

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

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**Dated: 10.08.2021**

**MINUTES OF THE 38<sup>th</sup> MEETING OF THE EXPERT APPRAISAL  
COMMITTEE**

**(INDUSTRY-2 SECTOR PROJECTS)**

**HELD ON 28<sup>th</sup> - 29<sup>th</sup> July, 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 37<sup>th</sup> Meeting of the EAC (Industry-2) held during 07<sup>th</sup> -08<sup>th</sup> July, 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: -

**28<sup>th</sup> July, 2021 (Wednesday)**

**Agenda No. 38.1**

**Proposed Different Grades of Carbon Black (Production Capacity - 1.925 Lakh Tonne/Annum) Manufacturing Unit and 36 MW Waste Heat Recovery Based Cogeneration Captive Power Plant by M/s. PCBL (TN) LTD located at Plot No. A7, SIPCOT Industrial Complex,**

**Village Thervoykandigai, Taluka Gummidipoondi Dist Thiruvallur, State Tamilnadu - Consideration of Environmental Clearance reg.**

**[IA/TN/IND2/206780/2021, J-11011/128/2021-IA-II(I)]**

The project proponent and their consultant M/s. Aqua-Air Environmental Engineers Pvt. Ltd., made a detailed presentation through Video Conferencing (VC) on the salient features of the project.

The proposal is for Environmental Clearance to the project for Proposed Different Grades of Carbon Black (Production Capacity - 1.925 Lakh Tonne/Annum) Manufacturing Unit and 36 MW Waste Heat Recovery Based Cogeneration Captive Power Plant by M/s. PCBL (TN) LTD located at Plot No. A7, SIPCOT Industrial Complex, Village Thervoykandigai, Taluka Gummidipoondi Dist Thiruvallur, State Tamilnadu. In ToR application proposal applied was for Production capacity 2.60 Lakh Tonne /Annum and Captive Power plant is 50 MW. Capacity has been reduced of the Production capacity because of following reasons: -

1. During detailed engineering the company was not able to fulfill the mandatory requirement of 33% green belt with ToR Production capacity.
2. Change in Carbon Black market scenario. The company has reduced Production Capacity & pollution load in the Application of EC and Increased Green belt area within the premises to achieve 33% of Green belt as per the Norms.

All Products are listed at S.N. 5(e) of Schedule of Environmental Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC)

The ToR has been issued by Ministry vide letter No. IA-J-11011/128/2021-IA-II(I); dated 2<sup>nd</sup> April, 2021. Public Hearing for the proposed project is exempted, as unit is located in Industrial Complex of SIPCOT (State Industries Promotion Corporation of Tamilnadu Limited). M/s. State Industries Promotion Corporation of Tamilnadu obtained Environmental Clearance from MoEFCC, New Delhi vide letter No. 21-41/2009. IA III dated: 09/08/2010. It was informed that no litigation is pending against the proposal.

**The details of products and capacity are as under:**

<b>Sr. No.</b>	<b>Description</b>	<b>Quantity (in ToR application)</b>	<b>Quantity (In EIA report)*</b>
1	Carbon Black	745 MT per day (2,60,750 MTPA) (Considering 350 working days)	550 MT per day (1,92,500 MTPA) (Considering 350 working days)
2	Waste Heat Recovery Based	50 MW	36 MW

	Cogeneration CPP		
<b>*Note:</b> Carbon black Production and CPP capacity was reduced from ToR application due to the Market Strategy and demand			

It was informed that 242892.53 m<sup>2</sup> land area will be used for proposed project. Industry will develop Greenbelt in an area of 33% i.e., 81315 (33.47%) m<sup>2</sup> out of 242892.53 m<sup>2</sup> of area of the project. The estimated project cost is Rs. 615.00 Crores. Total capital cost earmarked towards environmental pollution control measures is Rs. 116.50 Crores and the Recurring cost (operation and maintenance) will be about Rs. 11.57 Crores per annum. Total Employment will be 1425 persons as direct & indirect for proposed project. Industry proposes to allocate in next 5 years @ 2.5% of the profit towards Corporate Social Responsibility & Rs 6.15 Crores (approx.) in next 2 years @ of 1% of the Capital Investment 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/ waterbodies: KKTK Reservoir ~ 0.89 Km (N), Canal near Tambunaidupalaiyam ~ 2.12 Km (SSE), Canal near Karadiputtur ~ 2.2 Km (W), TG/Satya Sai Ganga Canal ~ 4.86 Km (W), Arani River ~ 7.13 Km (SSE).

Ambient air quality monitoring was carried out at 8 locations during March, 2021 to May, 2021 and the baseline data indicates the ranges of concentrations as: PM<sub>10</sub> (46.25 – 54.63 µg/m<sup>3</sup>), PM<sub>2.5</sub> (21.75 – 25.83 µg/m<sup>3</sup>), SO<sub>2</sub> (6.55 – 8.11 µg/m<sup>3</sup>) and NO<sub>2</sub> (13.42 – 17.45 µg/m<sup>3</sup>) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.54 µg/m<sup>3</sup>, 3.37 µg/m<sup>3</sup> and 0.34 µg/m<sup>3</sup> with respect to PM<sub>10</sub>, SO<sub>x</sub> and NO<sub>x</sub>. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

Total water requirement is 3583.0 m<sup>3</sup>/day of which fresh water requirement of 2785.0 m<sup>3</sup>/day will be met from SIPCOT. Effluent of 559.0 m<sup>3</sup>/Day quantity will be treated through ETP consisting of primary treatment facility followed by RO, MEE & ATFD Unit. The sewage generated will be treated in STP of 50 m<sup>3</sup>/Day and the treated sewage will be used for green belt development. So, the plant will be maintaining Zero Liquid discharge system.

Power requirement during Operation phase & construction phase for proposed project will be 11.20 MW & 0.4 MW respectively and will be met from CPP/TANGEDCO (Tamil Nadu Generation and Distribution Corporation Limited). 2 Nos. DG set of 1200 KVA & 1300 KVA capacity shall be used

as standby during power failure. Stack (height 30 m) will be provided as per CPCB norms to the proposed DG sets.

Unit shall have 3 Nos. of 54 MT/hr, 86 kg/cm<sup>2</sup> Off Gases Waste gas based Boilers will be installed. Adequate stack height as per CPCB Norms of 90 m will be installed for controlling the Particulate emissions respectively.

**Details of process emissions generation and its management:**

**1) Flue Gas Emission:**

<b>Emission source</b>	<b>APC measure proposed</b>	<b>Stack height</b>	<b>Fuel Name &amp; Quantity</b>
DG set: 1x1300 & 1x1200 KVA	Adequate stack height as per CPCB Norms	30m AGL	Diesel (500 Lit/hr)
*Waste gas based Boilers: Set-1: 54 MT/hr, 86 kg/cm <sup>2</sup> Set-2: 54 MT/hr, 86 kg/cm <sup>2</sup> , Set-3: 54 MT/hr, 86 kg/cm <sup>2</sup>	Adequate stack height as per CPCB Norms	90m AGL	Off Gases (495197 Nm <sup>3</sup> /hr)
Note: *In form -1, Boiler capacity is mentioned as 32 TPH, 80 TPH, 24 TPH & 60 TPH (each 1 Nos) One Boiler is removed due to the reduction in production capacity			

**2) Process Gas Emission:**

<b>Emission source</b>	<b>APC measure proposed</b>	<b>Stack height (m)</b>
2 Nos. of Flare Stacks	Adequate stack height as per CPCB Norms	50 AGL
Vapor Bag Collectors – 6 Nos. of Stacks	Bag Collectors	60 AGL
Dryer – 6 Nos. of Stacks	Bag Collectors / ESPs	60 AGL
Process Bag Collectors – 2 Nos. of Stacks	Bag Collectors / ESPs	50 AGL
Venturi Scrubbers – 2 Nos. of Stacks	Not Applicable	50 AGL
Dedusting & Rerun Bag Collectors – 12 Nos.	Not Applicable	20 m

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

Categories of Hazardous/Solid Wastes shall be generated from this Unit.

<b>Sr. No.</b>	<b>Details of Waste</b>	<b>Scheduled as per HWM rules</b>	<b>Proposed Quantity TPA</b>	<b>Storage and Disposal</b>
1	Used or Spent Oil	5.1	6.0	Collection, Storage, Transportation and sell to TNPCB Authorized Recyclers or reuse in the process.
2	Sludge & MEE Salt	35.3	3990* (WTP Sludge-2800 MEE Salt-1190)	Collection, Storage, Transportation and disposal at TSDf-Gummidipoondi.
3	ETP Sludge	35.3	175	Collection, Storage, Transportation and disposal at TSDf-Gummidipoondi or can also be sent to cement plant.
4	Empty Container/bags/Discarded drums/ Barrels/ Liners/ Waster paper bags/ waste plastic	33.1	12	Collection, Storage, Transportation and sell to TNPCB Authorized Recyclers
5	Used Filter cloth	-	2.0	Collection, Storage, Transportation and sell to TNPCB Authorized Recyclers
6	Used Oily cotton waste/weather hand gloves/cotton hand gloves	33.2	2.0	Collection, Storage, Transportation and disposal at TSDf-Gummidipoondi.
7	Discarded filter medium (bag filter)	36.2	12.0	Collection, Storage, Transportation and disposal at TSDf-Gummidipoondi.
8	Ceramic wool/waste insulation material	-	12.0	Collection, Storage, Transportation and disposal at TSDf
9	Spent Ion exchange resins	35.2	1.0	Collection, Storage, Transportation and disposal at TSDf

10	Oily emulsion Sludge	I - 4.1	15.0	Collection, Storage, Transportation and disposal at TSDF
11	Used Batteries	-	0.1	Collection, Storage, Transportation and disposal at TSDF
12	Spent batteries Acid	I - 36.2	0.024	Collection, Storage, Transportation and disposal at TSDF
<b>Note:</b> * In Form-1, ETP sludge & MEE salt is mentioned as 6210 TPA				

### Solid Waste Generation

Sr. No	Description	Construction Phase Quantity (Kg/day)	Operation Phase Quantity (Kg/d)	Method of Collection	Method of Disposal
1	Solid Waste	250	Inorganic waste- 76.5	Bins	Send to TNPCB authorized vendors
			Organic waste- 114.75		Convert to manure by using OWC
2	STP Sludge	-	5.0		Used as a manure for Greenbelt

*Note: As per CPHEEO norms-0.45 kg/day/capita*

Paper / Card Board, Dust bin collection, dry leaves, grass, Metal scrap & wooden scrap will be recycled /sent to authorize dealer.

Certified Compliance Report is not applicable as this is proposed unit.

After detailed deliberations, EAC suggested to invest entire CER budget in field of education, health and solar power distribution. CER activities shall be such that they can be monitored and CER budget shall be invested before commencement of industrial operations. Project proponent proposed that the project is being set up on crash basis for setting up industries before 2022 end to avail special tax incentive. In view of this, PP requested to complete all activities within two years after commencement of production, which the committee agreed. CER budget shall be invested as well as monitored by third party audit also. PP agreed to above and submitted revised CER activities break up along with undertaking for the same.

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). Total water requirement is 3583.0 m<sup>3</sup>/day of which fresh water requirement of 2785.0 m<sup>3</sup>/day will be met from SIPCOT. Necessary permission in this regard shall be obtained from the concerned

regulatory authority. 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.

- (iii). Comprehensive water audit to be conducted on annual basis and report to the concerned Regional Office of MEF&CC. Outcome from the report to be implemented for conservation scheme.
- (iv). Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.
- (v). Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm, and solvent transfer to be done through pumps.
- (vi). Process organic residue and spent carbon, if any, shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF. The ash from boiler shall be sold to brick manufacturers/cement industry.
- (vii). Regular VOC monitoring shall be done at vulnerable points.
- (viii). The oily sludge shall be subjected to melting pit for oil recovery and the residue shall be bio-remediated. The sludge shall be stored in HDPE lined pit with proper leachate collection system.
- (ix). Oil catchers/oil traps shall be provided at all possible locations in rain/ storm water drainage system inside the factory premises.
- (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 cleaning etc. to reduce wastewater generation.
- (xi). The green belt of 5-10 m width shall be developed in more than 33% of the total project area, mainly along the plant periphery, in downward wind direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.
- (xii). 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 be completed within time and CER activities (monitorable) as proposed shall be conducted along with proper monitoring of the same before commencement of operations of industry.

- (xiii). The project proponent shall ensure 70% of the employment to the local people, as per the applicable law. The project proponent shall set up a skill development centre/provide skill development training to village people.
- (xiv). 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.
- (xv). 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.
- (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. In case of the treated effluent to be utilized for irrigation/gardening, real time monitoring system shall be installed at the ETP outlet.
- (xvii). PP to set up occupational health Centre for surveillance of the worker's health within and outside the plant on a regular basis. 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.
- (xviii). The National Emission Standards for Petrochemical (Basic & Intermediates) issued by the Ministry vide G.S.R. 820 (E) dated 9<sup>th</sup> November, 2012 as amended time to time shall be followed.
- (xix). Recommendations of mitigation measures from possible accident shall be implemented based on advanced risk Assessment studies conducted for worst case scenarios using latest techniques.

### **Agenda No. 38.2**

**Proposed laying of LPG pipeline in Kandla-Viramgam-Gandhinagar-Sanand Section of Kandla Gorakhpur Pipeline, District Gandhinagar, Gujarat by M/s IHB limited- Consideration of Environment and CRZ Clearance reg.**

**[IA/GJ/IND2/114428/2019, IA-J-11011/256/2019-IA-II(I)]**

The proposal is for Environmental and CRZ Clearance to the project for Kandla – Viramgam – Gandhinagar - Sanand section of Kandla Gorakhpur Pipeline by M/s IHB LIMITED.

Earlier proposal was considered by the EAC in its 36<sup>th</sup> meeting held on 16-17<sup>th</sup> June, 2021 in the Ministry, wherein the project proponent and their consultant M/s. Anacon laboratories Pvt. Ltd. Nagpur, presented the EIA/EMP report as per the ToR. The Committee found the EIA/EMP report complying with the ToR and **recommended** the project for grant of environmental clearance.

On examining the case, it was found that PP has applied only for EC and not mentioned regarding CRZ clearance in Form -2 or EIA or any documents related to EC application. When proposal was analysed in details then it was found that SCZMA clearance has been obtained for which EDS was generated," Kindly provide all documents submitted to GCZMA while obtaining clearance. Clearance has been obtained from GCZMA, whereas in Form 2, CRZ specific details are not applicable. Clarify."

EDS reply was," Stand-alone application for CRZ submitted through offline mode to GCZMA. While submitting Form-2, there is no provision to input application already made offline for CRZ. Hence "NA" option was selected for all offline/ stand-alone applications. However, details of the same were uploaded under additional information."

The project requires CRZ recommendation/clearance and it has obtained CRZ clearance from GCZMA on 9<sup>th</sup> April, 2021. Accordingly, file was processed to CRZ division of the Ministry for their comments. CRZ Division stated that "The proposed activity is a permissible activity as per the extant norms of the CRZ regulations and the specific conditions, which are not suggested by SCZMA and relevant for the project may be imposed as given below:

- i. The PESO clearance shall be obtained, if related by M/s IHB Private Limited before commencing the project / activities.
- ii. All necessary permissions from different Government Department / agencies shall be obtained by M/s IHB Private Limited before commencing the project / activities.
- iii. All conditions/recommendations stipulated by the Gujarat Coastal Zone Management Authority (GCZMA) vide their letter No. ENV-10-2021-14-T, dated 09/04/2021, shall strictly be complied with".

Competent Authority decided to again reconsider the proposal in EAC for CRZ recommendation and as per adequacy of marine EIA / EMP report.

The proposal was again considered by the EAC in its 38<sup>th</sup> meeting held on 28-29<sup>th</sup> July, 2021 in the Ministry wherein the project proponent and their consultant M/s. Anacon laboratories Pvt. Ltd. Nagpur, presented the marine EIA/EMP report and stated that both Environmental and CRZ clearance required.

The EAC, after detailed deliberations, **recommended** the project for grant of Environmental and CRZ clearance, subject to compliance of terms and conditions and general terms of conditions as per the earlier 36<sup>th</sup> EAC meeting held on 16-17<sup>th</sup> June, 2021 and this meeting.

### **Agenda No. 38.3**

#### **Expansion and De-bottlenecking of existing Petro-Chemical Plant by M/s Reliance Industries Limited located at Plot No. 1, Notified Industrial Area, GIDC Dahej, Bharuch, Gujarat – Re-consideration of Environment Clearance reg.**

**[IA/GJ/IND2/209217/2020, J-11011/39/2016-IA II (I)]**

The proposal is for Environmental Clearance (EC) for Expansion and De-bottlenecking of existing Petro-Chemical Plant by M/s Reliance Industries Limited located at Plot No. 1, Notified Industrial Area, GIDC Dahej, Bharuch, Gujarat.

The proposal was earlier placed before the EAC (Ind-2) in its 34<sup>th</sup> meeting held during 28<sup>th</sup> to 29<sup>th</sup> April, 2021 wherein EAC deferred the proposal.

The proposal was again considered by the EAC in its 35<sup>th</sup> meeting held on 02<sup>nd</sup> June, 2021 in the Ministry, wherein the project proponent and their consultant M/s. ERM India Pvt. Ltd., presented the EIA/EMP report as per the ToR. The Committee found the EIA/EMP report complying with the ToR and **recommended** the project for grant of environmental clearance.

The EAC, after detailed deliberations, **recommended** the project for grant of environmental clearance, subject to compliance of terms and conditions and general terms of conditions.

Subsequently, an email was received dated 17.06.2021 from project proponent after issuance of Minutes of Meeting (MoM) regarding certain specific conditions to be modified as per their industry operations. Enlisted below are specific conditions which needs to be modified according to the request of PP:

- v.** Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.

**Request by PP:** We request you to please consider not to impose the condition of a guard pond for storm water.

- vii.** Process organic residue and spent carbon, if any, shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF. The ash from boiler shall be sold to brick manufacturers/cement industry.

**Request by PP:** As there is no ash generation in the units proposed in the present proposal we request you to kindly delete the condition for ash disposal or else modify it to prescribe compliance to the Ministry's Notification on Fly Ash.

- ix.** The oily sludge shall be subjected to melting pit for oil recovery and the residue shall be bio-remediated. The sludge shall be stored in HDPE lined pit with proper leachate collection system.

**Request by PP:** We request you to kindly not include this condition in the EC.

- x.** Oil catchers/oil traps shall be provided at all possible locations in rain/ storm water drainage system inside the factory premises.

**Request by PP:** We request you to kindly waive this condition as any oil catcher will only be an impediment to the free flow in the storm water and not serve any purpose other than obstructing the flow.

When the proposal was processed for grant of EC, competent Authority decided to again deliberate the proposal in EAC as per PP request.

The proposal was again considered by the EAC in its 38<sup>th</sup> meeting held on 28-29<sup>th</sup> July, 2021 in the Ministry wherein the project proponent and their consultant M/s. ERM India Pvt. Ltd., presented the certain specific conditions with specific remarks.

After detailed deliberations EAC recommended the exclusion of the condition number (v), (vii) & (x). Condition number (ix) remains unchanged. Also, PP was asked to submit undertaking stating that the discharge in storm water drain shall meet CPCB standards. PP submitted the undertaking in compliance of above. Details are as follows:

<b>Specific Conditions of Ministry</b>	<b>PP request with justification</b>	<b>EAC recommendation</b>

<p>(v). Process effluent / any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.</p>	<p>i. The Dahej Manufacturing Division (DMD), established in 1995, has a well-designed, properly-knit and adequately sized independent effluent and storm water network.</p> <p>ii. Both these networks are so designed that they are independent of each other and hence, there is no possibility of contamination of the storm water stream.</p> <p>iii. DMD site is spread over an area of 618 Ha and thus has a huge catchment area and the guard pond to be established for storing storm water will require a very large capacity of about 6.5 million m<sup>3</sup>.</p> <p><b><i>Considering the network and systems in place at DMD, we request you to please reconsider imposing the condition "<u>Storm water drain shall be passed through guard pond</u>".</i></b></p>	<p>After deliberation EAC has accepted the PP request and exclusion of this condition. PP was asked to submit undertaking stating that the discharge in storm water drain shall meet CPCB standards. PP submitted the undertaking in compliance of this.</p>
<p>(vii). Process organic residue and spent carbon, if any, shall be sent to cement industries. ETP sludge, process inorganic &amp; evaporation salt shall be disposed off to the TSDF. The ash from boiler shall be sold to brick manufacturers/cement industry.</p>	<p>i. Process organic residues and spent carbon is being disposed by co-processing in cement industries. However cement industries are not always in a position to accept these wastes. The wastes then need to be incinerated in common incinerators as provided in the HOWM Rules 2016. This may be allowed as an operational requirement.</p> <p>ii. The disposal in TSDF of ETP sludge has an alternative of coprocessing in cement plants which is being practiced. There is no process inorganic or evaporation salt generated at DMD which needs to be disposed.</p>	<p>After deliberation EAC has accepted PP request and exclusion this condition.</p>

	<p>iii. The present proposal does not involve setting up of any boilers that will generate ash.</p> <p>iv. The ash generated from the existing, operational coal fired boilers in our power plant, is being handled / disposed strictly as per the Notification of the Ministry.</p> <p><b>We request you to kindly delete the condition for ash disposal or modify it to prescribe compliance to the Ministry's Notification on Fly Ash.</b></p>	
<p>(ix). The oily sludge shall be subjected to melting pit for oil recovery and the residue shall be bio-remediated. The sludge shall be stored in HDPE lined pit with proper leachate collection system.</p>	<p>i. DMD being a petrochemical processing unit, there is no recoverable oil in the sludge generated.</p> <p>ii. The generated sludge, is disposed through co-processing or incineration; in compliance to the HOWM Rules, 2016 and authorization granted by SPCB.</p> <p>iii. The sludge generated in ETP is the only sludge generated and cannot be treated by bio-remediation. It is disposed in secure landfill site.</p> <p><b>We request you to kindly not include this condition in the EC.</b></p>	<p>After deliberation EAC has not accepted the request of PP. This condition would remain unchanged.</p>
<p>(x). Oil catchers / oil traps shall be provided at all possible locations in rain / storm water drainage system inside the factory premises.</p>	<p>i. DMD site has units based on gas cracking. The resultant cracked gas is further processed in the downstream units of the gas cracker.</p> <p>ii. As free oil is not envisaged to be generated in the process, oil catchers have not been considered while designing the storm water system at DMD.</p> <p>iii. DMD being a petrochemical complex, we have not</p>	<p>After deliberation EAC has accepted the PP request and exclusion of this condition.</p>

	<p>experienced any such contamination.</p> <p>iv. The storm water is separated from the effluent carrying pipelines and there is no intermingling of the two streams.</p> <p><b>We request you to kindly waive off this condition as provision of oil catchers will only be an impediment to the free flow in the storm water channel and not serve any other purpose.</b></p>	
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The EAC, after detailed deliberations, **recommended** the project for grant of Environmental clearance, subject to compliance of terms and conditions and general terms of conditions as per the earlier 35<sup>th</sup> EAC meeting held on 02-03<sup>rd</sup> June, 2021 and this meeting.

**29<sup>th</sup> July, 2021 (Thursday)**

**Agenda No. 38.4**

**Proposed Expansion of Sugarcane Crushing Capacity from 4800 TCD To 7500 TCD and Distillery Capacity from 45 KLPD To 200 KLPD (Ethanol) Based on Sugarcane Syrup/"B" Heavy Molasses/"C" Molasses/Denature Spirit as Raw Material" at Kacharewadi, Taluka. Mangalwedha, District. Solapur, Maharashtra by M/s Utopian Sugars Limited- Consideration of Environment Clearance.**

**[IA/MH/IND2/211517/2019, J-11011/223/2015-IA II (I)]**

The Project Proponent and the Accredited Consultant M/s. Dr. Subbarao's Environment Centre, Sangli made a detailed presentation on the salient features of the project and informed that:

The proposal is for environmental clearance to the project expansion of Sugarcane crushing capacity from 4800 TCD to 7500 TCD and Distillery Capacity from 45 KLPD To 200 KLPD (Ethanol) Based on Sugarcane Syrup/"B" Heavy Molasses/"C" Molasses/Denature Spirit as Raw Material M/s Utopian Sugars Limited located at Kacharewadi, Taluka. Mangalwedha, District. Solapur, Maharashtra.

The project/activities are covered under category A of item 5 (g) 'Distilleries' and 5 (j) Sugar Industry of the Schedule to the EIA, 2006 and requires appraisal at central level by the sectoral Expert Appraisal Committee (EAC). The proposal has been submitted under the Ministry's EIA Notification, 2006 amendments vide Notification no. S.O. 345(E) dated 17<sup>th</sup> January 2019 & extension of notification S.O. 750(E) dated 17<sup>th</sup> February 2020, S.O 980(E) dated 2<sup>nd</sup> March, 2021. Accordingly, the proposal shall be appraised as category 'B2' project. It was informed that no litigation is pending against the proposal.

Ministry issued EC for the distillery unit of 45 KLPD **Vide F. No. SEIAA-EC-000002299 dated 20.07.2020** and it was commissioned in the year 2020 and as per EIA Notification there is no requirement of Environment Clearance for sugar industry having sugarcane crushing capacity is less than 5000 TCD.

**The details of products and capacity are as under:**

Sr. No.	Unit	Capacity			
		Existing	Proposed	Total	
1.	Sugarcane crushing capacity	4800 TCD	2700 TCD	7500 TCD	
2.	Cogeneration Power Plant	14.8 MW	--	14.8 MW	
3.	Distillery	45 KLPD	155KLPD	200 KLPD	
	Rectified Spirit or	45 KLPD	--	45	Only one product at a time Utilized for EBP.
	Extra Neutral Alcohol or	45 KLPD	--	45	
	Ethanol	45 KLPD	--	45	
	Ethanol	45 KLPD	155 KLPD	200	

Existing land area is 344400 m<sup>2</sup>; no additional land is required for proposed expansion. Industry will develop greenbelt in an area of 33.34 % i.e. 11.48 HA out of total area of the project. The estimated project cost is Rs.125 Crores. Total capital cost earmarked towards environmental pollution control measures for existing capacity is Rs 34.40 Crores and the recurring cost (operation and maintenance) is about Rs 3.50 Crores per annum. For proposed expansion of project capital cost earmarked towards environmental pollution control measures will be Rs. 19.05 Crores and the recurring cost (operation and maintenance) will be Rs. 1.66 Crores. Total Employment will be 110, out of which 70 persons as direct & 40 persons indirect after expansion. Industry proposes to allocate Rs 94 Lakhs (0.75%) 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. Manganga River is flowing at a distance of 9.12 km in North-West direction.



Ambient air quality monitoring was carried out at 2 locations for January 2021 and the monitoring results indicate the ranges of concentrations as: PM<sub>10</sub> (69 – 74 µg/m<sup>3</sup>), PM<sub>2.5</sub> (29 – 30µg/m<sup>3</sup>), SO<sub>2</sub> (8 - 10µg/m<sup>3</sup>) and NO<sub>x</sub> (10 - 15µg/m<sup>3</sup>). As PUC is a B2 project baseline data is not required.

Total fresh water requirement of the plant will be 121 KLPD out of which 78 KLPD for distillery unit shall be met from ground water and rest 43 KLPD for domestic purpose shall be met from Ujani canal. Sugar effluent of 1095 m<sup>3</sup>/day shall be treated in existing sugar ETP by upgrading it. Distillery effluent 243 m<sup>3</sup>/day shall be treated based on concentration incineration and drying in spray dryer.

Power requirement after expansion will be 11000 KVA and will be met from its own existing 14.8 MW co-generation power plant. At present, 2\*500 KVA DG Set with a Stack height of 6 m above roof level is provided as per CPCB norms for the DG sets. Existing unit has one bagasse fired boiler 1\*82.5 TPH and 1\*15 TPH incineration boiler. After the proposed expansion the 1\*80 TPH of bagasse fired boiler for sugar unit and distillery unit will be installed. ESP with a stack of height of 60 m shall be provided.

#### **Details of process emissions generation and its management:**

SO<sub>2</sub> and CO<sub>2</sub> gases shall be scrubbed. CO<sub>2</sub> gas shall be recovered.

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

Pressmud generated will be around 300 MT/D which shall be sold as manure. Fly ash generated will be 711 MT/M. Ash generated shall be used for brick manufacturing in factory premises. The total quantity of ETP sludge generated shall be 50 MT/M, 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.

Certified compliance report submitted by RO, MoEFCC- F.No.: EC-975/RON/2019-NGP/8211 dated 01.07.2021 mentioned one non-compliance and six partial compliances. PP informed that ATR has been submitted to IRO, Nagpur.

As per OM dated 16<sup>th</sup> June, 2021, PP has submitted self-certification in the form of affidavit declaring that the proposed expansion of 155 KLPD will be for manufacturing of fuel ethanol only.

After detailed deliberations, EAC observed that proposed parking area is 16% and suggested that parking area shall be increased to at least 18%. Further, EAC directed that PP shall commit that composting wouldn't be done. PP agreed the same.

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 16<sup>th</sup> June, 2021, project falls in category B2 and the proposed additional capacity of 155 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 after expansion will be 121 KLPD which shall be met from ground and Ujani canal. Prior permission shall be obtained from the concerned regulatory authority/Irrigation division in this regard, and renewed from time to time. No ground water recharge shall be permitted within the premises. Rainwater shall be collected in storage ponds and utilized for plant activities. Ground water monitoring shall be done regularly and report is to be submitted to concerned authorities regularly.
- (v). The spent wash shall be concentrated in MEE and dried in spray drier and as committed composting shall not be done.
- (vi). CO<sub>2</sub> 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). 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 be completed within time as proposed.
- (xiv). There shall be at least 18% parking space out of total area of plant site which shall be earmarked for parking of vehicles for raw materials and finished products, 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. 38.5**

**Expansion of Molasses Based Distillery from 60 KLPD to 120 KLPD by installation of new 60 KLPD Ethanol Plant at Village Laksar, Tehsil Laksar, District Haridwar, Uttarakhand by M/s. Rai Bahadur Narain Singh Sugar Mills Limited (Distillery Division)- Consideration of Environment Clearance.**

**[IA/UK/IND2/218585/2021, J-11011/618/2010-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 expansion of Molasses Based Distillery from 60 KLPD to 120 KLPD by installation of new 60 KLPD Ethanol Plant by Rai Bahadur Narain Singh Sugar Mills Limited located at Village Laksar, Tehsil Laksar, District Haridwar, Uttarakhand.

The project/activities are covered under category A of item 5 (g) 'Distilleries' of the Schedule to the EIA, 2006 and requires appraisal at central level by the sectoral Expert Appraisal Committee (EAC). The proposal has been submitted under the Ministry's EIA Notification, 2006 amendments vide Notification no. S.O. 345(E) dated 17<sup>th</sup> January 2019 & extension of notification S.O. 750(E) dated 17<sup>th</sup> February 2020, S.O 980(E) dated 2<sup>nd</sup> March,2021. Accordingly, the proposal shall be appraised as category 'B2' project. It was informed that no litigation is pending against the proposal.

Ministry had issued EC earlier vide letter no. J-11011/78/2005-IA-II (I) dated 24<sup>th</sup> May, 2006 to the existing operational project in favor of Rai Bahadur Narain Singh Sugar Mills Limited (Distillery Division).

**The details of products and capacity are as under:**

S. No.	Unit	Existing	Proposed Additional	Total after expansion	Remarks
1.	Distillery	60 KLPD (Ethanol /ENA/ RS)	New 60 KLPD Ethanol Plant	120 KLPD	Additional increased 60 KLPD capacity will be Ethanol only

Existing land area is 14.5 hectares (145000 m<sup>2</sup>). The proposed expansion will be done within the existing plant premises so no additional land is required. Industry has already developed greenbelt in an area of 35% i.e. 5.0 ha (50000 m<sup>2</sup>) out of total area of the project. The estimated project cost is Rs. 33.0 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. 1.5 Crore per annum. Total Employment will be 56 persons as Permanent & 7 persons as temporary during operation phase after expansion. Industry proposes to allocate Rs. 66 Lakhs @2 % of total project cost towards Social developmental activities.

There are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/ Elephant Reserves, Wildlife Corridors etc., within 10 km distance from the plant site. There is 1 Reserved Forest (RF) within 10 km radius namely Pathri Reserve Forest (3.0 km in NE direction). River i.e. Harwaha Nadi (1.0 km in West direction), Pathari Rao (1.5 km in NE direction), Pir Khala (2.5 km in NNE direction), Begam Nadi (4.0 km in ESE direction), Bodi Nadi (5.0 km in WSW direction), Solani River (5.0 km in West direction), Banganga River (5.5 km in SE direction), Pathawa Nadi (5.5 km in North direction) are flowing within 10 km radius.

Total fresh water requirement after expansion will be 474 KLPD which will be met from Groundwater and condensate water of their own Sugar Mill. Effluent of 886 KLPD quantity after expansion will be treated through state of art CPU (1050 KLPD Capacity) Treatment Plant (Anaerobic- UASB Reactor, Extended Aeration ASP, Clarifiers, Filters, & Chlorine chamber). The plant will be based on Zero Liquid discharge system.

Power requirement for distillery after expansion will be 3.0 MW including existing 1.5 MW and will be met from 30 MW Co-generation Power Plant in adjacent own Sugar Mill & D.G. Sets (for emergency). Sugar Mill Plant has one DG set of capacity 1010 KVA which is used as standby during power failure. Adequate Stack height (6 m) has been provided as per CPCB norms to the existing DG set. No additional DG set is proposed. Existing 70 & 90 TPH Bagasse & Biogas fired boilers are present in own adjacent Sugar Mill. A 30 TPH boiler is kept as standby in Sugar Mill campus for emergency operations which will be used as and when required for distillery operations. No additional boiler will be installed. Wet Scrubber with a stack height of 60 m is already installed in existing 70 & 90 TPH boilers for controlling the particulate emissions within the statutory limit.

#### **Details of process emissions generation and its management:**

- Wet Scrubber with stack of adequate height (60 m) is already installed with the boilers to control the particulate and gaseous emissions as per CPCB guidelines. No new boiler is proposed.
- CO<sub>2</sub> generated during the fermentation process sold to vendors.
- Online Continuous Emission Monitoring System has been installed with the existing stack and data transmitted to CPCB/SPCB servers.

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

- Presently, Spent Wash generated during the process, is being first treated in Bio-Digester (Bio- Methanation) followed by Multi-effect evaporator and then used for Bio-composting. Bio-compost generated (9922 TPA) is sold to farmers.
- In proposed new Ethanol Plant, spent wash generated in the new Ethanol Plant will be treated in bio-digester (bio-methanation) followed by Multi Effect Evaporator and concentrated spent wash will be dried in Spray Dryer and the powder will be used as potash rich manure (45 TPD).
- ETP Sludge is being/will be dried and given to farmers to be used as organic manure.
- Used oil (1 MT/Year) generated from the plant machinery/ gear boxes as hazardous waste is being/will be sold out to the CPCB authorized recycler.

Certified EC compliance Report has been obtained by Regional Office, MoEFCC, Dehradun vide F. No: NC-RO/UTR/IND-3/31/2006/2251 dated

08<sup>th</sup> February, 2021 wherein one non-compliance and two partial compliances were observed. PP has submitted ATR to IRO Dehradun.

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

After detailed deliberations, EAC desired PP to submit ash disposal plan. PP submitted that there is no boiler in the distillery unit. The distillery unit is interlinked with adjacent own sugar mill and the requirement of power and steam is fulfilled from the sugar mill. The adjacent sugar mill has 3 boilers viz., 90 TPH, 70 TPH & 30 TPH (Standby) which are bagasse and biogas based. The ash generated from the sugar mill is being and will be given to the nearby brick manufacturing units. Ash disposal is being and will be done as per the guidelines of CPCB and SPCB.

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 16<sup>th</sup> June, 2021, project falls in category B2 and the proposed additional capacity of 60 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 after expansion will be 474 KLD which will be met from ground water. Prior permission shall be obtained from the concerned regulatory authority/Irrigation division in this regard, and renewed from time to time. No ground water recharge shall be permitted within the premises. Rainwater shall be collected in storage ponds and utilized for plant activities. Ground water monitoring shall be done regularly and report is to be submitted to concerned authorities regularly.
- (v). The spent wash generated shall be treated by bio-methanation followed by Multi Effect Evaporator and concentrated spent wash will be dried in Spray Dryer.
- (vi). CO<sub>2</sub> 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). 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 be completed within time as proposed.
- (xiv). There shall be 20% parking space out of total area of plant site which shall be earmarked for parking of vehicles for raw materials and finished products, 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. 38.6**

**Expansion of sugarcane crushing capacity from 12000 TCD to 18000 TCD and molasses based distillery from 160 KLPD to Multi-feed (B heavy, Cane Juice, Grains) based 300 KLPD distillery unit at Shetphalgade, Tehsil- Indapur, District Pune, Maharashtra, by Baramati Agro Limited (Unit-1)- Reconsideration of Environment Clearance.**

**[IA/MH/IND2/197038/2016, J-11011/106/2016-IA-II (I)]**

The proposal was earlier placed before the EAC (Ind-2) in its 33<sup>rd</sup> meeting held during 07<sup>th</sup> to 08<sup>th</sup> April, 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:

<b>S.No</b>	<b>ADS</b>	<b>Reply of PP</b>	<b>Observation of EAC</b>
1.	Proper certified compliance report shall be presented along with action taken report for various non-complied points.	PP has submitted the detailed action plan along with costing and time line against the partial non-compliance points.	EAC found the action plan satisfactory.
2.	Action plan for construction of rainwater collection ponds inside plant premises with details i.e. quantity of rainwater collected, capacity and dimensions of storage pond and their utilization for plant activities.	PP has submitted the design details of rainwater and storm-water management plan.	EAC found the reply satisfactory.
3.	Revised water balance shall be submitted taking into account of collection of rainwater.	PP has submitted the revised water balance taking account of collection rain water which resulted in reduction of fresh water	EAC found the reply satisfactory.

		by 100 MT/D for distillery unit.	
4.	Action plan for proper and concrete development of parking area with time frame to be submitted.	PP informed that parking area, cane yard and all the internal roads shall be concreted and submitted the layout plan for the same.	EAC found the same satisfactory.
5.	Action plan for development of road outside plant premises so that nearby farmers can be benefitted as a part of CER and dust problems faced during vehicle movement are avoided.	PP informed that industry has earmarked Rs. 26 Lakhs for the maintenance of roads outside the premises of the industry and activity has been included in the CER Plan. PP submitted that amount shall be spent within 5 years.	EAC found the same satisfactory.

After acceptance of Additional Details Sought Reply submitted by PP the project was again placed in 38<sup>th</sup> EAC meeting and following information has been submitted:

The Project Proponent and the accredited Consultant M/s SD Engineering Services 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 Sugarcane crushing capacity from 12000 TCD to 18000 TCD and molasses based distillery from 160 KLPD to multifeed (B-heavy, cane juice, grains) based 300 KLPD distillery unit by M/s. Baramati Agro Limited located at village Shetphalgade, Taluka- Indapur, District-Pune, Maharashtra.

The project/activities are covered under category A of item 5 (g) 'Distilleries' and 5 (j) 'Sugar Industry' of the Schedule to the EIA, 2006 and requires appraisal at central level by the sectoral Expert Appraisal Committee (EAC). The proposal has been submitted under the Ministry's EIA Notification, 2006 amendments vide Notification no. S.O. 345(E) dated 17<sup>th</sup> January 2019 & extension of notification S.O. 750(E) dated 17<sup>th</sup> February 2020, S.O 980(E) dated 2<sup>nd</sup> March,2021. Accordingly, the proposal shall be appraised as category 'B2' project. It was informed that no litigation is pending against the proposal.

Ministry had issued EC earlier vide letter No. J-11011/106/2016-IA-II (I) dated 20<sup>th</sup> March 2017 to the existing project from MoEF & CC, New Delhi

for expansion of sugar unit (4500 TCD to 12000 TCD), Cogeneration Power Plant (20 MW to 70 MW) and Distillery Unit (60 KLPD to 160 KLPD) at post Shetphalgade, Tehsil Indapur, District Pune, Maharashtra in favour of M/s. Baramati Agro Limited

**The details of products and capacity are as under:**

Sr. no.	Description	Unit	Existing Capacity		Proposed Capacity	Total	Remark
			As per CTO	As per EC			
1.	Sugarcane crushing capacity	TCD	9000*	12000	6000	18000	None
2.	Co-generation Power	MW	30*	70	0	70	None
3.	Distillery Unit						
a	Rectified Spirit or Extra Neutral Alcohol	KLPD	160*	160	0	160	Only one product at a time (No Change proposed)
b	Ethanol	KLPD	0	0	140	140	For Ethanol Blending Programme

Existing land area is 477600 m<sup>2</sup> & no additional land will be used for proposed expansion. Industry will develop greenbelt in an area of 35.59 % i.e., 170000 m<sup>2</sup> out of net plot area of the project. The estimated project cost is Rs 544.3013 Crores including existing investment of Rs. 419.3013 Crores. Total capital cost earmarked towards environmental pollution control measures is Rs. 1100.00 Lakhs and the Recurring cost (operation and maintenance) will be about Rs. 165.00 Lakhs per annum. Total Employment will be 450 persons as direct & 500 to 1000 persons as indirect after expansion. Industry proposes to allocate Rs. 0.9375 crores @ of 0.75 % 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. Water body Nimbodi Lake is at a distance of 3 Km in North East Direction.

Ambient air quality monitoring was carried out at nine locations during October 2020 to December 2020 and the baseline data indicates the ranges of concentrations as: PM10 43.65 to 74.68 µg/m<sup>3</sup>), PM 2.5 (22.05 to 54.36 µg/m<sup>3</sup>), SO<sub>2</sub> (5.12 – 24.51 µg/m<sup>3</sup>), NO<sub>2</sub> (9.21 – 28.24 µg/m<sup>3</sup>)

and CO (0.08 to 1.38 mg/m<sup>3</sup>). AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.05 µg/m<sup>3</sup>, 0.04 µg/m<sup>3</sup>, 0.51 µg/m<sup>3</sup>, and 0.20 µg/m<sup>3</sup> with respect to PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>x</sub> and NO<sub>x</sub> respectively. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

Total fresh water requirement for the integrated unit shall not exceed 907 MT/D, 713 MT/D, 1044 MT/D and 441 MT/D based on raw material used 'C' molasses + B heavy molasses, 'B' heavy molasses, sugar cane juice and grains respectively. It will be met from Khadakwasla Canal and Ujani Dam. Effluent of quantity 7347 MT/Day (Sugar factory trade effluent- 660 MT/Day, Cogeneration power plant effluent- 237 MT/Day, Excess Condensates 3600 MT/Day, existing 60 KLPD Spent wash 570 MT/Day, 240 KLPD Distillery concentrated spent wash 270 MT/Day, Distillery Condensates and non -process effluent - 1798 MT/Day and domestic effluent of 212 MT/Day). Sugar (660 MT/Day) and Co-generation power plant (237 MT/Day) effluent shall be treated in existing sugar factory ETP based on primary, secondary and tertiary treatment and disposed on land for irrigation. Excess condensates from sugar unit (3600 MT/Day) shall be treated in Sugar Condensates Polishing Unit (CPU) and reused as process water or makeup water for boiler and cooling towers. Existing 60 KLPD Distillery spentwash (570 MT/Day) shall be treated based on biomethanation followed by concentration to 120 MT/Day followed by bio-composting. The condensates 450 MT/Day shall be treated in distillery CPU and recycled back to process and utilities. The effluent generated from 240 KLPD distillery shall be treated based on Concentration and Incineration. The plant will be based on Zero Liquid discharge system.

Power requirement after expansion will be 23.25 MW including existing 15.21 MW and will be met from own Co- generation power from existing 30 MW & proposed 40 MW TG attached to Bagasse/multi-feed fire boiler. Existing unit has 1 No. of DG sets of 500 kVA capacity, additionally 1\*500 KVA DG set is used as standby during power failure. Stack (height 6m) will be provided as per CPCB norms to the proposed DG sets. Existing unit has 1\* 40 TPH, 1\*110 TPH bagasse fired boiler for sugar and cogeneration power plant and 1\*10 TPH and 1\*32 TPH Incinerator boiler for distillery unit. Additionally, 1\*110 TPH and 1\*50 TPH bagasse fired boilers will be installed. Electrostatic Precipitator (ESP) with a stack of height of 75 m will be installed for controlling the particulate emissions within the statutory limit for the proposed boilers.

### **Details of process emissions generation and its management:**

#### **Air pollution control measures**

Sr . No	Boiler details	Fuel	Quantity	Source	Stack Height in Meter s	APC Equipme nt
<b>Existing</b>						
<b>Sugar Unit</b>						
1	1*110 TPH	Bagasse	1080 MT/Day	Own sugar unit	65	ESP
2	1*40 TPH	Bagasse	418 MT/Day	Own sugar unit	49	ESP
3	DG Set	HSD	110 Ltr/hr	Open Market	6	Acoustic Enclosure
<b>Distillery unit</b>						
1	1*10 TPH	Biogas + Bagasse	Biogas: 32000 m3/Day Bagasse : 48 MT/Day	Anaerobic digester from distillery Own sugar unit	40	Wet Scrubber
2	1* 32 TPH Incinerator boiler	Concentrated Spent wash + Coal	CSW: 270 MT/Day Coal: 85 MT/Day	Distillery Spent wash Open market	70	ESP
3	DG Set (500 KVA)	HSD	110 Ltr/Hr	Open Market	6	Acoustic Enclosures
<b>Proposed</b>						
<b>Sugar Unit</b>						
1	1*110 TPH	Bagasse	1080 MT/Day	Own sugar unit	75	ESP
2	1*50 TPH	Bagasse	520 MT/Day	Own sugar unit		
<b>Distillery Unit</b>						
No additional boiler shall be installed for the proposed expansion.						

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

**Details of non-hazardous waste generated and its disposal**

Sr. No.	Description of waste	Quantity			UOM	Mode of collection and disposal
		Existing	Proposed	Total		
<b>Sugar and cogeneration unit</b>						
1	Fly/ Boiler ash	18.73	20	38.73	MT/D	Sell to brick manufacturers
2	ETP Sludge	150	150	300	MT/A	After drying, it will be sold for brick kiln
3	Press mud	360	360	720	MT/D	Mixed with concentrated spent wash as filler material and treated in composting
<b>Distillery unit</b>						
1	Incineration boiler ash	26	28	54	MT/D	Sold as potash rich manure to farmers after mixing with press mud
2	Fly/ Boiler ash	0.6	--	0.6	MT/D	Sell to brick manufacturers
3	Yeast Sludge					
a	C Molasses	15	0	15	MT/D	After drying, it will be sold for brick kiln
b	B Heavy Molasses	13	11	24		
c	Cane Juice	0	5	5		
d	Grains	0	10	10		
<b>Other solid waste</b>						
1	Canteen waste	1.5	1.0	2.5	MT/D	Composting

**Details of hazardous waste generated and its disposal:**

Sr. No.	Category	Description of waste	Quantity	Mode of Collection and Disposal
1.	5.1	Used Oil	2.0 KL/A	Shall be collected in Leak Proof Containers and utilized as lubricant for bullock carts

Certified EC compliance report obtained from Regional Officer, MoEF& CC, Nagpur vide File No. EC-5-87/2008/7404 Dated 02.11.2020. Site visit of RO was carried out on 05.10.2020. Partial compliance issued against Specific & general conditions. Industry complied the partial compliance & submitted action plan report to RO, MoEF&CC on 28.11.2020.

As per OM dated 16<sup>th</sup> June, 2021, PP has submitted self-certification in the form of affidavit declaring that the proposed expansion of 140 KLPD will be for manufacturing of fuel ethanol only.

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 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 has found the additional information submitted by the project proponent to be satisfactory and addressing the issues raised by the Committee. 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, subject to compliance of terms and conditions as under, and general terms of conditions at Annexure: -

- (i). As per OM dated 16<sup>th</sup> June, 2021, project falls in category B2 and the proposed additional capacity of 140 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 for the integrated unit shall not exceed 907 MT/D, 713 MT/D, 1044 MT/D and 441 MT/D based on raw material used 'C' molasses + B heavy molasses, 'B' heavy molasses, sugar cane juice and grains respectively. It shall be met from Khadakwasla Canal and Ujani 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. Ground water monitoring shall be done regularly and report is to be submitted to concerned authorities regularly. Rainwater storage ponds shall be constructed and utilized within plant activities as committed.
- (v). The spent wash/other concentrates shall be treated by concentration followed by incineration.
- (vi). CO<sub>2</sub> 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. Budget of Rs. Forty (40) lakhs shall be invested for OHS management.
- (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. Greenbelt development shall be 2500 trees per hectares as committed by PP.
- (xiii). 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 be completed within time as proposed.
- (xiv). There shall be adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products, and no parking to be allowed outside on public places. Out of the total project area, 20% shall be allotted solely for parking purposes.
- (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.

## **38.7. Any other items with the permission of the Chair.**

### **Agenda No. 38.7.1**

**Clarification on applicability of Environment Clearance as per EIA Notification 2006 for our proposed project activity of manufacturing of recycled PET Granules/Chips from post-consumer PET Bottles for M/s JB RPET Industries Pvt. Ltd.- regarding.**

The details as informed to EAC for manufacturing activity of recycled PET bottles are mentioned as under:

#### **Process Description:**

##### **1<sup>st</sup> Process: - From PET bottles to Hot washed PET flakes**

**Debaler Machine** – As PET bottles (with caps & labels) often come in bales, compacted bundles tied together with metal wires, the first stage is to get the material into a “free flowing” stream. The “debaler” breaks apart the bales allowing the plastic bottles within to drop onto the belt conveyor that moves the bottles onto the next step.

**Trommel Separator** – This is a large, slow rotating machine used to remove small pieces of contamination. At the core of the trommel separator, there is a large mesh screen tunnel that rotates between 6-10 rotations per minute. The holes on this tunnel are small enough for not making PET bottles fall through, but they are large enough for small particles of contamination for removal.

**Wet Granulator / Crusher** – The bottles will be cut into “flakes”, or small pieces, via this wet granulator. A granulator uses an open rotor mounted with heavy-duty knives that spin at high speeds. As the PET bottles enter the granulator’s cutting chamber, these rotating knives come into contact with stationary knives cutting the bottles into small pieces. A screen with small holes between 12-18mm in diameter will be used to control the size of the flakes. In such scenario, the PET plastic will continue to be cut within the chamber until it is small enough to fall through the holes on this screen. All the while, water will be sprayed into the cutting chamber which partially will be washing the bottles while acting as a lubricate to reduce friction of the knives and plastic.

**Label Separator** – The stream of plastic leaving the granulator is composed of PET flakes, paper and PP/PE/PVC film from the labels, and

PP/PE rigid plastics from the bottle caps. This mixed stream is now ready to be sorted. The first step is the label separator where a column of pressured air blows away the lighter paper and plastic film into a separate collection tank.

**Sink / Float Separation Tank** – A large tank of water used to separate materials that sink from those that float. This is the final separation equipment in our PET bottle washing line that effectively removes the left-over plastic films from labels and PP/PE bottles caps. As both the labels and bottle caps float in water, the sinking PET flakes can easily be removed to be further processed in the next piece of equipment.

**Hot Washer for PET Flakes** – Similar to a washing machine in nature, this stream of PET flakes will be washed using boiling hot water which sterilizes and further gets rid of contaminants such as glues (from the labels being glued on), grease/oils, and difficult to remove left-overs (beverage/foods) from the equation

**Friction Washer** – A secondary friction washer (cold water) is used to cool and further clean the PET flakes in a scrubbing manner.

**High Speed Dewatering Machine** – The dewatering machine uses centrifugal or “spinning” force to remove a portion of the water from the PET flakes. It’s a cost-effective way to dry the PET flakes before it’s thermally dried. Thermal drying consumes much more energy.

**Thermal Dryer + Cyclone Separator** – The partially dried PET flakes can now be completely dried using the thermal dryers. Within the long tubes of the thermal dryers, hot air and the PET flakes will be mixed together where the leftover moisture is dehydrated. The final cyclone separator mixes the hot, moist air with a flow of cold air cooling the PET flakes in preparation for storage. The cyclone separator is also the last defence against fines such as dust.

**Product Silo** – A large storage tank for the clean, dry PET flakes.

**2<sup>nd</sup> Process is enumerated as below: -**

<b>Sr. No.</b>	<b>Process Name</b>	<b>Process Description</b>
1	Flakes Charging and washing with EG (Ethyl Glycol)	PET Flakes are washed with hot (Mono Ethyl Glycol - MEG) in a vessel to remove contamination like Dust particles

2	Flakes Drying	PET Flakes are rinsed in a friction washer where excess EG is drained out and flakes are transferred to next process
3	Pre-Glycolysis Reactor	Washed PET Flakes are fed into this reactor for melting process. Mono Ethyl Glycol is also added in to this reactor @30% of PET Flake's weight. Thereafter the material remains in this reactor at 180-to-220-degree temperature for 3-4 hours with agitator. The flakes get melt here and glycolysis is triggered in this reactor with the PET melt. The resultant product is transferred to next process
4	Glycolysis Reactor (Depolymerization)	MEG mixed PET melt is processed in a reactor at certain temperature (200-250 Degree) with mechanical agitator for certain time (3-4 hours). So that depolymerization of with PET is achieved, the resultant material is called as Oligomer.
5	Filtration	Said oligomer is passed through filters with high pressure to remove other contamination and suspended particles.
6	Pre-Poly 1	Oligomer is transferred to this vessel to extract free glycol at a certain temperature & pressure under vacuum conditions.
7	Pre-Poly 2(Polymerization)	After addition of additives & catalyst. Oligomer is transferred to this tank to further extract glycol and increase the IV to 0.30 dl/gm.Polymerization reaction starts here
8	Finisher(Polymerization)	Oligomer is transferred to this tank to further extract glycol and increase the IV to 0.64 dl/gm.Polymerization reaction completes here
9	CPF	Polymer is transferred through candle filters for further filtration.
10	Granulation System	Polymer melt is converted into solid state and granulated to form chips/pellets

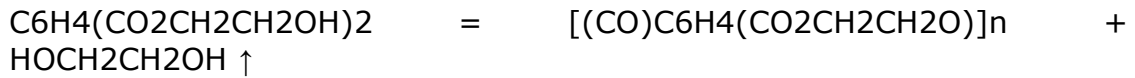
### Chemical reaction:

The post consumed PET Bottle flake is processed with glycol to depolymerization and then that product is again processed for polycondensation for end product.





BHET = PET + Glycol



After detailed discussions and deliberations on the matters related to environmental pollution, various balances i.e. water/mass balances, emissions, effluents from the processes involved, EAC members decided that the project activity of manufacturing of recycled PET Granules/Chips from post-consumer PET Bottles does not require Environmental Clearance and the project proponent can operate the existing/proposed facilities after obtaining requisite consents from State Pollution Control Board and other agencies as applicable.

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## **ANNEXURE**

### **GENERAL CONDITIONS FOR ENVIRONMENTAL CLEARANCE**

- (i) No further expansion or modifications in the plant, other than mentioned in the EIA Notification, 2006 and its amendments, shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change/SEIAA, as applicable. In case of deviations or alterations in the project proposal from those submitted to this Ministry for clearance, a fresh reference shall be made to the Ministry/SEIAA, as applicable, to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.
- (ii) The energy source for lighting purpose shall be preferably LED based, or advanced having preference in energy conservation and environment betterment.
- (iii) The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under the Environment (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).
- (iv) The company shall undertake all relevant measures for improving the socio-economic conditions of the surrounding area. CER activities shall be undertaken by involving local villages and administration and shall be implemented. The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment.
- (v) The company shall earmark sufficient funds towards capital cost and recurring cost per annum to implement the conditions stipulated by the Ministry of Environment, Forest and Climate Change as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so earmarked for environment management/ pollution control measures shall not be diverted for any other purpose.

- (vi) A copy of the clearance letter shall be sent by the project proponent to concerned Panchayat, Zilla Parishad/Municipal Corporation, Urban local Body and the local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal.
- (vii) The project proponent shall also submit six monthly reports on the status of compliance of the stipulated Environmental Clearance conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional Office of MoEF&CC, the respective Zonal Office of CPCB and SPCB. A copy of Environmental Clearance and six monthly compliance status report shall be posted on the website of the company.
- (viii) The environmental statement for each financial year ending 31<sup>st</sup> 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**

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

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