

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

Dated: 07.10.2021

**MINUTES OF THE 41st MEETING OF THE EXPERT APPRAISAL
COMMITTEE**

(INDUSTRY-2 SECTOR PROJECTS)

HELD ON 28th - 30th September, 2021

**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 40th Meeting of the EAC (Industry-2) held during 14th - 16th September, 2021 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.

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: -

28th September, 2021 (Tuesday)

Agenda No. 41.1

On shore Oil & Gas exploration in Deomali PEL area in Tirap and Changlang Districts by M/s Oil India Limited (NEF PROJECT) located at Districts Tirap and Changlang, Arunachal Pradesh - Consideration of Environment Clearance reg.

[IA/AR/IND2/56550/2013, J-11011/98/2013-IA II (I)]

The PP/consultant were absent for the appraisal of proposal. Therefore, EAC has decided to defer the proposal.

Accordingly, proposal was deferred for the needful.

Agenda No. 41.2

Conversion of 37 Exploration Wells & laying of Associated Flowlines, Involving Construction of Well Manifold at Tripura State by M/s Oil and Natural Gas Corporation Limited - Consideration of Environment Clearance reg.

[IA/TR/IND2/210752/2007, J-11011/635/2007-IA II (I)]

The proposal was earlier placed before the EAC (Ind-2) in its 39th meeting held during 17th - 18th August, 2021 wherein EAC deferred the proposal and desired certain requisite information/inputs.

Information desired by the EAC and responses submitted by the project proponent is as under:

| S. No | ADS | Reply of PP | Observation of EAC |
|--------------|---|--|---|
| 1. | Action taken report on the non-compliances and partial compliances raised in Monitoring reports. | Point wise Action taken report on the non-compliances and partial compliances raised in Monitoring reports were submitted. | EAC found the explanation satisfactory. |
| 2. | Compliance details of EC letter No J-11011/401 /2006-1A II(I) dated 22.09.2008 and EC letter No. J-11011 / 41 / 2010- 1A II(I) dated 04.01.2011 | Point wise Compliance details were submitted. | PP has submitted action plan for all the conditions depicted as "non-compliances" or "partial compliances". EAC found the |

| | | | |
|----|--|---|--|
| | | | reply satisfactory. |
| 3. | Proposed CER fund allocated of 22.15 lakhs to resolve issues raised is very low. PP shall increase the amount to be spent on resolving PH issues and shall incorporate them in CER funds in EMP. | Proposed CER fund allocated has been revised to 80 lakhs. District wise details of activities along with budget allocated has been submitted. | EAC found the reply satisfactory. |
| 4. | Details of process emissions generation and its management. | The proposed project is conversion of existing 37 exploration wells into development wells. No drilling activity will be carried out. Therefore there is no process emissions from well site. | EAC deliberated the issue and found it satisfactory. |
| 5. | Proposed well No 23 in ROAW is located in forest land as per Monitoring report of EC J-11011/635/2007-IA-II (I) dated 22.10.2007. Discrepancy regarding applicability of | ONGC has sought clarification regarding well # ROAW from Tripura Space Applications Centre (TSAC) regarding Forest applicability and in reply they have confirmed vide mail dtd 25" Aug 2021 that location is under non forest land. Screenshot of mail has been submitted. | EAC found the explanation satisfactory. |

| | | | |
|--|---|---|--|
| | <p>Forest Clearance shall be clarified.</p> | <p>(TSAC is a wing of Tripura State Council for Science and Technology established by Govt. of Tripura. It acts as a nodal centre for all remote Sensing and GIS related activities in the state).</p> <p>Further, an Undertaking is also submitted regarding non-applicability of forest land.</p> | |
|--|---|---|--|

The Project Proponent and the accredited Consultant M/s. Eco Chem Sales & Services (ECSS) Surat, made a detailed presentation on the salient features of the project.

The proposal is for environmental clearance to the project conversion of 37 Exploration Wells & laying of Associated Flowlines, Involving Construction of Well Manifold at Tripura State by M/s Oil and Natural Gas Corporation Limited.

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 proposal was considered by the Expert Appraisal Committee (Industry-2) and recommended Terms of References (ToRs) for the Project. The ToR has been issued by Ministry vide letter No. J-11011/60/2017-IA.II(I); dated 31st May 2017 and amended ToR date 20th December 2018.

Public Hearing for the proposed project has been conducted by the State Pollution Control Board on 30/09.2020 & 06/11/2020 at Sepahijala District, 10/02/21 at Gomati District, 18/02/21 at South Tripura District, 20/02/21 at North Tripura District, 23/02/2021 at West Tripura District. PP has submitted that all the Public Hearings have been presided by Additional District Magistrate & Collector of their respective districts. The main issues raised during the public hearing are related to Social issues like provision of local employment, passenger shed, maintenance of anganwadi centres, drinking water facilities, solar street lights, Provision of computers to school, maintenance of road etc. It was informed that no litigation is pending against the proposal.

PP has informed that old exploration projects covered under different environment clearance, drilling operations were completed, and in some of the wells sufficient indications of hydrocarbons were noticed while drilling,

the wells were tested by perforation in the production casing. M/s ONGC has obtained environmental clearance for 37 wells which they are going to be converted onto development under the following ECs:

1. F. No. J-11011 / 41 / 2010- 1A II(I) dated 04.01.2011
2. F.No. J-11011 / 213 / 2008- 1A II(I) Dated 11.06.2008
3. F.No. J-11011 / 401 / 2006- 1A II(I) Dated 22.09.2008
4. F.No. J-11011 / 635 / 2007- 1A II(I) Dated 22.10.2007
5. F.No. J-11011 / 636 /2007- 1A II(I) Dated 22.10.2007
6. F.No. J-11011 / 633 / 2007- 1A II(I) Dated 22.10.2007

The details of products and capacity are as under:

| S. No. | Product | Quantity | Unit |
|---------------|----------------|-----------------|--|
| 1. | Natural Gas | 6 | Million standard cubic feet per day (MMSCFD) |

The total land acquired for 37 wells will be 62.9 ha *i.e.* 1.7 ha for the proposed project. M/s ONGC will develop area as social forestry/Plantation by having consultation with the Forest department. The estimated project cost is Rs. 313.76 Crores. Total capital cost earmarked towards environmental pollution control measures is Rs. 0.371 Crores and the Recurring cost (operation and maintenance) will be about Rs. 0.1346 Crores per annum. Total Employment will be 30 persons as direct during construction. Industry proposes to allocate Rs. 0.80 Crores towards Corporate Environment Responsibility to address the issues raised during public hearings.

PP informed that there is Clouded Leopard National Park which is in Sipahijala Wildlife Sanctuary at 5.57 km from the ROBB Well. Final ESZ of Sipahijala Wildlife Sanctuary has been notified by MoEFCC to an extent of 10 metres to 50 metres. Unakoti Reserve forest at 10 km in North West direction and Deo Reserve forest at 10 km in South direction from well (KHBj & KHBE). River Haora at 1.35 km in South East direction from Well (KUAC), River Gongor at 5.00 km in West from Well (RODJ), River Gomati at 1.00 km in South West direction from Well (SDAC), River Salda at 2.79 km in South direction from Well (RODJ), River Muhuri at 0.60 km in South from Well (GOAK), River Juri at 4.96 km in North direction from Well (KHBj & KHBE).

Ambient air quality monitoring was carried out at 10 locations during 1st October 2018 to 31th December 2018 and the baseline data indicates the ranges of concentrations as: PM₁₀ (37.6 – 74.3 µg/m³), PM_{2.5} (18.3 – 35.9 µg/m³), SO₂ (3.8 – 8.6 µg/m³) and NO_x (10.9 – 20.9 µg/m³). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.25 µg/m³, 0.18

$\mu\text{g}/\text{m}^3$ and $0.54 \mu\text{g}/\text{m}^3$ with respect to PM_{10} , SO_x and NO_x . The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

Proposed project does not involve drilling activity so there will not be need of fresh water for the conversion of wells into development wells. Hence no additional load on water sources of Tripura State. Water will be sourced from open market through water tanker if required. Effluent (Produced water) of 0-25 KLD/well quantity will be treated through Mobile ETP and treated effluent is disposed in effluent disposal wells below 1000 Mtrs.

Power requirement for the production will be 62 kVA and will be met from State electricity board. The rated capacity of the DG sets are having capacity 62 kVA during production. Stack (height 9 m for 62 kVA DG. Set) will be provided as per CPCB norms to the proposed DG sets.

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

Waste oil shall be generated in minute quantity which will be disposed as per as per Hazardous Waste Rule 2016 and its amendment.

PP has informed that all the ECs granted on the proposed site have been expired. However, Monitoring reports of the ECs that have been granted earlier in the proposed area has been submitted by PP issued by Regional Office, Shillong.

Monitoring report of EC vide letter J-11011/635/2007-IA-II (I) dated 22.10.2007 based on site visit on 22.04.2014 noted following remarks:

- i. Waste pits have not been provided without leachate collection system as stipulated in G.S.R.546 (E) dated 30th August, 2005 (specific condition No. ii).
- ii. The project authorities could not provide a copy membership of common TSDF for the disposal of drill cuttings and hazardous waste. Copy of authorization or membership of TSDF has not been submitted to this Regional Office. Project authorities have not also created secured landfill at the site as per design of the approved by CPCB for disposal of drill cuttings and hazardous waste as stipulated (specific condition No. v).
- iii. ADAH have not been properly restored. Earth filling is done without artificial plantation, removal of cement concrete, brick debris etc. (specific condition No. xv).
- iv. Project authorities are required to prepare a detailed plan for development of gas fields before going for commercial production for gas bearing wells viz., ADAK (Fig.2), ADAM (Fig.3) & ROAW and obtain fresh clearance from the Ministry as stipulated (specific condition No. xvii).

- v. A separate Environment Management Cell equipped with full-fledged laboratory facilities has not been setup as stipulated (general condition No. vii).
- vi. Details of funds for implementation of EC conditions could not be provided (general condition No. viii)
- vii. Monitored data has been submitted without statistical interpretation as stipulated (general condition No. ix)

Monitoring report of EC vide letter J-11011/636/2007-IA-II (I) dated 22.10.2007 based on site visit on 24.04.2014 noted following remarks:

- i. Waste pits have not been provided without leachate collection system as stipulated in G.S.R.546 (E) dated 30th August, 2005 (specific condition No. i).
- ii. The project authorities could not provide a copy membership of common TSDF for the disposal of drill cuttings and hazardous waste. Copy of authorization or membership of TSDF has not been submitted to this Regional Office. Project authorities have not also created secured landfill at the site as per design of the approved by CPCB for disposal of drill cuttings and hazardous waste as stipulated (specific condition No. iv).
- iii. Project authorities have gone ahead with commercial extraction of gas without obtaining fresh clearance from Ministry as stipulated (specific condition No. xvi).
- iv. No monitoring data of RSPM, SPM, SO₂, NO_x, HC & VOC from DG sets and from flare stack, no record could be made available during monitoring as stipulated (general condition No.ii).
- v. No monitoring data of noised could be made available during monitoring as stipulated (general condition No.v).
- vi. A separate Environment Management Cell equipped with full-fledged laboratory facilities has not been setup as stipulated (general condition No. vi).
- vii. Details of funds for implementation of EC conditions could not be provided (general condition No. viii)
- viii. Monitored data has been submitted without statistical interpretation as stipulated (general condition No. ix)

Monitoring report of EC vide letter J-11011/633/2007-IA-II (I) dated 22.10.2007 based on site visit on 23.04.2014 noted following remarks:

- i. Waste pits have not been provided without leachate collection system as stipulated in G.S.R.546 (E) dated 30th August, 2005 (specific condition No. ii).
- ii. The project authorities could not provide a copy membership of common TSDF for the disposal of drill cuttings and hazardous waste. Copy of authorization or membership of TSDF has not been submitted to this Regional Office. Project authorities have not also created secured landfill at the site as per design of the approved by CPCB for disposal of drill cuttings and hazardous waste as stipulated (specific condition No. v).

- iii. It is observed during monitoring that GOAJ have not been properly restored. Earth filling is done without artificial plantation, removal of cement concrete, brick debris etc. (specific condition No. xv).
- iv. Project authorities are required to prepare a detailed plan for development of gas fields before going for commercial production for gas bearing wells viz., TMD, SDAC, GSF (Fig.3), GOAB (Fig.4) &GOAG and obtain fresh clearance from the Ministry as stipulated (specific condition No. xvii).
- v. No monitoring data of RSPM, SPM, SO₂, NO_x, HC & VOC from DG sets and from flare stack, could be made available during monitoring as stipulated (general condition No. iii).
- vi. No monitoring data of noised could be made available during monitoring as stipulated (general condition No.v).
- vii. A separate Environment Management Cell equipped with full-fledged laboratory facilities has not been setup as stipulated (general condition No. vi).
- viii. Details of funds for implementation of EC conditions could not be provided (general condition No. viii)
- ix. Monitored data has been submitted without statistical interpretation as stipulated (general condition No. ix)

Monitoring report of EC vide letter J.13011/213/2008-IA.II (I) dated 11th June 2008 based on site visit on 02.02.2012 noted following remarks: Overall, the implementation of conditions laid down in the Environment Clearance, are poor. Some of the points discussed with the project authorities who need prompt action at their end include:

- i. Diesel based power gensets of 1225 KVA were operated in the sites, with no acoustic enclosures provided to these units
- ii. The project authorities have to comply with the stipulation regarding drill cutting and drilling fluids for onshore drilling operation as per the guidelines notified vide GSR (E) dated 30th August 2005 by providing leachate collection and treatment facility.
- iii. Site restoration should include landscaping the existing drilling sites so that it looks as similar as possible to the pre-drilling landscape, by restoring vegetation and/or previous land use and
- iv. Authorization for disposal of drill cuttings and solid wastes from SPCB should be obtained as stipulated.
- v. The project authorities have not informed the Regional Office as well as the Ministry, the date of financial closure and final approval of the project (release of the exploratory well by the competent authority) and the date of commencing the land development works, which is in violation of general stipulation XI.

During deliberation the following additional information was sought from PP:

- i. Ambient Air Monitoring, Emission Monitoring, Waste water analysis and drill cutting analysis at drilling rigs carried out by NABL

- accredited & MoEF&CC recognized agency.
- ii. Half yearly compliance reports of EC conditions.
- iii. Clarification from Tripura Space Application Centre (TSAC) shall be submitted whether the well #ROAW is falling in forest land.

PP has submitted the information desired above and EAC found it in order.

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 EIA/EMP report prepared and submitted by the Consultant accredited by the QCI/ NABET on behalf of the Project Proponent. The EAC noted that the Project Proponent has given undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the EIA/EMP report. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.

The Committee noted that the EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. The Committee has found the baseline data is within NAAQ standards. The Committee has deliberated the action plan proposed by the project proponent to arrest the incremental GLC due to the project. The Committee has also deliberated on the CER plan and found to be addressing the issues in the study area.

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

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

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

- (i). The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the

Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented.

- (ii). No pipelines or its part shall be laid in the Forest land/Protected Area without prior permission/approval from the Competent Authority.
- (iii). The project proponent will treat and reuse the treated water within the drilling site location including at processing location and no waste or treated water shall be discharged outside the premises under any condition. Mobile ETP coupled with RO and mobile STP shall be installed to treat the waste water and sewage waste respectively.
- (iv). During production, storage and handling, the fugitive emission of methane, if any, shall be monitored using appropriate technology.
- (v). The project proponent also to ensure trapping/storing of the CO₂ generated, if any, during the process and handling.
- (vi). Approach road shall be made pucca to minimize generation of suspended dust.
- (vii). The project proponent shall make all arrangements for control of noise from the drilling activity. Acoustic enclosure shall be provided for the DG sets along with the adequate stack height as per CPCB guidelines.
- (viii). Proposed project does not involve drilling activity so there will not be need of fresh water for the conversion of wells into development wells. Hence no additional load on water sources of Tripura State. Water will be sourced from open market through water tanker if required.
- (ix). The company shall construct the garland drain to prevent runoff of any oil containing waste into the nearby water bodies. Separate drainage system shall be created for oil contaminated and non-oil contaminated.
- (x). Drill cuttings separated from drilling fluid shall be adequately washed and disposed in HDPE lined pit. Waste mud shall be tested for hazardous contaminants and disposed according to HWMH Rules, 2016. No effluent/drilling mud shall be discharged/disposed off into nearby surface water bodies. The company shall comply with the guidelines for disposal of solid waste, drill cutting and drilling fluids for onshore drilling operation notified vide GSR.546(E) dated 30th August, 2005.
- (xi). Oil spillage prevention and mitigation scheme shall be prepared. In case of oil spillage/ contamination, action plan shall be prepared to clean the site by adopting proven technology. The recyclable waste (oily sludge) and spent oil shall be disposed of to the authorized recyclers.
- (xii). The project proponent shall take necessary measures to prevent fire hazards, containing oil spill and soil remediation as needed. At fixed

installations or plants use of ground flare shall be explored. At the place of ground flaring, the overhead flaring stack with knockout drums shall be installed to minimize gaseous emissions during operation.

- (xiii). The project proponent shall develop a contingency plan for H₂S release including all necessary aspects from evacuation to resumption of normal operations. The workers shall be provided with personal H₂S detectors in locations of high risk of exposure along with self-containing breathing apparatus.
- (xiv). Blow Out Preventer system shall be installed to prevent well blowouts during drilling operations.
- (xv). On completion of the project, necessary measures shall be taken for safe plugging of wells with secured enclosures to restore the drilling site to the original condition. The same shall be confirmed by the concerned regulatory authority from environment safety angle. In case of hydrocarbon not found economically viable, a full abandonment plan shall be implemented for the drilling site in accordance with the applicable DGH / Indian Petroleum Regulations.
- (xvi). As per the Ministry's OM dated 30.09.2020 superseding the OM dated 01.05.2018 regarding the Corporate Environmental Responsibility, and as per the action plan proposed by the project proponent to address the socio-economic and environmental issues in the study area, the project proponent, as committed, shall provide education funds in technical training centers/ support in nearby village's schools, support in health care facilities, drinking water supply and funds for miscellaneous activities like solar street lights, battery, solar panel etc., in the nearby villages. The action plan shall to be completed within time as proposed.
- (xvii). No lead acid batteries shall be utilized in the project/site.
- (xviii). Occupational health surveillance of the workers shall be carried out as per the prevailing Acts and Rules. All workers & employees shall be provided with required safety kits/mask for personal protection.
- (xix). Oil content in the drill cuttings shall be monitored if oil-based mud is used and report shall be sent to the Ministry's Regional Office.
- (xx). The project proponent shall prepare operating manual in respect of all activities, which would cover all safety & environment related issues and measures to be taken for protection. One set of environmental manual shall be made available at the drilling site/ project site. Awareness shall be created at each level of the management. All the schedules and results of environmental monitoring shall be available at the project site office. Remote monitoring of site should be done.

Agenda No. 41.3

Guru Gobind Singh Polymer Addition Project, District Bathinda Punjab by M/s HPCL-MITTAL ENERGY LIMITED (HMEL) - Amendment in Environment Clearance reg.

[IA/PB/IND2/221937/2021, J-11011/266/2017-IA II(I)]

The proposal is for amendment in the Environmental Clearance granted by the Ministry vide letter dated 12th December, 2017 for the project Guru Gobind Singh Polymer Addition located at Village Phullokhari, Taluka Talwandi Saboo, District Bathinda, Punjab (India) in favour of M/s. Guru Gobind Singh Refinery.

The project proponent has requested for amendment in the EC with the details are as under;

| S. No. | Para of EC issued by MoEF&CC | Details as per the EC | To be revised/read as | Justification/reason |
|---------------|---|---|---|--|
| 1 | Condition no. (xv) of page no. 4. | The green belt of at least 10 m width shall be developed in more than 33% of the total project area, mainly along the plant periphery, in downwind direction, and along | The green belt shall be developed in 477 acres, out of which 315 acres green belt shall be developed on the land adjacent and inside the refinery. The remaining green belt of about 163 acres shall be | Currently the refinery has developed a green belt in an area of 315 acres. During inception stage of project it was envisaged that refinery will be able to buy land adjacent to the refinery. The land adjacent to the refinery is highly fertile & farmers are no longer interested in selling their land to refinery. |

| | | | | |
|--|--|---|---|--|
| | | road sides etc. As many as 25000 trees to be planted per year during first five years. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department. | developed on land identified through District Forest Department in Bathinda, Punjab. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department. | |
|--|--|---|---|--|

During the deliberations EAC observed that P.P. submitted MOU with DFO for plantation of trees in the area, which is equivalent 33.3 per cent of the statutory requirement of the Green Belt. P.P. will ensure to plant type of trees, number of trees and the location of trees on the advice and approval of DFO. This will ensure the overall green belt statutory requirement of 33 per cent by the project proposal proponent.

The Expert Appraisal Committee, after detailed deliberations **recommended** for amendment in the EC vide letter J-11011/266/2017-IA II(I) dated 12th December, 2017 with all other terms and conditions remain unchanged.

Agenda No. 41.4

Expansion of Sugar Factory from 12,000 TCD to 16,000 TCD, Gat No.: 315/7 to 315/15, Shri Kallappanna Awadenagar, Hupari - Yalgud, Tal.-Hatkanangale, Dist.-Kolhapur, Maharashtra by M/s. Jawahar Shetakari Sahakari Sakhar Karkhana Ltd. - Amendment in Environment Clearance reg.

[IA/MH/IND2/224565/2021; J-11011/146/2020-IA-II (I)]

The Proposal is for amendment in the Environmental Clearance (EC) granted by the Ministry vide letter F. No. : J-11011/146/2020-IA-II dated 01.12.2020 for the project Expansion of Sugar Factory from 12000 TCD to 16,000 TCD at Gat No.: 315/7 to 315/15, Shri Kallappanna Awadenagar, Hupari - Yalgud, Tal.-Hatkanangale, Dist.-Kolhapur, Maharashtra in favor of M/s. Jawahar Shetakari Sahakari Sakhar Karkhana Ltd.

The Project Proponent has requested for amendment in the EC with the details are as under;

| Sr. No. | Para of EC issued by MoEF&CC | Details as per the EC | To be Revised / Read as | Justification/ reasons |
|----------------|--|--|---|--|
| 1 | Page No. 4, Point No. 13, Sub Point (ii) | As already committed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/ treated water shall be discharged outside the premises. Treated effluent shall be reused in the process/utilities. Treated industrial effluent shall not be used for | As already committed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/ treated water shall be discharged outside the premises. Treated effluent shall be reused in the process/utilities and for gardening/ greenbelt development/ | <ul style="list-style-type: none">• Subsequent to grant of EC on 01.12.2020, Industry explored feasibility towards achieving the condition stipulated in EC towards not utilizing cane condensate for watering of Green Belt in its premises during Dec. 2020 -March 2021 Crushing Season. |

| Sr. No. | Para of EC issued by MoEF&CC | Details as per the EC | To be Revised / Read as | Justification/ reasons |
|---------|------------------------------|---|--|--|
| | | gardening/ greenbelt development/ horticulture and not to send outside/ used for farming. | horticulture in own premises only and not to send outside/ used for farming. | <ul style="list-style-type: none"> • Despite utilizing all treated effluents & condensate in process & utilities, 35% of excess condensate remained balanced (2,250 CMD). • In ensuing season, after switching to 16,000 TCD crushing, more quantity of excess condensate will remain as non-usable balance creating onsite storage & disposal problems. • A sugar factory becomes water exporting unit due to water content in cane (70%) which comes out as condensate after juice heating, concentration & syrup making. <p>For Green Belt; Fresh Water (1900 CMD) was used that put</p> |

| Sr. No. | Para of EC issued by MoEF&CC | Details as per the EC | To be Revised / Read as | Justification/ reasons |
|---------|------------------------------|-----------------------|-------------------------|---|
| | | | | adverse impact (Negative) River water Resource. |

During deliberation, EAC suggested that no waste or treated water shall be discharged outside the premises. PP has submitted an undertaking for the above and EAC found it in order.

The Expert Appraisal Committee, after detailed deliberations **recommended** for amendment in the EC vide letter J-11011/146/2020-IA-II dated 01st December, 2020 with all other terms and conditions remain unchanged.

Agenda No. 41.5

Studies for additional exploratory/development drilling in KG offshore PML block KG/OSDSF/GSKW/2018 of 93.91 sq.km area transferred to Oil India Ltd in DSF round-II, falling in East Godavari District of Andhra Pradesh by M/s. Oil India Limited - Consideration of Environment and CRZ Clearance.

[IA/AP/IND2/122504/2019, J-11011/332/2019-IA-II(I)]

The Project Proponent and the accredited Consultant M/s. Asian Consulting Engineers Pvt. Ltd., made a detailed presentation on the salient features of the project and informed that:

The proposal is for environmental & CRZ clearance to the project for Studies for additional exploratory/development drilling in KG offshore PML block KG/OSDSF/GSKW/2018 of 93.91 sq.km area transferred to Oil India Ltd in DSF round-II, falling in East Godavari District of Andhra Pradesh by M/s. Oil India Limited.

All offshore and onshore oil and gas exploration, development and production 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).

Terms of References (ToRs) has been issued by Ministry vide letter No. IA-J-11011/332/2019-IA-II(I) dated 12th December 2019. PP has submitted the application under "1(b) Offshore and onshore oil and gas exploration,

development & production” Category ‘A’. It was informed that no litigation is pending against the proposal.

The details of products and capacity are as under:

| S. No | Product Details | Existing Quantity | Proposed Quantity | Total Quantity |
|--------------|------------------------|--------------------------|--------------------------|-----------------------|
| 1. | Oil in-place MMT | | 2.05 | 2.05 |
| 2. | Gas in-place BCM | | 4.86 | 4.85 |
| | Total | | | |

This is offshore project and there is no activity on land. The estimated project cost is Rs. 600 crores. Total capital cost earmarked towards environmental pollution control measures is Rs 55,00,000 and the Recurring cost (operation and maintenance) will be about Rs 18,50,000 per annum. Total Employment will be 20 persons as direct & 30 persons indirect after expansion. Industry proposes to allocate Rs. 1.5 Crores @ of 2 % profit of the Project towards Corporate Social Responsibility.

There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site. Offshore Project.

Ambient air quality monitoring was carried out at Six (06) locations during October 2020 to January 2021 and the baseline data indicates the ranges of concentrations as: PM10 (85.2 - 75.2 µg/m³), PM2.5 (50.8 - 45.1 µg/m³), SO₂ (16.8 - 12.8 µg/m³) and NO₂ (25.8 - 20.7 µg/m³). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 12.7 µg/m³, 11.9 µg/m³ and 45.93 µg/m³ with respect to PM10, SO_x and NO_x. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

Total water requirement is 66 m³/day of which fresh water requirement of 36 m³/day will be met from Water will be procured from town through supply vessels or produced on-board from a Desalination plant. Effluent of 10 m³/day quantity will be treated through On board STPs. The plant will be based on Zero Liquid discharge system

Power requirement will be 3750 KW met from Diesel Generator (DG) sets on-board. Stack (height 11 m) will be provided as per CPCB norms to the proposed DG sets.

Details of process emissions generation and its management:

Air pollution will be mainly from the burning of fuel in the generator sets required for power generation during the Project activities. The proposed drilling operations will require a number of generator sets to cater to the power requirement. However, these will be placed near to each other and hence their emissions for all practical purposes can be considered to be from a single group

source, instead of various point sources. Air emissions may result from gas flaring activities during the well testing (four days per well)

Efficient flare system designs will be ensured. Good operational controls and high levels of monitoring shall be built into the design operations. Regular maintenance of engines and DG sets will be ensured to keep the environmental impact minimum. The DG sets shall comply with the applicable emission norms. High efficiency generator sets will be provided with adequate stack height and modern emission control equipment. Emissions can be minimized further by the use of low sulphur diesel. (i.e., the present sulphur content of the HSD utilized is 50 ppm). Regular maintenance of the transportation vessels to be ensured to minimize the level of emissions in the environment. Leak Detection & Repair (LDAR) programme will be undertaken to reduce fugitive emission.

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

The drill cuttings will be generated during drilling phase of the wells. Cuttings free from Water Based Mud (WBM) will be discharged offshore into sea, as per the G.S.R. 546 (E), dated 30/08/2005, according to which the cuttings will be discharged to the sea intermittently at an average rate of 50 bbl/hr/well from a platform. This is done to have proper dilution and dispersion without any adverse impact on the marine environment, whereas cuttings generated from the Synthetic Oil-Based Mud (SOBM) will be brought back to onshore for treatment and disposal.

Hazardous Waste: Hazardous waste, such as waste lube/system oil from machinery, used oil from generator sets (in case of operation) are likely to be generated. The waste shall be handled as per the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016. The waste will be carefully stored in drums and transported to the MoEF approved recyclers for its final disposal.

Biodegradable waste from the kitchen, laundries and galleys will be collected, segregated, stored in containers and will be transported onshore, as well as used for composting. Combustible Waste (Paper, Rags, Packing Materials, etc.). will be properly segregated (plastics, metal, glass) and transported to the onshore base for sale to the recycling contractor.

During deliberations EAC noted that PP has submitted details of only exploratory drilling of wells and the proposed activities comes under item 1(b) under category B₂ as per Ministry's S.O 236 dated Jan 16, 2020 and it falls in the jurisdiction of SEIAA. In this regard PP informed that even if the proposal for EC is applied at SEIAA, subsequent to exploratory activities PP has to invariably approach at the central level for development/production activities. In this regard, EAC is of the opinion that the instant proposal may be allowed for appraisal at central level in order to avoid delay in grant of EC. Further, it was observed that the development of drills falls under category 'A' and Public Hearing is

applicable for such proposals. PP responded that as the proposed activities are only off-shore based exploratory activities and hence Public Hearing is not applicable in this case.

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 EIA/EMP report prepared and submitted by the Consultant accredited by the QCI/ NABET on behalf of the Project Proponent. The EAC noted that the Project Proponent has given undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the EIA/EMP report. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.

The Committee noted that the EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. The Committee has found the baseline data is within NAAQ standards. The Committee has deliberated the action plan proposed by the project proponent to arrest the incremental GLC due to the project. The Committee has also deliberated on the CER plan and found to be addressing the issues in the study area.

The Committee noted that as per the extant rules of the Ministry, the projects involving Environmental & CRZ Clearance which needs to be examined as per the CRZ Notification, 2011/2019. The Committee has taken cognizance of the recommendations of the APCZMA for CRZ clearance.

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 and CRZ Clearance subject to clearance by the CRZ Division of the Ministry.

The environmental & CRZ 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 and CRZ clearance, *subject to comments on the*

admissibility of the project as per the CRZ Notification, 2011/2019, and subject to compliance of terms and conditions as under, and general terms of conditions at Annexure: -

- (i). The project proponent shall comply with all the conditions stipulated in the APCZMA /CRZ recommendations and NOC issued for the same.
- (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). No pipelines or its part shall be laid in the Forest land/Protected Area without prior permission/approval from the Competent Authority.
- (iv). The project proponent will treat and reuse the treated water within the drilling site location including at processing location and no waste or treated water shall be discharged outside the premises under any condition. Mobile ETP coupled with RO and mobile STP shall be installed to treat the waste water and sewage waste respectively.
- (v). During production, storage and handling, the fugitive emission of methane, if any, shall be monitored using appropriate technology.
- (vi). The project proponent also to ensure trapping/storing of the CO₂ generated, if any, during the process and handling.
- (vii). Approach road shall be made pucca to minimize generation of suspended dust.
- (viii). The project proponent shall make all arrangements for control of noise from the drilling activity. Acoustic enclosure shall be provided for the DG sets along with the adequate stack height as per CPCB guidelines.
- (ix). Total water requirement is 66 m³/day of which fresh water requirement of 36 m³/day will be met from Water will be procured from town through supply vessels or produced on-board from a Desalination plant. Prior permission shall be obtained from the concerned regulatory authority.
- (x). The company shall construct the garland drain to prevent runoff of any oil containing waste into the nearby water bodies. Separate drainage system shall be created for oil contaminated and non-oil contaminated.
- (xi). Drill cuttings separated from drilling fluid shall be adequately washed and disposed in HDPE lined pit. Waste mud shall be tested for

hazardous contaminants and disposed according to HWMH Rules, 2016. No effluent/drilling mud shall be discharged/disposed off into nearby surface water bodies. The company shall comply with the guidelines for disposal of solid waste, drill cutting and drilling fluids for onshore drilling operation notified vide GSR.546(E) dated 30th August, 2005.

- (xii). Oil spillage prevention and mitigation scheme shall be prepared. In case of oil spillage/ contamination, action plan shall be prepared to clean the site by adopting proven technology. The recyclable waste (oily sludge) and spent oil shall be disposed of to the authorized recyclers.
- (xiii). The project proponent shall take necessary measures to prevent fire hazards, containing oil spill and soil remediation as needed. At fixed installations or plants use of ground flare shall be explored. At the place of ground flaring, the overhead flaring stack with knockout drums shall be installed to minimize gaseous emissions during operation.
- (xiv). The project proponent shall develop a contingency plan for H₂S release including all necessary aspects from evacuation to resumption of normal operations. The workers shall be provided with personal H₂S detectors in locations of high risk of exposure along with self-containing breathing apparatus.
- (xv). Blow Out Preventer system shall be installed to prevent well blowouts during drilling operations.
- (xvi). On completion of the project, necessary measures shall be taken for safe plugging of wells with secured enclosures to restore the drilling site to the original condition. The same shall be confirmed by the concerned regulatory authority from environment safety angle. In case of hydrocarbon not found economically viable, a full abandonment plan shall be implemented for the drilling site in accordance with the applicable DGH / Indian Petroleum Regulations.
- (xvii). As per the Ministry's OM dated 30.09.2020 superseding the OM dated 01.05.2018 regarding the Corporate Environmental Responsibility, and as per the action plan proposed by the project proponent to address the socio-economic and environmental issues in the study area, the project proponent, as committed, shall provide education funds in technical training centers/ support in nearby village's schools, support in health care facilities, drinking water supply and funds for miscellaneous activities like solar street lights, battery, solar panel etc., in the nearby villages. The action plan shall to be completed within time as proposed.
- (xviii). No lead acid batteries shall be utilized in the project/site.

- (xix). Occupational health surveillance of the workers shall be carried out as per the prevailing Acts and Rules. All workers & employees shall be provided with required safety kits/mask for personal protection.
- (xx). Oil content in the drill cuttings shall be monitored if oil-based mud is used and report shall be sent to the Ministry's Regional Office.
- (xxi). The project proponent shall prepare operating manual in respect of all activities, which would cover all safety & environment related issues and measures to be taken for protection. One set of environmental manual shall be made available at the drilling site/project site. Awareness shall be created at each level of the management. All the schedules and results of environmental monitoring shall be available at the project site office. Remote monitoring of site should be done.

Agenda No. 41.6

Expansion of Distillery from 80 KLPD (C Heavy Molasses based operation) to 150 KLPD (B Heavy Molasses /Grain based operation) along with proposed 7.15 MW Co-Generation Power Plant by M/s. Rana Sugar Limited (Distillery Division) located at Village Belwara, Sadar Nagar & Rani Nagal, Tehsil & District Moradabad, Uttar Pradesh - Consideration of Environment Clearance

[IA/UP/IND2/230311/2021, J-11011/22/2015-IA-II(I)]

The Project Proponent and the accredited Consultant M/s. J.M. EnviroNet Pvt. Ltd., made a detailed presentation on the salient features of the project.

The proposal is for environmental clearance to the project for Expansion of Distillery from 80 KLPD (C Heavy Molasses based operation) to 150 KLPD (B Heavy Molasses /Grain based operation) along with proposed 7.15 MW Co-Generation Power Plant by M/s. Rana Sugar Limited (Distillery Division) located at Village Belwara, Sadar Nagar & Rani Nagal, Tehsil & District Moradabad, Uttar Pradesh.

All Distillery projects are listed at S. No. 5 (g) of Schedule of Environment Impact Assessment (EIA) and as per as per the EIA Notification 2006 and amendment vide Notification S.O. 345(E), dated the 17th January, 2019, S.O. 750(E), dated the 17th February, 2020, S.O. 980 (E) dated 02nd March, 2021 and S.O 2339(E) dated 16.06.2021 the proposal is to be appraised as 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.

Standard ToR and public Hearing conduction is not applicable as the project falls under category B2 as per OM dated 2nd March, 2021 & 16th June, 2021. It was informed that no litigation is pending against the project.

Rana Sugar Limited (Distillery Division) has obtained Environmental clearance from MoEFCC vide F. No. J-11011/22/2015-IA II (I) dated 9th January, 2017 for 80 KLPD Molasses based distillery at Village Belwara, Sardar Nagar & Rani Nagal, Tehsil & District Moradabad, Uttar Pradesh.

The details of products and capacity are as under:

| Units | | Existing installed Capacity | Additional Capacity | Total Capacity after Proposed Expansion | Remark |
|---------------------------|----------|---|-------------------------|---|--|
| Distillery Plant | Capacity | 80 KLPD C-Heavy Molasses Based | 70 KLPD | 150 KLPD B-Heavy Molasses/Grain Based | Additional increased 70 KLPD capacity will be Ethanol only |
| | Product | Ethanol / Rectified Spirit/ Extra Neutral Alcohol | Ethanol (Bio-fuel) Only | | |
| Co-generation Power Plant | | Nil | 7.15 MW | 7.15 MW | - |

Existing land area is 10.12 ha (25.0 acres) (101200 m²). Industry has already developed greenbelt in an area of 34% i.e. 3.44 ha (34400 m²) out of total area of the project. The estimated expansion project cost is Rs. 50 Crores. Total capital cost earmarked towards environmental pollution control measures is Rs. 25.0 Crores and the Recurring cost (operation and maintenance) will be about Rs. 0.6 Crores / annum. No. of working days will be 350 days/annum. Total Employment will be 150 persons during operational phase after expansion. Industry proposes to allocate Rs. Rs. 1 Crore of total project cost towards Corporate Environment Responsibility (CER).

There are No National Park, Reserved / Protected Forests, Wildlife Sanctuary, Biosphere Reserve, Tiger / Elephant Reserve, Wildlife Corridor, Reserved Forests (RF)/ Protected Forests (PF) within 10 km radius. River – Dhela Nadi (~ 4.8 km in WNW direction), Bahalla Nadi (~ 5.5 km in East direction), Nala/ Drain - Rajhera Nala (~ 0.5 km in North direction), Ghagra Nala (~ 2.0 km in ENE direction), Kachhua Nala (~ 2.5 km in WNW direction), Nachna Nala (~ 4.0 km in ESE direction), Damdama Nala (~

7.5 km in West direction), Nechiya Nala (~ 8.0 km in SSE direction), Distributary - Roshanpur Distributary (~ 1.5 km in NE direction), Godhi Distributary (~ 2.0 km in NW direction), Pipalsana Distributary (~ 4.5 km in WNW direction) are the water bodies available within 10 km radius.

Existing fresh water requirement is 470 KLPD. After Expansion, total fresh water requirement for 150 KLPD plant will be 780 KLPD for Molasses/Grain based operation which will be met from ground water. After expansion, Effluent (MEE Condensate, Fermentation Cleaning & others) of 1234 m³/day during B Heavy Molasses based distillery operation or 1040 m³/day during Grain based distillery operation will be treated through state of art CPU of 1500 KLPD capacity. The plant will be based on Zero Liquid discharge system.

Existing power requirement for 80 KLPD C-Heavy Molasses based distillery is 2.0 MW and additional 1.0 MW of power will be required for proposed expansion. Thus, the total power requirement after proposed expansion project will be approx. 3.0 MW which will be sourced from 7.15 MW Co-generation Power Plant. Existing unit has D.G Sets of 1250 KVA and 750 KVA capacity used as standby during power failure. Stack height (7 m) will be provided as per CPCB norms to the proposed DG Sets.

25 TPH boiler has already been installed in the plant premises. Now, with the proposed expansion company will install a new 52 TPH incineration boiler along with 7.15 MW turbine. Thus, after proposed expansion existing 25 TPH boiler will be kept on standby and total requirement of steam and power will be fulfilled from new incineration boiler of 52 TPH. ESP with a stack height of 72 m for proposed boiler will be installed for controlling the particulate emissions within the statutory limit of 50 mg/Nm³.

Details of process emissions generation and its management:

CO₂ generated during the fermentation process is being/will be collected and sold to authorized vendors.

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

- During Molasses based operation Spent wash (875 TPD) generated will be concentrated in Multi-effect evaporator and then con. Spent wash (146 TPD) used as fuel in boiler along with bagasse/rice husk as auxiliary fuel.
- Solid waste from the Grain based operations generally comprises of fibres and proteins in the form of DDGS (71 TPD), which will be ideally used as Cattle Feed.
- Ash (110 TPD) will be used for soil amelioration due to rich potash content & given to brick manufacturers manufacturing units.
- Used oil & grease (1.0 KL/annum) generated from plant machinery/gear boxes as hazardous waste is being/ will be sold out to the CPCB authorized recyclers.

Details of Certified compliance report submitted by RO, MoEF&CC - Certified Compliance report of existing EC has been obtained from Regional Office, MoEFCC, Lucknow vide F. No: IV/ENV/UP/IND-155/473/2017 dated 26th July, 2021.

As per OM dated 16th June, 2021, PP has submitted self-certification in the form of affidavit declaring that the proposed from 80 KLPD to 150 KLPD will be for manufacturing of fuel ethanol only.

During deliberation EAC sought the following commitments from PP:

- Existing bio composting shall be abandoned in the Industry and spent wash shall be treated through installation of incineration boiler.
- Proposed budget allocated towards CER of Rs. 1.00 crores shall be spent on installation of solar power and for providing drinking water facilities to the nearby villages.
- ESP shall be installed for controlling air pollution.
- Brick manufacturing unit shall be installed for utilization of fly ash.
- Solar plant of 500 kW shall be installed within plant for energy conservation.

PP agreed to the above conditions and submitted an undertaking in compliance of the above.

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 OM dated 16th June, 2021, project falls in category B2 and the proposed capacity from 80 KLPD to 150 KLPD shall be only be used for fuel ethanol manufacturing as per self-certification in form of an 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). The project proponent will treat and reuse the treated water within the factory and no waste or treated water shall be discharged outside the premises.
- (iv). Total fresh water requirement shall not exceed 780 m³/day and will be sourced from ground water. Prior permission shall be obtained from the concerned regulatory authority/CGWA in this regard, and renewed from time to time.
- (v). Effluent (MEE Condensate, Fermentation Cleaning & others) generated shall be treated through state of art CPU. Brick manufacturing unit shall be installed within plant for utilization of fly ash.
- (vi). CO₂ generated from the process shall be bottled/made solid ice and utilized/sold to authorized vendors.
- (vii). 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.

- (viii). 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.
- (ix). The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Firefighting system shall be as per the norms.
- (x). Process organic residue and spent carbon, if any, shall be sent to Cement other suitable industries for its incinerations. ETP sludge, process inorganic & evaporation salt shall be disposed of to the TSDF.
- (xi). 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.
- (xii). The green belt of at least 5-10 m width shall be developed in nearly 33% of the total project area, mainly along the plant periphery. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department. Records of tree canopy shall be monitored through remote sensing map.
- (xiii). PP shall allocate Rs. 1.0 crores for CER and it shall be spent on installation of solar power and for providing drinking water facilities to the villages nearby.
- (xiv). There shall be adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products as per CPCB norms and no parking to be allowed outside on public places.
- (xv). Storage of raw materials shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions.
- (xvi). Continuous online (24x7) monitoring system for stack emissions 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.
- (xvii). 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.

Agenda No. 41.7

100 KLPD Grain Based Ethanol Plant along with 2.7 MW Co-Generation Power Plant by M/s. Yash Biofuels Pvt. Ltd. Located at Block Kasba, Village Basantpur, District Purnia, Bihar - Consideration of Environment Clearance

[IA/BR/IND2/229733/2021, J-11011/385/2021-IA-II(I)]

EAC desired that the proposal shall be considered only after obtaining document from competent authority related with conversion of land use to industrial purpose.

Accordingly, the proposal was deferred for the needful.

Agenda No. 41.8

Greenfield Project of 100 KLPD Grain Based Ethanol Plant along with 3.0 MW Co-generation Power Plant by M/s. RDS Biofuels Private Limited located at NH-27, Village-Jasauli, Block-Kotwa, P.O. +P.S.-Jasauli, Distt. East Champaran, Bihar - Consideration of Environment Clearance

[IA/BR/IND2/229678/2021, J-11011/383/2021-IA-II(I)]

EAC desired that the proposal shall be considered only after obtaining document from competent authority related with conversion of land use to industrial purpose.

Accordingly, the proposal was deferred for the needful.

Agenda No. 41.9

Change in raw material from molasses based distillery to non-molasses based distillery of the same capacity (120 KLPD) by M/s. Yaragatti Sugars Pvt. Ltd. (YSPL) located at Chandargi Village, Ramdurg Taluk, Belagavi District, Karnataka - Amendment in Environment Clearance

[IA/KA/IND2/225451/2021, J-11011/325/2016 – IA II (I)]

During deliberation EAC has desired that PP shall submit revised EMP report incorporating all the changes occurred due to change in raw material proposed and shall re-submit the proposal.

Accordingly, the proposal was deferred for the needful.

29th September, 2021 (Wednesday)

Agenda No. 41.10

Expansion of 60 KLPD Molasses Based Distillery to 150 KLPD B & C Molasses/Cane Syrup based distillery located at Sainagar, Village Ranjani, Tal. Kallam, Dist. Osmanabad, Maharashtra. by M/s Natural Sugar and Allied Industries Ltd. (NSAIL) - Consideration of Environment Clearance.

[IA/MH/IND2/223246/2021, IA-J-11011/35/2021-IA-II(I)]

The proposal was earlier considered by the EAC in its 40th meeting held on 14th -16th September, 2021.

During the deliberations it was informed to EAC that the CCR issued by IRO, Nagpur dated 29.06.2021 mentioned that there is no court case against the project whereas PP has submitted (Form-2) that there is an ongoing court case against the project since 2015. Further, EAC has also noted that PP/consultant have concealed the fact in the documents and in presentation. EAC directed PP to resubmit the case furnishing the details of court case. Accordingly, proposal was deferred for the needful.

The proposal was re-considered by this EAC in its 41st meeting held on 28th -30th September, 2021.

During the deliberations, PPs voice was not audible to EAC and the problem has been persisted for long due to poor network at their end. Therefore, EAC has suggested that proposal may be considered in upcoming EAC meeting.

Accordingly, proposal was deferred for the needful.

Agenda No. 41.11

Expansion of Distillery Capacity from 110 KLPD to 250 KLPD to Produce Ethanol Based on Sugarcane Juice/ Syrup/"C" Molasses/"B" Heavy Molasses/Grains/ Raw Sugar as a Raw

Material by M/s. Yashwant Sugar and Power Private Limited located at Nagewadi, Tal. Khan District Sangli Maharashtra - Consideration of Environment Clearance

[IA/MH/IND2/225571/2020, J-11011/305/2020-IA-II(I)]

The Project Proponent and the accredited Consultant M/s. Dr. Subbarao Environment Center, made a detailed presentation on the salient features of the project.

The proposal is for environmental clearance to the project for Expansion of Distillery Capacity from 110 KLPD to 250 KLPD to Produce Ethanol Based on Sugarcane Juice/ Syrup/"C" Molasses/"B" Heavy Molasses/Grains/ Raw Sugar as a Raw Material by M/s. Yashwant Sugar and Power Private Limited located at Nagewadi, Tal. Khan District Sangli Maharashtra.

All Distillery projects are listed at S. No. 5 (g) of Schedule of Environment Impact Assessment (EIA) and as per as per the EIA Notification 2006 and amendment vide Notification 02nd March, 2021 and S.O 2339(E) dated 16.06.2021 the proposal is to be appraised as 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.

Standard ToR and public Hearing conduction is not applicable as the project falls under category B2 as per OM dated 2nd March, 2021 & 16th June, 2021. It was informed that no litigation is pending against the project.

Ministry issued EC for the unit Vide F. No. IA-J-11011/305/2020-IA-II(I) dated 4th August 2021 for the project Expansion of Sugarcane crushing capacity from 2500 TCD to 8000 TCD, establishment of 40 MW Co-generation Power plant and 110 KLPD distillery to produce 110 KLPD Rectified Spirit/110 KLPD Extra Neutral Alcohol/105 KLPD Ethanol based on "C"/"B" Heavy molasses/Sugarcane Juice/Syrup/grains in favour of M/s. Yashwant Sugar and Power Private Limited, Nagewadi, Taluka; Kahanpur, District Sangli, Maharashtra.

The details of products and capacity are as under:

| Sr. No. | Unit | Capacity | | |
|---------|-----------------------------------|----------|----------|-------|
| | | Existing | Proposed | Total |
| 1. | Sugarcane crushing capacity (TCD) | 8000 | 00 | 8000 |
| 2. | Cogeneration Power Plant (MW) | 40 | 00 | 40 |
| 3. | Distillery (KLPD) | 110 | 140 | 250 |
| | Rectified Spirit or | 110 | 00 | 110 |

| | | | | | |
|----|--------------------------|-----|-----|-----|----------------------------|
| | Extra Neutral Alcohol or | 110 | 00 | 110 | Only one product at a time |
| | Ethanol | 105 | 145 | 250 | |
| 4. | Ethanol | 105 | 145 | 250 | Utilized for EBP program |

Existing land area is 365500 m²; no additional land is required for proposed expansion. Industry will develop green belt in an area of 35.16 % i.e. 128500 m² out of total area of the project. The estimated project cost is Rs. 50 crores. Total capital cost earmarked towards environmental pollution control measures is Rs. 4 Crore and the recurring cost (operation and maintenance) will be about Rs 0.6 Crores per annum. Total Employment will be 30 persons as direct & indirect persons after expansion. Industry proposes to allocate Rs 5 Crore (1 %) towards Corporate Environment Responsibility.

There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, and Wildlife Corridors etc. within 10 km distance from the project site. Yerala River is flowing at a distance of 5 km in North-West direction.

Ambient air quality monitoring was carried out at 8 locations during December 2020 to February 2021 and the baseline data indicates the ranges of concentrations as: PM₁₀ (42.7-72 µg/m³), PM_{2.5} (26.5-42.1 µg/m³), SO₂ (14.5-28 µg/m³) and NO_x (16.6-27.8 µg/m³). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.24 µg/m³, 0.35 µg/m³, 4.96 µg/m³ and 2.02 µg/m³ with respect to PM₁₀, PM_{2.5}, SO₂ and NO_x. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

The net water requirement will be 290 m³/day for sugar division and Co-generation unit which is required for makeup water for boilers and domestic water requirement of 100. There is no water required for distillery unit. Total net water requirement is 390 m³/day initially. Effluent of 1258 m³/day (Sugar & Co-generation effluents 458 m³/day, Spraypond Overflow 800 m³/day) quantity is generated from the sugar unit. This effluent shall be treated in upgraded sugar ETP. Distillery effluent 480 m³/day shall be treated using concentration and drying to form potash rich manure. The plant will be based on Zero Liquid discharge system.

Power requirement after expansion will be 17000 KVA and will be met from its own 40 MW co-generation power plant. It is proposed to install 2*500 KVA DG Set, Stack height of 6 m above roof level is provided as per CPCB norms for the DG sets. Existing unit has two bagasse fired boilers, 1*200 TPH and 1*30 TPH. ESP with a stack of height of 80 m shall be provided for both the boiler.

Details of process emissions generation and its management:

SO₂ and CO₂ gases shall be scrubbed. CO₂ gas shall be recovered.

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

Pressmud generated will be around 320 MT/D which shall be sold as manure. Fly ash generated will be 482.4MT/M. Ash generated shall be used for brick manufacturing in factory premises. The total quantity of ETP sludge generated shall be 300 MT/A, which shall be sold as manure. Hazardous waste i.e. spent oil of 1.01 MT/Annum shall be utilized in-house for the lubrication of bullock carts.

Details of certified compliance report submitted by RO, MoEFCC.: F. No. EC-1340/RON/2021-NGP/8464 dated 12th August 2021

As per OM dated 16th June, 2021, PP has submitted self-certification in the form of affidavit declaring that the proposed from 110 KLPD to 250 KLPD will be for manufacturing of fuel ethanol only.

During presentation EAC observed that there were discrepancies w.r.t data submitted by PP regarding Ambient Air Quality Monitoring which needs rectification. Further, EAC desired the following information from PP:

PP shall submit revised layout of green belt plan.

Accordingly, proposal was deferred for the needful.

Agenda No. 41.12

Proposed 1G Grain based Bio ethanol Plant at 100 KLPD capacity with captive power plant of 50 TPH capacity at BIADA, Industrial Area, Panapur Village , Motipur Taluk, Muzaffarpur District, Bihar by M/s Naturals Dairy Private Limited - Consideration of Environment Clearance.

[IA/BR/IND2/228044/2021, IA-J-11011/342/2021-IA-II(I)]

The Project Proponent and the accredited Consultant M/s. ABC Technolabs India Pvt Ltd made a detailed presentation on the salient features of the project and informed that:

The proposal is for environmental clearance to the project proposed 1G Grain based Bio ethanol Plant at 100 KLPD capacity with captive power plant of 50 TPH capacity at BIADA, Industrial Area, Panapur Village,

Motipur Taluk, Muzaffarpur District, Bihar by M/s Naturals Dairy Private limited.

All grain based distilleries producing ethanol, solely to be used for Ethanol Blended Petrol Programme of the Government of India are listed at S.N. 5(ga) of Schedule of Environmental Impact Assessment (EIA) Notification, 2006 amendment vide S.O 2339 dated 16th June 2021 under category 'B-2' and are appraised at Central Level by Expert Appraisal Committee (EAC).

The project proposal is exempted from obtaining ToR & conducting Public Hearing as per EIA notification, 2006 amendment vide S.O 2339 dated 16th June 2021. It was informed that no litigation is pending against the project.

The details of products and capacity are as under:

| Sl.No | Product Detail | Existing quantity | Proposed quantity | Total quantity |
|--------------|--------------------------------------|--------------------------|--------------------------|-----------------------|
| 1 | Fuel Ethanol/Absolute Alcohol | - | 100 KLPD | 100 KLPD |

The total area for the proposed distillery project is 8.15 ha (81500 m²). Industry will develop greenbelt in an area of 33% i.e. 2.6895 Ha (26895 m²) out of total area of the project.

The estimated project cost is Rs.140.05 Crores. Total capital cost earmarked towards environmental pollution control measures is Rs. 2.8 Crores and the recurring cost (operation and maintenance) will be about Rs. 0.4 Crore per annum. Total Employment will be 103 persons during operation phase. Industry proposes to allocate Rs. 2.8 crores @2 % of total project cost towards Corporate Environment Responsibility (CER).

There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. lies within 10 km distance. River Burhi Gandakis flowing at a distance of 0.45 Km in North direction.

Total water requirement for the Grain based Ethanol Plant will be 620 KLPD which will be met from borewell. Effluent of 130 KLPD quantity will be treated through ETP system. The plant will be based on Zero Liquid discharge system.

The total power requirement for the proposed Ethanol Plant will be 1700 kW, which will be met from Bihar State Power Holding Company Limited (BSPHCL). additionally 1500 KVA DG sets will be used as standby during power failure. Stack (height 9m) will be provided as per CPCB norms to the proposed DG sets. A 50 TPH multifuel fired boiler will be installed. Multi

cyclone separator/ bag filter with a stack of height of 40m will be installed for controlling the particulate emissions within the statutory limit of 115 mg/Nm³ for the proposed boilers.

Details of process emissions generation and its management:

- PM from stack with gaseous pollutants (SO₂, NO_x and CO) are also anticipated
- Fugitive emission from proposed ethanol plant includes evaporation of wastewater, volatilization of alcohol from process & storage tanks, dust from stock piles, Spills and material handling and open vessel
- Operation of construction equipment, vehicular movement, fabrication, erection and commissioning
- Treated process condensate from PCTP will be used for Cooling Tower make up
- Generated sludge will be mixed with sewage sludge and used as a manure in the premises and if required will be sold to outside the plant in open market

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

- Biomass will be about 62680.8 TPA (Approx.) and Food waste/Biodegradable waste will be about 1 TPA (Approx.), Paper/cardboard will be 2 TPA (Approx.), Ash will be 1785.2 TPA (Approx.).
- Used / spent oil will be 7 KL/Annum (Approx.), which will be collected in metal drums kept in secured dyked area and will be disposed to CPCB/ BSPCB registered used oil preprocessor.

As per OM dated 16th June, 2021, PP has submitted self-certification in the form of affidavit declaring that the proposed capacity of 100 KLPD will be for manufacturing of fuel ethanol only.

During the appraisal EAC observed that proposed fresh water requirement is high and directed that fresh water requirement shall not exceed 4 kL per kL production of ethanol and industry shall adhere to complete ZLD. Further, EAC suggested that proposed Rs. 2.8 crores of CER shall be spent on providing drinking facilities and solar street lighting for nearby villages. PP agreed for the same and submitted an undertaking in the compliance of the above. Accordingly, as committed by PP fresh water requirement shall not exceed 400 KLPD.

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 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 OM dated 16th June, 2021, project falls in category B2 and the proposed additional capacity of 100 KLPD shall be only for fuel ethanol manufacturing as per self-certification in form of an 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). The project proponent will treat and reuse the treated water within the factory and no waste or treated water shall be discharged outside the premises.

- (iv). Total fresh water requirement shall not exceed 400 KLPD which will be met from bore well. Prior permission shall be obtained from the concerned regulatory authority/CGWA in this regard, and renewed from time to time. No ground water recharge shall be permitted within the premises.
- (v). The spent wash shall be concentrated and dried to form DDGS to be used as cattle feed.
- (vi). CO₂ generated from the process shall be bottled/made solid ice and utilized/sold to authorized vendors.
- (vii). 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.
- (viii). 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.
- (ix). 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.
- (x). Process organic residue and spent carbon, if any, shall be sent to Cement other suitable industries for its incinerations. ETP sludge, process inorganic & evaporation salt shall be disposed of to the TSDF.
- (xi). 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.
- (xii). The green belt of at least 5-10 m width shall be developed in nearly 33% of the total project area, mainly along the plant periphery. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department. Records of tree canopy shall be monitored through remote sensing map.
- (xiii). PP shall allocate Rs. 2.8 crores towards CER and it shall spent on providing drinking facilities and solar street lighting for nearby villages.

- (xiv). There shall be adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products as per CPCB norms and no parking to be allowed outside on public places.
- (xv). Storage of raw materials shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions.
- (xvi). Continuous online (24x7) monitoring system for stack emissions 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.
- (xvii). 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.

Agenda No. 41.13

Proposed 250 KLPD Grain based Ethanol Plant along with 6.0 MW Cogeneration Power Plant by M/s. K G Spirits LLP located at Village Parasi, Post Barwa B.O, Tehsil Gobindpur, District Dhanbad, Jharkhand - Consideration of Environment Clearance.

[IA/JH/IND2/228956/2021, J-11011/357/2021-IA-II(I)]

The Project Proponent and the accredited Consultant M/s. J.M. EnviroNet Pvt. Ltd., made a detailed presentation on the salient features of the project.

The proposal is for environmental clearance to the project for Proposed 250 KLPD Grain based Ethanol Plant along with 6.0 MW Cogeneration Power Plant by M/s. K G Spirits LLP located at Village Parasi, Post Barwa B.O, Tehsil Gobindpur, District Dhanbad, Jharkhand.

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.

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

The details of products and capacity are as under:

| Unit | Capacity | Product |
|---------------------------|----------|--|
| Grain Based Ethanol Plant | 250 KLPD | Product- Ethanol (Bio-fuel) By-product- DDGS &CO ₂ |
| Co-generation Power Plant | 6.0 MW | Power |

Total project area is 8.80 hectares (88000 m²) for proposed project. Industry will develop greenbelt in an area of 33% i.e. 2.9 ha (29000 m²) out of total area of the project. The estimated project cost is Rs. 220 Crores. Total capital cost earmarked towards environmental pollution control measures is Rs. 15.0 Crores and the Recurring cost (operation and maintenance) will be about Rs. 2.0 Crores / annum. No. of working days will be 350 days/annum. Total Employment will be 120 persons (Permanent 80 & temporary 40) during operation phase. Industry proposes to allocate Rs. 1.0 Crores of total project cost towards Corporate Environment Responsibility (CER).

No National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/ Elephant Reserves, Wildlife Corridors etc. lies within 10 km radius. 2 Reserved Forests (RF)- Girua Pahar RF (~7.5 Km in NNE direction), Dhangi RF (~9.0 Km in West direction) & 6 Unnamed Protected Forests (PF) lies within 10 Km radius. Khudiya Nadi (~ 2.0 Km in NE direction), Pusai Nadi (~ 5.5 Km in NE direction) and Ghi Nadi (~ 10 Km in SW direction) are the water bodies found within 10 km radius.

Total fresh water requirement will be 1340 KLPD which will be sourced from Ground water. Total input for first run for Ethanol Plant will be 4192 KLPD. 2907 KLPD will be recycled and net fresh water requirement will be 1285 KLPD for proposed Ethanol Plant and 55 KLPD Domestic use. Effluent of 1123 m³/day will be treated through state of art PCTP/Effluent Treatment Plant (Bio tower, clarifiers, ACF) of 1500 KLPD capacity. The plant will be based on Zero Liquid discharge system.

Power requirement for Ethanol plant will be 5.4 MW, which will be sourced from the 6.0 MW Co-generation Power Plant. Unit will be having D.G. Sets of 2 x 1500 KVA which will be used as standby during power failure. Stack height (9 m) will be provided as per CPCB norms. Proposed Boiler of 55 TPH capacity with ESP as Air Pollution Control Equipment will be installed with a stack height of 56 m for controlling the particulate emissions within the statutory limit of 50 mg/Nm³.

Details of Process emissions generation and its management:

CO₂ (189 TPD) generated during the fermentation process will be collected and sold to authorized vendors.

Details of Solid waste/ Hazardous waste generation and its management

- Solid waste from the Grain based operations generally comprises of fibres and proteins in the form of DDGS (117 TPD), which will be ideally used as Cattle, poultry & fish feed ingredients.
- Ash (55 TPD) generated from boiler will be supplied to brick manufacturers.
- 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.

As per OM dated 16th June, 2021, PP has submitted self-certification in the form of affidavit declaring that the proposed capacity of 250 KLPD will be for manufacturing of fuel ethanol only.

During deliberations EAC sought the following information/commitments from PP:

- Brick manufacturing unit will be installed within the plant premises for utilization of fly ash.
- 15% of the total plant area will be reserved for parking.
- CO₂ plant will be installed to capture CO₂ generated during fermentation process.
- Development of greenbelt to be completed along with commissioning of the project.
- OHS fund to be increased to Rs. 50 Lakhs per annum.
- Company to construct a storage pond of 90 days capacity and the accumulated water to be used as fresh water thereby reducing fresh water consumption.
- The proposed budget to be spent on social development activities to be increased to 1% of the total project cost and to be spent on solar power and providing drinking water facilities.
- Further, EAC directed that PP shall submit an affidavit mentioning that the complete land has been converted for industrial use and is in possession of the company. A challan/ payment receipt supporting that the company has already paid for the land conversion also to be submitted.

PP has submitted the desired information as sought above and EAC found it to be in order and recommended the proposal for grant of EC.

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 OM dated 16th June, 2021, project falls in category B2 and the proposed capacity of 250 KLPD shall be only be used for fuel ethanol manufacturing as per self-certification in form of an 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). The project proponent will treat and reuse the treated water within the factory and no waste or treated water shall be discharged outside the premises.
- (iv). Total fresh water requirement shall not exceed 1340 m³/day for any kind of raw material use will be met from ground water. Prior permission shall be obtained from the concerned regulatory authority/CGWA in this regard, and renewed from time to time. No ground water recharge shall be permitted within the premises.
- (v). The spent wash shall be concentrated and dried to form DDGS to be used as cattle feed. Brick manufacturing unit will be installed within the plant premises for utilization of fly ash.
- (vi). CO₂ generated from the process shall be bottled/made solid ice and utilized/sold to authorized vendors.
- (vii). 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.
- (viii). 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.
- (ix). The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Firefighting system shall be as per the norms.
- (x). Process organic residue and spent carbon, if any, shall be sent to Cement other suitable industries for its incinerations. ETP sludge, process inorganic & evaporation salt shall be disposed of to the TSDF.
- (xi). 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.
- (xii). The green belt of at least 5-10 m width shall be developed in nearly 33% of the total project area, mainly along the plant periphery. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department. Records of tree canopy shall be monitored through remote sensing map.

- (xiii). PP shall allocate Rs. 2.2 crores towards CER and it shall be used for installation of solar power and for providing drinking water for villagers free of cost.
- (xiv). There shall be adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products as per CPCB norms and no parking to be allowed outside on public places.
- (xv). Storage of raw materials shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions.
- (xvi). Continuous online (24x7) monitoring system for stack emissions 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.
- (xvii). 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.

Agenda No. 41.14

Proposed 300 KLPD Grain based Ethanol Plant along with 6.0 MW Cogeneration Power Plant by M/s. Kamakhya Biofuels Private Limited located at AIDCL Sipajhar Industrial Plot, Village Badiasisha, Tehsil Sipajhar, District Darrang, Assam - Consideration of Environment Clearance.

[IA/AS/IND2/228961/2021, J-11011/358/2021-IA-II(I)]

The Project Proponent and the accredited Consultant M/s. J.M. EnviroNet Pvt. Ltd., made a detailed presentation on the salient features of the project.

The proposal is for environmental clearance to the project for Proposed 300 KLPD Grain based Ethanol Plant along with 6.0 MW Cogeneration Power Plant by M/s. Kamakhya Biofuels Private Limited located at AIDCL Sipajhar Industrial Plot, Village Badiasisha, Tehsil Sipajhar, District Darrang, Assam.

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.

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

The details of products and capacity are as under:

| Unit | Capacity | Product |
|---------------------------|-----------------|--|
| Grain Based Ethanol Plant | 300 KLPD | Product- Ethanol (Bio-fuel) By-product- DDGS &CO ₂ |
| Co-generation Power Plant | 6.0 MW | Power |

Total project area is 24.08 hectares (240800 m²) for proposed project and the same has been allotted to the company by Assam Industrial Development Corporation Limited (AIDCL). Industry will develop greenbelt in an area of 33% i.e.7.95 ha (79500 m²) out of total area of the project. The estimated project cost is Rs. 245 Crores. Total capital cost earmarked towards environmental pollution control measures is Rs. 16.0 Crores and the Recurring cost (operation and maintenance) will be about Rs. 2.0 Crores / annum. No. of working days will be 350 days/annum. Total Employment will be 120 persons (Permanent 90 & temporary 30) during operation phase. Industry proposes to allocate Rs. 1.0 Crores of total project cost towards Corporate Environment Responsibility (CER).

No National Parks, Wildlife Sanctuaries, Reserved Forests (RF)/ Protected Forests (PF), Biosphere Reserves, Tiger/ Elephant Reserves, Wildlife Corridors etc. lies within 10 km radius. Beng Nadi (~4.0 km in NNE direction), Dwigal Nadi (~8.0 km in NNE direction), Saktola Nadi (~9.5 km in ENE direction), Sonta Nadi (~7.0 km in SE direction), Brahmaputra River (~6.5 km in SSE direction), Nanai Nadi (~0.5 km in East direction), Bar Nadi (~2.0 km in West direction), Kalapani Nadi (~4.5 km in NNW), Dimlai Nadi (~5.5 km in NNW), Nekunda Nadi (~5.5 km in NNW direction), Batha Nala (~5.5 km in East direction), Godiabil Nala (~8.5 km in SSW) are the water bodies found within 10 km radius.

Total fresh water requirement will be 1635 KLPD which will be sourced from AIDCL Supply. Total input for first run for Ethanol Plant will be 4905 KLPD. 3370 KLPD will be recycled and net fresh water requirement will be 1535 KLPD for proposed Ethanol Plant and 100 KLPD for Domestic use. Effluent of 1342 m³/day will be treated through state of art CPU/Effluent Treatment Plant (Aerobic, Anaerobic, Reverse Osmosis technology) of 2000 KLPD capacity. The plant will be based on Zero Liquid discharge system.

Power requirement for Ethanol plant will be 6.0 MW, which will be sourced from the 6.0 MW Co-generation Power Plant. Unit will be having D.G. Sets of 2 x 1500 KVA which will be used as standby during power failure. Stack height (9 m) will be provided as per CPCB norms. Proposed Boiler of 55 TPH capacity with ESP as Air Pollution Control Equipment will be installed with a stack height of 56 m for controlling the particulate emissions within the statutory limit of 50 mg/Nm³.

Details of Process emissions generation and its management:

CO₂ (227 TPD) generated during the fermentation process will be collected and sold to authorized vendors.

Details of Solid waste/ Hazardous waste generation and its management

- Solid waste from the Grain based operations generally comprises of fibres and proteins in the form of DDGS (117 TPD), which will be ideally used as Cattle, poultry & fish feed ingredients.
- Ash (55 TPD) generated from boiler will be supplied to brick manufacturers.
- 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.

As per OM dated 16th June, 2021, PP has submitted self-certification in the form of affidavit declaring that the proposed capacity of 300 KLPD will be for manufacturing of fuel ethanol only.

During deliberations, EAC sought the following commitments from PP:

- Brick manufacturing unit will be installed within the plant premises for utilization of fly ash.
- 15% of the total plant area will be reserved for parking.
- CO₂ plant will be installed to capture CO₂ generated during fermentation process.
- Development of greenbelt to be completed along with commissioning of the project.
- OHS fund to be increased to Rs. 50 Lakhs per annum.
- Company to construct a storage pond of 90 days capacity and the accumulated water to be used as fresh water thereby reducing fresh water consumption.
- The proposed budget to be spent on social development activities to be increased to 1% of the total project cost (Rs. 245 Crores) and to be spent on solar power and providing drinking water facilities.

PP has submitted the desired information as sought above and EAC found it to be in order and recommended the proposal for grant of EC.

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 OM dated 16th June, 2021, project falls in category B2 and the proposed capacity of 300 KLPD shall be only be used for fuel ethanol manufacturing as per self-certification in form of an 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). The project proponent will treat and reuse the treated water within the factory and no waste or treated water shall be discharged outside the premises.
- (iv). Total fresh water requirement shall not exceed 1635 m³/day for any kind of raw material use will be met from AIDCL supply. Prior permission shall be obtained from the concerned regulatory authority/CGWA in this regard, and renewed from time to time. No ground water recharge shall be permitted within the premises.
- (v). The spent wash shall be concentrated and dried to form DDGS to be used as cattle feed. Brick manufacturing unit will be installed within the plant premises for utilization of fly ash.
- (vi). CO₂ generated from the process shall be bottled/made solid ice and utilized/sold to authorized vendors.
- (vii). 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.
- (viii). 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.
- (ix). The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Firefighting system shall be as per the norms.
- (x). Process organic residue and spent carbon, if any, shall be sent to Cement other suitable industries for its incinerations. ETP sludge, process inorganic & evaporation salt shall be disposed of to the TSDF.
- (xi). 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.
- (xii). The green belt of at least 5-10 m width shall be developed in nearly 33% of the total project area, mainly along the plant periphery. Selection of plant species shall be as per the CPCB guidelines in

consultation with the State Forest Department. Records of tree canopy shall be monitored through remote sensing map.

- (xiii). PP shall allocate Rs. 2.45 crores towards CER and it shall be spent on solar power and for providing drinking water facilities for villages nearby.
- (xiv). There shall be adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products as per CPCB norms and no parking to be allowed outside on public places.
- (xv). Storage of raw materials shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions.
- (xvi). Continuous online (24x7) monitoring system for stack emissions 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.
- (xvii). 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.

Agenda No. 41.15

Proposed 250 KLPD Grain based Ethanol Plant along with 6.0 MW Cogeneration Power Plant at Bariyarpur IP-48(P), Tehsil Motipur, District Muzaffarpur, Bihar by M/s. Micromax Biofuels Private Limited - Consideration of Environment Clearance.

[IA/BR/IND2/228654/2021, IA- J-11011/353/2021-IA-II(I)]

The Project Proponent and the accredited Consultant M/s J.M. EnviroNet Pvt. Ltd., made a detailed presentation on the salient features of the project and informed that:

The proposal is for environmental clearance for establishment of 250 KLPD Grain based Ethanol Plant along with 6.0 MW Cogeneration Power Plant at Bariyarpur IP-48(P), Tehsil Motipur, District Muzaffarpur, Bihar by M/s. Micromax Biofuels Private Limited.

All grain based distilleries producing ethanol, solely to be used for Ethanol Blended Petrol Programme of the Government of India are listed at S.N. 5(ga) of Schedule of Environmental Impact Assessment (EIA) Notification,

2006 amendment vide S.O 2339 dated 16th June 2021 under category 'B-2' and are appraised at Central Level by Expert Appraisal Committee (EAC).

The project proposal is exempted from obtaining ToR & conducting Public Hearing as per EIA notification, 2006 amendment vide S.O 2339 dated 16th June 2021. It was informed that no litigation is pending against the project.

The details of products and capacity are as under:

| Unit | Capacity | Product |
|---------------------------|----------|--|
| Grain Based Ethanol Plant | 250 KLPD | Product- Ethanol (Bio-fuel) By-product- DDGS &CO ₂ |
| Co-generation Power Plant | 6.0 MW | Power |

Total project area is 14.164 hectares (141640 m²) for proposed project. Industry will develop greenbelt in an area of 35% i.e. 4.95 ha (49500 m²) out of total area of the project.

The estimated project cost is Rs. 245 Crores. Total capital cost earmarked towards environmental pollution control measures is Rs. 14.63 Crores and the Recurring cost (operation and maintenance) will be about Rs. 6.30 Crores / annum. Total Employment will be 120 persons (Permanent 72 & temporary 48) during operation phase. Industry proposes to allocate Rs. 1.0 Crores of total project cost towards Corporate Environment Responsibility.

There are no National Parks, Wildlife Sanctuaries, Reserved Forests (RF)/ Protected Forests (PF), Biosphere Reserves, Tiger/ Elephant Reserves, Wildlife Corridors etc. lies within 10 km radius. Burhi Gandak river (~3.0km in NNE direction), Baghmata River (~6.5km in ENE direction), Danda Nadi (~3.5 km in WNW direction), Malikpur Branch Canal (~5.0 km in SSW direction) are the water bodies found within 10 km radius.

Total fresh water requirement will be 1340 KLPD (Process, Co-generation power plant, utilities & Domestic) which will be sourced from Ground water. Effluent of 1123 m³/day will be treated through state of art CPU/Effluent Treatment Plant of 1500 KLPD capacity. The plant will be based on Zero Liquid discharge system.

Power requirement for Ethanol plant will be 5.37 MW, which will be sourced from the 6.0 MW Co-generation Power Plant. Unit will be having D.G. Sets of 1 x 2000 KVA which will be used as standby during power failure. Adequate Stack height (9 m) will be provided as per CPCB norms. Boiler of 55 TPH capacity with ESP as Air Pollution Control Equipment will be

installed. ESP with a stack height of 56 m will be installed for controlling the particulate emissions within the statutory limit of 50 mg/Nm³.

Details of process emissions generation and its management:

CO₂ (189 TPD) generated during the fermentation process will be collected and sold to authorized vendors.

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

- Solid waste from the Grain based operations generally comprises of fibres and proteins in the form of DDGS (117 TPD), which will be ideally used as Cattle, poultry & fish feed ingredients.
- Ash (106 TPD) from proposed boiler will be given to brick manufacturers.
- 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

As per OM dated 16th June, 2021, PP has submitted self-certification in the form of affidavit declaring that the proposed capacity of 250 KLPD will be for manufacturing of fuel ethanol only.

During the deliberations EAC directed PP to submit an undertaking for the following commitments:

- Brick manufacturing unit will be installed within the plant premises for utilization of fly ash.
- 15% of the total plant area will be reserved for parking,
- CO₂ plant will be installed to capture CO₂ generated during fermentation process.
- Development of greenbelt to be completed along with commissioning of the project.
- OHS fund to be increased to Rs. 50 Lakhs per annum.
- Industry shall construct rain water storage facility of capacity from which it can meet at least 90 days fresh water requirement.

Further, EAC directed that the proposed budget to be spent on CER shall be increased to Rs 2.50 crores and it shall be spent on installing solar power and providing drinking water facilities to the nearby villages. It was also suggested that the proposed activities under CER shall be completed within two years. PP has submitted the desired information as sought above and EAC found it to be in order.

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 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 OM dated 16th June, 2021, project falls in category B2 and the proposed additional capacity of 250 KLPD shall be only for fuel ethanol manufacturing as per self-certification in form of an 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). The project proponent will treat and reuse the treated water within the factory and no waste or treated water shall be discharged outside the premises.

- (iv). Total fresh water requirement shall be 1340 KLPD which will be met ground water. Extraction of ground water shall not be done without obtaining prior permission of CGWA/concerned authority. No ground water recharge shall be permitted within the premises. Industry shall construct rain water storage facility of capacity from which it can meet at least 90 days fresh water requirement.
- (v). The spent wash shall be concentrated and dried to form DDGS to be used as cattle feed. PP shall install brick manufacturing plant within factory for utilization of fly ash.
- (vi). CO₂ generated from the process shall be bottled/made solid ice and utilized/sold to authorized vendors.
- (vii). PP shall allocate Rs. 50 Lakhs for OHS per annum. 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.
- (viii). 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.
- (ix). The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Firefighting system shall be as per the norms.
- (x). Process organic residue and spent carbon, if any, shall be sent to Cement other suitable industries for its incinerations. ETP sludge, process inorganic & evaporation salt shall be disposed of to the TSDF.
- (xi). 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.
- (xii). The green belt of 5 m width shall be developed in nearly 33% of the total project area, mainly along the plant periphery. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department. Records of tree canopy shall be monitored through remote sensing map. Development of greenbelt shall be completed along with commissioning of the project.
- (xiii). PP shall allocate Rs. 2.50 Crores for CER and it shall be spent on installing solar power and providing drinking water facilities within

nearby villages. All the proposed activities under CER shall be completed within two years.

- (xiv). There shall be 15% space inside the plant premises earmarked for parking of vehicles for raw materials and finished products as per CPCB norms and no parking to be allowed outside on public places.
- (xv). Storage of raw materials shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions.
- (xvi). Continuous online (24x7) monitoring system for stack emissions 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.
- (xvii). 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.

Agenda No. 41.16

Green Field Grain Base Distillery Project of 60 KLD Fuel Ethanol Plant along with Cogen Plant of 1.8 MW (By Product: 30 TPD of CO2 Generation & 26-27 TPD of DDGS) at Khasara No. 155/1, 155/2/1/1, 155/2/1/2 134/3/1/1, 154/3, 153/5/1/2/1 134/3/1/2/1 Village Aliganj, Tehsil- Bareli & Dist- Raisen (MP) proposed by M/s KP Biofuels Pvt Limited- Consideration of Environment Clearance.

[IA/MP/IND2/227386/2021, IA- J-11011/334/2021-IA II (I)]

The Project Proponent and the accredited Consultant M/s. Creative Enviro Services., made a detailed presentation on the salient features of the project and informed that:

The proposal is for environmental clearance for establishment of Green Field Grain Base Distillery Project of 60 KLD Fuel Ethanol Plant along with Cogen Plant of 1.8 MW (By Product : 30 TPD of CO2 Generation & 26-27 TPD of DDGS) at Khasara No. 155/1, 155/2/1/1, 155/2/1/2 134/3/1/1, 154/3, 153/5/1/2/1 134/3/1/2/1 Village Aliganj, Tehsil- Bareli & Dist- Raisen (MP) proposed by M/s KP Biofuels Pvt Limited.

All grain based distilleries producing ethanol, solely to be used for Ethanol Blended Petrol Programme of the Government of India are listed at S.N.

5(ga) of Schedule of Environmental Impact Assessment (EIA) Notification, 2006 amendment vide S.O 2339 dated 16th June 2021 under category 'B-2' and are appraised at Central Level by Expert Appraisal Committee (EAC).

The project proposal is exempted from obtaining ToR & conducting Public Hearing as per EIA notification, 2006 amendment vide S.O 2339 dated 16th June 2021. It was informed that no litigation is pending against the project.

The details of products and capacity are as under:

| Sr No | Product Details | Existing Quantity | Proposed Quantity | Total Quantity |
|--------------|------------------------|--------------------------|--------------------------|------------------------|
| 1. | Fuel Ethanol | Nil | 60 KLD of fuel ethanol | 60 KLD of fuel Ethanol |
| 2 | Cogeneration of Power | Nil | 1.8 MW | 1.8 MW |
| 3 | DDGS | Nil | 26-28 TPD | 26-28 TPD |

The acquired land area is 4.359 ha with proposed built-up area of 1.65 ha. Green belt will be developed in area of 33 % i.e. 1.45 ha of area with 3600 number of trees within 02 years of time.

The estimated project cost is Rs 6030 Lacs. Total capital cost for environmental measures is proposed as Rs 686 Lacs. The recurring cost (operation and maintenance) will be about Rs 77.95 lacs per annum. Total Employment will be 50 persons as direct & 90 persons as indirect after the commissioning of project. Industry proposes to allocate Rs. 150 Lacs towards Corporate Environment Responsibility.

There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. lies within 10 km distance. No protected forest are reported in the study area. Major River Narmada is flowing at a distance of 2.0 km in south direction.

Total water requirement is estimated to be 1200 KLD and after recycling & reuse of 802 KLD of water, net fresh water requirement is estimated to be 390 KLD, which will be met from Ground Water Resources. Permission from CGWA has been obtained. Spent wash of 484 TPD will be treated through Multi Effect Evaporator with thermal recompression for thin slops evaporation and followed by CPU. The plant will be based on zero liquid discharge concept.

Power requirement for the project will 1500 KW and will be met from Co-generation unit of 1.8 MW and MPSEB. DG sets of 500 KVA is proposed

and will have Stack height of 30mt as per CPCB norms and will be used as standby during power failure. Unit will have 01 boilers of 18 TPH, which will be coal and husk fired. ESP with a stack having height of 42 mt will be installed for controlling the Particulate emissions (within statutory limit of 115 mg/Nm³) for proposed boiler.

Details of process emissions generation and its management:

PM, SO₂, NO_x will be generated from the fuel combustion. following measures are proposed for implementation:

- ESP shall be provided at stack of boiler to control the emission below 50 mg per cubic meter
- Adequate stack height of 42 mt for boiler shall be provided for better dispersion.
- Dust collectors system shall be provided at various material transfer points.
- Online continuous monitoring system shall be provided for stack of boiler
- Development of green belt shall be carried out in consultation with forest department
- Dense phase conveying system for ash handling shall be provided to prevent the fugitive emission.
- Provision of cover over coal conveyors belt along with dust suppression system
- Provision of dust mask for workers and instruction of compulsory use.
- It is proposed to use low sulphur coal in the boiler.
- CO₂ generated during the fermentation process will be collected by utilizing CO₂ Scrubbers.

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

| Detail Of By Products / Solid/Hazardous Waste And Management | | | |
|---|-----------------|----------------|--|
| Type Of Waste | Quantity | Storage | Utilization/ Disposal |
| DDGS - (by product) | 26 -27 TPD | Covered shed | Sold as Cattle Feed, Poultry & Fisheries |
| Boiler ash | 20 TPD | Silo | Brick making or land filling |
| Waste papers/Boxes | 0.1 TPD | Covered shed | to recyclers |

| | | | |
|---------------------------|-----------|----------------------------|---|
| Used Oil | <200Lt/Yr | HDPE drums in covered shed | Given to re-cycler authorized by MPPCB/MoEF |
| Spent Resin from DM Plant | <50Kg/Yr | HDPE drums in covered shed | Given to re-cycler authorized by MPPCB/MoEF |

As per OM dated 16th June, 2021, PP has submitted self-certification in the form of affidavit declaring that the proposed capacity of 60 KLPD will be for manufacturing of fuel ethanol only.

During the deliberations EAC directed PP to submit an undertaking for the following commitments:

- Brick manufacturing unit will be installed within the plant premises for utilization of fly ash.
- OHS funds to be increased to Rs. 25 Lakhs.
- Industry shall construct rain water storage facility of capacity from which it can meet at least 90 days fresh water requirement.

Further, EAC directed that the proposed budget of Rs 1.50 crores towards CER shall be spent on improving infrastructure of existing schools or construction of a state of art green school within villages nearby. PP has agreed to the same and submitted an undertaking in compliance of the above.

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 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 OM dated 16th June, 2021, project falls in category B2 and the proposed additional capacity of 60 KLPD shall be only for fuel ethanol manufacturing as per self-certification in form of an 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). The project proponent will treat and reuse the treated water within the factory and no waste or treated water shall be discharged outside the premises.
- (iv). Total fresh water requirement shall be 390 KLPD which will be met ground water. Extraction of ground water shall not be done without obtaining prior permission of CGWA/concerned authority. No ground water recharge shall be permitted within the premises. Industry shall construct rain water storage facility of capacity from which it can meet at least 90 days fresh water requirement.
- (v). The spent wash shall be concentrated and dried to form DDGS to be used as cattle feed. PP shall install brick manufacturing plant within factory for utilization of fly ash.
- (vi). CO₂ generated from the process shall be bottled/made solid ice and utilized/sold to authorized vendors.
- (vii). PP shall allocate Rs. 25 Lakhs for OHS. 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.

- (viii). 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.
- (ix). The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Firefighting system shall be as per the norms.
- (x). Process organic residue and spent carbon, if any, shall be sent to Cement other suitable industries for its incinerations. ETP sludge, process inorganic & evaporation salt shall be disposed of to the TSDF.
- (xi). 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.
- (xii). The green belt of 5 m width shall be developed in nearly 33% of the total project area, mainly along the plant periphery. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department. Records of tree canopy shall be monitored through remote sensing map.
- (xiii). PP shall allocate Rs. 1.50 Crores for CER and it shall be spent on improving infrastructure of existing schools or construction of a state of art green school within villages nearby.
- (xiv). There shall be adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products as per CPCB norms and no parking to be allowed outside on public places.
- (xv). Storage of raw materials shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions.
- (xvi). Continuous online (24x7) monitoring system for stack emissions 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.
- (xvii). 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.

Agenda No. 41.17

Proposed 500 KLPD Grain based Ethanol Plant along with 15.0 MW Cogeneration Power Plant at Village Jorsha & Teghoria, Tehsil Mejhia, District Bankura, West Bengal by M/s. Ankoor Distilleries Private Limited - Consideration of Environment Clearance.

[IA/WB/IND2/228886/2021, IA- J-11011/93/2016-IA-II(I)]

The Project Proponent and the accredited Consultant M/s J.M. EnviroNet Pvt. Ltd., made a detailed presentation on the salient features of the project and informed that:

The proposal is for environmental clearance to the proposed 500 KLPD Grain based Ethanol Plant along with 15.0 MW Cogeneration Power Plant at Village Jorsha & Teghoria, Tehsil Mejhia, District Bankura, West Bengal by M/s. Ankoor Distilleries Private Limited.

All grain based distilleries producing ethanol, solely to be used for Ethanol Blended Petrol Programme of the Government of India are listed at S.N. 5(ga) of Schedule of Environmental Impact Assessment (EIA) Notification, 2006 amendment vide S.O 2339 dated 16th June 2021 under category 'B-2' and are appraised at Central Level by Expert Appraisal Committee (EAC).

The project proposal is exempted from obtaining ToR & conducting Public Hearing as per EIA notification, 2006 amendment vide S.O 2339 dated 16th June 2021. It was informed that no litigation is pending against the project.

The details of products and capacity are as under:

| Unit | Capacity | Product |
|---------------------------|-----------------|--|
| Grain Based Ethanol Plant | 500 KLPD | Product- Ethanol (Bio-fuel) By-product- DDGS &CO ₂ |
| Co-generation Power Plant | 15.0 MW | Power |

Total project area is 13.28 hectares (132800 m²) for proposed project. Industry will develop greenbelt in an area of 33% i.e. 4.38 ha (43800 m²) out of total area of the project.

The estimated project cost is Rs. 500 Crores. Total capital cost earmarked towards environmental pollution control measures is Rs. 30.0 Crores and the Recurring cost (operation and maintenance) will be about Rs. 3.0 Crores/ annum. Total Employment will be 300 persons (Permanent 200 & temporary 100) during operation phase. Industry proposes to allocate Rs. 2.0 Crores of total project cost towards Corporate Environment Responsibility.

There are no National Parks, , Wildlife Sanctuaries, Biosphere Reserves, Tiger/ Elephant Reserves, Wildlife Corridors etc. lies within 10 km radius. 2 Protected forests i.e, Gangajalghati PF (~8.0 km in East direction) & Biharinath Parbat PF (~8.5 km in West direction); Gaighata Jhor (~1.0 km in South direction), Damodar River (~4.0 km in NNE direction), Nonia Khal (~5.5 km in NNE direction), Chouphari Nadi (~6.0 km in SE direction), Bangarpur Nala (~7.5 km in WNW direction) are found within 10 km radius.

Total fresh water requirement will be 2685 KLD which will be sourced from Surface Water (Damodar River). Total input for first run for Ethanol plant will be 8420 KLPD. 5885 KLPD will be recycled and net fresh water requirement will be 2535 KLPD for proposed Ethanol plant and Co-generation Power Plant and 150 KLPD for Domestic use & greenbelt. Effluent of 2735 m³/day will be treated through state of art CPU/Effluent Treatment Plant (Aerobic, Anaerobic, Reverse Osmosis technology) of 3000 KLPD capacity. The plant will be based on Zero Liquid discharge system.

Power requirement for Ethanol plant will be 12.0 MW, which will be sourced from the 15.0 MW Co-generation Power Plant. Unit will be having D.G. Sets of 2 x 1500 KVA which will be used as standby during power failure. Stack height (8 m) will be provided as per CPCB norms. Proposed Boiler of 120 TPH capacity with ESP as Air Pollution Control Equipment will be installed with a stack height of 65 m for controlling the particulate emissions within the statutory limit of 50 mg/Nm³.

Details of process emissions generation and its management:

CO₂ (379 TPD) generated during the fermentation process will be collected and sold to authorized vendors.

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

- Solid waste from the Grain based operations generally comprises of fibres and proteins in the form of DDGS (233 TPD), which will be ideally used as Cattle, poultry & fish feed ingredients.
- Ash (125 TPD) from proposed boiler will be supplied to brick manufacturers.
- Used oil & grease (1.0 KL/Annum) generated from plant machinery/gear boxes as hazardous waste will be sold out to the CPCB authorized recyclers.

As per OM dated 16th June, 2021, PP has submitted self-certification in the form of affidavit declaring that the proposed capacity of 500 KLPD will be for manufacturing of fuel ethanol only.

During the deliberations EAC directed PP to submit an undertaking for the following commitments:

- Solar plant of at least 500 KW power will be installed within the plant premises.
- Brick manufacturing unit will be installed within the plant premises for utilization of fly ash.
- 15% of the total plant area will be reserved for parking
- CO₂ plant will be installed to capture CO₂ generated during fermentation process.
- Development of greenbelt to be completed along with commissioning of the project.
- OHS fund to be increased to Rs. 50 Lakhs per annum.
- Industry shall construct rain water storage facility of capacity from which it can meet at least 90 days fresh water requirement.

Further, EAC directed that the proposed budget to be spent on CER shall be increased to Rs 5.00 crores and it shall be spent on improving infrastructure of schools and for providing drinking water facilities within villages nearby. It was also suggested that the proposed activities under CER shall be completed before commencement of operation of the plant. PP has submitted the desired information as sought above and EAC found it to be in order.

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 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 OM dated 16th June, 2021, project falls in category B2 and the proposed additional capacity of 500 KLPD shall be only for fuel ethanol manufacturing as per self-certification in form of an 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). The project proponent will treat and reuse the treated water within the factory and no waste or treated water shall be discharged outside the premises.
- (iv). Total fresh water requirement shall be 2685 KLPD which will be met Damodar River. Extraction of ground water shall not be done without obtaining prior permission of CGWA/concerned authority. No ground water recharge shall be permitted within the premises. Industry shall construct rain water storage facility of capacity from which it can meet at least 90 days fresh water requirement.
- (v). The spent wash shall be concentrated and dried to form DDGS to be used as cattle feed. Brick manufacturing unit will be installed within the plant premises for utilization of fly ash.
- (vi). CO₂ generated from the process shall be bottled/made solid ice and utilized/sold to authorized vendors.

- (vii). PP shall allocate Rs. 50 Lakhs for OHS per annum. 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.
- (viii). 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.
- (ix). The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Firefighting system shall be as per the norms.
- (x). Process organic residue and spent carbon, if any, shall be sent to Cement other suitable industries for its incinerations. ETP sludge, process inorganic & evaporation salt shall be disposed of to the TSDF.
- (xi). 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.
- (xii). The green belt of 5 m width shall be developed in nearly 33% of the total project area, mainly along the plant periphery. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department. Records of tree canopy shall be monitored through remote sensing map. Development of greenbelt shall be completed along with commissioning of the project.
- (xiii). PP shall allocate Rs. 5.0 Crores for CER and it shall be spent on improving infrastructure of schools and for providing drinking water facilities within villages nearby. All the proposed activities under CER shall be completed before commencement of operation of the plant.
- (xiv). There shall be 15% space inside the plant premises earmarked for parking of vehicles for raw materials and finished products as per CPCB norms and no parking to be allowed outside on public places.
- (xv). Storage of raw materials shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions.
- (xvi). Continuous online (24x7) monitoring system for stack emissions 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.

- (xvii). 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.

Agenda No. 41.18

100 KLPD Grain Based Ethanol Plant along with 3.2 MW Co-generation Power Plant at Plot No. 10, Industrial Area, Nawanagar (Buxar), Bihar by M/s Bharat Plus Ethanol Pvt. Ltd.- Environmental Clearance.

[IA/BR/IND2/229097/2021, IA- J-11011/359/2021-IA-II(I)]

The Project Proponent and the accredited Consultant M/s Grass Roots Research & Creation India (P) Ltd., made a detailed presentation on the salient features of the project and informed that:

The proposal is for environmental clearance for establishment of 100 KLPD Grain Based Ethanol Plant along with 3.2 MW Co-generation Power Plant at Plot No. 10, Industrial Area, Nawanagar (Buxar), Bihar by M/s Bharat Plus Ethanol Pvt. Ltd.

All grain based distilleries producing ethanol, solely to be used for Ethanol Blended Petrol Programme of the Government of India are listed at S.N. 5(ga) of Schedule of Environmental Impact Assessment (EIA) Notification, 2006 amendment vide S.O 2339 dated 16th June 2021 under category 'B-2' and are appraised at Central Level by Expert Appraisal Committee (EAC).

The project proposal is exempted from obtaining ToR & conducting Public Hearing as per EIA notification, 2006 amendment vide S.O 2339 dated 16th June 2021. It was informed that no litigation is pending against the project.

The details of products and capacity are as under:

| SL.No | Units | Proposed Capacity |
|--------------|----------------------------|-----------------------------------|
| 1 | Installed Capacity | Grain Base Distillery of 100 KLPD |
| 2 | Major Raw Material | Grain (primarily broken rice) |
| 3 | Final Product & By-Product | Ethanol (100 KLPD) |

| | | |
|---|--|--|
| | | DDGS- 47 TPD CO ₂ - 76 TPD |
| 2 | Co-Generation Power Plant (1 x 26 TPH-AFBC) | 3.2 MW |

Total land required for the project is 8.09 Ha for proposed project. Industry will develop greenbelt in an area of 33% of total project area i.e. 2.67 Ha out of total area of the project.

The estimated project cost is Rs 129.50 Crores. Total capital cost earmarked towards environmental pollution control measures is Rs 355.5 lakh and the Recurring cost (operation and maintenance) will be about Rs 60.5 lakh per annum. Total Employment will be 440 persons as direct & indirect due to the project. Industry proposes to allocate 1% of total project cost towards Corporate Environment Responsibility.

There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, and Wildlife Corridors etc. within 10 km distance from the project site. Kao River is at approx. 3.0 km towards South, Thora River is at approx. 4.8 km towards SW, Chher River is at approx. 9.0 km towards East.

Ambient air quality monitoring was carried out at Project Site during 01.04.2021 to 26.04.2021 and baseline data indicates the ranges of concentrations as: PM₁₀ (79.3 – 93.9 µg/m³), PM_{2.5} (42.3–54.3 µg/m³), SO₂(8.2–9.4 µg/m³) and NO₂ (15.5–19.8 µg/m³). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.03 µg/m³, 0.02 µg/m³, 2.19 µg/m³ and 0.53 µg/m³ with respect to PM₁₀, PM_{2.5}, So₂ and NO_x. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

One Time Total water requirement for the project will be 1495 KLD which will be further reduced through recycling & reuse of 1095 KLD. Total fresh water demand for distillery operation is 401 KLD @4KL of water/KL of Ethanol. Daily fresh water requirement including power plant of 3.2 MW is 571 KLD @5.7 KL/KL of ethanol production, which will be sourced from ground water augmented with rain water. The applications for permission of withdrawal of ground water has been submitted to CGWA vide application no 21-4/924/BR/IND/2021 dated 12.09.2021. Effluent of 439 KLD quantity will be treated through 530 KLPD ETP/CPU. The plant will be based on Zero Liquid discharge system.

During operation phase power requirement will be 1.75 MW /Day and will be fulfilled by 3.2 MW Co-generation power plant within the project site. Surplus power will be connected to State Grid. For emergency, 1 DG set of 500 KVA will be installed within the plant area. Project will have 26 TPH

AFBC boiler will be installed. ESP and bag filter with a stack of height of 60 m will be installed for controlling the particulate emissions within the statutory limit of 115 mg/nm³ for the proposed boilers. Regular monitoring will be done to ensure that ambient air quality standards to meet all the time. All the internal roads will be asphalted.

Details of process emissions generation and its management:

CO₂ generated during fermentation process will be collected, purified, liquefied and sold to vendors.

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

| Type of Waste | Quantity (TPA) | Storage | Utilization/ Disposal |
|--|----------------|----------------------------|--|
| DDGS – (by product) (Dried distillers’ grains with soluble) | 15,345 | Covered shed | Sold as Cattle Feed, Poultry & Fisheries |
| Ash from boiler | 13,068 | Silo | Sold to Bricks manufactures in nearby area |
| Waste papers/Boxes | 2.5 | Covered shed | Sold to recyclers |
| Used Oil | 1.0 KL | HDPE drums in covered shed | Used for oiling the machine in house and balance will be given to authorized re-cycler |
| Spent Resin from DM Plant | 0.6 KL | HDPE drums in covered shed | Given to authorized re-cycler |

As per OM dated 16th June, 2021, PP has submitted self-certification in the form of affidavit declaring that the proposed capacity of 100 KLPD will be for manufacturing of fuel ethanol only.

During the deliberations EAC directed PP to submit an undertaking for the following commitments:

- Brick manufacturing unit will be installed within the plant premises for utilization of fly ash.
- Industry shall construct rain water storage facility of capacity from which it can meet at least 90 days fresh water requirement.

Further, EAC directed that the proposed of Rs 1.295 Crores towards CER shall be spent on installing solar power within nearby villages. It was also suggested that the proposed activities under CER shall be completed within 2 years. PP agreed to the above conditions and submitted an undertaking in the compliance of the above.

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 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 OM dated 16th June, 2021, project falls in category B2 and the proposed additional capacity of 100 KLPD shall be only for fuel ethanol manufacturing as per self-certification in form of an 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). The project proponent will treat and reuse the treated water within the factory and no waste or treated water shall be discharged outside the premises.
- (iv). Total fresh water requirement shall be 401 KLPD which will be met ground water. Extraction of ground water shall not be done without obtaining prior permission of CGWA/concerned authority. No ground water recharge shall be permitted within the premises. Industry shall construct rain water storage facility of capacity from which it can meet at least 90 days fresh water requirement.
- (v). The spent wash shall be concentrated and dried to form DDGS to be used as cattle feed. PP shall install brick manufacturing plant within factory for utilization of fly ash.
- (vi). CO₂ generated from the process shall be bottled/made solid ice and utilized/sold to authorized vendors.
- (vii). 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.
- (viii). 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.
- (ix). The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Firefighting system shall be as per the norms.
- (x). Process organic residue and spent carbon, if any, shall be sent to Cement other suitable industries for its incinerations. ETP sludge, process inorganic & evaporation salt shall be disposed of to the TSDF.
- (xi). 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.

- (xii). The green belt of 5 m width shall be developed in nearly 33% of the total project area, mainly along the plant periphery. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department. Records of tree canopy shall be monitored through remote sensing map.
- (xiii). PP shall allocate Rs. 1.295 Crores for CER and it shall be spent on installing solar power within nearby villages. All the proposed activities under CER shall be completed within 2 years.
- (xiv). There shall be adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products as per CPCB norms and no parking to be allowed outside on public places.
- (xv). Storage of raw materials shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions.
- (xvi). Continuous online (24x7) monitoring system for stack emissions 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.
- (xvii). 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.

Agenda No. 41.19

Greenfield Project of 45.0 KLD Ethanol by Grain Based Distillery with Zero Liquid Discharge, to be used for Ethanol Blended Petrol Programme of the Government along with 1.5 MW Power Plant at Village- Manoharpali, P.O – Samleipadar, Tehsil – Bijepur, District Bargarh, Odisha by M/s Bargarh Bio-Fuels Development Foundation - Consideration of Environment Clearance.

[IA/OR/IND2/228328/2021, IA- J-11011/348/2021-IA-II(I)]

The Project Proponent and the accredited Consultant M/s Global Tech Enviro Experts Pvt. Ltd., made a detailed presentation on the salient features of the project and informed that:

The proposal is for environmental clearance for establishment of greenfield Project of 45.0 KLD Ethanol by Grain Based Distillery with Zero Liquid Discharge, to be used for Ethanol Blended Petrol Programme of the Government along with 1.5 MW Power Plant at Village- Manoharpali, P.O – Samleipadar, Tehsil – Bijepur, District Bargarh, Odisha by M/s Bargarh Bio-Fuels Development Foundation.

All grain based distilleries producing ethanol, solely to be used for Ethanol Blended Petrol Programme of the Government of India are listed at S.N. 5(ga) of Schedule of Environmental Impact Assessment (EIA) Notification, 2006 amendment vide S.O 2339 dated 16th June 2021 under category 'B-2' and are appraised at Central Level by Expert Appraisal Committee (EAC).

The project proposal is exempted from obtaining ToR & conducting Public Hearing as per EIA notification, 2006 amendment vide S.O 2339 dated 16th June 2021. It was informed that no litigation is pending against the project.

The details of products and capacity are as under:

| SL.No | Units | Proposed Capacity |
|-------|---|--|
| 1 | Installed Capacity | Grain Base Distillery of 45.0 KLPD |
| 2 | Major Raw Material | Grains, Enzyme, Sodium Hydroxide, Antifoam Agent, Urea, Dry Yeast, Rice Hush |
| 3 | Final Product & By-Product | Ethanol (45.0 KLPD) DDGS- 25 TPD CO ₂ - 40 TPD |
| 4 | Co-Generation Power Plant (1 x 26 TPH-AFBC) | 1.5 MW |

Total land required for the project is 6.0 Ha for proposed project. Industry will develop greenbelt in an area of 33% of total project area i.e. 1.99 Ha out of total area of the project.

The estimated project cost is Rs 17 Crores. Total capital cost earmarked towards environmental pollution control measures is Rs 241.5 lakh and the Recurring cost (operation and maintenance) will be about Rs 51.5 lakh per annum. Total Employment will be 88 persons as direct & indirect due to

the project. Industry proposes to allocate Rs. 35 Lakhs towards Corporate Environment Responsibility.

There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, and Wildlife Corridors etc. within 10 km distance from the project site. Uttali River is at approx. 10.5 km towards West, Rani River is at approx. 1.2 km towards ENE.

Ambient air quality monitoring was carried out at Project Site during March to May 2021 and baseline data indicates the ranges of concentrations as: PM₁₀ (57.1 – 68.3 µg/m³), PM_{2.5} (26.8 – 30.9 µg/m³), SO₂(6.4–7.4 µg/m³) and NO₂ (17.9–20.8 µg/m³). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 1.32 µg/m³, 1.32 µg/m³, 0.063 µg/m³ with respect to PM₁₀, PM_{2.5}, SO₂. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

One Time Total Water Requirement will be 673 KLD which will be sourced from Rain water. Daily Fresh Water Requirement for distillation will be 180 KLD (4 KL of fresh water/KL production of Ethanol) & Daily Total fresh water requirement including power plant will be 265 KLD. Effluent of 198 KLD quantity will be treated through 250 KLPD ETP/CPU. The plant will be based on Zero Liquid discharge system.

Total power requirement will be 1250.0 KWH which will be met from in house co-generation power plant of 1.5 MW using rice husk as fuel. 2 DG sets of total capacity 1000 kVA (2 x 500 KVA) will be installed for emergency backup supply to meet the contingencies of power cut and power failure. Project will have 15 TPH AFBC boiler will be installed. ESP and bag filter with a stack of height of 30 m will be installed for controlling the particulate emissions within the statutory limit of 115 mg/nm³ for the proposed boilers. Regular monitoring will be done to ensure that ambient air quality standards to meet all the time. All the internal roads will be asphalted.

Details of process emissions generation and its management:

CO₂ generated during fermentation process will be collected, purified, liquefied and sold to vendors.

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

| Type of Waste | Quantity (TPD) | Treatment | Utilization/ Disposal |
|----------------------|-----------------------|------------------|------------------------------|
| Fly Ash | 12.6 | Storage | Brick manufacturing |

| | | | |
|---------------|----|---------|--------------------------------------|
| DDGS/Wet cake | 29 | Storage | Will be sold as cattle/ fish feed |
|---------------|----|---------|--------------------------------------|

As per OM dated 16th June, 2021, PP has submitted self-certification in the form of affidavit declaring that the proposed capacity of 45 KLPD will be for manufacturing of fuel ethanol only.

After detailed deliberations, EAC directed that the proposed budget of Rs. 35.00 Lakhs towards CER shall be spent on installing solar power within nearby villages. PP obliged to it and submitted an undertaking in the compliance of the above.

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 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 OM dated 16th June, 2021, project falls in category B2 and the proposed additional capacity of 45 KLPD shall be only for fuel ethanol manufacturing as per self-certification in form of an 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). The project proponent will treat and reuse the treated water within the factory and no waste or treated water shall be discharged outside the premises.
- (iv). Total fresh water requirement shall be 265 KLPD which will be sourced from rain water. Extraction of ground water shall not be done without obtaining prior permission of CGWA/concerned authority.
- (v). Effluent shall be treated through ETP/CPU. The spent wash shall be concentrated and dried to form DDGS to be used as cattle feed.
- (vi). CO₂ generated from the process shall be bottled/made solid ice and utilized/sold to authorized vendors.
- (vii). 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.
- (viii). 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.
- (ix). The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Firefighting system shall be as per the norms.
- (x). Process organic residue and spent carbon, if any, shall be sent to Cement other suitable industries for its incinerations. ETP sludge, process inorganic & evaporation salt shall be disposed of to the TSDF.
- (xi). 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.

- (xii). The green belt of 5 m width shall be developed in nearly 33% of the total project area, mainly along the plant periphery. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department. Records of tree canopy shall be monitored through remote sensing map.
- (xiii). PP shall allocate 35.00 Lakhs towards CER shall be spent on installing solar power within nearby villages.
- (xiv). There shall be adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products as per CPCB norms and no parking to be allowed outside on public places.
- (xv). Storage of raw materials shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions.
- (xvi). Continuous online (24x7) monitoring system for stack emissions 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.
- (xvii). 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.

30th September, 2021 (Thursday)

Agenda No. 41.20

60 KLPD Grain Based Ethanol Plant along with 2.0 MW Co-generation Power Plant at Khasra No. 406/410/411, Block Kudra, Village Daindh, District Kaimur, Bihar by M/S ESE ENERGY PRIVATE LIMITED- Consideration of Environment Clearance.

[IA/BR/IND2/228207/2021, IA- J-11011/345/2021-IA-II(I)]

PP intimated to Ministry that they can't present the case due to non-availability of conversion of land use documents and requested to defer the proposal. It was informed to the committee.

Accordingly, the proposal was deferred for the needful.

Agenda No. 41.21

Proposed Distillery, Sugar and Co-Gen Unit at Sy. No. 40/1, 40/2, 40/3, 40/4, 40/5, 40/6, 41/ 41/3, 41/4, 41/5, 41/6, 42, 47(P), 50/1(P), 41/1, 47/2, 49/1, 49/2, 53/5a/1, 62/2 of Chatnahalli Village, District Haveri, Karnataka by M/s GM SUGARS AND ENERGY LTD- Consideration of Environment Clearance.

[IA/KA/IND2/200952/2017, IA- J-11011/77/2017-IA-II (I)]

The Project Proponent and the accredited consultant M/s. Ultra-tech made a detailed presentation on the salient features of the project and informed that:

The proposal is for environmental clearance to the project Proposed Distillery, Sugar and Co-Gen Unit at Sy. No. 40/1, 40/2, 40/3, 40/4, 40/5, 40/6, 41/ 41/3, 41/4, 41/5, 41/6, 42, 47(P), 50/1(P), 41/1, 47/2, 49/1, 49/2, 53/5a/1, 62/2 of Chatnahalli Village, District Haveri, Karnataka by M/s GM SUGARS AND ENERGY LTD.

As per the provisions of "EIA Notification No. S.O. 1533 (E)" dated 14.09.2006; as amended vide Notification No. "S.O. 1960 (E)" dated 13.06.2019; the proposed expansion of Sugar Factory is listed at activity 5(j) under 'Category B' while Molasses based Distillery activity at 5(g) under Category 'A' respectively. As the Sugar Factory & Distillery projects are located in same premises as an integrated project complex, the entire proposal of expansion of Sugar Factory & Distillery is being appraised at Center Level by EAC of MoEFCC. No litigation is pending against the proposal.

The project proposal was considered by the Expert Appraisal Committee (Industry-2) in its 22nd meeting held during 17th – 18th April 2017 and recommended Terms of References (ToRs) for the Project. Subsequently, ToR has been issued by Ministry vide letter No. J-11011/77/2017-IA-II (I) dated 07th July 2017. Public Hearing for the proposed project has been conducted by the Karnataka Pollution Control Board on 23rd May, 2018 presided by Deputy Commissioner, Haveri district. The main issues raised during the public hearing are related to employment to local villagers, survey of surrounding forest area, Waste water management, electricity to the local people and rate fixation of sugarcane.

The details of products and capacity are as under:

| S. No | Product Details | Existing Quantity | Proposed Quantity | Total Quantity |
|-------|-----------------|-------------------|-------------------|----------------|
| 1 | Sugar | 0 | 10000 TCD | 10000 TCD |
| 2 | Distillery | 0 | 120 KLPD | 120 KLPD |
| 3 | Co-Gen | 0 | 50 MW | 50 MW |
| Total | | - | - | - |

The total area for the proposed distillery project is 9,44,637.46 m². Industry will develop greenbelt in an area of 33% i.e. 3,11,730.36 m² out of total area of the project.

The estimated project cost is Rs 376 Crores. Total capital cost earmarked towards environmental pollution control measures is Rs 306 lakhs and the Recurring cost (operation and maintenance) will be about Rs 87 lakhs per annum. Total Employment will be 494 persons as direct & 5000 persons indirect. Industry proposes to allocate Rs 115 Lakhs per annum for 10 years @ 2.5 % towards Corporate Environment Responsibility.

There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site. River/ water body Tungabadra is flowing at a distance of 1.36 km in East direction.

Ambient air quality monitoring was carried out at 9 locations during Oct to Dec 2017 and the baseline data indicates the ranges of concentrations as: PM10 (51.20-46.80 µg/m³), PM2.5 (28.4-23.8 µg/m³), SO₂ (10.7-8.10 µg/m³) and NO₂ (14.5-11.1 µg/m³). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 12.0 µg/m³, 5.29 µg/m³ and 10.61 µg/m³ with respect to PM10, Sox and NO_x. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS). EAC noted that submitted baseline data (Oct to Dec 2017) is older than 3 years. However, EAC has not insisted for the latest data.

Total water requirement is 4388 m³/day of which fresh water requirement of 2882m³/day will be met from Tungabadra River. Effluent of 1480 quantity will be treated through ETP. The plant will be based on Zero Liquid discharge system.

Total power requirement for Ethanol plant will be 17625 kVA and will be met from Co-gen unit. Unit has 120 x 2 TPH + 1 x 55 TPH Bagasse fired boiler. Multi cyclone separator/ bag filter with a stack of height of 30 m

will be installed for controlling the particulate emissions within the statutory limit of 115 mg/Nm³ for the proposed boilers.

Details of process emissions generation and its management:

Air Pollution Control

- Adequate stack height will be provided for better dispersion of the air pollutants;
- Bag filter will be installed to control the particulate matter emission
- Ambient air quality and stack emission would be regularly monitored and effective control exercised, so that the stack emission load limits would be met at all the time.
- Green belt will be developed which will help in attenuating the pollutants emitted by the plant.
- Adequate measures for control of fugitive dust emissions will be taken.
- All the roads will be asphalted.
- CO₂ generated from the process will be bottled/made solid ice and sold to authorized vendors.

Waste Water Treatment

- Fresh water requirement of the project will be met by jack well near Tungabhadra river.
- The proposed project would be based on "Zero Liquid Discharge (ZLD)".
- MEE system will be provided.
- The sewage generated from the sanitary blocks will be treated in STP and used for irrigation.
- Rainwater harvesting will be done and the water will be discharge in ground water.
- A duly lined storage lagoon of 7 days capacity shall be provided.
- Treatment of Effluent
- Spent Lees from Distillation column and process condensate will be recycled.
- Spent Wash will be concentrated in multi stage multi effect evaporator and burned in insulator.
- Waste water will be treated in ETP. Treated Water will be used for greenbelt development and process

Noise Management

- Green belt development (plantation of dense trees across the boundary) will help in reducing noise levels in the plant as a result of attenuation of noise generated due to plant operations, and transportation.
- Personal protective equipments like ear plugs and ear muffs will be provided to employees working in the noise prone areas.

- Time to time oiling and servicing and O and M of machineries will be done.
- Acoustic enclosure for Turbine and D.G. sets would be used.

Solid Waste Management

- Spent wash will be evaporated in incinerator.
- Ash from the Boiler will be sold to brick manufactures.

Odour Management

- The remedial measures will be taken such as better house-keeping by regular steaming of all fermentation equipments.
- Temperature will be kept under control during fermentation to avoid inactivation/ killing of yeast.

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

| Source | Name | Quantity In MT per day | Mode of disposal |
|---------------------------------------|-------------|---------------------------------------|---|
| Cane crushing season | | | |
| Mill House | Bagasse | 3200 | Shall be used as boiler fuel |
| Process House | Press mud | 400 | Shall be given to farmers. |
| | Molasses | 400 | Part of it shall be used in house & remaining shall be sold to other distilleries |
| Boiler house (cogen plant) | Ash | 24 | Shall be given to farmers. |
| Effluent treatment plant | Sludge | 3 | Used as manure within premises |
| Distillery Inceneration Boiler | Fly ash | 219.48 | Used as manure |

After detailed deliberations EAC sought the following details were sought from PP:

- No form of bio composting shall be done in the industry.

- PP shall submit revised water balance @3-3.5 kL fresh water used/ kL alcohol produced. Further PP shall meet 20% of the fresh water requirement from rain water harvesting.
- Brick manufacturing unit will be installed within the plant premises for utilization of fly ash.
- Installation of solar power plant of 500 kW capacity within factory.
- Development of greenbelt to be completed along with commissioning of the project.
- PP shall allocate Rs. 6.00 crores towards CER and it shall be spent on villages nearby with the breakup as follows:
 - Rs 2.00 crore – Improving infrastructure in schools
 - Rs 2.00 crore – Providing drinking water facilities
 - Rs. 1.00 crore – Improving infrastructure in hospitals
 - Rs. 1.00 crore- Installation of solar power

It was also suggested that the proposed activities under CER shall be completed before commencement of operation of the plant.

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

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

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

- (i). The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented.
- (ii). The project proponent will treat and reuse the treated water within the integrated industry and no waste or treated water shall be discharged outside the premises.
- (iii). Total freshwater requirement will be 2882 KLPD which will be sourced from Tungabhadra River. Prior permission shall be obtained from the concerned regulatory authority/CGWA in this regard, and renewed from time to time. No ground water recharge shall be permitted within the premises. PP shall meet 20% of the fresh water requirement from rain water harvested.
- (iv). Effluent shall be treated through ETP and no form of bio composting shall be done in the industry. Brick manufacturing unit will be installed within the plant premises for utilization of fly ash.
- (v). CO₂ generated from the process shall be bottled/made solid ice and utilized/sold to authorized vendors.
- (vi). 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.
- (vii). 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.
- (viii). The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Firefighting system shall be as per the norms.
- (ix). Process organic residue and spent carbon, if any, shall be sent to Cement other suitable industries for its incinerations. ETP sludge, process inorganic & evaporation salt shall be disposed of to the TSDF.
- (x). 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.

- (xi). The green belt of at least 5-10 m width shall be developed in nearly 33% of the total project area, mainly along the plant periphery. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department. Records of tree canopy shall be monitored through remote sensing map.
- (xii). PP shall allocate Rs. 6.00 crores towards CER and it shall be spent on villages nearby with the breakup as follows:
- Rs 2.00 crore – Improving infrastructure in schools
 - Rs 2.00 crore – Providing drinking water facilities
 - Rs.1.00 crore – Improving infrastructure in hospitals
 - Rs. 1.00 crore- Installation of solar power
- All the proposed activities under CER shall be completed before commencement of operation of the plant.
- (xiii). There shall be adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products as per CPCB norms and no parking to be allowed outside on public places.
- (xiv). Storage of raw materials shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions.
- (xv). Continuous online (24x7) monitoring system for stack emissions 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.
- (xvi). 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.

Agenda No. 41.22

Expansion of Grain based Distillery (120 to 300 KLPD) & Co-generation Power Plant (2.5 to 9.0 MW) by installation of new 180 KLPD Grain based Ethanol Plant at Village Sangat Kalan, Tehsil

Bathinda, District Bathinda, Punjab by M/s. Om Sons Marketing Private Limited- Consideration of Environment Clearance.

[IA/PB/IND2/228335/2011, J-11011/274/2011-IA-II(I)]

The Project Proponent and the accredited Consultant M/s J.M. EnviroNet Pvt. Ltd., made a detailed presentation on the salient features of the project and informed that:

The proposal is for environmental clearance to the project proposed expansion of Grain based Distillery (120 to 300 KLPD) & Co-generation Power Plant (2.5 to 9.0 MW) by installation of new 180 KLPD Grain based Ethanol Plant at Village Sangat Kalan, Tehsil Bathinda, District Bathinda, Punjab by M/s. Om Sons Marketing Private Limited.

All grain based distilleries producing ethanol, solely to be used for Ethanol Blended Petrol Programme of the Government of India are listed at S.N. 5(ga) of Schedule of Environmental Impact Assessment (EIA) Notification, 2006 amendment vide S.O 2339 dated 16th June 2021 under category 'B-2' and are appraised at Central Level by Expert Appraisal Committee (EAC).

The project proposal is exempted from obtaining ToR & conducting Public Hearing as per EIA notification, 2006 amendment vide S.O 2339 dated 16th June 2021. It was informed that no litigation is pending against the project.

The details of products and capacity are as under:

| Units | | Existing installed Capacity | Additional Capacity | Total Capacity after Proposed Expansion | Remark |
|---------------------------|------------|---|----------------------------|--|---|
| Grain based Distillery | Capacity | 120 KLPD | 180 KLPD | 300 KLPD | Additional increased 180 KLPD capacity will be Ethanol only |
| | Product | Ethanol / Rectified Spirit/ Extra Neutral Alcohol | (Ethanol Only) | | |
| | By Product | DDGS and CO2 | DDGS and CO2 | | |
| Co-generation Power Plant | | 2.5 MW | 6.5 MW | 9.0 MW | - |

| | | | | |
|------------------------|----------------------|-----|----------------------|---|
| IMFL/CL Bottling Plant | 20,000 cases per day | Nil | 20,000 cases per day | - |
|------------------------|----------------------|-----|----------------------|---|

Existing land area is 10.25 ha (25.34 acres) (102500 m²), No additional land is required for the expansion, as the same will be done within the existing plant premises. Industry has already developed greenbelt in an area of 33% i.e. 3.40 ha (34000 m²) out of total area of the project.

The estimated expansion project cost is Rs. 200 Crores. Total capital cost earmarked towards environmental pollution control measures is Rs. 11.6 Crores and the Recurring cost (operation and maintenance) will be about Rs. 3.63 Crores / annum. Total Employment will be 400 persons during operational phase after expansion. Industry proposes to allocate Rs. 51.35 Lakhs of total project cost towards Corporate Environment Responsibility.

There are No National Parks, Reserved Forests (RF) / Protected Forests (PF), Wildlife Sanctuaries, Biosphere Reserves, Tiger/ Elephant Reserves, Wildlife Corridors etc. within 10 km radius. Lower Lissara Nala (0.1 km in SE direction) Pakka Distributary (1.5 km in South direction), Kotla Branch-Sirhind Canal (4.5 km in SSE direction), Ragghuwali Distributary (6.0 km in SE direction), Bathinda Distributary (7.5 km in NNW direction), Bangi Distributary (9.0 km in South direction) are the water bodies available within 10 km radius.

Existing fresh water requirement is 950 KLPD and the additional fresh water requirement for expansion will be 970 KLPD. Hence, the total fresh water requirement after expansion will be 1920 KLPD which will be sourced from canal water. Effluent (MEE Condensate, Fermentation Cleaning & others) of existing (685 m³/day) & Additional (1128 m³/day) will be treated through state of art CPU of 2000 KLPD capacity after expansion. The plant will be based on Zero Liquid discharge system.

The power requirement for the existing plant is 2.5 MW. Additional power requirement for expansion project will be 4.0 MW. Total requirement after expansion will be 6.5 MW which will be sourced from 9.0 MW Co-Generation Power Plant. 1 x 1000 KVA, 1 x 500 KVA, 1 x 250 KVA DG sets are already present and additional 2 x 1500 KVA DG sets are proposed for emergency backup. Stack height (9 m) will be provided as per CPCB norms. Existing power and steam requirement of the plant is being met by 27 TPH rice husk/biomass (paddy straw & cotton straw) fired boiler having Bag filter as air pollution control device along with a 2.5 MW turbine. As a part of expansion, the company is proposing a new 65 TPH rice husk/biomass (paddy straw & cotton straw) fired boiler with 9.0 MW turbine. After expansion, the existing 27 TPH boiler and 2.5 MW turbine will be kept at standby and will be used only during emergency. Hence, Power and steam requirement for the plant will be met by 65 TPH boiler having adequate stack height of 62 m and ESP as air pollution control

device along with 9.0 MW turbine for controlling the particulate emissions within the statutory limit of 50 mg/Nm³.

Details of process emissions generation and its management:

CO₂ generated during the fermentation process is being/will be collected and sold to authorized vendors.

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

- Solid waste from the Grain based operations generally comprises of fibres and proteins in the form of DDGS, which will be ideally used as Cattle poultry & fish feed ingredients.
- Ash from the boiler is being/will be supplied to farmers/brick manufacturers.
- Used oil & grease generated from plant machinery/gear boxes as hazardous waste is being/ will be sold out to the CPCB authorized recyclers

Certified Compliance report of Existing EC obtained from Integrated Regional Office, MoEFCC, Chandigarh vide F. No: 5-436/2013-RO (NZ)/539-540 dated 31st August, 2021 wherein 13 non compliances/partial were compliances mentioned. ATR has been submitted to IRO, Chandigarh vide letter dated 18.08.2021.

As per OM dated 16th June, 2021, PP has submitted self-certification in the form of affidavit declaring that the proposed expansion of 180 KLPD will be for manufacturing of fuel ethanol only.

After deliberations EAC sought the following commitments from PP:

- Audiometry test to be conducted on yearly basis on workers exposed to high noise levels.
- At least 15% of the total plant area will be reserved for parking.
- Brick manufacturing unit will be installed within the plant premises for utilization of fly ash.
- Company will store rain water in storage tanks and reuse this water in process and plant activities.
- Electro-Static Precipitator (ESP) with Stack of adequate height will be installed with the proposed boiler.
- Solar plant of at least 500 KW power will be installed within the plant premises.
- Fund for occupational health and safety will be increased to Rs. 50 Lakhs per annum.
- Company will be completely based on Zero Effluent Discharge.
- Bio feed/biofuel will be used as fuel in the boiler.

- CO2 plant will be installed to capture CO2 generated during fermentation process.
- Fresh water requirement for the proposed ethanol plant to be reduced by 20% by storing rainwater and then reusing in plant. The water requirement submitted by the company which is being sourced from canal has to be reduced by 20% by storing rainwater and by reusing and recycling more and more rainwater. For Ethanol production fresh water requirement should be less than 3 kl/kl.
- Proposed funds towards CER shall be increased to Rs. 2.00 crores and it shall be spent on installation of solar power and providing drinking water facilities to nearby villagers under the guidance of District Magistrate and other local bodies. All the activities to be completed before commissioning of the project.

PP has submitted the desired information as sought above and EAC found it in order. Accordingly, the reduced fresh water requirement shall be 1730 KLPD.

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 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 OM dated 16th June, 2021, project falls in category B2 and the proposed additional capacity of 180 KLPD shall be only for fuel ethanol manufacturing as per self-certification in form of an 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). The project proponent will treat and reuse the treated water within the factory and no waste or treated water shall be discharged outside the premises.
- (iv). Total fresh water requirement shall be 1730 KLPD which will be met from canal water. Prior permission shall be obtained from the concerned regulatory authority/CGWA in this regard, and renewed from time to time. No ground water recharge shall be permitted within the premises.
- (v). The spent wash shall be concentrated and dried to form DDGS to be used as cattle feed. Brick manufacturing unit will be installed within the plant premises for utilization of fly ash.
- (vi). CO₂ generated from the process shall be bottled/made solid ice and utilized/sold to authorized vendors.
- (vii). PP shall allocate Rs. 50 Lakhs for OHS per annum. 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.
- (viii). 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.
- (ix). The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Firefighting system shall be as per the norms.

- (x). Process organic residue and spent carbon, if any, shall be sent to Cement other suitable industries for its incinerations. ETP sludge, process inorganic & evaporation salt shall be disposed of to the TSDF.
- (xi). 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.
- (xii). The green belt of 5 m width shall be developed in nearly 33% of the total project area, mainly along the plant periphery. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department. Records of tree canopy shall be monitored through remote sensing map.
- (xiii). PP shall allocate Rs. 2.00 Crores towards CER and it shall be spent on installation of solar power and providing drinking water facilities to nearby villagers under the guidance of District Magistrate and other local bodies. All the proposed activities under CER shall be completed before commencement of operation of the plant.
- (xiv). There shall be at least 15% inside the plant premises earmarked for parking of vehicles for raw materials and finished products as per CPCB norms and no parking to be allowed outside on public places.
- (xv). Storage of raw materials shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions.
- (xvi). Continuous online (24x7) monitoring system for stack emissions 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.
- (xvii). 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.

Agenda No. 41.23

Establishment of 105 KLPD Multi-Feed Distillery Based on Molasses (B & C)/ Cane Juice/ Grains by Kailasbapu Agro Industries Producer Company Ltd. (KAIPCL), located at Gat No. 94/2, Mandurne, Tal.: Chalisgaon, Dist.: Jalgaon, Maharashtra - Consideration of Environment Clearance.

[IA/MH/IND2/194387/2021, IA-J-11011/28/2021-IA-II(I)]

The Project Proponent and the accredited consultant M/s. Equinox Environments (I) Pvt. Ltd made a detailed presentation on the salient features of the project and informed that:

The proposal is for environmental clearance to the project establishment of 105 KLPD Multi-Feed Distillery Based on Molasses (B & C)/ Cane Juice/ Grains located at Gat No. 94/2, Mandurne, Chalisgaon taluk, Jalgaon district, Maharashtra by M/s Kailasbapu Agro Industries Producer Company Ltd. (KAIPCL)

All Molasses based distilleries >100 KLPD & Non-Molasses based distilleries >200 KLD are listed at S.N. 5(g) of Schedule of Environment Impact Assessment (EIA) Notification dated 14.9.2006 and as amended on 13.6.2019 under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC). It was informed that no litigation is pending against the proposal.

Standard ToR has been issued by Ministry of Environment, Forests & Climate Change vide letter IA-J-11011/28/2021-IA-II(I) dated 23rd January, 2021. Public hearing for proposed project was conducted on 18.05.2021 through Video Conferencing at Collector Office Jalgaon presided by District Magistrate, Jalgaon. Prior public notice has been published on 15.04.2021 for information and citizens were requested to participate in the public hearing through their mobile phone (By installing Zoom app) or computer (by visiting the web site <https://zoom.us/join>) by using given meeting ID and password. The main issues raised mainly w.r.t ash & effluent generation & its management, employment generation, Benefits to farmers and villagers, etc.

The details of products and capacity are as under:

| Industrial Unit | Description | Quantity |
|--------------------------------------|--|-----------------|
| Distillery (Proposed 105 KLPD) | Product | |
| | Rectified Spirit/ Ethanol/ ENA | 3,150 KL/M |
| | By-product | |
| | Carbon Di-oxide (CO ₂) Gas | 2,610 MT/M |
| | Fusel Oil (0.2%) | 6 KL/M |
| | Spentwash Dry Powder | 1950 MT/M |

Total plot land area is 63,263 M². Proposed Distillery Built- up is 18,424 M². Industry will develop greenbelt in an area of 33% i.e. 20,877 M² out of total plot area of the project.

The estimated proposed project cost is Rs. 108 Crores. Total capital cost earmarked towards environmental pollution control measures under distillery is Rs. 25.70 Crores and the Recurring cost (operation and maintenance) will be about Rs. 1.74 Crores per annum. Total Employment under proposed project would be 142 persons as direct as well as indirect after establishment of projects. Industry proposes to allocate Rs. 2 Crores towards Corporate Environmental Responsibility.

There are no national parks, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 Km Study Area. River Girna is flowing at a distance of 1.2 Km at South, River Manyad at 1.7 Km at South-East.

Ambient air quality monitoring was carried out at 8 locations during October 2020 – December 2020 and submitted baseline data indicates that ranges of concentrations of PM₁₀ (47.2 – 60.2 µg/m³), PM_{2.5} (11.4 – 22 µg/m³), SO₂ (9.1 – 17.7 µg/m³) and NO_x (11.3 – 23.7 µg/m³) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the establishment project would be 0.11 µg/m³ PM₁₀(towards West side), 0.028 µg/m³PM_{2.5}(towards West side), 0.697 SO₂ µg/m³ (towards West side) and 0.42 µg/m³NO_x (towards West side). The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

Total water requirement for Distillery project will be 1198 CMD. Out of which,109 CMD will fresh water from Girna Dam while 1008 CMD will be CPU treated effluent and 81 CMD will be harvested rainwater & STP treated water. The effluent generated from 105 KLPD distillery would be in the form of raw spentwash to the tune of 840 M³/Day. Here, raw spentwash shall be concentration in Multiple (Five) Effect Evaporator (MEE). Concentrated spentwash to the tune of 183 M³/Day (1.7 KL/KL of alcohol against norm of 8 KL/KL of alcohol) shall be dried in ATFD to form powder. The DDGS generated from 105 KLPD grain distillery is to the tune of 193 MT/D & same is used as Cattle feed.

Power requirement for proposed distillery will be 2 MW will be procured from boiler turbine. One DG set of 500 KVA capacity will be installed in proposed distillery as standby during power failure. Stack of height 7 M ARL is provided as per CPCB norms to the DG sets. New boiler will be installed under proposed distillery unit, since steam required will be taken from proposed 30 TPH boiler. ESP is provided with a stack of height of 50 M resp. for controlling the particulate emissions within the statutory limit of 115 mg/Nm³.

Details of process emissions generation and its management:

The CO₂ generation shall take place in fermenters of the distillery. CO₂ to the tune of 87 MT/Day shall be released from 105 KLPD distillery plant. CO₂ shall be bottled and supplied to manufacturers of beverages.

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

Details of Solid waste generated & its management

| No. | Unit | Waste Type | Quantity (MT/M) | Disposal |
|-----|------------|--------------|-----------------|------------------------------|
| 1. | Distillery | Yeast Sludge | 720 | Used as manure |
| | | CPU Sludge | 25 | |
| | | Boiler Ash | 240 | Brick/Cement Industry/Manure |

Details of Hazardous waste generated & its management

| No | Industrial Unit | Category | Quantity | Disposal |
|----|-----------------|------------------------------|---------------|--------------------------------------|
| 1 | Distillery Unit | Cat.5.1 : Spent Oil | 0.8 MT/Yr. | Forwarded to authorized re-processor |
| | | Cat. 33.3 : Cotton Waste | 0.3 MT/Yr. | |
| | | Cat. 33.1 : Empty Containers | 30 Nos. / Yr. | Forwarded to authorized re-seller |

During deliberations EAC suggested that proposed Rs. 2.0 crores allocated for CER shall be spent on providing drinking water facilities and installation of solar power in nearby villages. Further, EAC asked PP to submit conversion of land use for industrial purposes document.

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

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

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

- (i). The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented.
- (ii). The project proponent will treat and reuse the treated water within the integrated industry and no waste or treated water shall be discharged outside the premises.
- (iii). Total freshwater requirement will be 109 CMD will fresh water from Girna Dam. Prior permission shall be obtained from the concerned regulatory authority/CGWA in this regard, and renewed from time to time. No ground water recharge shall be permitted within the premises.
- (iv). During molasses based operation raw spent wash shall be concentrated in MEE and concentrated spent wash shall be dried in ATFD to form powder. During grain based operation spent wash shall be concentrated and dried to form DDGS to be used as cattle feed.
- (v). CO₂ generated from the process shall be bottled/made solid ice and utilized/sold to authorized vendors.
- (vi). 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.

- (vii). 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.
- (viii). The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Firefighting system shall be as per the norms.
- (ix). Process organic residue and spent carbon, if any, shall be sent to Cement other suitable industries for its incinerations. ETP sludge, process inorganic & evaporation salt shall be disposed of to the TSDF.
- (x). 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.
- (xi). The green belt of at least 5-10 m width shall be developed in nearly 33% of the total project area, mainly along the plant periphery. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department. Records of tree canopy shall be monitored through remote sensing map.
- (xii). PP shall allocate Rs. 2.00 Crores for CER and it shall be spent on shall be spent on providing drinking water facilities and installation of solar power in nearby villages.
- (xiii). There shall be adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products as per CPCB norms and no parking to be allowed outside on public places.
- (xiv). Storage of raw materials shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions.
- (xv). Continuous online (24x7) monitoring system for stack emissions 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.
- (xvi). 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.

Agenda No. 41.24

Proposal of Grain Base fuel ethanol unit of 200KLD, 6.0MW Co-generation power plant by product: 102-110 TPD of DDGS District Narsimhapur Madhya Pradesh by M/s MAHAKAUSHAL SUGAR AND POWER INDUSTRIES LTD- Consideration of Environment Clearance.

[IA/MP/IND2/228828/2021, IA- J-11011/356/2021-IA-II(I)]

PP has intimated to Ministry that they can't present the case due to personal reasons and requested to defer the proposal. It was informed to the committee.

Accordingly, the proposal was deferred for the needful.

Agenda No. 41.25

Proposed integrated project of 10000 TCD Sugar, 41 MW Co-generation power plant & 220 KLPD Distillery/ Ethanol Plant along with 8 MW incineration boiler based power generation Kalaburagi Karnataka by M/s K P R SUGAR AND APPARELS LIMITED- Consideration of Environment Clearance.

[IA/KA/IND2/190438/2020, IA- J-11011/333/2020-IA-II(I)]

EAC informed that the proposal shall be considered only after obtaining document from competent authority related with conversion of land use to industrial purpose.

Accordingly, the proposal was deferred for the needful.

Agenda No. 41.26

Proposed 200 KLPD Grain based Ethanol Plant along with 6.0 MW Cogeneration Power Plant at Village Chak Alia, Tehsil & District Gurdaspur (Punjab) by M/s. VRV Hospitality Private Limited- Consideration of Environment Clearance.

[IA/PB/IND2/229738/2021, J-11011/384/2021-IA-II(I)]

The Project Proponent and the accredited Consultant M/s J.M. EnviroNet Pvt. Ltd., made a detailed presentation on the salient features of the project and informed that:

The proposal is for environmental clearance to the project proposed 200 KLPD Grain based Ethanol Plant along with 6.0 MW Cogeneration Power Plant at Village Chak Alia, Tehsil & District Gurdaspur (Punjab) by M/s. VRV Hospitality Private Limited.

All grain based distilleries producing ethanol, solely to be used for Ethanol Blended Petrol Programme of the Government of India are listed at S.N. 5(ga) of Schedule of Environmental Impact Assessment (EIA) Notification, 2006 amendment vide S.O 2339 dated 16th June 2021 under category 'B-2' and are appraised at Central Level by Expert Appraisal Committee (EAC).

The project proposal is exempted from obtaining ToR & conducting Public Hearing as per EIA notification, 2006 amendment vide S.O 2339 dated 16th June 2021. It was informed that no litigation is pending against the project.

The details of products and capacity are as under:

| Unit | Capacity | Product |
|---------------------------|-----------------|--|
| Grain Based Ethanol Plant | 200 KLPD | Product- Ethanol (Bio-fuel) By-product- DDGS &CO ₂ |
| Co-generation Power Plant | 6.0 MW | Power |

Total project area is 7.50 hectares (75000 m²) for proposed project. Industry will develop greenbelt in an area of 33% i.e. 2.47 ha (24700 m²) out of total area of the project.

The estimated project cost is Rs. 220 Crores. Total capital cost earmarked towards environmental pollution control measures is Rs. 15.0 Crores and the Recurring cost (operation and maintenance) will be about Rs. 2.0 Crores / annum. Total Employment will be 120 persons (Permanent 80 & temporary 40) during operation phase. Industry proposes to allocate Rs. 1.0 Crores of total project towards Corporate Environment Responsibility.

There are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/ Elephant Reserves, Wildlife Corridors, Reserved Forest (RF)/ Protected Forest (PF) etc. lies within 10 km radius of the project site. Upper Bari Doab Canal (1.2 km in West direction), Chakki Khad (5.5 km in East direction), Beas River (5.5 km in SE direction), Nalua Nala (5.5 km in ENE), Khal Nala (5.5 km in NW direction), Naumuni Nala (7.2 km in NNW) & Minor Agricultural canal are present in 10 km radius.

Total fresh water requirement will be 1363 KLPD which will be sourced from Canal water. Total input for first run for Ethanol Plant will be 3664 KLPD. 2421 KLPD will be recycled and net fresh water requirement will be 1243 KLPD for proposed Ethanol Plant and 120 KLPD Others (Domestic use, Greenbelt etc.). Effluent of 925 m³/day will be treated through state of art CPU/ETP of 1200 KLPD capacity and recycled within process & for CT Makeup. The plant will be based on Zero Liquid discharge system.

Power requirement for Ethanol plant will be 5.52 MW, which will be sourced from the 6.0 MW Co-generation Power Plant. Unit will be having D.G. Sets of 2 x 1500 KVA which will be used as standby during power failure. Stack height (9 m) will be provided as per CPCB norms. Proposed Boiler of 55 TPH capacity with ESP as Air Pollution Control Equipment will be installed with a stack height of 56 m for controlling the particulate emissions within the statutory limit of 50 mg/Nm³.

Details of process emissions generation and its management:

CO₂ (152 TPD) generated during the fermentation process will be collected and sold to authorized vendors.

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

- Solid waste from the Grain based operations generally comprises of fibres and proteins in the form of DDGS (93 TPD), which will be ideally used as Cattle, poultry & fish feed ingredients.
- Ash (55 TPD) generated from boiler will be supplied to brick manufacturers.
- 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.

As per OM dated 16th June, 2021, PP has submitted self-certification in the form of affidavit declaring that the proposed expansion of 200 KLPD will be for manufacturing of fuel ethanol only.

After deliberations EAC sought the following commitments from PP:

- Proposed green belt shall be completed along with the commissioning of the project.
- At least 15% of the total plant area will be reserved for parking.
- Brick manufacturing unit will be installed within the plant premises for utilization of fly ash.
- Company will store rain water in storage tanks and reuse this water in process and plant activities.
- Electro-Static Precipitator (ESP) with Stack of adequate height will be installed with the proposed boiler.
- Solar plant of at least 500 KW power will be installed within the plant premises.

- Fund for occupational health and safety shall be increased to Rs. 50 Lakhs per annum.
- Company will be completely based on Zero Effluent Discharge.
- Bio feed/biofuel will be used as fuel in the boiler.
- CO2 plant will be installed to capture CO2 generated during fermentation process.
- Fresh water requirement for the proposed ethanol plant to be reduced by 20% by storing rainwater and then reusing in plant. The water requirement submitted by the company which is being sourced from canal has to be reduced by 20% by storing rainwater and by reusing and recycling more and more rainwater. For Ethanol production fresh water requirement should be less than 3 kl/kl.
- Proposed funds towards CER shall be increased to Rs. 2.50 crores out of which Rs. 1.25 crore shall be spent on providing medical facilities in village hospitals and the rest Rs. 1.25 crore on installation of solar power and providing drinking water facilities to nearby villagers under the guidance of District Magistrate and other local bodies. All the activities to be completed before commissioning of the project.

PP has submitted the desired information as sought above and EAC found it to be in order. Accordingly, revised fresh water requirement has been reduced to 1090 KLPD.

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 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 OM dated 16th June, 2021, project falls in category B2 and the proposed capacity of 200 KLPD shall be only for fuel ethanol manufacturing as per self-certification in form of an 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). The project proponent will treat and reuse the treated water within the factory and no waste or treated water shall be discharged outside the premises.
- (iv). Total fresh water requirement shall be 1090 KLPD which will be met from canal water. Prior permission shall be obtained from the concerned regulatory authority/CGWA in this regard, and renewed from time to time. No ground water recharge shall be permitted within the premises.
- (v). The spent wash shall be concentrated and dried to form DDGS to be used as cattle feed. Brick manufacturing unit will be installed within the plant premises for utilization of fly ash.
- (vi). CO₂ generated from the process shall be bottled/made solid ice and utilized/sold to authorized vendors.
- (vii). PP shall allocate Rs. 50 Lakhs for OHS per annum. 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.

- (viii). 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.
- (ix). The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Firefighting system shall be as per the norms.
- (x). Process organic residue and spent carbon, if any, shall be sent to Cement other suitable industries for its incinerations. ETP sludge, process inorganic & evaporation salt shall be disposed of to the TSDF.
- (xi). 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.
- (xii). The green belt of 5 m width shall be developed in nearly 33% of the total project area, mainly along the plant periphery. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department. Records of tree canopy shall be monitored through remote sensing map.
- (xiii). PP shall allocate Rs. 2.50 Crores towards CER of which Rs. 1.25 crore shall be spent on providing medical facilities in village hospitals and the rest Rs. 1.25 crore on installation of solar power and providing drinking water facilities to nearby villagers under the guidance of District Magistrate and other local bodies. All the proposed activities under CER shall be completed before commencement of operation of the plant.
- (xiv). There shall be at least 15% inside the plant premises earmarked for parking of vehicles for raw materials and finished products as per CPCB norms and no parking to be allowed outside on public places.
- (xv). Storage of raw materials shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions.
- (xvi). Continuous online (24x7) monitoring system for stack emissions 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.
- (xvii). 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.

Agenda No. 41.27

Proposed 250 KLPD Grain based Ethanol Plant along with 6.0 MW Cogeneration Power Plant at Village Pratappur, Mouza- Kendula, Block Faridpur-Durgapur, District Paschim Bardhaman, West Bengal by M/s. Venky Power & Metals Private Limited - Consideration of Environment Clearance.

[IA/WB/IND2/229533/2021, J-11011/378/2021-IA-II(I)]

The Project Proponent and the accredited Consultant M/s J.M. EnviroNet Pvt. Ltd., made a detailed presentation on the salient features of the project and informed that:

The proposal is for environmental clearance to the project proposed 250 KLPD Grain based Ethanol Plant along with 6.0 MW Cogeneration Power Plant at Village Pratappur, Mouza- Kendula, Block Faridpur-Durgapur, District Paschim Bardhaman, West Bengal by M/s. Venky Power & Metals Private Limited.

All grain based distilleries producing ethanol, solely to be used for Ethanol Blended Petrol Programme of the Government of India are listed at S.N. 5(ga) of Schedule of Environmental Impact Assessment (EIA) Notification, 2006 amendment vide S.O 2339 dated 16th June 2021 under category 'B-2' and are appraised at Central Level by Expert Appraisal Committee (EAC).

The project proposal is exempted from obtaining ToR & conducting Public Hearing as per EIA notification, 2006 amendment vide S.O 2339 dated 16th June 2021. It was informed that no litigation is pending against the project.

The details of products and capacity are as under:

| Unit | Capacity | Product |
|---------------------------|-----------------|--|
| Grain Based Ethanol Plant | 250 KLPD | Product- Ethanol (Bio-fuel) By-product- DDGS &CO ₂ |
| Co-generation Power Plant | 6.0 MW | Power |

Total project area is 5.11 hectares (51100 m²) for proposed project. Industry will develop greenbelt in an area of 33% i.e. 1.68 ha (16800 m²) out of total area of the project.

The estimated project cost is Rs. 232 Crores. Total capital cost earmarked towards environmental pollution control measures is Rs. 15.0 Crores and the Recurring cost (operation and maintenance) will be about Rs. 2.0 Crores / annum. Total Employment will be 120 persons (Permanent 80 & temporary 40) during operation phase. Industry proposes to allocate Rs. 1.0 Crores of total project cost towards Corporate Environment Responsibility.

There are no No National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/ Elephant Reserves, Wildlife Corridors etc. lies within 10 km radius. 6 Ukhra Protected Forests (PF), 2 Unnamed Protected Forests (PF) & 3 Durgapur Protected Forest; Ajay River (~ 6.0 Km in ENE direction), Tumuni Nala (~ 3.0 Km in ENE direction), Babupur Nala (~ 8 Km in NNE direction), Kunur Nala (~0.5 km in WSW direction) are found within 10 km radius.

Total fresh water requirement will be 1340 KLPD which will be sourced from Ground water. Total input for first run for Ethanol Plant will be 4192 KLPD. 2907 KLPD will be recycled and net fresh water requirement will be 1285 KLPD for proposed Ethanol Plant & Co-generation Power Plant and 55 KLPD Domestic use. Effluent of 1123 m³/day will be treated through state of art CPU/ETP of 1500 KLPD capacity. The plant will be based on Zero Liquid discharge system.

Power requirement for Ethanol plant will be 6.0 MW, which will be sourced from the 6.0 MW Co-generation Power Plant. Unit will be having D.G. Sets of 2 x 1500 KVA which will be used as standby during power failure. Stack height (9 m) will be provided as per CPCB norms. Proposed Boiler of 55 TPH capacity with ESP as Air Pollution Control Equipment will be installed with a stack height of 56 m for controlling the particulate emissions within the statutory limit of 50 mg/Nm³.

Details of process emissions generation and its management:

CO₂ (189 TPD) generated during the fermentation process will be collected and sold to authorized vendors.

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

- Solid waste from the Grain based operations generally comprises of fibres and proteins in the form of DDGS (117 TPD) which will be ideally used as Cattle, poultry & fish feed ingredients.
- Ash (55 TPD) generated from boiler will be supplied to brick manufacturers.
- 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.

As per OM dated 16th June, 2021, PP has submitted self-certification in the form of affidavit declaring that the proposed expansion of 250 KLPD will be for manufacturing of fuel ethanol only.

After deliberations EAC sought the following commitments from PP:

- Proposes green belt shall be completed along with the commissioning of the project.
- At least 15% of the total plant area will be reserved for parking.
- Brick manufacturing unit will be installed within the plant premises for utilization of fly ash.
- Company will store rain water in storage tanks and reuse this water in process and plant activities.
- Electro-Static Precipitator (ESP) with Stack of adequate height will be installed with the proposed boiler.
- Solar plant of at least 500 KW power will be installed within the plant premises.
- Fund for occupational health and safety will be Rs. 50 Lakhs per annum.
- Company will be completely based on Zero Effluent Discharge.
- Bio feed/biofuel will be used as fuel in the boiler.
- CO₂ plant will be installed to capture CO₂ generated during fermentation process.
- Fresh water requirement for the proposed ethanol plant to be reduced by 20% by storing rainwater and then reusing in plant. The water requirement submitted by the company which is being sourced from canal has to be reduced by 20% by storing rainwater and by reusing and recycling more and more rainwater. For Ethanol production fresh water requirement should be less than 3 kl/kl.
- Proposed funds towards CER shall be increased to Rs. 2.32 Crores and it shall be spent on improving infrastructure of schools within villages nearby under the guidance of District Magistrate and other local bodies. All the activities to be completed before commissioning of the project.

PP has submitted the desired information as sought above and EAC found it to be in order. Accordingly, revised fresh water requirement has been reduced to 1072 KLPD.

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 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 OM dated 16th June, 2021, project falls in category B2 and the proposed capacity of 250 KLPD shall be only for fuel ethanol manufacturing as per self-certification in form of an 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). The project proponent will treat and reuse the treated water within the factory and no waste or treated water shall be discharged outside the premises.
- (iv). Total fresh water requirement shall be 1072 KLPD which will be met from ground water. Prior permission shall be obtained from the concerned regulatory authority/CGWA in this regard, and renewed from time to time. No ground water recharge shall be permitted within the premises.

- (v). The spent wash shall be concentrated and dried to form DDGS to be used as cattle feed. Brick manufacturing unit will be installed within the plant premises for utilization of fly ash.
- (vi). CO₂ generated from the process shall be bottled/made solid ice and utilized/sold to authorized vendors.
- (vii). PP shall allocate Rs. 50 Lakhs for OHS per annum. 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.
- (viii). 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.
- (ix). The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Firefighting system shall be as per the norms.
- (x). Process organic residue and spent carbon, if any, shall be sent to Cement other suitable industries for its incinerations. ETP sludge, process inorganic & evaporation salt shall be disposed of to the TSDF.
- (xi). 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.
- (xii). The green belt of 5 m width shall be developed in nearly 33% of the total project area, mainly along the plant periphery. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department. Records of tree canopy shall be monitored through remote sensing map.
- (xiii). PP shall allocate Rs. 2.32 Crores towards CER which shall be spent on improving infrastructure of schools within villages nearby under the guidance of District Magistrate and other local bodies. All the proposed activities under CER shall be completed before commencement of operation of the plant.
- (xiv). There shall be at least 15% inside the plant premises earmarked for parking of vehicles for raw materials and finished products as per CPCB norms and no parking to be allowed outside on public places.

- (xv). Storage of raw materials shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions.
- (xvi). Continuous online (24x7) monitoring system for stack emissions 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.
- (xvii). 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.

Agenda No. 41.28

Proposed 250 KLPD Grain based Ethanol Plant along with 6.0 MW Cogeneration Power Plant at Village Lehri, Tehsil Talwandi Sabo, District Bathinda, Punjab by M/s. Pancarbo Greenfuels Private Limited - Consideration of Environment Clearance.

[IA/PB/IND2/229735/2021, J-11011/382/2021-IA-II(I)]

The Project Proponent and the accredited Consultant M/s J.M. EnviroNet Pvt. Ltd., made a detailed presentation on the salient features of the project and informed that:

The proposal is for environmental clearance to the project proposed 250 KLPD Grain based Ethanol Plant along with 6.0 MW Cogeneration Power Plant at Village Lehri, Tehsil Talwandi Sabo, District Bathinda, Punjab by M/s. Pancarbo Greenfuels Private Limited.

All grain based distilleries producing ethanol, solely to be used for Ethanol Blended Petrol Programme of the Government of India are listed at S.N. 5(ga) of Schedule of Environmental Impact Assessment (EIA) Notification, 2006 amendment vide S.O 2339 dated 16th June 2021 under category 'B-2' and are appraised at Central Level by Expert Appraisal Committee (EAC).

The project proposal is exempted from obtaining ToR & conducting Public Hearing as per EIA notification, 2006 amendment vide S.O 2339 dated 16th June 2021. It was informed that no litigation is pending against the project.

The details of products and capacity are as under:

| Unit | Capacity | Product |
|---------------------------|-----------------|--|
| Grain Based Ethanol Plant | 250 KLPD | Product- Ethanol (Bio-fuel) By-product- DDGS &CO ₂ |
| Co-generation Power Plant | 6.0 MW | Power |

Total project area is 6.27 hectares (62700 m²) for proposed project. Industry will develop greenbelt in an area of 33% i.e. 2.06 ha (20600 m²) out of total area of the project.

The estimated project cost is Rs. 200 Crores. Total capital cost earmarked towards environmental pollution control measures is Rs. 20.0 Crores and the Recurring cost (operation and maintenance) will be about Rs. 2.0 Crores / annum. Total Employment will be 120 persons (Permanent 80 & temporary 40) during operation phase. Industry proposes to allocate Rs. 1.0 Crores of total project cost towards Corporate Environment Responsibility.

There are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/ Elephant Reserves, Wildlife Corridors, Reserved Forests (RF)/ Protected Forests (PF) etc. lies within 10 km radius. Singho Branch (~ 2.5 Km in NNW direction), Mirziana Branch (~ 4.5 Km in SW direction), Musa Branch (~4.5 Km in SE direction), Bhakra Canal (~5.0 Km in South direction), Mammarkhera Major Distributary (~ 5.5 Km in SSW direction), Phaggu Distributary (~ 6.5 Km in SSE direction), Jaga Branch (~ 7.0 Km in North direction), Odat Branch (~ 7.5 Km in SE direction) & Kewal Distributary (~ 8.5 Km in WSW direction) are the water bodies found within 10 km radius.

Total fresh water requirement will be 1363 KLPD which will be sourced from Ground water. Total input for first run for Ethanol Plant will be 4658 KLPD. 3295 KLPD will be recycled and net fresh water requirement will be 1363 KLPD for proposed Ethanol Plant & Co-generation Power Plant. Effluent of 1400 m³/day will be treated through state of art CPU/ETP of 1700 KLPD capacity & recycled back to process & CT makeup. The plant will be based on Zero Liquid discharge system.

Power requirement for Ethanol plant will be 5.5 MW, which will be sourced from the 6.0 MW Co-generation Power Plant. Unit will be having D.G. Sets of 1 x 1000 KVA which will be used as standby during power failure. Stack height (7 m) will be provided as per CPCB norms. Proposed Boiler of 55 TPH capacity with ESP as Air Pollution Control Equipment will be installed with a stack height of 60 m for controlling the particulate emissions within the statutory limit of 50 mg/Nm³.

Details of process emissions generation and its management:

CO₂ (192 TPD) generated during the fermentation process will be collected and sold to authorized vendors.

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

- Solid waste from the Grain based operations generally comprises of fibres and proteins in the form of DDGS (197 TPD), which will be ideally used as Cattle, poultry & fish feed ingredients.
- Ash (55 TPD) generated from boiler will be supplied to brick manufacturers.
- 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.

As per OM dated 16th June, 2021, PP has submitted self-certification in the form of affidavit declaring that the proposed expansion of 250 KLPD will be for manufacturing of fuel ethanol only.

After deliberations EAC sought the following commitments from PP:

- Proposed green belt shall be completed along with the commissioning of the project.
- At least 15% of the total plant area will be reserved for parking.
- Brick manufacturing unit will be installed within the plant premises for utilization of fly ash.
- Company will store rain water in storage tanks and reuse this water in process and plant activities.
- Electro-Static Precipitator (ESP) with Stack of adequate height will be installed with the proposed boiler.
- Solar plant of at least 500 KW power will be installed within the plant premises.
- Fund for occupational health and safety will be Rs. 50 Lakhs per annum.
- Company will be completely based on Zero Effluent Discharge.
- Bio feed/biofuel will be used as fuel in the boiler.
- CO₂ plant will be installed to capture CO₂ generated during fermentation process.
- Fresh water requirement for the proposed ethanol plant to be reduced by 20% by storing rainwater and then reusing in plant. The water requirement submitted by the company which is being sourced from canal has to be reduced by 20% by storing rainwater and by reusing and recycling more and more rainwater. For Ethanol production fresh water requirement should be less than 3 kl/kl.
- Proposed funds towards CER shall be increased to Rs. 2.00 Crores of which Rs. 1.00 crore shall be spent on energy conservation measures by installation of solar power and the rest Rs. 1.00 crore for providing drinking water facilities to nearby villagers under the guidance of District Magistrate and other local bodies. All the activities to be completed before commissioning of the project.

PP has submitted the desired information as sought above and EAC found it to be in order. Accordingly, revised fresh water requirement has been reduced to 1090 KLPD.

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 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 OM dated 16th June, 2021, project falls in category B2 and the proposed capacity of 250 KLPD shall be only for fuel ethanol manufacturing as per self-certification in form of an 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). The project proponent will treat and reuse the treated water within the factory and no waste or treated water shall be discharged outside the premises.
- (iv). Total fresh water requirement shall be 1090 KLPD which will be met from ground water. Prior permission shall be obtained from the concerned regulatory authority/CGWA in this regard, and renewed from time to time. No ground water recharge shall be permitted within the premises.
- (v). The spent wash shall be concentrated and dried to form DDGS to be used as cattle feed. Brick manufacturing unit will be installed within the plant premises for utilization of fly ash.
- (vi). CO₂ generated from the process shall be bottled/made solid ice and utilized/sold to authorized vendors.
- (vii). PP shall allocate Rs. 50 Lakhs for OHS per annum. 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.
- (viii). 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.
- (ix). The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Firefighting system shall be as per the norms.
- (x). Process organic residue and spent carbon, if any, shall be sent to Cement other suitable industries for its incinerations. ETP sludge, process inorganic & evaporation salt shall be disposed of to the TSDF.
- (xi). 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.

- (xii). The green belt of 5 m width shall be developed in nearly 33% of the total project area, mainly along the plant periphery. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department. Records of tree canopy shall be monitored through remote sensing map.
- (xiii). PP shall allocate Rs. 2.00 Crores towards CER of which Rs. 1.00 crore shall be spent on energy conservation measures by installation of solar power and the rest Rs. 1.00 crore for providing drinking water facilities to nearby villagers under the guidance of District Magistrate and other local bodies. All the proposed activities under CER shall be completed before commencement of operation of the plant.
- (xiv). There shall be at least 15% inside the plant premises earmarked for parking of vehicles for raw materials and finished products as per CPCB norms and no parking to be allowed outside on public places.
- (xv). Storage of raw materials shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions.
- (xvi). Continuous online (24x7) monitoring system for stack emissions 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.
- (xvii). 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.

Agenda No. 41.29

Expansion of Molasses based distillery from 30 KLPD to multi feed (Cane Juice, B heavy molasses & C molasses) based 110 KLPD distillery unit at village Nivruttinagar (Dhalewadi), Post Shirol, Taluka District Pune by M/s SHRI VIGHNAHAR SAHAKARI SAKHAR KARKHANA LIMITED- Consideration of Environment Clearance.

[IA/MH/IND2/229251/2003, IA- J-11011/1/2004-IA II]

The PP/consultant were absent for the appraisal of proposal. Therefore, EAC has decided to defer the proposal.

Accordingly, proposal was deferred for the needful.

Agenda No. 41.30.

Any other items with permission of the Chair.

Agenda No. 41.30.1

Residue Up-gradation and Distillate Yield Improvement Project with 11.0 MMTPA Crude Processing by M/s Indian Oil Corporation Limited located at Mathura Refinery, UP - Consideration of Environment Clearance reg.

[IA/UP/IND2/27109/2012, J-11011/1100/2007-IA-II (I)]

During deliberations, EAC decided that this proposal is **recommended** for grant of environmental clearance, subject to earlier recommendation of previous EAC and in addition to that, conditions suggested by CBCB, Taj Trapezium Zone (TTZ) Authority and report of IIT Kanpur submitted to CPCB. PP has been asked to submit an undertaking to meet all the requirements of the specific conditions, before going to Hon'ble Supreme Court, including impact of expansion up to 50 km radius from SO₂ point of view and load will not increase 450Kg./Hrs.

Brief History of the proposal:

The proposal is for environmental clearance to the project for Residue Up-gradation and Distillate Yield Improvement Project with 11.0 MMTPA Crude Processing by M/s Indian Oil Corporation Limited located at Mathura Refinery, UP. As informed and as per the documents submitted by the Project Proponent (PP), the project will facilitate crude processing from 8 MMTPA to 11 MMTPA; maximize the processing of high Sulphur crude; Up-gradation of bottom of barrels to maximize distillate yield from HS crude and production euro-IV MS and diesel.

All the Petroleum Refining Industry are listed at 4(a) of the Schedule of EIA Notification, 2006 under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC).

The project proposal was considered by the Expert Appraisal Committee (Industry-2) in its 3rd meeting held during 3rd- 5th December, 2012 and 10-11th June, 2013 and recommended Terms of References (ToRs) for the project. The ToR has been issued by Ministry vide letter No. J-11011/1100/2007-IA-II(I) dated 26th September, 2013. Public Hearing for the proposed project has been conducted by the Uttar Pradesh Pollution Control Board on 23rd December, 2013 at Mathura chaired by Addl. District Magistrate Mathura. The EAC has deliberated upon the issues raised during the public hearing. The concerns were raised regarding pollution due to enhancement in production, local development, patient treatment in Swarn Jayanti Hospital, etc. The EAC noted that the issues have satisfactorily been responded by the project proponent and incorporated in the final EIA-EMP report. It was informed that no litigation is pending against the proposal. However, as per the order of the Hon'ble Supreme Court, Ministry can consider the project in the TTZ under the provisions of EIA Notification; But, the final clearance is subject to the orders of Court upon receipt of final decision by the concerned authorities.

The PP has obtained Environmental Clearance (EC) for the existing unit vide F. No. J-11011/283/2006-IA II(I) dated 22.04.2007. The EAC has discussed the certified compliance report submitted by the Ministry's Regional Office at Lucknow vide letter No. IV /ENV /UP /IND-86/215/2007 /551 dated 02.01.2013.

The details of products and capacity are as under: -

| S.No. | Process Units | Capacity |
|--------------|---|-----------------|
| | Crude Capacity (from 8 MMTPA to 11 MMTPA) | 11 MMTPA |
| 1. | Resid Hydrocracking Unit | 2.3 MMTPA |
| 2. | New hydrocracker unit | 2.0 MMTPA |
| 3. | Hydrogen Unit | 110 TMTPA |
| 4. | Sulphur Recovery Unit (SRU) with TGTU | 3 x 300 TPD |
| 5. | Additional VDU | 2.5 MMTPA |
| 6. | DHDT revamp | 2.4 MMTPA |
| 7. | Sour Water Stripper (SWS) | 50 TPH |
| 8. | Amine Regeneration Unit | 600 TPH |
| 9. | Nitrogen Unit | 1200 NM3/hr |

The additional facilities proposed in the offsite to cater to the project requirement are:

| S.No. | Facility | Capacity |
|--------------|--|------------------------|
| 1. | Gas Turbo Generator Steam Turbine Generator | 2x30 MWhr 1x20 MWhr |
| 2. | Cooling Tower for Process cooling water | 5x2500 m3/hr |
| 3. | Air compressor and Drier | 2x5000 NM3/hr |
| 4. | RO Plant for DM water | 1x200 m3/hr |
| 5. | RO Plant for ETP effluent | 1x250 m3/hr |
| 6. | Storage tanks | 3x30 TKL+2x25 TKL |
| 7. | Mounded bullets - LPG | 1x2500 m3 |
| | | |

The product Pattern after expansion is:

| Refinery Input | Base case | M-11 |
|------------------------|------------------|-------------|
| BH | 1,200 | 1,200 |
| LS | 2,800 | 0 |
| HS | 4,000 | 9,800 |
| Total Crude | 8,000 | 11,000 |
| Natural Gas | 450 | 1,100 |
| Refinery Output | Base case | M-11 |
| Propylene | 200 | 200 |
| LPG | 430 | 675 |
| NAPHTHA | 525 | 1,050 |
| MS | 1,150 | 1,150 |

| | | |
|----------|-------|---------|
| SKO | 400 | 400 |
| ATF | 560 | 1,200 |
| HSD | 2,750 | 4,900 |
| FO/PITCH | 950 | 520/200 |
| BITUMEN | 750 | 900 |
| SULFUR | 53 | 240 |

The Land requirement is 60 acres within the existing plant premises. The Refinery is located in the Taj Trapezium Zone in Uttar Pradesh. The new units proposed under the expansion project. The cost of the project is Rs. 8668 Crores. Out of which Rs.1180.10 Crore and Rs. 20.14 Crore per annum are earmarked towards capital cost and recurring cost for implementation of environment management plan. Total Employment will be 4500 people during construction phase and 1500 people operational phase.

Ambient air quality (AAQ) monitoring was carried out at 15 locations during November, 2012 - January, 2013. The baseline data indicates the ranges of concentrations as:- PM₁₀ (41-109 µg/m³), PM_{2.5} (24-68.4 µg/m³), SO₂ (13.2 - 30 µg/m³) and NO₂ (19-33 µg/m³). The predicted value of ground level concentration due to proposed project is SO₂ (7.80 µg/m³) and NO_x (8.13 µg/m³). The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS), except particulate matter. SO₂ emissions will be maintained below the prescribed limit (450 Kg/hr). As per the recommendation of EAC to carry out environmental survey for establishing levels of methane hydrocarbon and non-methane hydrocarbons in ambient air, the PP has undertaken the study and reported that Methane-Hydrocarbons were found in the range of 0.4 to 2.6 ppm and Non-Methane Hydrocarbons were found in the range of 0.11- 5.7 ppm.

The SO₂ emission shall be maintained within 450 m³/hr limit with following Measures, viz. Reduce in liquid fuel and maximizing gaseous fuel (Fuel gas and Natural Gas), - Use of fuel oil with "S" content < 0.6%, Installation of SRU's with minimum 99.5% efficiency and Hydro finished feed to FCCU.

The total water allocation to Mathura Refinery is 2383 m³/hr (300 m³/hr Keetham, 1250 m³/hr koyala river and 833 m³/hr from Gokul Barage). Gokul Barage is the third water source, allocated to Mathura Refinery and same is under implementation phase. Water requirement for the proposed project is 500 m³/hr. Out of this 200-250 m³/hr shall be met by recycle and 250-300 m³/hr shall be met by fresh water.

Refinery has a full-fledged Effluent Treatment Plant (ETP) of 750 m³/hr dry-weather and 1050 m³/hr wet weather capacity for treatment of waste water generated from the refinery. The facility was subsequently modernized for removal of emulsified oil, sludge minimization, increase in reuse/recycle of treated effluent & reduce VOC emissions. The treated effluent meets revised norms as per latest 2008 MoEF guidelines. The treated effluent is being disposed to the river Yamuna. The treated effluent is gainfully being used by local farmers for irrigation purpose.

60 MW (approx) shall be required for proposed additional facilities during normal operation. Source of 60 MW is Refinery's captive generation by installing additional gas turbines in the Refinery's Captive Power Plant. Natural gas will be used as fuel. A total of 4.0 MMSCMD gas (including current requirement of 1.7 MMSCMD) will be required post Resid Upgradation.

Details of process emissions generation and its management:

It is reported that the air quality dispersion modeling was carried out to identify the impact on Taj Mahal and TTZ for 50 km radius from Mathura refinery. It is reported that the modeling study indicates no impact on Taj Mahal due to proposed project.

It is informed that the gaseous emissions from the Refinery complex will be controlled as per the standards stipulated by the regulatory authorities. There shall be about 8 numbers of stacks for the proposed project. Air emissions from each stack of the proposed project are complied with their applicable standards as per EP rules, 2008. Heaters/furnaces will be provided with well proven Low NOx burners to reduce the emissions of Nitrogen Oxides (NOx). The heights of various stacks will be determined taking into consideration the "Guidelines for Minimum Stack Height" as per notification by MoEF dated 19th May 1993, which fixes the minimum stack height based on emission of Sulphur Dioxide.

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

Spent catalyst generated from the Resid hydro cracking unit shall be disposed off to metal re-claimers for metal recovery. Spent catalyst generation is expected to be in tune of 2.5 TMTPA.

It is reported that the Refinery has adopted environmentally sound solid waste management practices based on the philosophy of minimization of generation of solid waste and safe disposal of residual waste. The refinery is disposing oily sludge through bioremediation by 'Oilivorous-S technology', provided by TERI and IOC R&D. In order to enhance and expedite oil recovery from oily sludge, latest and far more effective technology thermo-mechanical facility for oily sludge processing was setup. The oily sludge generated from the effluent treatment plant is treated in the oily sludge centrifuge provided in the ETP. The cake generated from the centrifuge is further sent for bioremediation/PVC lined pit.

The project proposal was considered by the Expert Appraisal Committee (Industry -2) in its 18th meeting held during 28th 30th April, 2014; 24th meeting held during 29th- 31st September, 2014; 38th meeting held during 20th-21st April, 2015; 44th meeting held during 20th- 21st July, 2015 and 16th meeting held during 08th-09th December, 2016. The proposal was

recommended by the EAC in its 44th meeting held on 20th- 21st July, 2015 but in 16th meeting held on 08th - 09th December, 2016, EAC deliberated that the proposal has been recommended by EAC in its 44th meeting held during 20th – 21st July, 2015; however, during processing of recommendations of the EAC in the Ministry it was decided to seek the comments of TTZ Authority on the proposed expansion; accordingly, vide letter no. J-11011/1100/2007- IA. II (I) dated 9th May, 2016 the Ministry requested the TTZ to provide the requisite comments. PP informed the EAC during its 16th meeting held on 8th – 9th December, 2016 that this proposal is pending due to want of above information from TTZ. The PP further informed that they are continuously perusing the matter with the respective authorities of TTZ, the requisite information will be provided shortly. The EAC in view of the above facts recommended to the Ministry that since EAC has already appraised the proposal from environmental perspective and **recommended** the project for grant of Environmental Clearance, the Ministry may take up the issue with the TTZ for obtaining their comments as required by the Ministry.

Further, opinion was taken from CPCB and TTZ Authority in this case. As this refinery is in Taj Trapezium Zone (TTZ), Hon'ble Supreme Court has given permission for the proposal on the condition that after obtaining EC, PP has to approach the Hon'ble Supreme Court for order prior to start of work. There are various conditions stipulated by CBCB and TTZ authority which is as follows:

Conditions stipulated by CPCB:

- i. From the Sulphur balance data provided, the unit will upgrade the technology to recover Sulphur in SRU which have efficiency of 99.9% (Norms for new refinery is 99.5% as per the 2008 Notification).
- ii. The Sulphur in liquid fuel should be restricted to 0.5% as per the new refinery norms instead of proposed 0.6% in meeting held on July 20-21, 2015 at MoEFCC.

Conditions/decision stipulated by TTZ Authority:

- i. The emissions from Mathura Refinery shall be under prescribed CPCB standards.
- ii. The company shall abide by the conditions granted by MoEFCC.

Recommendations of report of IIT Kanpur submitted to CPCB:

- i. Secondary particles SO₄, NO₃, and NH₄ constitute about 20 percent of PM_{2.5}. The SO₂ emission from refinery and the power plant of 665 MW could be the primary cause of high SO₄. Efforts should be made to reduce SO₂ emission from these large sources. The power plant should comply with SO₂ emission norms at the earliest possible.

- ii. CPCB may consider updating the current air quality station to a CAQM and include more parameters (NH₃, H₂S, HCl, HNO₃), organic and black carbon, ions and rainwater analysis and have a better air quality communication and response system.

Now, as recommended by EAC Ind-2, the comprehensive Specific and General conditions will be as follows:

Specific Condition:

- (i). This Environmental Clearance is subject to obtaining of necessary permission of Hon'ble Supreme Court of India. (Refer: Hon'ble Supreme Court of India Order dated 22nd September, 2011 in IA. No. 485 in WP. (C) 13381 of 1984).
- (ii). From the Sulphur balance data provided, the unit will upgrade the technology to recover Sulphur in SRU which have efficiency of 99.9% (Norms for new refinery is 99.5% as per the 2008 Notification).
- (iii). The Sulphur in liquid fuel should be restricted to 0.5% as per the new refinery norms instead of proposed 0.6% in meeting held on July 20-21, 2015 at MoEFCC.
- (iv). The emissions from Mathura Refinery shall be under prescribed CPCB standards.
- (v). Secondary particles SO₄, NO₃, and NH₄ constitute about 20 percent of PM_{2.5}. The SO₂ emission from refinery and the power plant of 665 MW could be the primary cause of high SO₄. Efforts should be made to reduce SO₂ emission from these large sources. The power plant should comply with SO₂ emission norms at the earliest possible.
- (vi). CPCB may consider updating the current air quality station to a CAQM and include more parameters (NH₃, H₂S, HCl, HNO₃), organic and black carbon, ions and rainwater analysis and have a better air quality communication and response system.
- (vii). M/s IOCL shall comply with new standards/norms for Oil Refinery Industry notified under the Environment (Protection) Rules, 1986 vide G.S.R. 186(E) dated 18th March, 2008.
- (viii). The process emissions [SO₂, NO_x, HC (Methane & Non-methane)], VOCs and Benzene from various units shall conform to the standards prescribed under the Environment (Protection) Act. At no time, the emission levels shall go beyond the stipulated standards. In the event of failure of pollution control system(s) adopted by the unit, the unit shall be immediately put out of operation and shall not be

restarted until the desired efficiency of the pollution control device has been achieved.

- (ix). As proposed, in the expansion case of 11 MTPA refiner, some old stacks shall be dismantled and new stacks will be installed in the units namely, SHU, New VDU, OHCU-1, HGU-III, New SRU's TGTU, GT-V and GT-VI.
- (x). Continuous on-line stack monitoring for SO₂, NO_x and CO of all the stacks shall be carried out. Low NO_x burners shall be installed. Fuel oil with Sulphur content less than 0.6 % shall be used.
- (xi). SO₂ emissions after expansion from the refinery shall not exceed 450 Kg/hr. NO_x emissions after expansion from the Refinery shall not exceed 236 Kg/hr. Sulphur recovery units shall be installed for control of H₂S emissions. The overall sulphur recovery efficiency of Sulphur recovery unit with tail gas treating shall not be less than 99.9%.
- (xii). Fugitive emissions of HC from product storage tank yards etc. must be regularly monitored Sensors for detecting HC leakage shall be provided at strategic locations. Leak Detection and Repair programme shall be implemented to control HC/VOC emissions.
- (xiii). As proposed, record of sulphur balance shall be maintained at the Refinery as part of the environmental data on regular basis. The basic component of sulphur balance include sulphur input through feed (sulphur content in crude oil), sulphur output from Refinery through products, by-product (elemental sulphur), atmospheric emissions etc.
- (xiv). Total water requirement after expansion shall not exceed 1870 m³/hr. Out of which, fresh water requirement from Koyala & Keetham water bodies will be 1370 m³/hr. and remaining water (500 m³/hr.) will be met from treated effluent/recycled water.
- (xv). Industrial effluent generation shall not exceed 665 m³ / day after expansion. Industrial effluent shall be treated in the effluent treatment plant. Treated effluent shall be recycled/reused as make up for the raw water cooling tower and remaining treated effluent shall be discharged into nallah.
- (xvi). All the effluents after treatment shall be routed to a properly lined guard pond for equalization and final control. In the guard pond, automatic monitoring system for flow rate, pH and TOC shall be provided.
- (xvii). Oil catchers/oil traps shall be provided at all possible locations in rain/ storm water drainage system inside the plant premises.
- (xviii). As proposed, Spent catalyst shall be sent to authorized recycler /re-processors. Oily Sludge shall be treated in the Sludge Centrifuge

provided in the ETP and the cake generated from the centrifuge is further sent for bioremediation for disposal.

- (xix). The membership of common TSDF shall be obtained for the disposal of hazardous waste. Copy of authorization or membership of TSDF shall be submitted to Ministry's Regional Office at Lucknow. Chemical/inorganic sludge shall be sent to treatment storage disposal facility (TSDF) for hazardous waste. Spent catalyst shall be sent to authorized recyclers/re-processors.
- (xx). Green belt over 19.25 acres land area should be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB-guidelines in consultation with the DFO.
- (xxi). All the commitments made to the public during public hearing/public consultation meeting held on 23.12.2013 shall be satisfactorily implemented and adequate budget provision shall be made accordingly.
- (xxii). At least 2.5 % of the total cost of the project should be earmarked towards the corporate social responsibility and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Lucknow. Implementation of such program should be ensured accordingly in a time bound manner.
- (xxiii). Zero Liquid Discharge shall be ensured.
- (xxiv). Continuous online (24 x7) monitoring to be installed for measurement of pollutants. Data to be uploaded on company's website and provided to the respective RO of MEF&CC, CPCB and SPCB.

General Condition:

- (i) The project authorities must strictly adhere to the stipulations made by the Uttar Pradesh Pollution Control Board, State Government and any other statutory authority.
- (ii) No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change. 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 to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.
- (iii) The locations of ambient air quality monitoring stations shall be decided in consultation with the State Pollution Control Board (SPCB) and it shall be ensured that at least one stations is installed in the

upwind and downwind direction as well as where maximum ground level concentrations are anticipated.

- (iv) The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 shall be followed.
- (v) 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 Environment (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).
- (vi) The energy source for lighting purpose shall be preferably LED based, or advanced having preference in energy conservation and environment betterment.
- (vii) The Company shall harvest rainwater from the roof tops of the buildings and storm water drains to recharge the ground water and use the same water for the process activities of the project to conserve fresh water.
- (viii) Training shall be imparted to all employees on safety and health aspects of chemicals handling. Pre-employment and routine periodical medical examinations for all employees shall be undertaken on regular basis. Training to all employees on handling of chemicals shall be imparted.
- (ix) The company shall also 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.
- (x) The company shall undertake all relevant measures for improving the socioeconomic conditions of the surrounding area. CSR activities shall be undertaken by involving local villages and administration. 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.
- (xi) The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment.
- (xii) A separate Environmental Management Cell equipped with full fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.

- (xiii) 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.
- (xiv) 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.
- (xv) 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.
- (xvi) 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.
- (xvii) 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 at <http://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.
- (xviii) 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.

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, ZillaParishad/Municipal Corporation, Urban

local Body and the local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal.

- (vii) The project proponent shall also submit six monthly reports on the status of compliance of the stipulated Environmental Clearance conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional Office of MoEF&CC, the respective Zonal Office of CPCB and SPCB. A copy of Environmental Clearance and six monthly compliance status report shall be posted on the website of the company.
- (viii) The environmental statement for each financial year ending 31st March in Form-V as is mandated shall be submitted to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Regional Offices of MoEF&CC by e-mail.
- (ix) The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB/Committee and may also be seen at Website of the Ministry and at <https://parivesh.nic.in/>. This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the concerned Regional Office of the Ministry.
- (x) The project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of the project.
- (xi) This Environmental clearance is granted subject to final outcome of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, if any, as may be applicable to this project.

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

| S. No. | Name and Address | Designation |
|---------------|---|---------------------|
| 1. | Dr. J. P. Gupta | Chairman |
| 2. | Sh. R.K. Singh | Member |
| 3. | Sh. Ashok Agarwal | Member |
| 4. | Ms. Saloni Goel | Member |
| 5. | Dr. Y.V. Rami Reddy | Member |
| 6. | Dr. T. Indrasena Reddy | Member |
| 7. | Sh. S. C. Mann | Member |
| 8. | Dr. T. K. Joshi | Member |
| 9. | Dr. J. S. Sharma | Member |
| 10. | Sh. Dinabandhu Gouda, CPCB | Member |
| 11. | Sh. Sanjay Bist, IMD | Member |
| 12. | Sh. Ashok Kr. Pateshwary, Director, MoEFCC | Member Secretary |
| MoEFCC | | |
| 13. | Dr. Mahendra Phulwaria | Scientist 'C' |
| 14. | Sh. Kanaka Teja | Research Assistant |
