15% coal as auxiliary fuel.
- ESP (5 fields) with 45 meters high stack will be installed for controlling the particulate emissions.
- Saplings of 4-6 feet shall be planted for development of greenbelt.
- EAC suggested that all internal roads shall be paved to control fugitive emissions. PP agreed to it.
- PP has also not uploaded the Risk Assessment on the PARIVESH portal. PP was asked to submit details on Risk Assessment, the desired information has not been provided about the size of the storage tank , likely duration of the storage in the tanks and risk from connecting pipeline and leakage from valve.

Therefore, PP shall provide the following additional information:

i. Submit details on Risk Assessment, the desired information has not been provided about the size of the storage tank, likely duration of the storage in the tanks and risk from connecting pipeline and leakage from valve.

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

Agenda No. 10

Proposed 60 KLD Grain Based Ethanol plant along with 2.0 MW Cogeneration Power Plant at Survey no. 333, Koyba Halvad Road, Koyba, Tehsil- Halvad, Dist.- Morbi, Gujarat by M/S. Prism Advance Technology Enterprise Private Limited - Consideration of Environmental Clearance.

[IA/GJ/IND2/ 418810/2023, IA-J-11011/452/2022-IA-II(I)]

The Project Proponent and the accredited Consultant M/s. Envisolve LLP (NABET certificate no. NABET/EIA/2124/IA0088 and validity 19/08/2024) made a detailed presentation on the salient features of the project and informed that the proposal is for environmental clearance to the project for 60 KLPD Grain based Ethanol Plant & 2 MW Co-generation power plant (Rice Husk) located at Survey no. 333, Koyba Halvad Road, Koyba, Tehsil- Halvad, Dist.- Morbi, Gujarat by M/S. Prism Advance Technology Enterprise Private Limited.

As per the MoEF&CC Notification S.O. 2339(E), dated 16th June, 2021, a special provision in the EIA Notification, 2006-(Schedule 5 (ga), Category B2) is made, wherein for all applications made for Grain based distilleries with Zero Liquid Discharge producing ethanol; solely to be used for Ethanol Blended Petrol Programme of the Government of India shall be considered under B2 Category and appraised at Central Level by Expert Appraisal Committee (EAC) with condition that the project proponent shall file a notarized affidavit that ethanol produced from proposed project shall be used completely for EBP Programme.

The details of products and capacity as under:

S. No	Name of unit	Name of the product/by-product	Production capacity
1.	Distillery (Raw material- Grains such as rice and maize)	Ethanol	60 KLPD
2.	Co-generation powerplant	Power	2 MW
3.	DWGS dryer	DDGS	30 TPD
4..	Fermentation unit	Carbon Di-Oxide	50 TPD

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

Total land area required is 3.98 hectares. Greenbelt will be developed in total area of 1.3 hectares i.e., 33.86% of total project area. The estimated project cost is Rs. 98 Crores. Capital cost of EMP would be Rs. 13.13 Crores and recurring cost for EMP would be Rs. 1.78 Crores per annum. Industry proposes to allocate Rs. 1.96 Crores towards Extended EMP (Corporate Environment Responsibility). Total Employment will 110 persons as direct & indirect.

There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance. No Reserve forests/protected

forests, No national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. from project site. No Eco-sensitive around the boundary. NBWL application has been submitted dated NA (if applicable). Conservation plan for schedule I species- Not Applicable. Water bodies: Khari Dam is at a distance of 1.17 Km in East direction and Narmada Canal is at distance of 1.9 Km in North direction. Khari Dam is at a distance of 1.17 Km for which, we have received the NOC for proximity of river vide letter No. JMN-1/VASHI/28102022/2022 dated 28.10.2022 from Office of the Collector & District Magistrate, Morbi.

AAQ modelling study for point source emissions indicates that resultant concentrations considering the maximum incremental GLCs after the proposed project would be 75.50 µg/m^3, 25.52, 8.027 µg/m^3 and 15.80 µg/m^3 with respect to PM_{10}, $PM_{2.5}$ SO_2 and NO_X. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

Total fresh water requirement will be 240 m^3/day which will be met from Narmada Canal. Application has been submitted to Narmada Water Resources, Water Supply & Kalpsar Department dated 21.09.2022. Effluent (Condensate/spent lees/blowdown etc.) of 390 m^3/day quantity will be treated through Condensate Polishing Unit/Effluent Treatment Plant of capacity 500 KLPD. Raw stillage (360 KLPD: quantity of raw spent wash from distillation) will be sent to decanter followed by MEE and dryer to produce DDGS. STP of capacity 10 KLPD will be installed to treat sewage generated from factory premises. The plant will be based on Zero Liquid discharge system and no effluent/treated water will be discharged outside the factory premises.

Power requirement will be 2 MW and will be met from proposed 2 MW cogeneration power plant. 25 TPH Rice husk fired boiler will be installed. Bag house with 45 m high stack will be installed for controlling the particulate matter emissions within the statutory limit of 50 mg/Nm for the proposed 25 TPH boiler. 1 DG set of 1000 kVA will be used as standby during power failure and stack height (14 m) will be provided as per CPCB norms to the proposed DG set.

Details of Process emissions generation and its management:

- APCE Bag house with 45 m meters high stack will be installed for controlling the particulate matter emissions.
- Online Continuous Emission Monitoring System will be installed with the stack and data will be transmitted to CPCB/SPCB servers.
- CO2 (50 TPD) generated during the fermentation process will be collected by

utilizing CO2 scrubbers and it shall be sold to authorized vendors/collected in proposed bottling plant.

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

- DDGS (Distilled Dried Grains Stillage) (30 TPD) will be sold as cattle feed / fish feed / prawn feed.
- Boiler ash (40 TPA) will be used for brick manufacturing supplied to brick manufacturers/ given to farmers to be used as manure.
- Used oil (0.5 Kiloliters per annum) will be sold to authorized recyclers.
- CPU sludge (20 kg) and STP Sludge (5 kg) will be used as manure.

As per Notification S.O 2339(E), dated 16th June, 2021, PP has submitted self-certification in the form of notarized affidavit declaring that the proposed capacity of 60 KLPD will be used for manufacturing fuel ethanol only.

Total land of 3.98 Hectares is under possession of the company and land use conversion has been completed vide Order No. 926/28 105103512022 dated-24.08.2022. EAC found the information satisfactory.

Capital cost and recurring cost of EMP are given below:

S.N	**DESCRIPTION**	**CAPITAL COST INR CRORES**	**RECURRING COST INR CRORES/ANNUM**
1.	Air emission control systems (Bag filter, dust suppression, etc.)	2.5	0.1
2.	MEE	4	1
3.	Condensate Policing unit	1.77	0.2
4.	Environmental lab equipment & OCEMS-Online Continuous Emission/Effluent Monitoring System	1	0.01
5.	Solid& hazardous Waste Management	0.15	0.05
6.	Ash handling & management	0. 5	0.05
7.	Occupational Health & Safety	0.5	0.07
8.	Greenbelt development	0.6	0.2

9.	Fire fighting	0.55	0.07
10.	Rainwater harvesting systems	0.1	0.03
11.	CER (Education, Health, Solar Light and Drinking water.	1.96	-
TOTAL		**13.13**	**1.78**

Details of CER with proposed activities and budgetary allocation:

S.N	DESCRIPTION	PHYSICAL NOS. & VILLAGE	CAPITAL COST INR LAKHS
1.	**1.** Deepening of existing bore wells/ponds in nearby villages for drinking water. **2.**Construction of 1 new borewell in Koyba village as per requirement. **3.** Plastic Water Tank distribution 25 Nos.	03 Villages Koyba, New Koyba & Haripur Village	18
2.	Provision of Street Solar light 180 units.	Koyba, New Koyba and Haripur Village, Dhavana Village and Kavadiya village	92
3.	Maintenance of Road	From project site to nearby Morbi SH	50
4.	Plantation Program	500 Plants alongside Khari Dam with consultation from local authority.	15
5.	Distribution of Drinking Water (RO)	04 nos. in Primary School, Koyba & Govt School Halvad, Dhavana & Kavadiya	8
6.	6 nos of computer distribution along with printer and internet facility	01 Computers in Koyba Primary School & 05 in Halvad School	3
7.	Free Health checkup and supply of medicines to the sick people in the nearby villages	Village. Koyba new Koyba, Halvad Dhavana and Kavadiya	8
8.	Impart training to the local villagers for skill	-	2

	development & providing employment to them in the industry		
	Total Amount		**196**

During deliberations, EAC discussed following issues:

- The committee noted that there is a forest land near to the project site and no information has been proved in EMP/presentation. The committee suggested that clarification from DFO shall be obtained authenticating the distance of forest land from the project site.
- EAC suggested PP to revise species of the greenbelt such that only 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 atleast 20 variety of species as a part of greenbelt. Saplings 4-6 feet high shall be planted. Accordingly, PP should submit revised greenbelt plan.
- PP shall submit an undertaking that no ground water recharge shall be permitted within the premises.

The Committee desired to submit the above information in writing. However, no requisite information desired by EAC was not submitted by PP in the form of undertaking/letter head.

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

Agenda No. 11

Manmade Fiber (Polyethylene Terephthalate (PET) Chips) Manufacturing Industry located at MIDC Waluj Village, Tehsil: Gangapur District Aurangabad, State Maharashtra by M/s. Cosmo Speciality Polymers Pvt. Ltd - Consideration of Terms of Reference (violation category).

[IA/MH/IND2/424186/2023, IA-J-11011/150/2023-IA-II(I)]

The Project Proponent and the accredited Consultant M/s. Aditya Environmental Services Pvt. Ltd. (NABET/EIA/2225/RA0262, Validity: 01.05.2025) made a

detailed presentation on the salient features of the project and informed that the proposal is for environmental clearance to the project for Manmade Fiber (Polyethylene Terephthalate (PET) Chips) Manufacturing Industry located at MIDC Waluj Village, Tehsil: Gangapur District Aurangabad, State Maharashtra by M/s. Cosmo Speciality Polymers Pvt. Ltd. PP informed that the existing plot includes a shed and infrastructure procured from M/s. Colgate Palmolive. Further, PP informed that they will use the existing shed as well as the all infrastructure for the proposed project.

The proposed project/activities are listed item 5(d) Manmade fibers manufacturing of Schedule of Environment Impact Assessment (EIA) Notification under category 'B' and are appraised at State Level. Since Aurangabad is listed under Severely Polluted Area (SPA), the proposal is appraised at central level by Expert Appraisal Committee (EAC) as per Ministry's OM 22-23/2018-IA.III dated 31st October, 2019.

The details of products and capacity as under:

S. No	Unit	Product/by-product	Existing Quantity	Proposed Quantity	Total Quantity
1	MTPM	Polyethylene terephthalate Chips (PET Chips)	0	1800	1800

Total land area required is 0.565 hectares. Greenbelt will be developed in total area of 0.28474 hectares (within plot: 1187.4,Sq.m. outside plot: 1680 Sq.m.) i.e., 50 % of total project area. The estimated project cost is Rs. -40 Crores. Capital cost of EMP would be Rs 0.43 Crores and recurring cost for EMP would be Rs. 0.37 Crores per annum. Industry proposes to allocate Rs. 1 Crores towards Extended EMP (Corporate Environment Responsibility). Total Employment will be 60 persons as direct & indirect.

There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance.

Total fresh water requirement will be 430 CMD which will be met from MIDC Waluj. Effluent of 72 CMD quantity will be treated through Condensate Polishing Unit/Effluent Treatment Plant of capacity 80 KLPD. The plant will be based on Zero Liquid discharge system and no effluent/treated water will be discharged outside factory premises.

Power requirement will be 132 KVA and will be met from proposed Maharashtra state electricity board. 1000 KVA DG set will be used as standby during power failure and stack height (7 m) will be provided as per CPCB norms to the proposed DG sets.

Total land of 0.5650 Hectares is under possession of the company. EAC found the information satisfactory.

PP sought exemption of Public Hearing as the proposed project is located in the industrial area. Therefore, public hearing / consultation for project cited above shall be exempted by the EAC as per stage Section 7 (i), III Stage (3), Para (i)(b) of EIA Notification 2006 due to project being located in notified industrial area after submission of document providing that project site is falling notified Industrial Area.

During deliberations, EAC discussed following issues:

- PP informed that following construction has been done without obtaining EC and no operational activities have been started:
- Storage Tanks for EG.
- Foundation work initiated for warehouse.
- Construction started inside existing building to enable installation of new machinery.

After deliberations, the Committee recommended the project proposal involving violation for prescribing following specific ToRs for undertaking detailed EIA and EMP study in addition to the Standard ToR for manmade fibers manufacturing projects (Annexure- III):

i. The State Government/SPCB to take action against the project proponent under the provisions of section 19 of the Environment (Protection) Act, 1986, and further no consent to operate to be issued till the project is granted EC.
ii. The project proponent shall be required to submit a bank guarantee equivalent to the amount of remediation plan and natural and community resource augmentation plan with the SPCB prior to the grant of EC. The quantum shall be recommended by the EAC and finalized by the regulatory authority. The bank guarantee shall be released after successful implementation of the EMP, followed by recommendations of the EAC and approval of the regulatory authority.
iii. Assessment of ecological damage with respect to air, water, land and other environmental attributes of all the units already in existence during their construction and as well as during operation. The collection and analysis of data

shall be done by an environmental laboratory duly notified under the Environment (Protection) Act, 1986, or an environmental laboratory accredited by NABL, or a laboratory of a Council of Scientific and Industrial Research (CSIR) institution working in the field of environment.

iv. Preparation of EMP comprising remediation plan and natural and community resource augmentation plan corresponding to the ecological damage assessed and economic benefits derived due to violation.
v. The remediation plan and the natural and community resource augmentation plan to be prepared as an independent chapter in the EIA report by the accredited consultants.
vi. One season fresh base line data shall be collected for preparation of EIA/EMP reports.
vii. Layout plan earmarking space for development of peripheral green belt.
viii. Transportation details and their impact on road network to be submitted in the EIA/MEP report.
ix. Impact due increase traffic shall be assessed and incorporate in environmental management plan.
x. Risk assessment study shall be carried out of hazardous chemical storage.

Agenda No. 12

Proposed Establishment of 200 KLPD Grain Based Distillery Plant (Ethanol) at Ranjani, Tal- Kavathe Mahakal, Dist: - Sangli by M/s. Vasantdada Sahakari Maka Prakriya Karkhana Ltd. - Consideration of Environmental Clearance.

[IA/MH/IND2/423540/2022, IA-J-11011/436/2022-IA-II(I)]

The Project Proponent and the accredited Consultant M/s. Techno Green Solution, Pune (NABET-Quality Council of India (Certificate No.: NABET/EIA/2124/IA0081 (Rev.01) valid till July 5, 2024), made a detailed presentation on the salient features of the project and informed that the proposal is for Environmental Clearance for Proposed Establishment of 200 KLPD Grain Based Distillery Plant (Ethanol) at Ranjani, Tal-Kavathe Mahakal, Dist: - Sangli by M/s. Vasantdada Sahakari Maka Prakriya Karkhana Ltd.

As per the MoEF&CC Notification S.O. 2339(E), dated 16th June, 2021, a special provision in the EIA Notification, 2006-(Schedule 5 (ga), Category B2) is made, wherein

for all applications made for Grain based distilleries with Zero Liquid Discharge producing ethanol; solely to be used for Ethanol Blended Petrol Programme of the Government of India shall be considered under B2 Category and appraised at Central Level by Expert Appraisal Committee (EAC) with condition that the project proponent shall file a notarized affidavit that ethanol produced from proposed project shall be used completely for EBP Programme.

The details of products and capacity as under:

Sr No	**Name of Unit**	**Name of the products /by products**	**Production capacity**
1	Distillery	Ethanol	200 KLPD
2	Cogeneration Power Plant	Power	5.5 MW
3	DWGS Dryer	DDGS	90 TPD
4	Fermentation	Carbon Dioxide	150 TPD

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

Total land area required is 10.20 hectares. Greenbelt will be developed in total area of 3.36 hectares i.e., 33% of total project area. The estimated project cost is Rs. 174.20 Crores. Capital cost of EMP would be Rs. 24.00 Crores and recurring cost for EMP would be Rs. 1.075 Crores per annum. Industry proposes to allocate Rs. 2.50 Crores towards Extended EMP (Corporate Environment Responsibility). Total Employment will be 77 persons as direct & 100 Persons indirect.

There are no national parks, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site. Protected forest; Alkud at 1.6 km and Ranjani reserved forest at 2.9 km from project site. Water bodies: Nangole Lake at 3 km, River Kunnur at 8.7 km from project site. Application for extension of water permission is submitted to Sangli Irrigation Division on 20th March 2023,

AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 1.27 µg/m3, 2.05µg/m3, 1.12 µg/m3 with respect to PM10, SO_2 & Nox. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

Total water fresh water requirement shall be 800 m^3/day which will be met from Basappawadi Medium Project. Application for extension of water permission is submitted to Sangli Irrigation Division on 20th March 2023. Effluent (Condensate/ Spent lees /blowdown) of 1121 M^3/day quantity will be treated through Condensate polishing unit of capacity 1250 M^3/day. Raw Stillage (1338 KLPD: quantity of raw spent wash from distillation) will be sent to decanter followed by MEE and dryer to produce DDGS. The plant will be based on Zero Liquid discharge system and no effluent/treated water will be discharged outside factory premises.STP will be installed to treat sewage generated.

Power requirement will be 5.0 MW and will be met from proposed 5.5MW cogeneration power plant.45 TPH Bagasse/biomass fired boiler will be installed. APCE ESP with a stack height of 60 M will be installed for controlling the particulate emissions within the statutory limit of 50 mg/Nm^3 for the proposed boiler. 500 kVA DG set will be used as standby during power failure and stack height (6 m) will be provided as per CPCB norms to the proposed DG sets.

Details of Process emissions generation and its management:

- ESP with a stack height of 60 meters will be installed for controlling the particulate emissions.
- Online Continuous Emission Monitoring System will be installed with the stack and data will be transmitted to CPCB/SPCB servers.
- CO_2 (150 TPD) generated during the fermentation process will be collected by utilizing CO_2 scrubbers and sold to authorized vendors/collected in installed bottling plant.

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

- DDGS (Distilled Dried Grains Stillage) (90 TPD) will be sold as cattle feed / fish feed / prawn feed.
- Boiler ash 8.30 TPD will be used for brick manufacturing in supplied to brick manufacturers/ given to farmers to be used as manure.
- Used oil will be sold to authorized recyclers
- CPU & STP sludge will be used as manure.

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

200 KLPD will be used for manufacturing fuel ethanol only.

Total 10.20 ha land is under possession of M/s. Vasantdada Sahakari Maka Prakriya Karkhana Ltd. & land use conversion has been completed vide letter no. 1No/1NA/SK-2/80 dated 04th January 1990. EAC found the information satisfactory.

Capital cost and recurring cost of EMP are given below:

Sr. No.	Environment Aspect	Capital Cost (in Rs. Lacs)	Recurring Cost (in Rs. Lacs)
1.	Air Pollution Emissions Control		
2.	Stack&ESP	500.00	20.00
3.	CO2 Plant	400.00	10.00
4.	Water & Waste water Management		3.00
5.	MEE	480.00	15.00
6.	Condensate Polishing Unit	250.00	10.00
7.	Dryer, Silo, cooling system & Packing (DWGS dryer)	600.00	10.00
8.	Green Belt Development	40.25	2.50
9.	Rain water Harvesting	30.00	2.00
10.	Online Monitoring System & Environment Monitoring (Stack, Ambient air, Water, Soil & Noise)	25.00	25.00
11.	Solid Waste Management	25.00	5.00
12.	Occupational Health and Safety	50.00	5.00
Total		**2400.00**	**107.5**

Details of CER with proposed activities and budgetary allocation:

Sr. No.	CER activity	Total (Rs. Lacs)
1	Provide Infrastructure to PHC center of Ranjani Village • Medical equipment's like – X-ray machine, ECG Machine, Oxygen Concentrator, Dialysis Unit and • Ambulance	150.00
2	Provide Infrastructure to ZP school of Ranjani, Malinagar Ankale, Khilegaon, Dhulgaon village • Digital Class Room • Construction Toilet facility • Construction of class room	50.00
3	Solar Street light system – 25 Nos. in each village	25.00

	• Number of Villages: 10 Nos • Cost of Solar Street Lamp: 10000/- Per unit Total 25 x 10 = 250 Units @ Village Ranjani, Malinagar, Kavathe Mahankal, Vithurayachi wadi, Moghamwadi, Pimpalwadi, Basappawadi, Nangole, Hingangaon, Irli. Total Cost: 250 x 10000/-= 2500000/-	
4	Drinkingwaterfacilityin ZP school @ Ranjani, Dhulgaon, Kavathe Mahankal, Irli, Alkud	25.00
	Total	**250.00**

During deliberations, EAC discussed following issues:

- PP has submitted revised CER budget from Rs. 1.74 Crores to Rs. 2.50 Crores along with the activities proposed.
- EAC suggested PP to submit revised EMP increasing the recurring budget for EMP since annual monitoring cost proposed is low.
- PP has informed that only bagasse and biomass shall be used as fuel for proposed 45 TPH boiler. Coal shall not be used as fuel.
- Proposed greenbelt with tree density @ 2500 trees per hectares shall completed within one year of issuance of EC.
- Ash shall collected and transported to nearby brick manufacturers in closed trucks.
- PP shall revise fresh water requirement restricting to 4 kL/kL alcohol produced. Accordingly, PP informed that net fresh water requirement shall not exceed 800 KLPD.
- Industry shall construct a rain water storage pond of 60 days capacity.

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

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

will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.

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

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

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

(i). As per the Notification S.O. 2339(E), dated 16th June, 2021, project falls in category B2 and the proposed capacity of 200 KLPD shall only be used for fuel ethanol manufacturing as per self-certification in form of a notarized affidavit by the Project Proponent. Provided that subsequently if it is found that the ethanol, produced based on the EC granted as per this dispensation, is not being used completely for EBP Programme, or if ethanol is not being produced, or if the said distillery is not fulfilling the requirements based on which the project has been appraised as category B2 project, the EC shall stand cancelled.

(ii). The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented.

(iii). EC granted for a project on the basis of the submitted documents shall become invalid in case the actual land for the project site turns out to be different from the land considered at the time of appraisal of project. Conversion of land use (CLU) certificate shall be obtained before start of construction activities.

(iv). NOC from the Concerned Local authority shall be obtained before start of the construction of plant and drawing water from surface water for the distillery activities, State Pollution Control Board / Pollution Control Committees shall not issue the Consent to Operate (CTO) under Air (Prevention and Control of Pollution) Act and Water (Prevention and Control of Pollution) Act till the project proponent shall obtain such permission. No ground water shall be used for the plant operations.

(v). Total Fresh water requirement shall not exceed 800 m^3/day which will be met from Basappawadi Medium Project. No ground water recharge shall be permitted within the premises. Industry shall construct a rain water storage pond of 60 days capacity and the accumulated water to be used as fresh water thereby reducing fresh water consumption.

(vi). Spent Wash/stillage shall be sent to the decanter followed by the Multiple Effect Evaporator and dryer to form DDGS. DDGS to be used as cattle feed. The MEE & Drier condensate, spent lees, WTP Rejects, Boiler & Cooling tower blowdowns, washings etc., is shall be treated in the 'Condensate Polishing Unit' (CPU). STP shall be installed to treat domestic wastewater. The plant will be based on 'Zero Liquid Discharge' system and no effluent/treated water will be discharged outside factory premises.

(vii). ESP (5 field) with a stack height of 60 meters will be installed with the Bagasse/Biomass fired 45 TPH boiler for controlling the particulate emissions within the statutory limit of 50 mg/Nm^3. SO_2 and NO_x emissions shall be less than 100 mg/Nm^3. At no time, the emission levels shall exceed the prescribed standards. In the event of failure of any pollution control system adopted by the unit, the respective unit shall not be restarted until the control measures are rectified to achieve the desired efficiency. Performance assessment of pollution control devices/ systems will be conducted annually.

(viii). Boiler ash (8.30 TPA) will be used for brick manufacturing supplied to brick manufacturers. PP shall use Bagasse /Biomass as fuel for the proposed boiler. No

coal shall be used. PP shall meet 15% of the total power requirement from solar power by generating power inside plant premises/adjacent/nearby areas.

(ix). CO_2 (150 TPD) generated during the fermentation process will be collected by utilizing CO_2 scrubbers and sold to authorized vendors/collected in installed bottling plant.

(x). PP shall allocate at least Rs. 0.5 Crore/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). PP shall ensure that location of the storage tanks should be decided in such a way that impact of the risk under abnormal conditions/ worst case scenario shall remain within the plant boundary level. The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire fighting system shall be as per the norms. PESO certificate shall be obtained.

(xiii). Process organic residue and spent carbon, if any, shall be sent to Cement and other suitable industries for its incinerations. ETP sludge, process inorganic & evaporation salt shall be disposed of to the TSDF.

(xiv). The company shall undertake waste minimization measures as below (a) Metering and control of quantities of active ingredients to minimize waste; (b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes. (c) Use of automated filling to minimize spillage. (d) Use of Close Feed system into batch reactors. (e) Venting equipment through vapour recovery system. (f) Use of high pressure hoses for equipment clearing to reduce wastewater generation.

(xv). The green belt of at least 5-10 m width shall be developed in nearly 3.36 hectares i.e., 33 % of the total project area 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 atleast 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 within one year of issuance of EC.

(xvi). PP proposed to allocate Rs. 2.5 Crores towards Extended EMP (CER) which shall be spent as submitted in CER plan. Further, all the proposed activities under CER shall be completed before the commissioning of the plant in consultation with District Administration.

(xvii). There shall be adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products and no parking to be allowed outside on public places. Out of the total project area, 15% shall be allotted solely for parking purposes with facilities like rest rooms etc.

(xviii). Storage of raw materials shall be either in silos or in covered areas to prevent dust pollution and other fugitive emissions. All stockpiles should be constructed over impervious soil and garland drains with catch pits to trap runoff material shall be provided. Biomass shall be stored in covered sheds and wind breaking walls/curtains shall be provided around biomass storage area to prevent its suspension during high wind speed. All Internal roads shall be paved. Industrial vacuum cleaner shall be provided to sweep the internal roads. The Air Pollution Control System shall be interlocked with process plant/machinery for shutdown in case of operational failure of Air Pollution Control Equipment.

(xix). Continuous online (24x7) monitoring system for stack emissions/effluent shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.

(xx). A separate Environmental Management Cell (having qualified person with Environmental Science/Environmental Engineering/specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out

the Environmental Management and Monitoring functions. EMC head shall report directly to Head of Organization/ Director/CEO as per company hierarchy.

(xxi). PP shall sensitize and create awareness among the people working within the project area as well as its surrounding area on the ban of Single Use Plastic in order to ensure the compliance of Notification published by MOEFCC on 12th August, 2021. A report along with photographs on the measures taken shall also be included in the six-monthly compliance report being submitted to concerned authority.

ANNEXURE

GENERAL CONDITIONS FOR ENVIRONMENTAL CLEARANCE

(i) No further expansion or modifications in the plant, other than mentioned in the EIA Notification, 2006 and its amendments, shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change/SEIAA, as applicable. In case of deviations or alterations in the project proposal from those submitted to this Ministry for clearance, a fresh reference shall be made to the Ministry/SEIAA, as applicable, to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.

(ii) The energy source for lighting purpose shall be preferably LED based, or advanced having preference in energy conservation and environment betterment.

(iii) The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under the Environment (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).

(iv) The company shall undertake all relevant measures for improving the socio-economic conditions of the surrounding area. CER activities shall be undertaken by involving local villages and administration and shall be implemented. The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment.

(v) The company shall earmark sufficient funds towards capital cost and recurring cost per annum to implement the conditions stipulated by the Ministry of Environment, Forest and Climate Change as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so earmarked for environment management/ pollution control measures shall not be diverted for any other purpose.

(vi) A copy of the clearance letter shall be sent by the project proponent to concerned Panchayat, Zilla Parishad/Municipal Corporation, Urban local Body and the local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal.

(vii) The project proponent shall also submit six monthly reports on the status of compliance of the stipulated Environmental Clearance conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional Office of MoEF&CC, the respective Zonal Office of CPCB and SPCB. A copy of Environmental Clearance and six monthly compliance status report shall be posted on the website of the company.

(viii) The environmental statement for each financial year ending 31st March in Form-V as is mandated shall be submitted to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Regional Offices of MoEF&CC by e-mail.

(ix) The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB/Committee and may also be seen at Website of the Ministry and at https://parivesh.nic.in/. This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the concerned Regional Office of the Ministry.

(x) The project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of the project.

(xi) This Environmental clearance is granted subject to final outcome of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, if any, as may be applicable to this project.

Annexure-II

1(b): STANDARD TERMS OF REFERENCE FOR CONDUCTING ENVIRONMENT IMPACT ASSESSMENT STUDY FOR OFFSHORE AND ONSHORE OIL AND GAS EXPLORATION, DEVELOPMENT AND PRODUCTION PROJECTS AND INFORMATION TO BE INCLUDED IN EIA/EMP REPORT

A. STANDARD TOR FOR OFFSHORE OIL & GAS EXPLORATION, DEVELOPMENT &PRODUCTION

1) Executive summary of the project.
2) No. of exploratory wells for which environmental clearance is accorded and No. of new wells proposed during expansion. Status and No. of the wells which are completed and closed.
3) Project Description and Project Benefits;

4) Cost of project and period of completion.

5) Employment to be generated.

6) Distance from coast line.

7) Details of sensitive areas such as coral reef, marine water park, sanctuary and any other eco-sensitive area.

8) Recommendation of SCZMA/CRZ clearance as per CRZ Notification dated 6th January, 2011 (if applicable).

9) Details on support infrastructure and vessel in the study area.

10) Climatology and meteorology including wind speed, wave and currents, rainfall etc.

11) Details on establishment of baseline on the air quality of the areas immediately affected by the exploratory drilling and also particularly with reference to hydrogen sulphide, Sulphur dioxide, NOx and background levels of hydrocarbons and VOCs.

12) Details on estimation and computation of air emissions (such as nitrogen oxides*, sulphur oxides*, carbon monoxide*, hydrocarbons*, VOCs*, etc.) resulting from flaring, DG sets, combustion, etc. duringallprojectphases

13) Base line data collection for surface water for one season leaving the monsoon season within 1 km for each exploratory wells, particularly in respect of oil content in the water sample and sediments sample.

14) Fisheries study w.r.t. benthos and marine organic material and coastal fisheries.

15) Source of fresh water. Detailed water balance, waste water generation and discharge.

16) Noise abatement measures and measures to minimize disturbance due to light and visual intrusions in case of project site closed to the coast.

17) Procedure for handling oily water discharges from deck washing, drainage systems, bilges etc.

18) Procedure for preventing spills and spill contingency plans.

19) Procedure for treatment and disposal of produced water.

20) Procedure for sewage treatment and disposal and also for kitchen waste disposal.

21) Details on solid waste management for drill cuttings, drilling mud and oil sludge, produced sand, radioactive materials, other hazardous materials, etc. including its handling and disposal options during all project phases.

22) Storage of chemicals on site.

23) Commitment for the use of water based mud (WBM) and synthetic oil based mud in special case.

24) Details of blowout preventer Installation.

25) Risk assessment and mitigation measures including whether any independent reviews of well design, construction and proper cementing and casing practices will be followed.

26) Handling of spent oils and oil from well test operations.

27) H2S emissions control plans, if required.

28) Details of all environment and safety related documentation within the company in the form of guidelines, manuals, monitoring programmes including Occupational Health Surveillance Programmeetc.

29) Restoration plans and measures to be taken for decommissioning of the rig and restoration of onshore support facilities on land.

30) Documentary proof for membership of common disposal facilities, if required.

31) Any litigation pending against the project or any directions/order passed by any Court of Law against the project. If so, details thereof.

32) Total capital and recurring cost for environmental pollution control measures.

B. STANDARD TOR FOR ONSHORE OIL AND GAS EXPLORATION, DEVELOPMENT &PRODUCTION

1) Executive summary of a project.

2) Project description, project objectives and project benefits.

3) Cost of project and period of completion.

4) Site details within 1 km of the each proposed well, any habitation, any other installation/activity, flora and fauna, approachability to site, other activities including agriculture/land, satellite imagery for 10 km area. All the geological details shall be mentioned in the Topo sheet of 1:40000 scale, superimposing the well locations and other structures of the projects. Topography of the project site.

5) Details of sensitive areas such as National Park, Wildlife sanctuary and any other eco-sensitive area along with map indicating distance.

6) Approval for the forest land from the State/Central Govt. under Forest

(Conservation) Act, 1980, if applicable.

7) Recommendation of SCZMA/CRZ clearance as per CRZ Notification dated 6th January, 2011 (if applicable).

8) Distance from nearby critically/severely polluted area as per Notification, if applicable. Status of moratorium imposed on the area.

9) Does proposal involve rehabilitation and resettlement? If yes, details thereof.

10) Environmental considerations in the selection of the drilling locations for which environmental clearance is being sought. Present any analysis suggested for minimizing the foot print giving details of drilling and development options considered.

11) Baseline data collection for air, water and soil for one season leaving the monsoon season in an area of 10 km radius with centre of Oil Field as its centre covering the area of all proposed drilling wells.

12) Climatology and Meteorology including wind speed, wind direction, temperature rainfall relative humidity etc.

13) Details of Ambient Air Quality monitoring at 8 locations for PM2.5, PM10, SO2, NOx, CO, VOCs, Methane and non-methane HC.

14) Soil sample analysis (physical and chemical properties) at the areas located at 5 locations.

15) Ground and surface water quality in the vicinity of the proposed wells site.

16) Measurement of Noise levels within 1 km radius of the proposed wells.

17) Vegetation and land use; flora/fauna in the block area with details of endangered species, if any.

18) Incremental GLC as a result of DG set operation, flaring etc.

19) Potential environmental impact envisaged during various stages of project activities such as site activation, development, operation/ maintenance and decommissioning.

20) Actual source of water and 'Permission' for the drawl of water from the

Competent Authority. Detailed water balance, wastewater generation and discharge.

21) Noise abatement measures and measures to minimize disturbance due to light and visual intrusions.

22) Details on wastewater generation, treatment and utilization /discharge for produced water/ formation water, cooling waters, other wastewaters, etc. duringallprojectphases.

23) Details on solid waste management for drill cuttings, drilling mud and oil sludge, produced sand, radio activematerials, other hazardous materials, etc. including its disposal options during all project phases.

24) Disposal of spent oil and lube.

25) Storage of chemicals and diesel at site. Hazardous material usage, storage and accounting.

26) Commitment for the use of water based mud (WBM) only

27) Oil spill emergency plans for recovery/ reclamation.

28) H2S emissions control.

29) Produced oil/gas handling, processing and storage/transportation.

30) Details of control of air, water and noise pollution during production phase.

31) Measures to protect ground water and shallow aquifers from contamination.

32) Whether any burn pits being utilized for well test operations.

33) Risk assessment and disaster management plan for independent reviews of well-designed construction etc. for prevention of blow out. Blowout preventer installation.

34) Environmental management plan.

35) Total capital and recurring cost for environmental control measures.

36) Emergency preparedness plan.

37) Decommissioning and restoration plans.

38) Documentary proof of membership of common disposal facilities, if any.

39) Details of environmental and safety related documentation within the company including documentation and proposed occupational health and safety Surveillance Safety Programme for all personnel at site. This shall also include monitoring programme for the environmental.

40) A copy of Corporate Environment Policy of the company as per the Ministry's O.M. No. J-11013/ 41/2006-IA.II(I) dated 26th April, 2011 available on the Ministry's website.

41) Any litigation pending against the project and or any direction/order passed by any court of law against the project. If so details thereof.

Annexure-III

5(d): STANDARD TERMS OF REFERENCE FOR CONDUCTING ENVIRONMENT IMPACT ASSESSMENT STUDY FOR MAN MADE FIBRES MANUFACTURING PROJECTS AND INFORMATION TO BE INCLUDED IN EIA/EMP REPORT

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)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 Iexisting 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 Notification2006 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.

4)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.

5)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.

6) 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.

7) 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 conveyorcum-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.

8) 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 heath status of workers with special reference to Occupational Health and Safety.

9) 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.

10) 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.

11) Enterprise Social Commitment (ESC)

i Adequate funds (at least 2.5 % of the project cost) shall be earmarked towards the EnterpriseSocial 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.

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

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

B. SPECIFIC TERMS OF REFERENCE FOR EIA STUDIES FOR MANMADE FIBRES MANUFACTURING PROJECTS

1. Details on requirement to ofrawmaterials (monomers, solvents, catalysts, etc.), its source and storageat the plant.
2. Details on raw material preparation for polymer production process.
3. Detailson polymer production process - polymerization, polymer recovery, finishing, polymer spinning and other process in case of specificend-product applications, etc.
4. Details of the proposed method so water conservation and recharging.
5. Details on airemission (SOx, NOx, VOC, CO, CO2, etc.) sources-point sources, fugitive emission sources, continuous air emission sources, intermit tent air emission sources, etc.
6. Details on chemical releases - acetonitrile, CS2, ethylene, ethyleneglycol, HCl, methanol, etc., and its management.
7. Details on existing ambient air quality and expected, emissions for PM10, PM2.5, SO2*, NOx*, CO2*, CO*, CS2*, VOC*, H2S, etc., and evaluation of the adequacy of the proposed pollution control devices to meet standards for point sources and to meet AAQ standards. (*-As applicable).
8. Risk assessment should also include leakages and location near to CS2& proposed measures for risk reduction.
9. Details of sodium sulphate recovery.

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List of the Expert Appraisal Committee (Industry-2) members participated during Video Conferencing (VC) meeting

S. No.	Name and Address	Position
1.	Shri S. C. Mann	Chairman
2.	Dr. J. S. Sharma	Member
3.	Prof. Y. V. Rami Reddy	Member
4.	Shri. J.S. Kamyotra	Member
5.	Dr. Rahul Rameshrao Mungikar	Member
6.	Dr. Onkar Nath Tiwari	Member
7.	Dr. Seshagiri Rao Ambati	Member
8.	Dr. Sanjay V. Patil (VSI)	Member
9.	Dr. Siddhartha Singh (IMD)	Member
10.	Shri A. N. Singh, Scientist 'E'	Member Secretary
MoEFCC		
11.	Dr. Mahendra Phulwaria	Scientist 'C'
12.	Mr. Kanaka Teja	Research Assistant

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