GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE
(IA DIVISION-INDUSTRY-3 SECTOR)
*****

Dated: 02.01.2023

MINUTES OF THE 44th EXPERT APPRAISAL COMMITTEE (INDUSTRY-3 SECTOR) MEETING HELD ON 16 & 19th DECEMBER, 2022

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

Time: 10:30 AM onwards

(i) Opening Remarks by the Chairman

Prof. (Dr.) A.B. Pandit, Chairman welcomed the Committee members and opened the EAC meeting for further deliberations.

(ii) Details of Agenda items by the Member Secretary

The Member Secretary apprised the Committee about the details of Agenda items to be discussed during this Expert Appraisal Committee (EAC) meeting.

(iii) Confirmation of Minutes of the 43rd Meeting of the EAC (Industry-3 Sector) held during November 14-15, 2022 through VC.

The EAC noted that the final minutes of the above meeting were issued after incorporating the comments offered by the members and approved by the Chairman. The EAC confirmed the MoM.

Agenda No. 44.1

Expansion of pesticide technical and pesticide specific intermediates manufacturing unit at Plot No. 3405/3406/3460A, Notified Industrial Estate, GIDC, Taluka Ankleshwar, District Bharuch (Gujarat) by M/s UPL Ltd. – Re-consideration of Amendment in Environmental Clearance

[Proposal No. IA/GJ/IND3/272580/2022; File No. J-11011/77/2002-IA-II(I)]

1. The Proposal is for the amendment in Environmental Clearance granted by the Ministry vide letter no. J-11011/77/2002-IA-II(I) dated 10.1.2020 for the project "Expansion of pesticide technical and pesticide specific intermediates manufacturing unit at Plot No.3405/ 3406/3460A, Notified Industrial Estate, GIDC, Taluka Ankleshwar, District Bharuch, Gujarat by M/s UPL Ltd.

2. The project proponent has requested for amendment in the EC with the details as under:

S. No.	Para of EC issued by MoEF & CC	Details as per the EC	To be revised/ read as	Justification/ Reasons
1	**Subject**	Expansion of Pesticide Technical and Pesticide Specific Intermediates Manufacturing Unit by **M/s UPL Ltd. at Plot No. 3405/3406/3460A**, Notified Industrial Estate, GIDC, Taluka Ankleshwar, District Bharuch (Gujarat) – Environmental Clearance – reg.	Expansion of Pesticide Technical and Pesticide Specific Intermediates Manufacturing Unit by **M/s UPL Ltd. at Plot No. 3405/3406/ 3460A/3460B/ 3461** Notified Industrial Estate, GIDC, Taluka Ankleshwar, District Bharuch(Gujarat) - Environmental Clearance – reg.	• Acquired New Adjacent Plot No. 3460B & 3461 Located in Notified Industrial Area, GIDC, Ankleshwar, admeasuring area of 39375 m^2 • Propose addition of Plot No. 3460B & 3461 to Existing Granted EC without Increase in Production Capacity & Pollution Load • Proposal is for change in Physical Boundary only. • The Existing Site & New Plot are located in Notified Industrial Area, GIDC, Ankleshwar. • **Request to add adjacent Plot No. 3460 B & 3461 in Subject Line Item.**

S. No.	Para of EC issued by MoEF & CC	Details as per the EC	To be revised/ read as	Justification/ Reasons
2.	**EC Para No. 2**	The Ministry of Environment, Forest and Climate Change has examined the proposal for Environmental Clearance to the project for Expansion of Pesticide technical and pesticide specific Intermediates manufacturing unit from 4069	The Ministry of Environment, Forest and Climate Change has examined the proposal for Environmental Clearance to the project for Expansion of Pesticide technical and pesticide specific Intermediates manufacturing unit from 4069 TPM to 9564 TPM by M/s UPL Ltd. in **an area of 105000 Sq M located at Plot no. 3405/3406/ 3460A/3460 B /3461**	• Acquired New Adjacent Plot No 3460B & 3461 Located in Notified Industrial Area, GIDC, Ankleshwar, admeasuring area of 39375 M^2 • We propose addition of Plot No 3460B & 3461 to Existing Granted EC without Increase in Production Capacity & Pollution Load • We Request to Merge Existing Plot Area (69625 Sq M) with New Plot Area (39375 Sq M) & Addition of Adjacent Plot Number 3460B & 3461.

<table>
<tr><th>S. No.</th><th>Para of EC issued by MoEF & CC</th><th>Details as per the EC</th><th>To be revised/ read as</th><th>Justification/ Reasons</th></tr>
<tr><td></td><td></td><td>TPM to 9564 TPM by M/s UPL Ltd in an area of 65,625 Sq M located at Plot no 3405/3406/3460 A, Notified industrial Estate, GIDC, Taluka Ankleshwar, District Bharuch (Gujarat)</td><td>Notified industrial Estate, GIDC, Taluka Ankleshwar, District Bharuch (Gujarat)</td><td></td></tr>
<tr><td>3</td><td>EC Para No. 4</td><td>Existing Land Area is 65625 Sq M and No addional land</td><td>Existing Land Area is 105000 Sq M and No additional land required for</td><td>Addition of New Plot Area in Sq. m & Amendments with respect to Cost and Green Belt. The area details are tabulated below. The existing and new plot are located in GIDC Ankleshwar.
<table>
<tr><th>S. No.</th><th>Particular</th><th>Area in sq. m</th><th>% of existin</th><th>Additional Area</th><th>Total area in sqm after</th><th>% of total plot after</th></tr>
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S. No.	Para of EC issued by MoEF & CC	Details as per the EC	To be revised/ read as	Justification/ Reasons
		required for the proposed expansion. Industry has already developed green belt /plantation in an area of 14226.58 sqm out of the total area of the project. The industry has also requested/signed MoU with GIDC for additional land for green belt	the proposed expansion. Industry has already developed green belt /plantation in an area of 13911.58 sqm out of the total area of the project. The industry has also planned more areas under green belt in an area of 19314.42 m^2 at Plot No **3460B/3461**. The Industry has developed 20934 m^2 greenbelt in a nearby village (Mandava) and 4790	

			g total plot	**(New plot 39375 m2)**	**amalgamation (105,000 m2)**	**amalgamation**
GB1	Green belt within UPL 2 premises	13911.58	**21.20**	19314.42	33226.00	**31.64**
GB2	Green belt within GIDC Ankleshwar	47900.00	**7.29**	4046.00	8836.00	**8.41**
A	Overall Green Belt within plot and within GIDC (GB1+GB2)	18701.58	**28.49**	23360.42	42062.00	**40.05**
GB3	Green Belt Development in	20934.00	**31.89**	-	20934.00	**19.93**

S. No.	Para of EC issued by MoEF & CC	Details as per the EC	To be revised/ read as	Justification/ Reasons
		development. **The estimated project cost is Rs. 445.89 Crores** Total Capital cost earmarked towards Environmental pollution control measures is Rs. 26.02 Crores and recurring cost (O & M) will be about Rs. 34 Crores per annum. Total	m^2 within GIDC. Also Planed more 4046 Sq M green belt in GIDC Area. **The estimated project cost is Rs. 477.89 Crores** Total Capital cost earmarked towards Environmental pollution control measures is Rs. 26.02 Crores and recurring cost (O & M) will be about Rs. 34 Crores per annum. Total Employment will be 103 persons direct &	

	Village Mandva						
B	Total Green belt including internal, within GIDC, and Village Mandva (GB1 + GB2 + GB3)	39365.00	**60.38**	-	62996.00	**59.98**

S. No.	Para of EC issued by MoEF & CC	Details as per the EC	To be revised/ read as	Justification/ Reasons
		Employment will be 103 persons direct & 150 persons indirect after expansion.	150 persons indirect after expansion.	
4.	**EC Para No. 12**	Based on the proposal submitted by the project proponent and recommendations of EAC (**Industry 2**), The MoEF&CC hereby accords Environmental Clearance to the project	Based on the proposal submitted by the project proponent and recommendations of EAC (**Industry 3**), The MoEF&CC hereby accords Environmental Clearance to the project for Expansion of Pesticide technical and pesticide specific	Request to add adjacent Plot No. 3460/B & 3461 in the project title.

S. No.	Para of EC issued by MoEF & CC	Details as per the EC	To be revised/ read as	Justification/ Reasons
		for Expansion of Pesticide technical and pesticide specific Intermediates manufacturing unit from 4069 TPM to 9564 TPM by **M/s UPL Ltd at Plot No. 3405/3406/3460A,** Notified Industrial Estate, GIDC, Taluka – Ankleshwar, District Bharuch (Gujarat), under	Intermediates manufacturing unit from 4069 TPM to 9564 TPM by **M/s UPL Ltd. at Plot No. 3405/3406/3460A/ 3460B / 3461** Notified Industrial Estate, GIDC, Taluka – Ankleshwar, District Bharuch (Gujarat), under the provisions of the EIA Notification, 2006, subject to compliance of the terms and conditions as below:-	

S. No.	Para of EC issued by MoEF & CC	Details as per the EC	To be revised/ read as	Justification/ Reasons
		the provisions of the EIA Notification, 2006, subject to compliance of the terms and conditions as below:-		

3. The proposal was placed in 32nd EAC Meeting held on May 31, 2022, wherein the EAC deferred the proposal for want of requisite information. Reply to the same was submitted by the PP, which is as follows:

S. No.	Queries Raised by EAC	Reply by the PP	Observation of EAC
1.	The Committee observed that PP acquired additional land in the Plot Nos. 3460 B and 3461, which are adjacent to existing units and located in the same notified Industrial Area. The PP submitted the Greenbelt plan for the proposed change, but the PP is not	The Project is located at Plot No. 3405, 3406, 3460/A, GIDC Notified Industrial Estate, Ankleshwar, Dist: Ankleshwar, Gujarat-, with total plot area 65625 m^2. Now with the allotment of plot No. 3460/B and 3461 by GIDC Ankleshwar on 04.03.2022 with area of 39375 m2, we seek amendment in EC for a total plot area of 105000 m^2	The EAC found the reply submitted by the PP to be satisfactory.

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<td>able to justify the existing Greenbelt developed so far</td>
<td>Industry already developed a greenbelt in an area of 13911.58 m^2 (@21.19%) out of the total existing plot area of @65625 m^2
Additional greenbelt @19314.42 m^2 (49.05%) of the proposed plot area @39375 m^2 will be developed.
Thus, after expansion, the plot area will be 105000 m^2 and the total green area will be 33226 m^2 (31.64 %.
In addition, we have developed 20934 m^2 greenbelt in nearby village (Mandava) and 4790 m^2 within GIDC.
UPL has developed greenbelt as an integral part of development of its plant & facilities 13911.58 m^2 21.19%) green area was developed out of the total existing plot area of 65625 m^2. Now with the proposed addition of adjacent plots (Plot No. 3460/B and 3461 with total area of 39375 m^2) allotted by GIDC, Gujarat, the greenbelt area of 19314.42 m^2 will be developed in the new additional plot.
PP has submitted list of tree species planted indise and outside the factory.</td>
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<td>2.</td>
<td>The additional land is on the one side of the existing unit and requires revised air quality modelling</td>
<td>Air quality Dispersion modelling has been done AERMOD Version 11.2 by Lakes Environmental Inc, Canada.
The model is used to predict the incremental GLC due the project activities i.e. two types of scenarios
<table>
<tr><th>S.No</th><th>Scenario</th><th>Sources</th></tr>
<tr><td>1</td><td>Source emissions in the same configuration and orientation as per earlier EIA/ EC.</td><td>Natural Gas Fired Boilers: 1 X 20 TPH, 2 x10 TPH &</td></tr>
</table>
</td>
<td>The EAC found the reply submitted by the PP to be satisfactory.</td>
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		2	1 x 20 TPH Natural Gas Fired Boiler & 1 x 2000 kVA DG set have been considered as relocated into for modelling purposes to understand if the relocation led to improvement in mGLC in study area.	1 X 5 TPH Boiler & 1 X 1250 KVA, 1 X 500 KVA & 1 X 2000 KVA
		No new source emissions are envisaged due to the proposed amendment in EC		
3.	Being a pesticide unit, Life Cycle Assessment needs to be done.	The Life Cycle Assessment study was done by using a model SIMA PRO Version 8.4.		The EAC found the reply submitted by the PP to be satisfactory.
4.	The presentation does not include the carbon footprints of the project and how the PP proposes to reduce/ compensate the same.	• During the peak operations, the **total CO_2 emissions will be 97,877 MT/annum which is equivalent to 10.2 tonne CO_2 eq/tonne Production.** • Through development of a **green belt having a total area of 58,950 m^2 having 8305 trees within the premises, 1197 trees in the GIDC premises and 5225 trees in the Mandava villages**, there will be natural sequestration of CO_2 emissions. • There is also a solar power source for the electrical load which leads to savings of **4097.22 MT eq. CO_2/annum** • The Company **will sequester 36,427 MT eq. CO_2/annum (37%) through** green belt development and solar power every operational year. • UPL has procured solar energy from KPI Green Energy Ltd. and saved CO_2 emissions @ 4097.22 Tons per year 2021 -2022. Thus, UPL has contributed		The EAC found the reply submitted by the PP to be satisfactory.

		to a reduction of 7.88 % of emission that would have been caused by total energy consumed. Overall percentage reduction due to solar energy accounts for 2.8%. • **Any further reduction in the Carbon footprint can be achieved through further use of clean energy (solar PV/Wind) and by adopting improved technologies for effluent and emission control which are contributing to the overall Carbon footprint of the plant**	
5.	Being an existing unit for which EC was granted on 10.1.2020, the PP is required to submit the latest six monthly compliance reports submitted to IRO, MOEF and CC	Being an operational unit, with a full fledged environmental management cell we regularly submit six monthly compliances to the conditions of EC dated 10.01.2020 to IRO. **The latest six monthly compliance report as submitted on 10.11.2022 and submitted.**	The EAC found the reply submitted by the PP to be satisfactory.

4. Deliberations by the EAC:

The EAC constituted under the provisions of the EIA Notification, 2006 and comprising of expert members/domain experts in various fields, examined the proposal submitted by the Project Proponent in desired form.

The EAC inter-alia, deliberated on the Greenbelt development plan, Life cycle assessment, carbon sequestration details and further, advised the PP to submit the following:

i. Updated Greenbelt development plan.
ii. Summary of LCA impacts.
iii. Updated Carbon footprint and updated carbon sequestration.

The PP submitted the above information/documents and the EAC found it to be satisfactory.

5. After detailed deliberations, the EAC **recommended** the amendment in EC, as detailed in above-mentioned table subject to the following additional conditions:

(i) The PP shall develop Greenbelt area within [UPL 2 Premises at least, 33,226 m^2 (31.64 %), Greenbelt area within GIDC Ankhleshwar – 8836 m^2 (8.41%), overall Greenbelt within plot and within GIDC (GB1+ GB2) – 42062.00) (40.05 %), in village Mandva 20943.00 (19.93%), Total greenbelt including internal within GIDC and Village Mandva (GB1+ GB2+GB3) (62996.00) 59.98%)] by planting within a period of one year of grant of EC. About 42,067 saplings (surviving trees after amalgmnation) shall also be planted.

The saplings selected for the plantation should be of sufficient height, preferably 6-ft (about 2 m).

(ii) The project proponent shall utilize modern technologies for capturing of carbon emitted and shall also develop carbon sink/carbon sequestration resources capable of capturing more than emitted. The implementation report shall be submitted to the IRO, MoEF&CC in this regard.

(iii) All necessary precautions shall be taken to avoid accidents and action plan shall be implemented for avoiding accidents. The Project proponent shall implement the onsite/offsite emergency plan/mock drill etc. and mitigation measures as prescribed under the rules and guidelines issued in the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996.

Agenda No. 44.2

Proposed Project for manufacture of Single Super Phosphate (SSP), Granulated Single Super Phosphate (GSSP), Sulphuric Acid & LABSA located at Plot No. C-2/2, Additional MIDC Phase III, Industrial Area, Jalna, Maharashtra by M/s Rajureshwar Industries Private Limited - Reconsideration of EC

[Proposal No. IA/GJ/IND3/259423/2022; File No. IA-J-11011/82/2022-IA-II(I)]

1. The proposal is for the environmental clearance for the Proposed Project for manufacture of Single Super Phosphate (SSP), Granulated Single Super Phosphate(GSSP), Sulphuric Acid & LABSA located at Plot No. C-2/2, Additional MIDC Phase III, Industrial Area, Jalna, Maharashtra by M/s Rajureshwar Industries Private Limited.

2. The project/activity is covered under Category 'A' of item 5(a) **(Chemical fertilizers**) of Schedule of Environment Impact Assessment (EIA) Notification, 2006 (as amended) and requires appraisal at Central Level by the EAC.

3. The PP applied for the ToR vide proposal number IA/MH/IND3/259423/2022 dated 16.3.2022 and the ToR was issued by the Ministry, vide letter no. J-11011/82/2022-IA-II(I) dated 16.3.2022. The PP reported that Public Hearing is exempted as the proposed project site is located in a Notified MIDC Industrial Area, notified vide Gazette Notification No. 2106/(230)/I-14 dated 03.07.2006. The PP applied for Environment Clearance on 14.7.2022 in Form-2 and submitted EIA/EMP Report and other documents. The PP reported in Form-2 that it is a **Fresh EC.** Due to some shortcomings, the Project was referred back to PP on 19.7.2022, 20.8.2022 & 23.8.2022 and reply to the same was submitted on 22.7.2022, 23.8.2022 & 6.9.2022. The proposal was placed in 38th EAC Meeting held on 14-15 September, 2022, wherein the EAC deferred the proposal for requisite information. The proposal is now placed in 44th EAC Meeting held on 16th & 19th December, 2022, wherein the Project Proponent and an accredited Consultant, Mantec Consultants Pvt. Ltd. [Accreditation number NABET/EIA/2023/RA0205, valid up to

20.4.2023] made a detailed presentation on the salient features of the project and informed the following:

4. The PP reported that the proposed land area is 4.5 Ha and no R& R is involved in the Project. The details of products are as follows:

S. No.	Product Details	Proposed Quantity, MTPA
1	Single Super Phosphate (SSP)	1,32,000
2	Granulated Single Super Phosphate (GSSP)	1,32,000
3	Sulphuric Acid	49,500
4	LABSA	16,500

5. The PP reported that there is no violation case as per the Notification No. S. O. 804(E) dated 14.03.2017 and no direction is issued under E (P) Act/Air Act/Water Act.

6. The PP reported that there are no National Parks, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from site. The nearest water bodies are Kundalika River – 5.00 km NW, Ghanewadi Nala - 3.00 km NE, Sina River - 3.50 km SE and Schedule- I species such as Varanus (Monitor Lizard), Antilope cervicapra (Black Bug), Canis lupus (Wolf) and Pavo Cristatus (Peafowl) have been envisaged in study area exist within the 10 km study area for which conservation plan has been submitted to Range Forest officer dated 3.12.2022.

7. The PP reported that the **ambient air quality** monitoring was carried out at 8 locations during March 2022 to May 2022 and the baseline data indicates the range of concentration as: PM_{10} (42.00 - 78.0 µg/m^3), PM2.5 (23.0 – 51.0 µg/m^3), SO_2 (4.0-18.0 µg/m^3), CO (0.30 – 0.89 µg/m^3) and NO_2 (12.0 – 28.0 µg/m^3). The AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 9.0E-05 µg/m^3, 4.0E-05 µg/$m^3$and 9.0E-05 µg/m^3 with respect to SO_2, NOx & PM_{10} respectively.

8. **Noise**: The noise levels at all locations are well below the prescribed limit.

9. **Ground Water Monitoring**: The PP reported that the analysis results indicate the pH value is in the range of 7.31 to 7.42, TDS-171 to 465 mg/L, chloride-22 to 65 mg/L, sulphate-32 to 49mg/L, total hardness-113 to 331 mg/L, COD-34 to 40 mg/L and BOD-5 to 8 mg/L.

10. **Surface Water Monitoring**: The PP reported that the analysis results indicate that the pH value is in the range of 7.29 to 7.51, TDS-358 to 387 mg/L, chloride-52 to 65 mg/L, sulphate-31 to 39 mg/L and total hardness-209 to 262mg/L.

11. Soil Monitoring: The analysis results show that soil is basic in nature as pH value ranges from 7.46 to 7.62 with organic matter 0.89% - 2.34%. The concentration of Nitrogen (12.7 mg/100g to 18.68mg/100g), Phosphorus (0.57 to 0.98mg/100gm) and Potassium (8.56 to 10.4 mg/100g) has been found to be in good amount in the soil samples. The soil is found to be suitable for agricultural purpose. The soil quality of the area will not be affected by the proposed project and its allied activities.

12. The PP reported that the net water requirement of 405 KLD for the proposed project will be met from water pipeline from MIDC, Jalna. Effluent of 36 KLD quantity will be treated through ETP. The plant will be based on Zero Liquid discharge system".

13. The PP reported that Power requirement of 1198 KW will be met from Maharashtra State Electricity Distribution Company Limited (MSEDCL). 1 DG set is also proposed of the capacity of 25 KVA. Waste heat recovery boiler will be proposed at the project site which will capture steam from the acid plant and generate the power of 720 KW/847 KVA.

14. Details of Process Emission Generation and its Management: Major pollutant emitted from various operations is sulphur dioxide (SO_2). Other emissions of minor importance include particulates, oxides of nitrogen (NO_2), carbon monoxide (CO), Hydrocarbons (HC) etc. Sources of SO_2 are mainly boilers, different process heaters and flares. The primary pollutant in the DG Set will be SO_2 with traces of NOx & CO. Good housekeeping, adequate air pollution control measures and stack of adequate height will be provided.

15. Details of Solid / Hazardous Waste Generation and its Management: STP sludge will be the solid waste generated from the proposed project activity which will be used as a manure for greenbelt development.

Category of waste	Type of solid waste	Quantity	Treatment
26.2	ETP waste	195 kg/day	To approved TSDF site for secured land filling. Mostly Gypsum with free moisture
26.1	Process Waste Sludge (Sulfur Sludge)	37.5 MT/Annum	To approved TSDF site for secured land filling. Sulphur content with other in organic impurities.
5.1	Spent/Used Oil	105 L/Year	MOEF Approved recyclers or Incineration.
33.3	Discarded Barrels/Liners/Containers	270 Nos./year	To approved recycler

Industry has proposed to provide sludge storage area for the storage of hazardous solid waste generated from the various source described above. The proposed hazardous waste storage area will be covered from side and top and will be provided with impervious layer at bottom with

Leachate collection pit. The proposed dimension of hazardous waste storage yard area is 5 m x 3 m x 2 m (H)

16. The Budget earmarked towards Environmental Management Plan (EMP) is ₹ 119 Lakh (capital) and the Recurring cost will be about ₹ 39.55 Lakhs per annum. The project proponent is committed towards the Enterprise Social Commitment (ESC) i.e. to spend 2.5% of the cost of project (Rs. 4023 lakhs).

17. The PP reported that the total project site area is 4.5 Ha/45,000 m^2 from which 33% i.e. 1.48 Ha area will be developed as a greenbelt within the project site. Local and native trees such as Neem, Jamun, Karanj, Kadamb, Ashoka, Mango etc. will be preferred for plantation within the project site.

18. The PP proposed to set up an Environment Management Cell (EMC) by engaging Dy. General Mamger - Dy. General Manager (CSR and CER activities) - Manager (Survey-Enviornment) - Dy. Manger (Enviornment) - Manager for the functioning of EMC.

19. The PP submitted the disaster and Onsite and Offsite Emergency Plans in the EIA report.

20. The estimated project cost is ₹ 40.23 Crore. There will be total 100 Nos. of workers (during Construction phase) and 80 Nos. of employees (during operation phase).

21. The proposal was placed in 38th EAC Meeting held on 14-15 September, 2022, wherein the EAC deferred the proposal for want of requisite information. Reply to the same is submitted by PP on 11.12.2022, which is as follows:

S. No.	Queries Raised by EAC	Reply by PP	Observation of EAC
1.	Conservation plan for Schedule-I species and its proof of submission to CWLW for approval.	Schedule- I species such as Varanus (Monitor Lizard), Antilope cervicapra (Black Bug), Canis lupus (Wolf) and Pavo Cristatus (Peafowl) have been envisaged in study area. Wildlife Conservation Plan for the same is prepared and submitted to Range Forest Officer, Jalna	The EAC found the reply submitted by the PP to be satisfactory.
2.	Surface and Ground Water quality data with their applicable standards	Surface and Ground Water quality data alongwith parameters and standards are incorporated in EIA Report as well as in EC presentation. Copy of the test results has been submitted.	The EAC found the reply submitted by the PP to be satisfactory.

3.	Details of fugitive emissions generation and their control measures.	Details of fugitive emissions generation and their control measures has been submitted.	The EAC found the reply submitted by the PP to be satisfactory.
4.	On-site and off-site disaster management plans specific to the proposal	On-site and off-site disaster management plans has been submitted	The EAC found the reply submitted by the PP to be satisfactory.
5.	Greenbelt development plan (@ of 2500 trees per hectare) with high carbon sequestration species along with budgetary allocation, for completion within a period of one year of grant of EC.	Greenbelt Development Plan has been revised as per the provision @ of 2500 trees per hectare. Same is incorporated in Chapter-3 &Chapter-10 of EIA Report alongwith in EC presentation	The EAC found the reply submitted by the PP to be satisfactory.
6.	OHS budget based on the relevant guidelines	Occupational Health & Safety budget has been submitted.	The EAC found the reply submitted by the PP to be satisfactory
7.	Detailed Rain water harvesting plan	Rainwater Harvesting Plan has been prepared & submitted	The EAC found the reply submitted by the PP to be satisfactory
8.	Soil micro biology and impact on flora and fauna	Soil Microbiology data has been incorporated in Chapter-3 of EIA Report.	The EAC found the reply submitted by the PP to be satisfactory
9.	Revised EMC and Environment Policy	Revised Environment Management Cell Hierarchy and Environmental Policy has been revised & submitted.	The EAC found the reply submitted by the PP to be satisfactory
10.	Details of carbon foot prints and carbon sequestration	Details of calculation of Carbon Sequestration in a tree per year and details of Green Belt Development Plan having the number and species that will be planted in 3 consecutive years	The EAC found the reply submitted by the PP to be satisfactory
11.	Proposed water and energy conservation measures	Details of Rainwater Harvesting has been prepared and submitted.	The EAC found the reply submitted by the PP to be satisfactory.

22. <u>Deliberations by the EAC</u>:

The EAC constituted under the provisions of the EIA Notification, 2006 comprising expert members/domain experts in various fields, examined the proposal submitted by the PP in desired format along with the EIA/EMP reports prepared and submitted by the Consultant accredited by the QCI/ NABET on behalf of the PP.

The EAC noted that the PP has given an 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 reports. 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 PP.

The EAC noted that the EIA reports are in compliance of the ToR issued for the project, reflecting the present environmental status and the projected scenario for all the environmental components. The EAC deliberated on the proposed mitigation measures towards Air, Water, Noise and Soil pollutions. The EAC advised that the storage of toxic/explosive raw materials/products shall be undertaken with utmost precautions and following the safety norms and best practices.

The EAC inter-alia, deliberated on the queries raised during the 38th EAC meeting the reply submitted by the PP found it to be satisfactory.

The EAC inter-alia, deliberated on the onsite and offsite emergency plans, Greenbelt development plan, water balance, rain water harvesting, STP and advised the PP to submit the following:

- Off-Site Disaster Management Plan for approval to the concerned authority once the plant becomes operational.
- Undertaking that 3700 no. plants will be done within one year after grant of Environment Clearance. Apart from this, no ornamental Plantation will be done further.
- Undertaking for Rainwater Harvesting, the company will use roof top water only for recharging.
- Company will opt for Sewage Treatment Plant for the treatment of generated domestic wastewater.
- Revised water balance.

The PP submitted the above information/documents and the EAC found it to be satisfactory.

The EAC deliberated on the Onsite and Offsite Emergency plans and various mitigation measures to be proposed during implementation also of the project and advised the PP to implement the provisions of the Rules and guidelines issued under the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996.

The EAC deliberated on the proposal with 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 expert members of the EAC found the proposal in order and recommended for grant of environmental clearance.

The EAC is of the view that its recommendation and grant of environmental clearance by the regulatory authority to the project/activity is strictly under the provisions of the EIA Notification 2006 and its subsequent 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 PP 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.

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

(i) The PP shall develop Greenbelt over an area of atleast, 1.48 Ha by planting 3700 within a period of one year of grant of EC. The saplings selected for the plantation should be of sufficient height, preferably 6-ft (about 2 m). The budget earmarked for the plantation shall be kept in separate account and should be audited annually. PP should annually submit the audited statement along with proof of activities viz. photographs (before & after with geo-location date & time), details of the expert agency engaged, details of species planted, number of species planted, survival rate, density of plantation etc. to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during the previous year.

(ii) A separate Environmental Management Cell (having qualified persons 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. PP shall engage Dy. General Manager- Dy. General Manager (CSR and CER activities)- Manager (Survey-Environment)- Dy. Manger (Environment)- Manager. In addition to this one safety & health officer as per the qualification given in Factories Act 1948 shall be engaged within a month of grant of EC. PP should annually submit the audited statement of amount spent towards the engagement of qualified persons in EMC along with details of person engaged to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

(iii) 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. The budget propose under EMP is ₹ 119 Lakh (Capital cost) and ₹ 39.55 Lakh annum (Recurring cost) shall be kept in separate account and should be audited annually. The PP should submit the annual audited statement along with proof of implementation of activities proposed under EMP duly supported by photographs (before & after with geo-location date & time) and other document as applicable to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

(iv) The net water requirement of 405 KLD for the proposed project shall be met from water pipeline from MIDC, Jalna. The PP should ensure that water supply should not be above the permissible limit as mentioned in the letter and fresh water shall be withdrawn only after obtaining valid agreement from Concerned Authority. The PP should submit the details of utilization to the Integrated Regional Office (IRO), MoEF&CC before 1st July of every year for the activities carried out during the previous year.

(v) No banned chemicals shall be manufactured by the project proponent. No banned raw materials shall be used in the unit. The project proponent shall adhere to the notifications/guidelines of the Government in this regard.

(vi) The project proponent shall comply with the environment norms for Organic Chemical Industry as notified by the Ministry of Environment, Forest and Climate Change, *vide* GSR 1607(E), dated 29.12.2017 under the provisions of the Environment (Protection) Rules, 1986.

(vii) The species-specific conservation plan of Schedule-I species shall be implemented within time limit and as per the approval of the Chief Wildlife Warden of the State Government.

(viii) The project proponent shall utilize modern technologies for capturing of carbon emitted and shall also develop carbon sink/carbon sequestration resources capable of capturing more than emitted. The implementation report shall be submitted to the IRO, MoEF&CC in this regard.

(ix) All necessary precautions shall be taken to avoid accidents and action plan shall be implemented for avoiding accidents. The project proponent shall implement the onsite/offsite emergency plan/mock drill etc. and mitigation measures as prescribed under the rules and guidelines issued in the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996.

(x) The volatile organic compounds (VOCs)/Fugitive emissions shall be controlled at 99.97 % with effective chillers/modern technology. Regular monitoring of VOCs shall be carried out.

(xi) The storage of toxic/hazardous raw material shall be bare minimum with respect to quantity and inventory. Quantity and days of storage shall be submitted to the Regional Office of Ministry and SPCB along with the compliance report.

(xii) The 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.

(xiii) Training shall be imparted to all employees on safety and health aspects for handling chemicals. Safety and visual reality training shall be provided to employees. Action plan for mitigation measures shall be properly implemented based on the safety and risk assessment studies.

(xiv) 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.

(xv) The solvent management shall be carried out as follows: (a) Reactor shall be connected to chilled brine condenser system. (b) Reactor and solvent handling pump shall have mechanical seals to prevent leakages. (c) Solvents shall be stored in a separate space specified with all safety measures. (d) Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done. (e) Entire plant shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses. (f) All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.

(xvi) The PP 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 vapor recovery system. (f) Use of high pressure-hoses for equipment cleaning to reduce wastewater generation.

Agenda No. 44.3

Proposed expansion of existing product Napthol ASG (10 TPM to 13 TPM) and Azo Pigments (7 TPM – no change) and new product types of Dyes (65 TPM) located at Plot no. 191, Phase–II, GIDC Vatva, Ahmedabad, Gujarat by M/s. Kailash Chemicals - Consideration of ToR

[Proposal No. IA/GJ/IND3/406603/2022; File No. IA-J-11011/511/2022-IA-II(I)]

1. The proposal is for the ToR for preparation of EIA/EMP for the Proposed expansion of existing product Napthol ASG (10 TPM to 13 TPM) and Azo Pigments (7 TPM – no change) and new product types of Dyes (65 TPM) located at Plot no. 191, Phase–II, GIDC Vatva, Ahmedabad, Gujarat by M/s. Kailash Chemicals. **The PP reported that the project is located in a Critically Polluted Area (CPA) as identified by the CPCB.**

2. The project/activity is covered under Category 'B' of item 5(f), Synthetic organic chemicals industry of Schedule EIA Notification, 2006 (as amended). However, since the project site is located in a critically polluted area, the project attracts the general condition and considered as Category 'A' at Centre.

3. The PP applied for the ToR vide proposal no. **IA/GJ/IND3/406603/2022** dated 29.11.2022. The proposal is now placed in 44th EAC Meeting held on 16th & 19th December 2022, wherein the PP made a detailed presentation on the salient features of the project. The information submitted by the PP is as follows:

4. The PP reported the product details as follows:

S. No.	Product	CAS No.	Existing (MT/month)	Additional (MT/month)	Total (MT/month)	Remarks
1.	**Azo Pigment**		7.0	0.0	7.0	Dyes and Colour industries
	1. Pigment Orange 70	NA				
	2. Pigment Yellow 101	3-3-2387				
	3. Pigment Yellow 138	30125-47-4				
	4. Pigment Yellow 139	36888-99-0				
	5. Pigment Yellow 147	4118-16-5				
2.	**Naphthol Dyes and Intermediates**			3.0	13.0	Dyes, Pigments
	1. Naphthol Asg	91-96-3	10.0			
	2. Naphthol As – Irg	4433-79-8	NIL			
	3. Naphthol Asp	135-19-3				
	4. Naphthol Itr	92-72-8				
	5. Naphthol Ph	90-15-3				
	6. Naphthol As-Cl	3770-97-6				
	7. Naphthol As-Lc	4273-92-1				
	8. Leuco Quinizarin	476-60-8				
	9. 1 Methylamino 4 Bromo Anthraquinon	128-93-8				
	10. 4 Bromo Anthra Pyridon	19524-06-2				
3.	**SOLVENT and Acid DYES**		NIL	55.0	55.0	Textile,

	1. Solvent Yellow 33	8003-22-3				Paint, color Industries
	2. Solvent Yellow 43	19125-99-6				
	3. Solvent Yellow 44	2478-20-8				
	4. Solvent Yellow 85	2478-20-8				
	5. Solvent Yellow 93	4702-90-3				
	6. Solvent Yellow 98	12671-74-8				
	7. Solvent Yellow 107	1267-74-8				
	8. Solvent Yellow 114	7576-65-0				
	9. Solvent Yellow 124	34432-92-3				
	10. Solvent Yellow 131	52821-24-6				
	11. Solvent Yellow 145	27425-55-4				
	12. Solvent Yellow 157	27908-75-4				
	13. Solvent Yellow 163	13676-91-0				
	14. Solvent Yellow 167	13676-91-0				
	15. Solvent Yellow 172	68427-35-0				
	16. Solvent Yellow 195	164251-88-1				
	17. Solvent Yellow 196	38215-36-0				
	18. Solvent Blue 35	17354-14-2				
	19. Solvent Blue 36	14233-37-5				
	20. Solvent Blue 58	61814-09-3				
	21. Solvent Blue 59	6994-46-3				
	22. Solvent Blue 63	6408-50-0				

	23. Solvent Blue 79	74499-36-8				
	24. Solvent Blue 97	61969-44-6				
	25. Solvent Blue 98	71819-49-3				
	26. Solvent Blue 101	6737-68-4				
	27. Solvent Blue 104	116-75-6				
	28. Solvent Blue 122	67905-17-3				
	29. Solvent Blue 128	18038-99-8				
	30. Solvent Green 3	128-80-3				
	31. Solvent Green 28	71839-01-5				
	32. Solvent Green 7	6358-69-6				
	33. Solvent Green 33	95-54-5				
	34. Solvent Red 19-E	6368-72-5				
	35. Solvent Red 52	81-39-0				
	36. Solvent Red 111	1229-55-6				
	37. Solvent Red 135	20749-68-2				
	38. Solvent Red 149	21295-57-8				
	39. Solvent Red 151	114013-41-1				
	40. Solvent Red 161	85750-13-6				
	41. Solvent Red 164	71819-51-7				
	42. Solvent Red 168	71832-19-4				
	43. Solvent Red 169	27354-18-3				
	44. Solvent Red 175	68411-75-6				

	45. Solvent Red 195	16425 1-88-1				
	46. Solvent Red 207	15958 -69-6				
	47. Solvent Red 227	2944- 28-7				
	48. Solvent Orange 58	71775 -93-4				
	49. Solvent Orange 60	6925- 69-5				
	50. Solvent Orange 63	16294 -75-0				
	51. Solvent Orange 86	81-64- 1				
	52. Solvent Orange 98	29196 -28-1				
	53. Solvent Orange 105	31482 -56-1				
	54. Solvent Orange 112	70546 -25-7				
	55. Solvent Orange 115	16294 -75-0				
	56. Solvent Violet 13	81-48- 1				
	57. Solvent Violet 14	8005- 40-1				
	58. Solvent Violet 38	63512 -14-1				
	59. Solvent Violet 31	70956 -27-3				
	60. Solvent Violet 59	6408- 72-6				
	61. Solvent Brown 43	71598 -33-9				
	62. Solvent Brown 53	64696 -98-6				
	63. Acid Yellow 184	61968 -07-8				
	64. Acid Yellow 250	93859 -32-6				
	65. Acid Green 25	4403- 90-1				
	66. Acid Red 52	3520- 42-1				
4.	**Basic/ Disperse Dyes**		NIL	10.0	10.0	

	1. Disperse Violet 1	128-95-0				Textile, Paint, color Industries
	2. Disperse Violet 3	NA				
	3. Disperse Violet 9	NA				
	4. Disperse Violet 26	12217-95-7				
	5. Disperse Yellow 105	176023-34-0				
	6. Disperse Yellow 186	28754-28-1				
	7. Disperse Yellow 201	80748-21-6				
	8. Disperse Orange 47	12236-03-2				
	9. Violet 2R	6408-72-6				
	10. Golden RK	NA				
	11. Orange 3R	730-40-5				
	12. Red 41	6373-90-6				
	13. Vat Yellow 4	11/4/3051				
	14. Basic Violet 11	2390-63-8				
	15. Basic Violet 11.1	39393-39-0				
	16. Basic Yellow 40	29556-33-0				
	17. Basic Yellow 28	54060-92-3				
	18. Basic Red 24	70210-20-7				
	19. Basic Red 18	25198-22-5				
	20. Basic Blue. 1	633-03-4				
	21. Basic Blue 54	38901-83-6				
	22. Basic Orange 22	4657-00-5				
	23. Basic Orange 30	12223-23-3				
	Total		**17**	**68**	**85**	

5. The PP reported that the existing project was established before 2006 and didn't attract the provisions of EIA Notification, 1994.

6. The PP reported that there is no violation as per the EIA notification, 2006, no court case is pending against the proposal and no direction issued under E(P) Act/Air Act/Water Act.

7. The PP reported the proposed project is in new unit 1968 m^2 no additional land will be used for proposed expansion within plant premises and no R&R is involved in the Project.

8. The PP reported that the proposal does not involve Approval/Clearance under Forest (Conservation) Act, 1980, Wildlife (Protection) Act, 1972 and C.R.Z Notification, 2011, as amended. There is no Forest, Eco Sensitive Area/National Park/Wildlife Sanctuary in 10 km radius of the site.

9. The PP reported that the water requirements after expansion will be 82.5 KLD (64.0 KL/Day Fresh from GIDC water supply + 18.5 KL/Day Recycle). The effluent generated from the process section will be collected and mixed with washing and other ancillary operation and sent to ETP [Primary + Secondary] treatment plant. After adequate treatment 17.0 KLD effluent will be send to CETP vatva and remaining 12.0 KLD effluent will be discharge through Common Facility.

10. The PP reported that total power requirement for the after proposed project will be 245 KW. Power demand will be met by Electricity Board/Authority. 1 Nos. DG set of 125 KVA capacity shall be used as standby during power failure. Stack (height 11.0 m) will be provided as per CPCB norms

11. The PP reported that the project, being in notified industrial area, is exempted from the public hearing as per the Ministry's O.M. J-11011/321/2016-IA. II(I) dated 27.04.2018.

12. Industry will develop Greenbelt in 40% of the project area i.e., 394 m^2 (20%) within Plant premises and 400 m^2 (20%) outside the Plant and within GIDC at a distance of 950 m.

13. The estimated project cost is ₹ 4.0 crores. Total Employment will be 15 persons as direct & 10 persons indirect for proposed project. Total employment will be 15 in number. Industry proposes to allocate Rs 8.0 Lakhs (approx.) in next 5 years @ of 2% of the project cost towards Corporate Environment Responsibility.

14. **Deliberations by the EAC:**

The EAC inter-alia, deliberated on the layout, water balance, dismantling of the existing plant, Greenbelt development plan, carbon sequestration study, action plan and mitigation measures proposed being a project located in CPA and sought the following requisite information/documents:

(i). Gazette Notification of the industrial area. In case, the same is not available, a certificate from GIDC specifying the details of notification.

(ii). Being a project located in a Critically Polluted Area, alternate site analysis for the proposed expansion.

(iii). Compliance to green belt development of minimum 40% of the total area of the exisiting unit (@2500 per hectare), in consultation with forest department and accordingly, submit the details of green belt developed, number of trees and aerial photographs and video.

(iv). Revised layout with 40% green belt.

(v). Revised and detailed water balance.

(vi). Undertaking for dismantling of existing Plant after EC.

(vii). Self-certified compliance to the existing CTO conditions.

(viii). Quantified and specific compliance and action plan for the additional safeguard measures prescribed in the Ministry's O.M. dated 31.10.2019 for critically and severely polluted areas.

In view of above, the EAC **deferred** the proposal.

Agenda No. 44.4

Proposed increase in the production of Thermoplastic Polyurethane (TPU) from 6000 MTPA to 8000 MTPA located at Survey No. 135/1A, 135/2A & 135/1B2, SIPCOT Industrial Area, Phase-II, Village Semmankuppam, Taluk Cuddalore, District Cuddalore, Tamil Nadu by M/s. Covestro (India) Private Limited - Consideration of ToR

[Proposal No. IA/TN/IND3/400888/2022; File No. IA-J-11011/403/2022-IA-II(I)]

1. The proposal is for the ToR for preparation of EIA/EMP for the Proposed increase in the production of Thermoplastic Polyurethane (TPU) from 6000 MTPA to 8000 MTPA located at Survey No. 135/1A, 135/2A & 135/1B2, SIPCOT Industrial Area, Phase-II, Village Semmankuppam, Taluk Cuddalore, District Cuddalore, Tamil Nadu by M/s. Covestro (India) Private Limited. **The PP reported that the project is located in a Severely Polluted Area (CPA) as identified by the CPCB.**

2. The project/activity is covered under Category 'A' of item 5(f), Synthetic organic chemicals industry of Schedule of EIA Notification, 2006 (as amended). However, since the project site is located in a severely polluted area, the project attracts the general condition and considered as Category 'A' at Centre.

3. The PP applied for the ToR vide proposal no. **IA/GJ/IND3/401571/2022** dated 30.9.2022. The proposal was referred back to the PP on 10.10.2022 and its reply was submitted on 29.11.2022. The proposal is now placed in 44th EAC Meeting held on 16th & 19th December 2022, wherein

the PP made a detailed presentation on the salient features of the project. The information submitted by the PP is as follows.

4. The PP reported the following product details:

S. No.	Name of product	CAS No.	Production			Uses
			Existing Quantity	Proposed Quantity	Total Quantity	
1.	Thermoplastic Polyurethane	9087-79-0	6000 MTPA (500 MTPM)	2000 MTPA	8000 MTPA	Automotive & medical industries
2.	Polyester Polyol*	25103-87-1	18000 MTPA (1500 MTPM)	-16800 MTPA	1200 MTPA	
**Due to market situation during implementation of proposed project as per the EC issued on 2014, the Polyester Polyol production quantity was implemented only up to 1200 MTPA. This quantity has been either utilised for In-house or Export purpose till date. Hence, the quantity of Polyester Polyol has been corrected to 1200 MTPA for future EC.*						

5. The PP reported that there is no violation as per the EIA notification, 2006, no court case is pending against the proposal and no direction issued under E(P) Act/Air Act/Water Act.

6. The PP reported that Ministry had issued EC earlier vide letter no. J-11011/458/2011-IA-II(I) dated 7th January, 2014 to M/s Bayer Material Science Pvt. Ltd, transferred to M/s Covestro (India) Private Limited on 10th August, 2022 to the existing project Increase in production of Thermoplastic Polyurethane (from 210 MTPM to 500 MTPM) and formulation of Polyether and Polyester of Polyol Blends (1500 MTPM) at Sy. No. 135/1 A, SIPCOT Industrial Area, Phase-II, Village Semmakuppam, Mandai & District Cuddalore, Tamil Nadu and Name change in the EC Letter from M/s. Bayer Material Science Pvt. Ltd. to M/s. Covestro (India) Private Limited has been obtained *vide* letter no. J-11011/458/2011-IA-II(I) dated 10th August, 2022

7. The PP reported that the total plot area is 33427 m^2, no additional area is required for the project for the proposed project and no R&R is involved in the Project.

8. The PP reported that the proposal does not involve Approval/Clearance under Forest (Conservation) Act, 1980, Wildlife (Protection) Act, 1972 and C.R.Z Notification, 2011, as amended. There is no Forest, Eco Sensitive Area/National Park/Wildlife Sanctuary in 10 km radius of the site. Uppanar River is adjacent at East direction, Bay of Bengal is at a distance of 2.7 km in East direction, Perumal Eri lake is at a distance of 4.5 km in SW direction

9. The PP reported that total fresh water requirement will be 36.63 KLD (Existing- 28.10 KLD+ Additional 8.53 KLD) after expansion which will be met from SIPCOT and Borewell water (Inside the factory premises). Existing water supply agreement for 60 KLD from SIPCOT dated 01st Feb., 2017, NOC for ground water extraction of 35 KLD issued by Water Resources

Department, GoTN dated 31st Dec., 2021 After expansion total Effluent of 4.0 KLD will be treated through Effluent Treatment Plant of capacity 5.0 KLD & Domestic or Sewage effluent 2.86 KLD will be treated through Sewage Treatment Plant of capacity 3.0 KLD. The plant will be based on Zero Liquid discharge system and no effluent/treated water will be discharged outside factory premises.

10. The PP reported that the existing power requirement during the Operation Phase is 780 kVA. After the proposed expansion of the unit, additional power of 270 kVA will be required, thus making the total demand after expansion to be 1050kVA. The maximum sanctioned demand of the plant as approved by TNEB currently is 1125 kVA, which is still below maximum required load of 1050kVA. Although, the transformer would be required to be upgraded from existing 1125 kVA to 1600 kVA for contingency and peak load fluctuations.

11. The PP reported that the project, being in notified industrial area, is exempted from the public hearing as per the Ministry's O.M. J-11011/321/2016-IA. II(I) dated 27.04.2018.

12. The PP reported that approx. 1.55 ha (~3.83 acres) i.e. 46.4% has already been developed under greenbelt within existing premises.

13. The cost of the proposed expansion is 1400 (Rs. in Lakhs). The PP reported that the total employment will be 87 persons as permanent & 110 persons on contract after expansion.

14. **Deliberations by the EAC:**

The EAC deliberated on the various environmental aspects such as Greenbelt development plan, Water balance and the action plan proposed by the PP being in a severely polluted area.

15. After detailed deliberations, the EAC **recommended** the project for grant of ToR (**Standard ToR [Annexure-II]** and **additional ToR as mentioned below)**, **without public hearing** as per the provisions of the EIA Notification, 2006 and as per O.M. No. 22-23/2018-IA.III dated 05.07.2022.

(i) The status of the action plan, if any, prepared by the State Government/SPCB for the CPA needs to be provided.

(ii) The PP needs to submit the action plan with respect to mitigation measures for CPA mentioned in the Ministry's OMs dated 31.10.2019.

(iii) Being in a Severely Polluted Area (SPA), the PP need to submit alternative site analysis and Environmental Cost Benefit analysis in the EIA report.

(iv) The PP shall submit the details of carbon foot prints and carbon sequestration study w.r.t. the proposed project. The Action Plan for utilization of modern technologies for capturing carbon emitted and developing carbon sink/carbon sequestration resources shall also be prepared and submitted.

(v) The PP should submit the photographs of monitoring stations & sampling locations. The photograph should bear the date, time, latitude & longitude of the monitoring station/sampling location. In addition to this, the PP should submit the original test reports and certificates of the labs which have analyzed the samples.

(vi) Details of Onsite and Offsite emergency plans as per the provisions of the MSIHC Rules need to be submitted.

(vii) Activity-wise, a time bound action plan along with budgetary provisions for occupational health & surveillance, environment management plan, and green belt development plans shall be prepared and submitted.

(viii) Undertaking from the PP and the consultant in pursuant to the O.M. No. J-11013/41/2006-IA. II(I) dated 04.08.2009 and J-11013/41/2006-IA. II(I) dated 5.10.2011.

(ix) The PP shall submit an undertaking to the effect that the project is not a violation proposal in pursuant to the S.O. 804(E) dated 14.03.2017 and SoP dated 07.07.2021.

(x) Action Plan for the management of hazardous waste and provision for its utilization in co-processing if applicable shall be prepared and submitted.

(xi) Provision for Reuse/recycle of treated wastewater, wherever feasible shall be made. The PP shall explore the possibilities for recycling and reusing of treated water in the unit to reduce the fresh water demand and waste disposal. A detailed water harvesting plan also needs to be prepared and submitted. Provision for Zero Liquid Discharge whenever techno-economically feasible shall be included. The PP shall make necessary provisions for continuous monitoring of the effluent quality/quantity.

(xii) The PP shall clarify whether project involves ground water utilization. In case of ground water abstraction, a copy of application made to concerned authorities for the same need to be submitted.

(xiii) The PP should develop Greenbelt over an area of 1.55 ha (46.4%) of the total project area. In addition to this PP shall also submit the action plan for gap filling for plantation. The plant species selected for greenbelt (considering 80 %survival rate) should have greater ecological value and should be of great utility value to the local population with emphasis on local and native species and the species which are tolerant to air pollution.

(xiv) Plan for development of the green belt outside the project premises such as avenue plantation, plantation in vacant areas, social forestry, etc. shall be prepared and submitted.

(xv) Assessment of the carrying capacity of transportation load on roads inside the notified industrial premises shall be carried out and submitted.

(xvi) In addition to the above, the EIA/EMP report shall also address issues such as i) Effective fugitive emission control measures for process, transportation, packing etc. ii) use of cleaner fuels and iii) best available technology for the plant.

Agenda No. 44.5

Expansion by installation of a 60 KTA Poly-Butadiene Rubber (PBR) plant located at Panipat Naphtha Cracker Complex, Panipat, Haryana by M/s Indian Oil Corporation Limited - Consideration of EC.

[Proposal No. IA/HR/IND3/408525/2022; File No. IA-J-11011/306/2020-IA-II(I)]

1. The proposal is for environmental clearance to the project for Expansion by installation of a 60 KTA Poly-Butadiene Rubber (PBR) plant located at Panipat Naphtha Cracker Complex, Panipat, Haryana by M/s Indian Oil Corporation Limited.

2. The project/activity is covered under Category 'A' of item 5(f), synthetic organic chemicals industry of Schedule of EIA Notification, 2006 (as amended) and requires appraisal at Central Level by the EAC.

3. The PP applied for ToR vide proposal number **IA/HR/IND3/185235/2022** dated 27.11.2020 and the ToR has been issued by the Ministry, vide letter No. IA-J-11011/306 /2020-IA-II(I) dated11.12.2020. The PP submitted that the Public Hearing was conducted on 25.5.2022 which was presided by the Deputy Commissioner. The PP applied for Environment Clearance on 30.11.2022 in Common Application Form and submitted EIA/EMP Report and other documents. The PP in the Form reported that it is an **Expansion case.** The proposal is now placed in 44th EAC Meeting held on 16th & 19th December 2022, wherein the PP and an accredited Consultant, **M/s. Mantec Consultants Pvt. Ltd.** [Accreditation number – **NABET/EIA/2023/RA 0205** Valid up to 20.4.2023] a detailed presentation on the salient features of the project. The information submitted by the PP is as follows:

4. The PP reported that the existing land area is 10.92 ha, no additional land will be required for the propose project and no R& R is involved in the Project. The details of products and by–products are as follows:

S. No.	Plant / Equipment / Facility	Units	Existing Configuration	Proposed Configuration	Final configuration after expansion	Remark
1	Polypropylene Unit (PPU)	KTA	780	0	780	In terms of product

2	HDPE Unit	KTA	351	0	351	In terms of product
3	Swing Unit (LLDPE/HDPE)	KTA	350	0	350	In terms of product
4	Butene-1 UNIT	KTA	20	0	20	In terms of product
5	Naphtha Cracker Unit (NCU)	KTA	947	0	947	In terms of product
6	MEG	KTA	425	0	425	In terms of product
7	PolyButadiene Rubber (PBR)	KTA	0	60	60	New Unit

5. The PP reported that Ministry had issued EC earlier vide letter no. J-110011/177/2016-IA-II (I) dated 16.12.2021 to the existing project in favor of M/s. Indian Oil Corporation Limited, Panipat Refinery & Naphtha Cracker Complex.

6. The PP reported that Certified compliance report of existing ECs has been issued by the IRO, Chandigarh vide letter dated 24.11.2022, which includes the Action Taken Report submitted by the PP for the partially complied/non–complied conditions.

7. The PP reported that there are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, and Wildlife Corridors etc. within 10 km radius from the project site. Water bodies: Khandra Drain(Inside the Site), Thirana Minor ~0.06km(W), Gohana Distributary ~0.07km(E), Untala Minor ~0.08km(E), New Delhi Parallel Branch (Western Yamuna Canal) ~0.59km(N), New Delhi Branch (Western Yamuna Canal) ~0.65km(N), Tributary Drain No 1 ~0.79km(W), Madlauda Minor ~1.06km(NW), Munak Drain ~2.09km(N), Joshi Drain ~2.25km(NW), Main Drain No 2/Indri Drain ~2.41km(E), Nahar Kuna Hansi/Hanal Nadi ~2.60km(N), Rer Kalan Minor ~3.79km(WNW), Kabir Branch/Bazida Distributary ~3.95km(E), Begampur Minor ~4.25km(N), Untala Drain~4.69km(S), Nohra/Nauhra Drain ~5.13km(SE), Binjhaul Minor ~5.26km(ESE), Bhalsi Minor ~5.41km(SW), Phurlak Drain ~5.47km(N), Gagsina East Drain ~5.51km(N), Munak Minor ~5.59km(N), Joshi Distributary ~5.61km(W), Khukrana Branch Canal ~5.83km(SSE), Hansi Branch(Western Yamuna Canal) ~6.22km(NW), Ganda Nala/Panipat Main Drain ~6.50(E), Mor Majra Drain ~6.93km(WNW), Pabana/Pawana Drain ~6.95km(NW), Munak Canal ~7.03km(NNW), Goli Distributary ~7.45km(NNW), Jind Distributary ~7.46km(WNW), Lohari Minor ~7.73km(S), Left Branch Gohana Distributary ~7.73km(S), Gudah Minor ~7.76km(ENE), Kurian Minor ~7.87km(NNW), Bhadaur Drain

~8.12km(S) and Ganda Nala ~8.57km(E). The PP reported that no forest area is involved in the proposed project and no Schedule-I species found in the study area.

8. The PP reported that the Ambient air quality monitoring was carried out at 8 locations during March 2021 to May 2021 and average baseline data indicates the ranges of concentrations as: PM_{10} (41 to 81.08 µg/m³), $PM_{2.5}$ (25.0 to 48.0 µg/m³), SO_2 (5.0 to 17.0 µg/m³) and NO_2 (12.0 to 29.0 µg/m³). AAQ modelling study for point source emissions is Nil as there is no proposed stack while the modelling study for line source emission indicates that the maximum incremental GLCs after the proposed project would be 0.02µg/m3 and 9.9µg/m3 with respect to NOx and CO. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS). **Noise-** The noise levels at all location are well below the NAAQS standards.

9. **Ground water** -The analysis results indicate that the pH value is 6.97 to 7.62 which is well within the specified standard of 6.5 to 8.5. The TDS was observed as 232 to 615 mg/l. The chlorides were found as 16 to 122 mg/l. The sulphate were found as 30 to 140mg/l. It is observed that sulphate are within limits; Total hardness ranges between 164 to 318 mg/l. Metals: Iron is found in between 0.009 -0.395 mg/l. **Surface water-** The analysis results indicate that the pH value is 7.09 to 8.19 which is well within the specified standard of 6.5 to 8.5. The TDS was observed as 171 to 642 mg/l. The chlorides were found as 10 to 48 mg/l. The sulphate were found as 22 to 64 mg/l. It is observed that sulphate are within limits; Total hardness ranges between 100 to 472 mg/l. Metals: Iron is found in between 0.02 -0.131 mg/l.

Soil- The analysis results show that soil is normal to weakly basic in nature as pH value ranges from 6.14 to 7.65 and organic matter varies between1.34 % - 1.85 %. The concentration of Nitrogen (13.4 mg/100gm to 18.6mg/100gm), Phosphorus (0.59 to 0.84mg/100gm) and Potassium (8.34 to 10.64 mg/100 gm) has been found to be in good amount in the soil samples. The soil is found to be suitable for the agricultural purpose. The soil will not be affected by proposed project since the project & its allied activities will not affect the nearby soil quality of area.

10. The PP reported that total water requirement is 74,652 KLD (4,572 KLD for PBR project) of which fresh water requirement of 50192 KLD (3,192 KLD for PBR project) will be met from Western Yamuna Canal. Effluent of 37 m^3/hr quantities will be treated through the new ETP of capacity 252 m^3/hr. The plant will be based on Zero Liquid Discharge system.

11. The PP reported that Power requirement after expansion will be 159000 KVA including existing 145000 KVA and Total power requirement (including proposed 14000 KVA for PBR Project) will be met from Existing Captive Power Plant of IOCL Panipat Naphtha Cracker Complex (Capacity is 238000 KVA). No DG set is envisaged in the proposed PBR Plant.

12. The PP reported that Existing unit has 2nos. of Boiler of 406.5TPH capacity of each. Both are Low sulphur liquid Fuel +Gas fired Boiler. Additionally, no boiler will be installed.

13. Details of Process Emissions Generation and their Management:

Details of Stack of Proposed PBR Plant

S. No.	Stack details vs. Stack attached to	Stack Height (m)	Exit Temperature of Gas (°C)	Exit Velocity of flue gas (m/sec)	Gas exit flow rate ($Nm^3/hr.$)
1.	Thermal Oxidizer with RLNG	30	80-90	10-12	4450

14. Details of Solid/ Hazardous Waste Generation and its Management:

S. No.	Name of Waste	Source of generation	Quantity	Disposal Method
1	Molecular Seive waste	Process	01 MT/Month	Collection, Storage, Decontamination, Disposal by sold to authorize recyclers
3	Waste rubber (0.50% basis)	Process	27 MT/Month	It will be sold to non-critical rubber users, like tyres rubber rings, valve packing's etc.
4	ETP Sludge	ETP	09 MT/Month	TSDF/Authorized Recycler

15. The Budget earmarked towards the Environmental Management Plan (EMP) is ₹ 32137.14 Lakhs (capital) and the Recurring cost (operation and maintenance) will be about ₹ 281.44 Lakhs per annum. Industry proposes to allocate ₹ 0.84 crore towards shifting the drain to avoid damage of crops by overflow during rainy season.

16. The PP reported that the advertisement for the Public Hearing was published on 12.4.2022 and the Public Hearing for the proposed project has been conducted by the State Pollution Control Board on 25.5.2022. The main issues raised during the public hearing are related to employment and degradation of crops productivity due to pollution, for which an Action Plan with budgetary allocation & timeline was submitted.

17. Plantation on 210 Acre has already been done which is 40% of the project area for PNC complex. An area of 7.3 Ha (18 acre) is earmarked for Greenbelt development at the periphery of the PNC at a distance of 2 Km from the project site.

18. The PP proposed to set up an Environment Management Cell (EMC) by engaging GM (HS&E), DGM (HS&E), CM, SM, M, AM and Officers for the functioning of EMC.

19. The PP submitted the Disaster and Onsite and Offsite Emergency Plans in the EIA report.

20. The estimated project cost is **Rs. 1459.0 Crores.** Total Employment will be **68 persons** as direct and **30 persons** as indirect after expansion.

21. <u>Deliberations by the EAC</u>:

The EAC constituted under the provisions of the EIA Notification, 2006 comprising expert members/domain experts in various fields, examined the proposal submitted by the PP in desired format along with the EIA/EMP reports prepared and submitted by the Consultant accredited by the QCI/ NABET on behalf of the PP.

The EAC noted that the PP has given an 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 reports. 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 PP.

The EAC noted that the EIA reports are in compliance of the ToR issued for the project, reflecting the present environmental status and the projected scenario for all the environmental components. The EAC deliberated on the proposed mitigation measures towards Air, Water, Noise and Soil pollutions. The EAC advised that the storage of toxic/explosive raw materials/products shall be undertaken with utmost precautions and following the safety norms and best practices.

The EAC inter-alia, deliberated on the existing and proposed Greenbelt Development Plan, Layout, Nala adjacent to the complex, Compliance to OM dated 31.10.2019 for projects falling within CPA, and advised the PP to submit the following:

- Existing and proposed Greenbelt development plan (Demarcation of Greenbelt, Number of trees and area).
- Revised Compliance to OM dated 31.10.2019 for projects falling within CPA.

The PP submitted the above information/documents and the EAC found it to be satisfactory.

The EAC deliberated on the Onsite and Offsite Emergency plans and various mitigation measures to be proposed during implementation also of the project and advised the PP to implement the provisions of the Rules and guidelines issued under the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996.

The EAC deliberated on the proposal with 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 expert members of the EAC found the proposal in order and recommended for grant of environmental clearance.

The EAC is of the view that its recommendation and grant of environmental clearance by the regulatory authority to the project/activity is strictly under the provisions of the EIA Notification 2006 and its subsequent 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 PP 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.

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

(i) Adequate stack height as per CPCB/SPCB guidelines shall be provided. Stack emission levels shall be stringent than the existing standards i.e. PM < 50 mg/Nm^3; SOx < 50 mg/Nm^3 and NOx < 100 mg/Nm^3.

(ii) CEMS shall be installed and connected to SPCB/CPCB Server.

(iii) Effective fugitive emission control measures shall be adopted in the process, transportation, packing etc.

(iv) Transportation of materials by rail/conveyor belt, wherever feasible, shall be explored.

(v) RLNG shall be proposed as a primary fuel in the proposed Thermal oxidizer.

(vi) The best available technology shall be used.

(vii) The PP shall develop an additional greenbelt over an area of at least 7. 3 ha, by planting approx. 18250 numbers of saplings within a year of grant of EC. The saplings selected for the plantation should be of sufficient height, preferably 6-ft. The budget earmarked for the plantation shall be kept in a separate account and should be audited annually. The PP should annually submit the audited statement along with proof of activities viz. photographs (before & after with geo-location date & time), details of expert agency engaged, details of species planted, number of species planted, survival rate, density of plantation etc. to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

(viii) The transportation load on roads shall be within their carrying capacity and adequate width of roads shall be maintained inside the industrial premises.

(ix) The existing effluent shall be treated and 100% reused within the premises and the proposed effluent shall also be treated and reused in the process application. Additionally, approx. 100 KLD domestic wastewater shall be generated after commissioning of the PBR plant, which shall be treated in the proposed ETP along with the treatment of processed wastewater.

(x) Continuous monitoring of effluent quality/quantity shall be done through online (OCEMS) mode. Further, the effluent monitoring shall be done once in a month by the MOEF&CC authorized agency. The OCEMS shall be connected to SPCB/CPCB server as well, to comply with the norms.

(xi) The rainwater from part of the rooftops shall be diverted using rain water pipes to the surface and via a storm water drain network. 2 (new) rainwater harvesting pits with an area of 3000 m^2 and recharge potential of 1200 m^3 shall be constructed for the proposed PBR Project. No recharge shall be permitted within the premises. Process effluent/ any wastewater shall not be allowed to mix with storm water.

(xii) No Fly ash, slag and red mud shall be generated from the existing as well as from the proposed PBR plant.

(xiii) The hazardous waste (Molecular Sieve waste, waste rubber (0.50% basis), ETP sludge) shall be collected, stored, transported, and disposed to TSDF/co-processing. The waste should be preferably utilized in co-processing.

(xiv) Monitoring of the compliance of EC conditions shall be submitted with third party audit every year.

(xv) An amount of ₹ 84 lakhs shall be allocated towards CER for diverting the drain channel opposite to CISF colony towards D-2 drain.

(xvi) A separate Environmental Management Cell (having qualified persons 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. PP shall engage engaging GM(med) – Manager –SMO-SERO- OHC, nurse. In addition to this one safety & health officer as per the qualification given in Factories Act 1948 shall be engaged within a month of grant of EC. PP should annually submit the audited statement of amount spent towards the engagement of qualified persons in EMC along with details of person engaged to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

(xvii) 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. The budget propose under EMP is ₹ 32137.14 Lakhs (Capital cost) and ₹ 281.44 lakhs per annum (Recurring cost) shall be kept in separate account and should be audited annually. The PP should submit the annual audited statement along with proof of implementation of activities proposed under EMP duly supported by photographs (before & after with geo-location date & time) and other document as applicable to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

(xviii) The total water requirement is 74,652 KLD (4,572 KLD for PBR project) of which fresh water requirement of 50192 KLD (3,192 KLD for PBR project) will be met from Western Yamuna Canal. The PP should ensure that water supply should not be above the permissible limit as mentioned in the letter and fresh water shall be withdrawn only

after obtaining valid agreement from Concerned Authority. The PP should submit the details of utilization to the Integrated Regional Office (IRO), MoEF&CC before 1st July of every year for the activities carried out during the previous year.

(xix) No banned chemicals shall be manufactured by the project proponent. No banned raw materials shall be used in the unit. The project proponent shall adhere to the notifications/guidelines of the Government in this regard.

(xx) The project proponent shall utilize modern technologies for capturing of carbon emitted and shall also develop carbon sink/carbon sequestration resources capable of capturing more than emitted. The implementation report shall be submitted to the IRO, MoEF&CC in this regard.

(xxi) All necessary precautions shall be taken to avoid accidents and action plan shall be implemented for avoiding accidents. The project proponent shall implement the onsite/offsite emergency plan/mock drill etc. and mitigation measures as prescribed under the rules and guidelines issued in the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996.

(xxii) The volatile organic compounds (VOCs)/Fugitive emissions shall be controlled at 99.97 % with effective chillers/modern technology. Regular monitoring of VOCs shall be carried out.

(xxiii) The storage of toxic/hazardous raw material shall be bare minimum with respect to quantity and inventory. Quantity and days of storage shall be submitted to the Regional Office of Ministry and SPCB along with the compliance report.

(xxiv) The 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.

(xxv) Training shall be imparted to all employees on safety and health aspects for handling chemicals. Safety and visual reality training shall be provided to employees. Action plan for mitigation measures shall be properly implemented based on the safety and risk assessment studies.

(xxvi) 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.

(xxvii) The solvent management shall be carried out as follows: (a) Reactor shall be connected to chilled brine condenser system. (b) Reactor and solvent handling pump shall have mechanical seals to prevent leakages. (c) Solvents shall be stored in a separate space specified with all safety measures. (d) Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done. (e) Entire plant shall be flame

proof. The solvent storage tanks shall be provided with breather valve to prevent losses. (f) All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.

(xxviii) The PP 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 vapor recovery system. (f) Use of high pressure-hoses for equipment cleaning to reduce wastewater generation.

(xxix) The activities and the action plan proposed by the project proponent to address the issues raised during the public hearing as well as the related socio-economic issues in the study area shall be completed as per the schedule presented before the Committee and as described in the EIA report in letter and spirit.

Agenda No. 44.6

Proposed Expansion Project for Manufacturing of Formaldehyde from 15 TPD to 100 TPD located at Khasra no. 22/10, 11/2, 20/1/1, Village Shehzadpur, Tehsil Jagadhri, Distt. Yamunanagar, Haryana by M/s Goyal Overseas Pvt. Ltd. - Consideration of EC (under violation category)

[Proposal No. IA/HR/IND3/405522/2022; File No. IA-J-11011/107/2021-IA-II(I)]

1. The proposal is for environmental clearance for the Proposed Expansion Project for Manufacturing of Formaldehyde from 15 TPD to 100 TPD located at Khasra no. 22/10, 11/2, 20/1/1, Village Shehzadpur, Tehsil Jagadhri, Distt. Yamunanagar, Haryana by M/s Goyal Overseas Pvt. Ltd.

2. The project/activity is covered under Category 'A' of item 5(f), synthetic organic chemicals industry of the Schedule of EIA Notification, 2006 (as amended) and requires appraisal at Central Level by the EAC.

3. The PP applied for ToR vide proposal number **IA/HR/IND3/204805/2021** dated 05.07.2021 and the ToR has been issued by the Ministry, vide letter no. IA-J-11011/107/2021-IA-II(I) dated 18.03.2022. The PP submitted that the Public Hearing was conducted on 31.05.2022 which was presided by the Sub-divisional Magistrate, District Jagadhari, Haryana. The PP applied for Environment Clearance on 01.12.2022 in Common Application Form and submitted EIA/EMP Report and other documents. The PP in the Form reported that it is an **Expansion case.** The proposal is now placed in 44th EAC Meeting held on 16th November- 19th Movember 2022, wherein the PP along with accredited Consultant, **M/s. Vardan EnviroNet, Gurugram**, **Haryana** [Accreditation number –NABET/EIA/2023/RA0212 (Rev. 01), Valid up to 7.12.2023] made a detailed presentation on the salient features of the project. The information submitted by the PP is as follows:

4. The PP reported that the existing land area is **6070 m^2,** no additional land will be required for the proposed project and no R& R is involved in the Project. The details of products and by–products are as follows:

Capacity	Existing	Proposed	Total
Formaldehyde CAS No.- 50-00-0	15 TPD	85 TPD	100 TPD

5. The PP reported that the plant was setup with the consent to establish dated 10.05.2018 obtained from the Haryana State Pollution Control Board (HSPCB). Subsequently, the unit is reported to be in operation with consent to operate dated 26.12.2018 valid up to 31.09.2023 for existing capacity (15 TPD). HSPCB instructed the project proponent to obtain prior environment clearance from the competent authority vide SCN No. HSPCB/YR/2020/5219 dated 19.03.2020. The unit had started construction in June 2018 (construction lasted over 4 months i.e. from June, 2018 to September 2018) and came in operation in April 2019 without securing Environmental Clearance, **hence it attracts the violation as per EIA Notification, 2006.**

6. The PP reported that the certified compliance report of CTO was issued by HSPCB vide letter dated 03.08.2022, stating that the Unit has complied with the terms and conditions of CTO except EIA violation.

7. The PP reported that there are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. falling within 10 km distance from the project site. Yamuna Nahar is flowing at a distance of 0.19 km in West direction and Yamuna River is flowing at a distance of 4.5 kms in South east direction. The PP reported that no forest area is involved in the proposed project and one Schedule-I species i.e. *Pavo cristatus (Mor)* is found in the study area. Wildlife conservation plan has been prepared and submitted to Divisional Wild Life Officer (DWLO) Rohtak, Haryana with budgetary provision of ₹ 8 Lakh.

8. The PP reported that the Ambient air quality monitoring was carried out at 8 locations from **1st October 2020 to 31st December 2020** and the baseline data indicates the ranges of concentrations as: PM_{10} (60.5 µg/m^3 to 88.5 µg/m^3), $PM_{2.5}$ (33.1 µg/m^3 to 57.2 µg/m^3) SO_2 (5.1 µg/m^3 to 18.4 µg/m^3) and NO_2 (12.2 µg/$m^3$and 37.4 µg/m^3). AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 88.549 µg/m3, 57.219 µg/m^3, 19.52 µg/m^3 and 37.513 µg/m^3 with respect to PM_{10}, $PM_{2.5}$, SO_x and NO_x. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS). The ground water pH varies from 7.50 to 7.81, Total Hardness varies from 114.42 to 284.56 mg/l, Total Dissolved Solids varies from 248 to 574 mg/l. The water samples are within permissible limits as per IS 10500:2012. The surface water pH varies from 7.61 to 7.81, Total Hardness varies from 374 to 721 mg/l, Total Dissolved Solids varies 713 to 1002 mg/l. COD varies from 39.0 to 62.0 (mg/l), BOD varies

from 11.0 to 15.0 (mg/l). The soil pH value ranges from 7.36 to 7.71 with organic matter 0.36% to 0.54%.The concentration of Nitrogen (146.24 Kg/ha. to 216 Kg/ha.), Phosphorus (17.62 Kg/ha. to 33.50 Kg/ha.) and Potassium (103.24 Kg/ha. to 182 Kg/ha.) Minimum and maximum noise levels recorded during the day time were from 48.38 Leq dB and 64.87 Leq dB respectively and minimum and maximum levels of noise during night time were 38.96 Leq dB and 56.2 Leq dB respectively.

9. The PP reported that total fresh water requirement of the project is **50 KLD** which will be met from **Ground water.** Application for Ground Water permission has been submitted to HWRA vide application no. HWRA/IND/N/2021/146 dated 10.11.2021. Domestic Effluent of 0.8 KLD quantity will be treated through Septic Tank followed by soak pit. The plant will be based on Zero Liquid discharge system.

10. The PP reported that no additional power requirement will be there for proposed expansion as existing 250 kVA will be sufficient and will be met from Uttar Haryana Bijli Vitran Nigam (UHBVN). Existing unit has DG sets of 320 kVA & 250 kVA capacity, additionally DG sets are used as standby during power failure. Stack (height) will be provided as per CPCB norms to the proposed DG sets.

11. The PP reported that Existing unit has 800 Kg/Hr HSD fired boiler. Scrubber with a stack height of 30 m will be installed for controlling the particulate emissions within the statutory limit of 115 mg/Nm^3 for the proposed boilers.

12. Details of Process Emissions Generation and their Management: Air emissions from utility and management:

S. No.	Source	Capacity	Fuel	Pollutants	Control measures
1	Boiler	800 kg/hr. (1 no.)	HSD	SPM, SO_2, NO_2	Scrubber and 30 m. Stack height
2	DG Set	320 kVA and 250 kVA (2 nos.)	HSD	SPM, CO, HC	Adequate stack height of 6 m

13. Details of Solid/ Hazardous Waste Generation and its Management: Hazardous wastes, process residue will be generated from the process & utilitiesmainly like Used Oil, Salts from evaporator and discarded containers or emptybarrels. The hazardous waste generated from different process shall be disposedto the TSDF, while the waste oil shall be sent to HSPCB authorize recyclers. All hazardous waste shall be strictly disposed of as per Hazardous and Other Waste(Management & Trans-boundary Movement) Rule, 2016.

14. The Budget earmarked towards the Environmental Management Plan (EMP) is ₹ 15.05 Lakhs (capital) and the Recurring cost (operation and maintenance) will be about ₹ 2.1 Lakhs per annum. Industry proposes to allocate ₹ 3.85 Lakhs as corporate environmental

responsibility towards avenue plantation, solar lights and development of roads.

15. Public Hearing for the proposed project has been conducted by the State Pollution Control Board on 31.05.2022 at the project site, wherein the public has primarily requested for development and widening of roads.

16. Green belt will be developed over 34.11 % area out of the 0.607 ha. of the total plant area i.e., 0.207 ha. of the total land. Considering 2500 trees per hectare, 110 no. of plantations has already been done at the plant premises and 510 no. (considering 80% survival rate) of more trees will be planted in the plant premises.

17. The PP proposed to set up an Environment Management Cell (EMC) by engaging Top management- General Manager- Manager (EHS)- Supervisor- worker- Chemist- Worker for the functioning of EMC.

18. The PP reported that as per carbon sequestration analysis, the total CO_2 emissions will be **3,349.213 Tonnes/Annum** from the process, fuel and transportation of raw materials and finished products. To sequestrate the carbon emissions, green belt plantation, scrubber will be provided. Total 1352 trees will be planted at the project site and village area from which total **4,09,132.163 Tonnes/Annum (after obtaining maturity)** of CO_2 will be sequestrated.

19. The PP submitted the Disaster and Onsite and Offsite Emergency Plans in the EIA report.

20. The estimated project cost is **Rs. 3.0 Crores** including existing investment of Rs. 2.05 Crores. Total employment will be **12** persons after expansion.

21. <u>Deliberations by the EAC:</u>

The EAC, constituted under the provisions of the EIA Notification, 2006 comprising Expert Members/domain experts in various fields, examined the proposal submitted by the Project Proponent in desired format along with the EIA/EMP reports 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 an 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 reports. 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 EAC noted that the EIA reports are in compliance of the ToR issued for the project, reflecting the present environmental status and the projected scenario for all the environmental components. The Committee deliberated on the proposed mitigation measure towards Air, Water, Noise and Soil pollutions. The Committee suggested that the storage of toxic/explosive raw materials/products shall be undertaken with utmost precautions and following the safety norms and best practices.

The EAC deliberated on the chapter 13 of the EIA report, comprising of damage assessment plan, damage cost to the Air environment, water environment, Noise Environment, Biological environment and Land environment due to the construction and operation of the unit without securing prior environmental clearance.

The EAC deliberated on the budget allocated towards environmental remediation plan, natural resource augmentation plan and community resource augmentation plan and found it to be satisfactory. The EAC also deliberated on the revised greenbelt development & plantation programme and CER and found it to be satisfactory.

The Member Secretary informed that Ministry has issued a Standard Operating Procedure dated 7th July 2021 bearing the file no. 22-21/2020-IA.II, for identification and handling of violation cases under EIA Notification 2006 in compliance to order of the Hon'ble National Green Tribunal in Appeal No. 34/2020 (WZ) titled Tanaji B. Gambhire Vs Chief Secretary, Government of Maharashtra. This SOP was challenged in the Madurai Bench of the Hon'ble High Court of Madras in the matter W.P.(MD) No. 11757 of 2021 titled Fatima Vs Union of India and was interim stayed vide order dated 15t July 2021. Recently, in the Order dated 9th December 2021 in the matter of Civil Appeal Nos. 7576-7577 of 2021 in Electrosteel Steels Limited Vs Union of India and Ors., the Hon'ble Supreme Court of India has inter-alia observed the following:

"*The interim order passed by the Madras High Court appears to be misconceived. However, this Court is not hearing an appeal from that interim order. The interim stay passed by the Madras High Court can have no application to operation of the Standard Operating Procedure to projects in territories beyond the territorial jurisdiction of Madras High Court. Moreover, final decision may have been taken in accordance with the Orders/ Rules prevailing prior to 7th July, 2021*."

The EAC observed that in this regard, the Ministry issued O.M. no. 22-21/2020- IA.III dated 28.1.2022. Further, the instant proposal should be dealt as per the provisions of SOP dated 7.7.2021 for handling of violation cases. The PP submitted the a) Damage Assessment and b) Remediation Plan and Natural & Community Resource Augmentation Plan, prepared in view of the environmental damage assessment. The details of the same are as follows:

A: Summarized Damage Assessment:

Environment Damage Cost	**(in Rs.)**
Air Environment	2,69,049
Water Environment	5,49,006
Noise Environment	2,05,000
Land Environment	4,93,000

Biological Environment	3,20,000
Total Damage Cost Evaluated	**18,36,055**

B1: Remediation Plan:

S. No.	Environment Component	Activity Description	Total Budgetary Provision in Rs.			
			1st Year	2nd Year	3rd Year	Total
1	Land Environment	1. Assistance to gram panchayat regarding usage of Organic Fertilizer that shall be provided to the farmers to increase the productivity and to increase fertility of soil. = Rs. 23,800/- 2. Providing Bund maker, Ridger, plough for agriculture purpose to villagers of Shezadpur = Rs. 1,50,000/- 3. Afforestation programme in Buria village = Rs. 50,000/-	**2,00,000** (Providing Bund maker, Ridger, Plough in Shezadpur and afforestation programme in Shezadpur and Buria Village)	**36,055** (Providing Seedlings, manure in Nagar panchayat of - Shezadpur and Mehar Majra)	--	2,36,055
2	Air Environment	Solar street light at common places in village areas of Shezadpur and Dayalgarh village = Rs. 1,00,000/-	--	--	1,00,000 (Solar street light in Shezadpur and Dayalgarh village)	1,00,000
3	Water Environment	1. Rain water harvesting pit (@ Rs. 1,00,000/location) at village	1,00,000 (Rain water harvesting pit at village Shezadpur)	50,000 (RO water facility at Govt. Scholl	---	1,50,000

S. No.	Environment Component	Activity Description	Total Budgetary Provision in Rs.			
			1st Year	2nd Year	3rd Year	Total
		Shezadpur villages = Rs. 1,00,000/- 2. RO Water facility in nearby govt. school of Buria village = Rs. 50,000/-		at village Buria)		
4	Noise Environment	Distribution of Hearing aids to the needy Sr. Citizens of the Shezadpur, Buria, Dayalgarh and Mehar Majra villages @ 1000 x 150 person = Rs. 1,00,000/-	--	1,50,000 (Distribution of Hearing aids to the needed Sr. Citizens of the Ismaila and Rohad villages)	--	1,50,000
5	Biological Environment	Trees plantation along the road side in the immediate vicinity of the plant = Rs 3,20,000/-	3,20,000 (Tree plantation along the road side)	--	-	3,20,000
Total						**9,56,055**

B2: Natural Resource Augmentation Plan along with Budget:

S. No.	Proposed Activities	Budget (Rs.)			
		1st Year	2nd Year	3rd Year	Total
1	Creation of Cow shed and development of Grazing Land in consultation with local Gram Panchayat authorities in villages	--	1,00,000	50,000	1,50,000
2	Plantation in common areas of nearby villages	50,000	30,000	20,000	1,00,000
3	Awareness programs on Environmental protection	20,000	10,000	--	30,000
Total					**2,80,000**

B3: Community Resource Augmentation Plan along with Budget:

S. No.	Proposed Activities	Budget (Rs.)			
		1st Year	2nd Year	3rd Year	Total
1	Creation of drainage & Repair of culverts and embankments in villages	1,50,000			1,50,000
2	Providing medical equipments for betterment of health facilities in villages	200000	1,50,000	--	3,50,000
3	Skill development programmes for women empowerment	40,000	30,000	30,000	1,00,000
Total					**6,00,000**

B. Summarized Remediation Plan and Natural & Community Resource Augmentation Plan (B1+B2+B3)

S. No.	Aspects	Budget (in Rupees)
1	Remediation Plan	9,56,055
2	Natural Resource Augmentation Plan	2,80,000
3	Community Resource Augmentation Plan	6,00,000
Total		**18,36,055 (18.36 lakhs)**

The EAC observed that as per Step-3 B (viii), *the project proponent will be required to submit a bank guarantee equivalent to the amount of Remediation Plan and Natural & Community Resource Augmentation Plan with Central / the State Pollution Control Board (depending on whether it is appraised at Ministry or by SEIAA). The quantification of such liability will be recommended by Expert Appraisal Committee and finalized by Regulatory Authority. The bank guarantee shall be deposited prior to the grant of environmental clearance*

and will be released after successful implementation of the Remediation plan and Natural & Community Resource Augmentation Plan.

The EAC observed that as per para 12 of the SOP dated 7.7.2021, there is a provision of Penalty. The instant proposal falls under category 12(a) (II) and for the compliance of the same, the PP submitted the following penalty amount. The EAC agreed with the same, which shall be remitted by the PP to the fund maintained by the SPCB as per Ministry's O.M. dated 28.07.2022.

Particulars	**Value (in Rupees)**	**Penalty (in Rupees)**
Turn over	30,14,83,147	7,53,707.87
Total Project cost	2,05,71,000	2,05,710
Total Penalty Cost	**9,59,417.87**	

The EAC deliberated the Onsite and Offsite Emergency plans and various mitigation measures to be proposed during implementation of the project and advised the PP to implement the provisions of the Rules and guidelines issued under the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996.

The EAC deliberated on the proposal with 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 Expert Members of the EAC found the proposal in order and recommended for grant of environmental clearance.

The EAC is of the view that its recommendation and grant of environmental clearance by regulatory authority to the project/activity is strictly under the provisions of the EIA Notification 2006 and its subsequent 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.

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

(i) The Budget earmarked towards Remediation plan and Natural and Community Resource Augmentation plan is **₹ 18.36 lakhs**. The PP is required to submit the bank guarantee for an amount as approved by regulatory Authority to the CPCB.

(ii) The PP shall spend amount proposed for Remediation plan and Natural and Community Resource Augmentation plan within a span of three years. The PP should annually submit

the audited statement along with proof of activities viz. photographs (before & after with geo-location date & time), details of activities carried out etc. to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

(iii) Remediation plan shall be completed in 3 years whereas bank guarantee shall be for 5 years. The bank guarantee will be released after successful implementation of the remediation plan and the Natural and Community Resource Augmentation Plan, and after the recommendation by regional office of the Ministry, Expert Appraisal Committee and approval of the Regulatory Authority.

(iv) A penalty amount of Rs. **9,59,417.87** shall be remitted by the PP to the fund maintained by the SPCB as per the Ministry's O.M. dated 28.07.2022.

(v) Approval/permission of the CGWA/SGWA shall be obtained before drawing ground water for the project activities, if applicable. The State Pollution Control Board (SPCB) concerned shall not issue Consent to Operate (CTO) till the project proponent obtains such permission.

(vi) Preventive measures to be taken to control ignition sources in bulk storage area and fire protection system to be established above ground storage tanks. Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done.

(vii) The PP shall develop Greenbelt over an area of at least 34.11% area i.e. 0.207 ha by planting additional 510 trees within a year of grant of EC. The saplings selected for the plantation should be of sufficient height, preferably 6-ft. The budget earmarked for the plantation shall be ₹ 2,55,400 and shall be kept in separate account and should be audited annually. The PP should annually submit the audited statement along with proof of activities viz. photographs (before & after with geo-location date & time), details of expert agency engaged, details of species planted, number of species planted, survival rate, density of plantation etc. to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

(viii) A separate Environmental Management Cell (having qualified persons 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. PP shall engage Top management - General Manager - Manager (EHS) – Supervisor – worker – Chemist - Worker. In addition to this one safety & health officer with suitable qualification and experience shall be engaged within six months of grant of EC. The PP should annually submit the audited statement of amount spent towards the engagement of qualified persons in EMC along with details of person engaged to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

(ix) 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. The budget propose under EMP is ₹ 15.05 Lakhs (Capital cost) and ₹ 2.1 Lakh (Recurring cost) shall be kept in separate account and should be audited annually. The PP should submit the annual audited statement along with proof of implementation of activities proposed under EMP duly supported by photographs (before & after with geo-location date & time) and other document as applicable to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

(x) The total fresh water requirement of the project is 50 KLD which will be met from Ground water. The PP should ensure that water supply should not be above the permissible limit as mentioned in the letter and fresh water shall be withdrawal only after obtaining valid agreement from Concerned Authority. The PP should submit the details of utilization to the Integrated Regional Office (IRO), MoEF&CC before 1st July of every year for the activities carried out during the previous year

(xi) No banned chemicals shall be manufactured by the project proponent. No banned raw materials shall be used in the unit. The project proponent shall adhere to the notifications/guidelines of the Government in this regard.

(xii) The project proponent shall utilize modern technologies for capturing of carbon emitted and shall also develop carbon sink/carbon sequestration resources capable of capturing more than emitted. The implementation report shall be submitted to the IRO, MoEF&CC in this regard.

(xiii) The project proponent shall comply with the environment norms for Organic Chemical Industry as notified by the Ministry of Environment, Forest and Climate Change, *vide* GSR 608(E), dated 21.07.2010 under the provisions of the Environment (Protection) Rules, 1986.

(xiv) The species-specific conservation plan of Schedule-I species shall be implemented within time limit and as per the approval of the Chief Wildlife Warden of the State Government.

(xv) All necessary precautions shall be taken to avoid accidents and action plan shall be implemented for avoiding accidents. The project proponent shall implement the onsite/offsite emergency plan/mock drill etc. and mitigation measures as prescribed under the rules and guidelines issued in the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996.

(xvi) The volatile organic compounds (VOCs)/Fugitive emissions shall be controlled at 99.97 % with effective chillers/modern technology. Regular monitoring of VOCs shall be carried out.

(xvii) The project proponent shall explore possibilities for recycling and reusing of treated water in the unit to reduce the fresh water demand and waste disposal.

(xviii) As already committed by the PP, Zero Liquid Discharge shall be ensured Effluent of 0.8 KLD quantity shall be treated through Septic Tank followed by soak pit.

(xix) 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 servers. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.

(xx) The storage of toxic/hazardous raw material shall be bare minimum with respect to quantity and inventory. Quantity and days of storage shall be submitted to the Regional Office of Ministry and SPCB along with the compliance report.

(xxi) The 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.

(xxii) Training shall be imparted to all employees on safety and health aspects for handling chemicals. Safety and visual reality training shall be provided to employees. Action plan for mitigation measures shall be properly implemented based on the safety and risk assessment studies.

(xxiii) 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.

(xxiv) The solvent management shall be carried out as follows: (a) Reactor shall be connected to chilled brine condenser system. (b) Reactor and solvent handling pump shall have mechanical seals to prevent leakages. (c) Solvents shall be stored in a separate space specified with all safety measures. (d) Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done. (e) Entire plant shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses. (f) All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.

(xxv) The storm water from the roof top shall be channelized through pipes to the storage tank constructed for harvesting of rain water in the premises and harvested water shall be used for various industrial processes in the unit. No recharge shall be permitted within the premises. Process effluent/ any wastewater shall not be allowed to mix with storm water.

(xxvi) Avenue plantation, providing solar lights and development of roads shall be undertaken under the corporate environmental responsibility within an year, as committed by the PP.

(xxvii) The PP 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 vapor recovery system. (f) Use of high pressure-hoses for equipment cleaning to reduce wastewater generation.

(xxviii) The activities and the action plan proposed by the project proponent to address the issues raised during the public hearing as well as the related socio-economic issues in the study area shall be completed as per the schedule presented before the Committee and as described in the EIA report in letter and spirit.

Agenda No. 44.7

Dye Manufacturing Unit at Sy. No. 34, Village Paldi, Taluka Khambat, District Anand, Gujarat by M/s Shreenathji Enterprise - Amendment in Environmental Clearance

[Proposal No. IA/GJ/IND3/294756/2022; File No. J-11011/29/2011-IA II (I)]

1. The proposal is for the Amendment in Environmental Clearance for Dye Manufacturing Unit at Sy. No. 34, Village Paldi, Taluka Khambat, District Anand, Gujarat by M/s Shreenathji Enterprise.

2. The proposal is for amendment in the Environmental Clearance granted by the Ministry vide EC letter dated 7th January, 2014 and EC validity extension letter issued on 4th January, 2022 valid up to 6th January, 2024 for the Proposal for Extension in the validity of Environmental Clearance for the manufacturing of Dye unit of M/s Shreenathji Enterprise, located at Sy. No. 34, Village Paldi, Taluka: Khambhat, District Anand, Gujarat

3. The project proponent has requested for amendment in the EC with the details as under:

Para of EC issued by MoEF &CC	Details as per EC	To be revised/read as	Justification/ reasons
2.0	The Ministry of Environment and Forests has examined the application. It is noted that the proposal is for setting up to Dye Manufacturing Unit at sy. No	The Ministry of Environment and Forests has examined the application. It is noted that the proposal is for setting up to Dye Manufacturing Unit at sy. No 34, Village paldi, Taluka khambhat, District Anand,	The EC amendment is sought for the following purpose:

	34, Village paldi, Taluka khambhat, District Anand, Gujarat. Total plot area is 46,122 m^2. Total cost of the project is Rs. 9.25 Crore. No national park/wildlife sanctuary/ reserve forest with 10 km. Rs 76.00 lakh and Rs. 90 lakh are earmarked towards capital cost and recurring cost per annum for pollution control device. Following products will be manufactured: **Sr. No. / Product Name / Quantity (MTPM)** 1. Vinyl Sulphone — 300 2. CPC Blue — 500 3. Alpha Blue — 200 4. Beta Blue — 200 5. CPC Green — 200 6. Dyes — 1000 7. Direct Turquoise Blue 86 — 600 8. Direct Turquoise Blue FBL-199 9. Reactive Blue G 10. Reactive Turquoise Blue H5G 11. Reactive Blue 72 12. Flushing Pigment — 0 **Total — 3000**	Gujarat. Total plot area is 46,122 m^2. Total cost of the project is **Rs. 30.70 Crore.** No national park/wildlife sanctuary/ reserve forest with 10 km. Following products will be manufactured: **Sr. No. / Product Name / Quantity (MT/Month): Existing Quantity as per EC and its Validity Extension / Proposed / Ultimate** 1. Vinyl Sulphone — 300 — **-300** — 0 2. CPC Blue — 500 — 0 — 500 3. Alpha Blue — 200 — 0 — 200 4. Beta Blue — 200 — 0 — 200 5. CPC Green — 200 — 0 — 200 6. Dyes — 1000 — 0 — 1000 7. Direct Turquoise Blue 86 8. Direct Turquoise Blue FBL-199 9. Reactive Blue G 10. Reactive Turquoise Blue H5G — 600 — 0 — 600	1) Removal of product namely Vinyl sulphone from the product profile granted in EC 2) Change of fuel from gas to agrowaste/ imported coal due to lack of availability of gas. 3) Respective conditions of EC w.r.t above mentioned changes

		11.	Reactive Blue 72				
			Total	**3000**	**-300**	**2700**	
3.0	Adequate height of stack will be provided to gas/oil fired boiler/ hot air generator. Two stage chilled water/caustic scrubber will be provided to process vents to control HCL. Two stage scrubber with caustic lye media solution will be provided to process vents to control SO_2. Two stage scrubber with chilled water media will be provided to process vents to control NH_3 emission. Total water requirement will be 1045 m^3/day. Out of which, fresh water requirement from ground water source will be 444 m^3/day and remaining water requirement will be met from treated effluent/recycled water. Industrial effluent generation will be 659 m^3/day and segregated into High COD/TDS and Low COD/TDS effluent streams. High TDS/COD will be passed through stripper followed by multiple effect evaporator (MEE). Low TDS effluent stream will be treated in effluent treatment plant (ETP) followed by Nano filtration. Treated effluent will be recycled/reused in process. No effluent will be discharged outside the factory premises and "Zero" effluent discharge concept will be followed. ETP sludge, incinerated ash and	Adequate height of stack will be provided to agro briquettes/Coal fired boilers/ hot air generator/**Thermopack boiler. Primary scrubber to Each Vessel followed by common secondary scrubber followed by acid scrubber will be provided to process vents to control HCL**. Two stage scrubber with chilled water media will be provided to process vents to control NH_3 emission. Total water requirement will be **900 m^3/day**. Out of which, fresh water requirement from ground water source will be **368 m^3/day** and remaining water requirement will be met from treated effluent/recycled water. Industrial effluent generation will be **565 m^3/day** and segregated into **High COD/TDS** and **Low COD/TDS** effluent streams. • Industrial effluent generated from CPC Blue shall be collected separately and treatment given in MEE & spray dryer. MEE Condensate shall be recycled in process and generated Ammonium salt shall be sold to actual user. • Remaining Industrial effluent, generated from other products, Boiler Blow down, cooling tower blow down & Washing shall be collected and sent to ETP consisting Primary & Secondary treatment, and then sent to RO and MEE for further treatment. Ro permeate and MEE condensate shall be recycled and used for Process water consumption. No effluent will be discharged outside the factory premises and **"Zero" effluent discharge concept will be followed.** ETP sludge and evaporated salt will be sent to treatment storage disposal facility for				

	evaporated salt will be sent to treatment storage disposal facility for hazardous waste (TSDF). Spent oil will be sent to authorized recyclers/re-processor.	hazardous waste (TSDF). Spent oil will be sent to authorized recyclers/re-processor.	
A (iii)	Two stage chilled water/caustic scrubber will be provided to process vents to control HCL. Two stage scrubber with caustic lye media solution will be provided to process vents to control SO_2. Two stage scrubber with chilled water media will be provided to process vents to control NH_3 emission. The scrubbing media shall be sent to effluent treatment plant (ETP) for treatment. Efficiency of scrubber shall be monitored regularly and maintained properly. At no time, the emission levels shall go beyond the prescribed standards.	**Primary scrubber to Each Vessel followed by common secondary scrubber followed by scrubber will be provided to process vents to control HCL**. Two stage scrubbers with chilled water media will be provided to process vents to control NH_3 emission. The scrubbing media shall **be considered as hazardous waste & will be sent to authorized end users having rule – 9 permission as per Haz. Waste Rules, 2016**. At no time, the emission levels shall go beyond the prescribed standards.	
A (vii)	Total fresh water requirement from ground water source shall not exceed 444 m^3/day and prior permission shall be obtained from central water authority/state ground water board.	Total fresh water requirement from ground water source shall not exceed **368 m^3/day** and prior permission shall be obtained from central water authority/state ground water board.	There is going to be reduction in Fresh Water consumption.
A(Viii)	Industrial effluent generation will be segregated into High COD/TDS and Low COD/TDS effluent streams. High TDS/COD will be passed through stripper followed by multiple effect evaporators (MEE). Low TDS effluent stream will be treated in effluent treatment plant (ETP) followed by Nano filtration. Treated effluent will be recycled/reused in process. Water quality of treated	Industrial effluent generated **from CPC Blue shall be collected separately and treatment given in MEE & spray dryer. MEE Condensate shall be recycled in process and generated Ammonium salt shall be sold to actual user**. **Remaining Industrial effluent, generated from other products, Boiler Blow down, cooling tower blow down & Washing shall be collected and sent to ETP consisting Primary & Secondary treatment, and then sent to RO and MEE for further treatment. Ro permeate and MEE condensate shall be**	--

	effluent shall meet the norms prescribed by CPCB/SPCB. Domestic wastewater shall be disposed through septic tank and soak pit.	**recycled and used for Process water consumption.** Water quality of treated effluent shall meet the norms prescribed by CPCB/SPCB. Domestic wastewater shall be disposed through septic tank and soak pit.	

4. **Deliberations by the EAC**:

The EAC constituted under the provisions of the EIA Notification, 2006 and comprising of expert members/domain experts in various fields, examined the proposal submitted by the PP in desired form.

The EAC inter-alia, deliberated on the fuel, Greenbelt development plan, STP, roof top water harvesting and advised the PP to submit the following:

- Priority for the use of fuel.
- Development of Greenbelt and tree plantation consisting of area environment specific species and try to obtain maximum carbon sequestratation through greenbelt development plan.
- Provision of STP and reuse of treated domestic wastewater for appropriate reuse.
- Detailed rain water harvesting.

The PP submitted the revised/updated information/documents of the same and the EAC found it to be satisfactory.

5. After detailed deliberations, the EAC **recommended** the amendment in EC, as detailed in above-mentioned table subject to the following additional conditions:

(i). Industry shall use agro briquettes as a fuel for Boiler/HAG & TFH and only in case of unavailability of agro briquettes, coal shall be used.

(ii). About 5100 saplings shall be planted within one year considering a density of 2500 trees per ha. and 80% survival rate.

(iii). STP shall be provided for the domestic wastewater and the treated wastewater shall be reused for gardening/plantation and 13 KLD from rain water harvesting shall be reused in the process.

(iv). All necessary precautions shall be taken to avoid accidents and action plan shall be implemented for avoiding accidents. The Project proponent shall implement the onsite/offsite emergency plan/mock drill etc. and mitigation measures as prescribed under the rules and guidelines issued in the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996.

(v). The project proponent shall utilize modern technologies for capturing of carbon emitted and shall also develop carbon sink/carbon sequestration resources capable of capturing more than emitted. The implementation report shall be submitted to the IRO, MoEF&CC in this regard.

Agenda No. 44.8

Expansion in Production capacity of existing products as well as addition of new Agrochemicals and Intermediates products (259.4 TPM to 1495 TPM) within the existing premises located at Plot No. 5001/B, 5027 to 5034 & 5037, 4707/B & 4707/P, GIDC Estate Ankleshwar, District Bharuch, Gujarat by M/s Meghmani Organics Limited - Amendment in Environmental Clearance

[Proposal No. IA/GJ/IND3/294923/2022; File No. 23-13/2020-lA.III(V)]

1. The proposal is for amendment in the Environmental Clearance granted by the Ministry vide letter dated 11th January, 2021 and 03rd November, 2021 (violation category) for the expansion in production capacity of existing products as well as additional of new agrochemical and intermediate products located at Plot No. 5001/B, 5027 to 5034 & 5037, 4707/B & 4707/P, GIDC Estate, Ankleshwar, District- Bharuch- 393001, Gujarat in favour of M/s. Meghmani Organics Limited.

2. The EAC noted that the proposal was earlier appraised in the 24th meeting held during January 12-13, 2022 (**Proposal No. IA/GJ/IND3/244344/2018)**, the MoM of which are as follows:

"The proposal is for modernization in the Environmental Clearance granted by the Ministry vide File No. J-11011/90/2020-IA-II(I) dated on 11th January, 2021 and further EC Identification No. EC21A017GJ111135 on 3rd November, 2021 for the project of new Agrochemicals and Intermediates products located at Ankleshwar in favour of M/s Meghmani Organics Limited.

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 / Reasons
1.	Subject	Proposed Expansion in production capacity of existing products as well as addition of new agrochemicals and intermediates products capacity (259.4 MT/Month to 1495	Proposed Expansion in production capacity of existing products as well as addition of new agrochemicals and intermediates	The unit has recently purchased the adjoining plots. On this plots, the unit will develop admin building, ware house and also would like to develop manufacturing facility. The

		MT/Month) within the existing premises by M/s. Meghmani Organics Limited located at Plot No. 5001/B, 5027 to 5034 & 5037, 4707/B & 4707/P, GIDC Estate, Ankleshwar, District-Bharuch- 393001, Gujarat – Consideration of Environment Clearance regarding.	products capacity (259.4 MT/Month to 1495 MT/Month) within the existing premises by M/s. Meghmani Organics Limited located at Plot No. 5001/B, 5027 to 5034 & **5035, 5036,** 5037, 4707/B & 4707/P, GIDC Estate, Ankleshwar, District- Bharuch-393001, Gujarat – Consideration of Environment Clearance regarding.	manufacturing facility will be developed based on the compatibility of process/raw materials. Hence, unit will make dedicated manufacturing facilities for dedicated products. This change will bring positive impacts as the existing plant will become more spacious.

Deliberations by the EAC

The Committee noted that the instant proposal is for addition of two new plot no. 5035-5036 in the existing Unit and the same plots were transferred to M/s Meghmani Organics Limited in September 2021 and the EC was granted on 3rd November 2021, However PP has not informed to the EAC/Ministry. If they PP on-time the same proposal can be appraised by the EAC accordingly as the instant project is located at industrial estate. PP has agreed the mistake.

The Committee noted that earlier the project proponent has submitted proposal to the Ministry for consideration in pursuance of the Ministry's Notification dated 14th March 2017 due to violation of the EIA Notification, 2006. The EAC deliberated on the project and considering the fact that EC has been granted to the PP on merit, considered the additional ToR issued for the damage assessment. The Ministry has issued additional terms of reference (ToR) to the project for remediation for preparation of EIA/EMP reports, vide letter dated 17th March, 2021.

The Committee also noted that the project proponent proposed Rs. 40 lakhs for Remediation, Natural Resource Augmentation and Community Resource Augmentation Plan. In this context, the EAC wanted to know the implementation status of Remediation, Natural Resource Augmentation and Community Resource Augmentation Plan, as it was earlier deliberated by the EAC in August 2021 and now about 5 months completed. PP was not able to present the action taken so far for the

implementation of remedial plans. PP also failed to show the Green belt development plan status and action taken so far for the Green belt development.

It was informed to the EAC that the para 7(ii) of the EIA Notification, 2006, inter-alia, mentions that all applications seeking prior environmental clearance for expansion with increase in the production capacity beyond the capacity for which prior environmental clearance has been granted under this notification or **with increase in either lease area** or production capacity in the case of mining projects or for the modernisation of an existing unit with increase in the total production capacity beyond the threshold limit prescribed in the Schedule to this notification through change in process and or technology or involving a change in the product –mix shall be made in Form I and they shall be considered by the concerned Expert Appraisal Committee or State Level Expert Appraisal Committee within sixty days, who will decide on the due diligence necessary including preparation of Environment Impact Assessment and public consultations and the application shall be appraised accordingly for grant of environmental clearance.

The Committee noted that as the application had been submitted under para 7(ii) of the EIA Notification, 2006, but the compliance status submitted by PP in December, 2020 which had some major non-compliances. The Committee advised PP to submit latest certified compliance report and its implementation status of the remedial plans as approved by the Committee during earlier appraisal in August 2021.

The Committee after detailed deliberation, **deferred** the proposal for the needful".

3. Since the PP did not submit the requisite information/documents within the stipulated time period, the proposal was delisted. The PP has now submitted the instant proposal for amendment in the EC with the details as under:

Para of EC issued by MoEF&CC	**Details as per the EC**	**To be revised/ read as**	**Justification/ reasons**
Subject	Proposed Expansion in production capacity of existing products as well as addition of new agrochemicals and intermediates products capacity (259.4 MT/Month to 1495 MT/Month) within the existing premises by M/s. Meghmani Organics Limited located at Plot No. 5001/B, 5027 to 5034 & 5037, 4707/B & 4707/P,	Proposed Expansion in production capacity of existing products as well as addition of new agrochemicals and intermediates products capacity (259.4 MT/Month to 1495 MT/Month) within the existing premises by M/s. Meghmani Organics Limited located at Plot No. 5001/B, 5027 to 5034 & **5035, 5036,** 5037,	The unit has recently purchased the adjoining plots. This change will bring positive impacts as the existing plant will become more spacious.

	GIDC Estate, Ankleshwar, District-Bharuch- 393001, Gujarat – Consideration of Environment Clearance regarding.	4707/B & 4707/P, GIDC Estate, Ankleshwar, District-Bharuch- 393001, Gujarat – Consideration of Environment Clearance regarding.	

4. Deliberations by the EAC:

(i) The EAC inter-alia, noted that the PP has not submitted the certified compliance report from IRO, MoEF&CC for the compliance of existing EC conditions and the approved remedial plans (for being a violation case).

(ii) Since the project site is located in a CPA and as per the EC, the PP is required to develop green belt in 40% of the project area, which is to be primarily developed within the project site and the balance, if any, within the industrial estate. The PP couldn't provide the compliance for the same.

(iii) The PP is also required to submit the quantified and specific compliance/action plan for the additional safeguard measures prescribed in the Ministry's O.M. dated 31.10.2019 for critically and severely polluted areas.

The proposal was accordingly, **deferred.**

Agenda No. 44.9

Proposed Manufacturing of Unsaturated Polyester Resin-60,000 TPA & Polymer Pigment Paste-2400 TPA located at Plot No. A-332, RIICO Industrial Area-Karoli, Tehsil-Tijara, District-Alwar, Rajasthan by M/s Innovative Resins Private Limited - Consideration of ToR

[Proposal No. IA/RJ/IND3/408601/2022; File No. IA-J-11011/522/2022-IA-II(I)]

1. The proposal is for the ToR for preparation of EIA/EMP for the Proposed Manufacturing of Unsaturated Polyester Resin-60,000 TPA & Polymer Pigment Paste-2400 TPA located at Plot No. A-332, RIICO Industrial Area-Karoli, Tehsil-Tijara, District-Alwar, Rajasthan.

2. The project/activity is covered under Category 'B' of item 5(f), synthetic organic chemicals industry of Schedule of EIA Notification, 2006 (as amended). However, since the the interstate boundary of Rajasthan and Haryana lies at a distance of 4.93 Km in NNW direction, the project attracts the general condition and considered as Category 'A' at Centre.

3. The PP applied for the ToR vide proposal number no. IA/RJ/IND3/408601/2022 dated 6.12.2022. The proposal is now placed in 44th EAC Meeting held on 16th & 19th December 2022, wherein the PP and an accredited Consultant, Enkay Enviro Services Pvt. Ltd. [Accreditation number NABET/EIA/2023/RA 0183, Valid up to 12 .12.2023] made a detailed

presentation on the salient features of the project. The information submitted by the PP is as follows:

4. The PP reported the proposed product details as follows:

S. No.	Product	Proposed Quantity (MTPA)	Uses
1.	Unsaturated Polyester Resin	60,000	Unsaturated polyester resins used in the production of fiber reinforced plastics & Filled Products
2.	Polyester Pigment Paste	2400	Pigment Paste caters to diverse needs of Composite/ Fibre reinforced Plastic/Casting Industry.

5. The PP reported that there is no violation as per the EIA notification, 2006, no court case is pending against the proposal and no direction issued under E(P) Act/Air Act/Water Act.

6. The PP reported that proposed land area is 10,126 m^2 and no R&R is involved.

7. The PP reported that the proposal does not involve Approval/Clearance under Forest (Conservation) Act, 1980, Wildlife (Protection) Act, 1972 and C.R.Z Notification, 2011, as amended. There is no Forest, Eco Sensitive Area/National Park/Wildlife Sanctuary in 10 km radius of the site. River/ water body-Sahibi is flowing at a distance of 4.16 km in West direction.

8. The PP reported that the total water requirement will be 20.5 KLD, out of which fresh water requirement of 7 KLD will be met from Ground Water Supply and 5 KLD will be met from RIICO Water Supply. The Industrial Effluent of 4.0 KLD will be treated through MEE & the Domestic Effluent of 5.0 KLD will be treated through STP. The treated water from STP (5.0 KLD) will be used for plantation, utility & dual plumbing and the water from MEE (3.5 KLD) will be re-circulated to Cooling Tower. The Plant will be based on Zero Liquid Discharge system.

9. The PP reported that the Power requirement will be 600 kVA and will be met from JVVNL. The proposed unit will install DG set of 325 kVA capacity and DG Set will run on PNG only. Stack (height of 30 m) will be provided as per CPCB norms to the proposed DG set.

10. The PP reported that the project, being in notified industrial area, is exempted from the public hearing as per the Ministry's O.M. J-11011/321/2016-IA. II(I) dated 27.04.2018.

11. The greenbelt to be developed within the premises is 3341.6 m^2 (i.e. 33%), out of which 2017.70 m^2 (19.92%) will be developed on ground and around 722 m^2 (7.13%) of area will be proposed for vertical gardening & 601.90 m^2 (5.94%) area will be provided for roof top plantation & remaining plantation area of 710 m^2 (7%) will be developed outside the plant premises along the road will be done by taking permission with RIICO.

12. The proposed project cost is Rs. 32.0 Crores. The PP reported that the total employment will be 140 persons as direct employment. Industry proposes to allocate Rs 96.0 Lakhs for activities under CER.
13. **Deliberations by the EAC:**

The EAC inter-alia, deliberated on the greenbelt development plan, manufacturing process and clarification regarding location of the project in critically polluted area and advised the PP to submit the following:

- Revised greenbelt development plan for 33% (**only on ground**) of the total area.
- Manufacturing process flow chart of unsaturated polyester resin.
- Undertaking that the project doesnot fall in the Critcally Pollluted area.

The PP submitted the above information/documents and the EAC found it to be satisfactory, except that the density of trees considered was 1000 per hectare **as against the prescribed 2,500 per hectare (2 m x 2 m).**

14. After detailed deliberations, the EAC **recommended** the project for grant of ToR (**Standard ToR [Annexure-II]** and **additional ToR as mentioned below)**, **without public hearing** as per the provisions of the EIA Notification, 2006 and as per O.M. No. 22-23/2018-IA.III dated 05.07.2022.
    (i) Action plan for utilization of modern technologies for capturing carbon emitted and developing carbon sink/carbon sequestration resources.
    (ii) Detailed description of micro flora and fauna (terrestrial and aquatic) existing in the study area with special reference to rare, endemic and endangered species.
    (iii) Explore possibilities for recycling and reusing of treated water in the unit to reduce the fresh water demand and wastewater disposal.
    (iv) Detailed greenbelt development plan for 33% (**only on ground**) of the total area, with a spacing of 2 m x 2 m and 2500 number of trees per hectare.
    (v) Detailed solvent recovery/solvent management plan
    (vi) Detailed Volatile Organic Compounds (VOCs)/Fugitive emissions control plan

Agenda No. 44.10

Proposed expansion of Marine Chemicals, Fertilizers and Captive Co-Gen Power Plant from 5295 MTPM to 113908 MTPM along with 25.6 MW of Co-Gen Power Generation located at Greater Rann of Kutch, Near Village Dhordo, Tal. Bhuj, Dist. Kutch, Gujarat by M/s. Agrocel Industries Pvt. Ltd - Consideration of EC

[Proposal No. IA/GJ/IND3/277411/2020; File No. IA-J-11011/269/2020-IA-II(I)]

1. The proposal is for environmental clearance for the Proposed expansion of Marine Chemicals, Fertilizers and Captive Co-Gen Power Plant from 5295 MTPM to 113908 MTPM along with 25.6 MW of Co-Gen Power Generation located at Greater Rann of Kutch, Nr. Village Dhordo, Tal: Bhuj, Dist. Kutch, Gujarat by M/s. Agrocel Industries Pvt. Ltd.

2. The project/activity is covered under Category 'A' of item 5(a), Chemical Fertlizer & 1(d) of the Schedule of EIA Notification, 2006 (as amended) and requires appraisal at Central Level by the EAC.

3. The standard ToR has been issued by the Ministry, vide letter No. -J-11011/269/2020-IA-II(I) dated 7.11.2020. The Public Hearing was conducted by the State Pollution control board on 25.8.2021. The PP applied for Environment Clearance on 11.6.2022 through CAF, and submitted the EIA/EMP Report and other documents. Due to the shortcomings, the proposal was referred back to PP on 23.6.2022 and reply for the same has been submitted on 7.12.2022. The PP reported in the Form-2 that it is an **Expansion case.** The proposal is now placed in the 44th EAC Meeting held on 16th &19th December 2022, wherein the PP and an accredited Consultant, **San Envirotech Pvt. Ltd**. [Accreditation number NABET/EIA/2023/RA 0216, Valid up to 23.12.2023] made a detailed presentation on the salient features of the project and informed the following:

4. The PP reported that the existing land area is 27762.5 Acres (112350851.43 m^2), which is lease land. Out of which, 366650 m^2 land is for the project and rest of the land is for salt recovery and was given by the Government of Gujarat on lease. No additional land will be required for proposed expansion. Expansion will be done within the existing unit and no R&R is involved in the Project. The details of products and by–products are as follows:

Sr. No.	**Name of the Products**	**CAS No.**	**Quantity (MT/Month)**			**Type of products**	**Schedule as per EIA Notification, 2006**
			Existing as per CCA	**Proposed**	**Total**		
1	Liquid Bromine	7726-95-6	4000	4333	8333	Inorganic Chemical	Non-EC
2	48% Hydrobromic Acid	10035-10-6					
3	Calcium Bromide (52%) / **Solid Powder**	7789-41-5					
4	Phosphorus Tribromide	7789-60-8	15	10	25	Inorganic Chemical	Non-EC
5	Sodium Bromide (45%)/ **Solid Powder**	7647-15-6	150	1437	1667	Inorganic Chemical	Non-EC
6	Zinc Bromide (77%)	7699-45-8	80				
7	Lithium Bromide	7550-35-8	0.0				
8	Potassium Schoenite ($K_2SO_4.MgSO_4.6H_2$	7447-40-7 5	750	28833	29583	Fertilizer	5(a)

	O)						
9	Syngenite ($K_2SO_4.CaSO_4.H_2O$)	13780-13-7					
10	Sulphate of Potash	7778-80-5	0.0			Fertilizer	5(a)
11	Potassium Nitrate	7757-79-1	0.0			Fertilizer	5(a)
12	Magnesium Sulphate ($MgSO_4$)	7487-88-9	0.0			Fertilizer	5(a)
13	Magnesium Chloride ($MgCl_2$)	7786-30-3	300	57333	57633	Inorganic Chemical	Non-EC
	Magnesium Hydroxide $Mg(OH)_2$	1309-42-8				Inorganic Chemical	Non-EC
	Magnesium Oxide (MgO)	1309-48-4				Inorganic Chemical	Non-EC
14	Enriched Mineral Salt Mix	--	0.0	16667	16667	Inorganic Chemical	Non-EC
15	Captive Co-Gen Power Plant (6.4 MW x 4 nos.)	--	--	25.6 MW	25.6 MW	Power Plant	1(d)
Total			**5295**	**108613**	**113908**		

5. The PP reported that there is no violation case as per the Notification No. S.O. 804(E) dated 14.03.2017 and no direction is issued under E(P) Act/Air Act/Water Act.

6. The PP reported that Unit is engaged in manufacturing of inorganic products – Marine Chemicals, so EC is not applicable to existing unit. Certified Compliance Report of CTO has been issued by the GPCB dated 9.11.2022.

7. The PP reported that there are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site. Pond of Dhordo Village is at a distance of 4.6 km in SE direction from project site.

8. The PP reported that Ambient air quality monitoring was carried out at 8 locations during October, 2020 to December, 2020 and the baseline data indicates the ranges of concentration as: PM_{10} (54.7 – 66.1 µg/m^3), $PM_{2.5}$ (32.5 – 38.9 µg/m^3), SO_2 (8.1 – 12.7 µg/m^3), NOx (12.3 – 15.7 µg/m^3). AAQ modeling study for point source emission indicated that the maximum

incremental GLCs after the proposed project would be 10.68 μg/m^3, 5.284 μg/m^3, 4.147 μg/m^3, 0.226 μg/m^3, 0.226 μg/m^3 and 1.131 μg/m^3 with respect to PM_{10}, SO_2, NOx, Br_2, Cl_2, HBr. The resultant concentrations are within the national ambient air quality standards (NAAQS. **Noise-** The noise levels of various locations are given in Table 3.23. The monitored noise level in the day time Leq (Ld) varies from 49.7 to 56.3 dB(A) and the night time Leq (Ln) varies from 37.4 to 49.1 dB(A) within the study area. Higher noise value of 56.3 dB(A) was recorded during day time at Project Site & lower noise value of 37.4 dB(A) was recorded during night time in Village Dhord. **Water-** The PP reported that the results have been compared with the drinking water standards specified in IS: 10500-2012. It was observed that all the physicochemical parameters and heavy metals except turbidity are below stipulated drinking water standards of BIS & it is suitable for drinking and other purposes. **Soil**- The PP reported that in the study area, variations in the pH value ranging from 7.45 to 7.97 which shows that the soil is slightly alkaline in nature. Organic Matter ranges from 1.62 to 2.36 mg/kg in the soil samples. Soil of the study area is known as saline soil and no or poor for cultivation. Soil with high bulk density exhibit poor physical conditions for agriculture crops.

9. The PP reported that total water requirement is 26287 KLD, of which fresh water requirement of 22378 KLD will be met from desalination of Sea water and rejected Brine water. 3909 KLD will be recycled/treated water. Total industrial effluent generation will be 460852 KLD, of which 3858 KLD will be close loop recycle. Hence actual w/w generation will be 456994 KLD. Domestic sewage generation will be 51 KLD. Source of wastewater generation will be process effluent 453712 KLD (Process Brine W/w 435559 + others 18153 KLD), Scrubber (80.0 KLD), stripper washing (1402 KLD), cooling bleed off (150 KLD), boiler blow down (1328 KLD), RO Reject (2380 KLD), Water with Lime slurry (1800 KLD). Trade effluent will be treated in to ETP (Neutralization and Settler). Effluent from ETP will sent to evaporation pan for recovery of mineral salt, which is one of the raw materials of products. Generated 51 KLD of domestic wastewater/sewage will be treated in STP and treated sewage will be reused in greenbelt.

10. The PP reported that power requirement after expansion will be 92000 KVA will be partially met from PGVCL (Paschim Gujarat Vij Company Limited) and partially by Captive Co-gen Power Plant of 25.6 MW. Existing unit has 3 DG sets of 320 kVA, 200 kVA and 82.5 kVA capacity. After expansion, unit proposed to add 3 more DG Sets of 500 kVA x 3 nos. DG sets are used as standby during power failure. Stack (height 12 m and 21 m) will be provided as per CPCB norms to the proposed DG sets.

11. Existing unit has one common stack of 2 nos. of Lignite/Imported Coal fired Boilers (6.0 TPH and 18 TPH), one stack of LDO/HSD fired Boiler (8 TPH), 2 stacks of Wood/Lignite/Imported coal fired Hot Air Generators (2.5 lakh kcal/hr. and 4 lakh kcal/hr.). Multi cyclone Bag filter, water scrubber is installed as APCM on Boiler of 6 TPH, ESP and water scrubber on Boiler of 18 TPH, Dust Collector followed by cyclone separator on LDO/HSD fired boiler. Dust Collector is installed on Hot Air Generators. After expansion, 5 stacks of coal fired Boilers, 6 stacks of coal fired Hot Air Generators will be added. ESP + Wet scrubber will be installed as APCM to Boilers. Cyclone Separator & Bag filter will be installed as an APCM on HAG to achieve the emission norms. Stack with adequate stack

height will be installed for controlling the particulate emissions within the statutory limit of 150 mg/Nm^3 for the proposed utilities. Total Flue stacks after expansion will be 18 nos. (Existing: 6 nos. + Additional: 12 nos.). Details of flue gas stacks are given below.

Flue Gas Stacks

Sr. No.	Stack attached to	Fuel Type	Stack Height (m)	APC measures	Probable Emission
Flue Gas Stacks-Existing					
1.	Boiler-1 (6.0 TPH)	Lignite/ Imported Coal 26.4 TPD	40	Multi cyclone Bag filter, water scrubber	PM: 150 mg/Nm^3 SO_2: 100 ppm NO_x: 50 ppm
2.	Boiler-2 (18 TPH)	Lignite/ Imported Coal 79.2 TPD	44	ESP and water scrubber	
3.	Boiler-3 (8 TPH)	LDO/HSD 16.8 TPD	30	Dust Collector followed by cyclone separator	
4.	Hot Air Generator-1 (2.5 lakh kcal/hr)	Wood / Lignite / Imported coal 7.2 TPD	11	Dust Collector	
5.	Hot Air Generator-2 (4 lakh kcal/hr)		15	Dust Collector	
6.	DG Set-1, 2 & 3 (320 KVA, 200 KVA and 82.5 kVA) (Stand By)	HSD 245 lit/hr.	12	Adequate stack height	
Flue Gas Stacks-Proposed					
1.	Boiler-4 (30 TPH) (non-salt based products)	Coal 131 TPD	47	ESP +Wet scrubber	PM: 150 mg/Nm^3 SO_2: 100 ppm NO_x: 50 ppm
2.	Boiler-5 (45 TPH) (salt based products)	Coal 197 TPD	51	ESP +Wet scrubber	PM: 150 mg/Nm^3 SO_2: 100 ppm NO_x: 50 ppm
3.	Boiler-6 (45 TPH) (salt based products)	Coal 197 TPD	51	ESP +Wet scrubber	PM: 150 mg/Nm^3 SO_2: 100 ppm NO_x: 50 ppm
4.	Boiler-7 (45 TPH) (salt based products)	Coal 197 TPD	51	ESP +Wet scrubber	PM: 150 mg/Nm^3 SO_2: 100 ppm NO_x: 50 ppm
5.	Boiler-8 (45 TPH) (salt based products)	Coal 197 TPD	51	ESP +Wet scrubber	PM: 150 mg/Nm^3 SO_2: 100 ppm NO_x: 50 ppm
6.	Hot Air Generator-3 (non-salt based products)	Coal 2 TPD	24	Cyclone Separator	PM: 150 mg/Nm^3 SO_2: 100 ppm NO_x: 50 ppm

	(5 Lakh kcal/hr.)				
7.	Hot Air Generator-4 (salt based products) (4 Lakh kcal/hr.)	Coal 1.6 TPD	24	Cyclone Separator	PM: 150 mg/Nm^3 SO_2: 100 ppm NO_x: 50 ppm
8.	Hot Air Generator-5 (salt based products) (50 Lakh kcal/hr.)	Coal 26 TPD	30	Cyclone Separator & Bag filter	PM: 150 mg/Nm^3 SO_2: 100 ppm NO_x: 50 ppm
9.	Hot Air Generator-6 (salt based products) (50 Lakh kcal/hr.)	Coal 26 TPD	30	Cyclone Separator & Bag filter	PM: 150 mg/Nm^3 SO_2: 100 ppm NO_x: 50 ppm
10.	Hot Air Generator-7 (salt based products) (50 Lakh kcal/hr.)	Coal 26 TPD	30	Cyclone Separator & Bag filter	PM: 150 mg/Nm^3 SO_2: 100 ppm NO_x: 50 ppm
11.	Hot Air Generator-8 (salt based products) (50 Lakh kcal/hr.)	Coal 26 TPD	30	Cyclone Separator & Bag filter	PM: 150 mg/Nm^3 SO_2: 100 ppm NO_x: 50 ppm
12.	DG Set-4, 5 & 6 (500 kVA x 3 nos.)	Diesel 630 lit/hr.	21	Adequate stack height	PM: 150 mg/Nm^3 SO_2: 100 ppm NO_x: 50 ppm

12. **Details of Process Emissions Generation and its Management:** At present, process gas emission is from stack attached with Bromine Plant-1. Process Stack is equipped with Water and Alkali scrubber. After expansion, process emissions will be from one vent of Bromine plant-2, 16 vents of Bromine Stripping plants, 3 vents of Air dryer for $CaBr_2$, NaBr, LiBr, 5 vents of 5 nos. of Rotary dryers (of Inorganic fertilizer) and one vent of Calciner (for MnO Plant). Vent of Bromine Plant-2 will be equipped with Water and Alkali Scrubber. 2 stage Alkali Scrubber will be installed on Bromine stripping plants and bag filter on vent of Air dryer, Rotary dryers and Calciner. Total process stacks after expansion will be 27 nos. (Existing: 1 no. + Additional: 26 nos.). Details of process gas stacks are given below.

Process Gas Stacks

S. No.	Stack attached to	Stack Height (m)	APC measures	Probable Emission
Process Gas Stacks –Existing				
1.	Bromine plant-1	20	Water and Alkali Scrubber	Br_2: 2 mg/Nm^3 Cl_2:9 mg/Nm^3 HBr: 30 mg/Nm^3
Process Gas Stacks –Proposed				
1.	Bromine plant-2	20	Water and Alkali Scrubber	Br_2: 2 mg/Nm^3 Cl_2:9 mg/Nm^3 HBr: 30 mg/Nm^3
2.	Bromine Stripping plant-3	20	2 stage Alkali Scrubber	
3.	Bromine Stripping plant-4	20	2 stage Alkali Scrubber	
4.	Bromine Stripping plant-5	20	2 stage Alkali Scrubber	

5.	Bromine Stripping plant-6	20	2 stage Alkali Scrubber	
6.	Bromine Stripping plant-7	20	2 stage Alkali Scrubber	
7.	Bromine Stripping plant-8	20	2 stage Alkali Scrubber	
8.	Bromine Stripping plant-9	20	2 stage Alkali Scrubber	
9.	Bromine Stripping plant-10	20	2 stage Alkali Scrubber	
10.	Bromine Stripping plant-11	20	2 stage Alkali Scrubber	
11.	Bromine Stripping plant-12	20	2 stage Alkali Scrubber	
12.	Bromine Stripping plant-13	20	2 stage Alkali Scrubber	
13.	Bromine Stripping plant-14	20	2 stage Alkali Scrubber	
14.	Bromine Stripping plant-15	20	2 stage Alkali Scrubber	
15.	Bromine Stripping plant-16	20	2 stage Alkali Scrubber	
16.	Bromine Stripping plant-17	20	2 stage Alkali Scrubber	
17.	Bromine Stripping plant-18	20	2 stage Alkali Scrubber	
18.	Air dryer for $CaBr_2$ solid	25	Bag filter	PM < 45 mg/Nm^3
19.	Air dryer for NaBr solid	25	Bag filter	PM < 45 mg/Nm^3
20.	Air dryer for LiBr	25	Bag filter	PM < 45 mg/Nm^3
21.	Rotary dryer 1 (for SOPM - Schoenite)	15	Bag filter	PM < 45 mg/Nm^3
22.	Rotary dryer 2 (for SOP - Sulphate of potash)	15	Bag filter	PM < 45 mg/Nm^3
23.	Rotary dryer 3 (for Syngenite)	15	Bag filter	PM < 45 mg/Nm^3
24.	Rotary dryer 4 (for $MgSO_4$)	15	Bag filter	PM < 45 mg/Nm^3
25.	Rotary dryer 5 (for $(MgOH)_2$)	15	Bag filter	PM < 45 mg/Nm^3
26.	Calciner (for MgO)	25	Bag filter	PM < 45 mg/Nm^3

13. **Details of Solid Waste/ Hazardous Waste Generation and its Management:**

Sr. No.	Name of waste	Category as per Haz. Rule, 2016	Source	Qty.			Disposal method
				Existing	Proposed addition	Total after expansion	

1.	Neutralizer sludge	35.3	Neutralizer	00	700000 MT/year	700000 MT/year	Collection, Storage, and reuse in Syngenite & Potassium Schoenite
2.	Discarded Containers/Liner/ Bags	33.1	Material storage	500 Nos./ Year 5 MT/Year	1500 Nos./Year 15 MT/Year	2000 Nos./Year 20 MT/Year	Collection, Storage, Decontamination, Transportation, Disposal by selling to Authorized Recycler
3.	Used Oil	5.1	Driving units	1 MT/Year	4 MT/Year	5 MT/Year	Collection, Storage, Transportation, Disposal by selling to Registered Reprocess
4.	Spent H_2SO_4 (70-75%)	C2	From Product Bromine and 48% Hydro Bromic Acid	4800 MT/Year	46,000 MT/Year	50,800 MT/Year	Collection, Storage, Transportation and captive consumption

14. The Budget earmarked towards the Environmental Management Plan (EMP) is ₹ 5.195 Crore (capital) and the Recurring cost (operation and maintenance) for EMP will be about ₹ 94.5 Lakhs per annum. Industry proposes to allocate ₹ 187.5 Lakhs towards CER.

15. The PP reported that Public Hearing for the expansion project has been conducted by the Gujarat Pollution Control Board on 25.08.2021. Most of participants have welcomed the project and adviced to utilize CER fund for drinking water, sanitation facility and education.

16. The industry has developed greenbelt in an area of 30% i.e. 51225 m^2 and proposes to add greenbelt in an area in 48587 m^2 for expansion project. Hence after expansion, total greenbelt area will be 99812 m^2 of total project area.

17. The PP reported that the unit has established set up of Environment Management Cell (EMC), Chief operating officer- Manager (EHS) – Safety manager- Enviornment- Safety officer- ETP in charge- ETP for the functioning of EMC.

18. The PP submitted the Onsite and Offsite disaster management plan in their EIA report.

19. The estimated project cost is Rs. 600 Crore including existing investment of Rs. 350 Crore. Total Employment will be 600 Persons after expansion.

20. **Deliberations by the EAC**:

After detailed deliberations, the EAC sought the following requisite information/documents and **deferred** the proposal:

(i) Compliance to green belt development of 33% of the total area of the exisiting unit (@2500 per hectare) in consultation with forest department and accordingly, submit the details of green belt developed, number of trees and aerial photographs and video.

(ii) Similarly, detailed time bound action plan for the greenbelt development for the proposed expansion.

(iii) Undertaking stating that Biomass/Agro Briquettes shall be used as the primary fuel.

(iv) Details of carbon foot print and carbon sequestration study w.r.t. existing and proposed expansion project.

(v) Details of energy conservation measures implemented and proposed in the Unit.

(vi) Confirmation from GCZMA or authorized agency of the ministry on an authenticated map regarding the location of the project outside the CRZ area.

(vii) Project and Site-specific On-site and Off-site emergency plans.

Agenda No. 44.11

Sebacic Acid manufacturing unit at Block/survey No. 452/A&B, 457,259,460,461,465,466,468 at village Umaraya, Padra Taluka, Dist. Vadodara by M/s Sebacic Mfg. & Expo lndia Limited - Amendment in Environmental Clearance

[Proposal No. IA/GJ/IND3/292095/2022; File No. J-I1011/1098/2007-IA-II(I)]

The project proponent did not attend the EAC meeting. The proposal was accordingly, **deferred.**

Agenda No. 44.12

Proposed Expansion of Pigment Products from 10 MTPM of Pigment Violet-23 to 60 MTPM of Pigment Violet 23 (Crude/Press Cake /Finished/Micronized) located at Plot No. 79 to 82, Phase No. II, GIDC Industrial Estate - Vatva, Ahmedabad, Gujarat by M/s Meghmani Pigments (Unit-1) - Consideration of ToR

[Proposal No. IA/GJ/IND3/402471/2022; File No. IA-J-11011/437/2022-IA-II(I)]

1. The proposal is for the ToR for preparation of EIA/EMP for the Proposed Expansion of Pigment Products from 10 MTPM of Pigment Violet-23 to 60 MTPM of Pigment Violet 23 (Crude/Press Cake /Finished/Micronized) located at Plot No. 79 to 82, Phase No. II, GIDC Industrial Estate - Vatva, Ahmedabad, Gujarat by M/s Meghmani Pigments (Unit-1). **The PP reported that the project is located in a Critically Polluted Area (CPA) as identified by the CPCB.**

2. The project/activity is covered under Category 'B' of item 5(f), Synthetic organic chemicals industry of Schedule of EIA Notification, 2006 (as amended). However, since the project site is located in a critically polluted area, the project attracts the general condition and considered as Category 'A' at Centre.

3. The PP applied for the ToR vide proposal no. **IA/GJ/IND3/402471/2022** dated 08.10.2022. The EDS were raised due to the shortcoming of information on 26th Oct. 2022 and 25th Nov. 2022 and its reply was submitted by the PP on 19th Nov. 2022 and 08th Dec. 2022 respectively. The proposal is now placed in 44th EAC Meeting held on 16th & 19th December, 2022, wherein the PP and an accredited Consultant, San Envirotech Pvt. Ltd. [Accreditation number – NABET/EIA/1922/RA 0216, Valid up to 23.12.2022] made a detailed presentation on the salient features of the project. The information submitted by the PP is as follows:

4. The PP reported the product details as follows:

Name of Products	CAS No.	Production Capacity (MT/Month)			End Use of Product
		Existing	Addition	Total after expansion	
Pigment Violet-23 (Crude/ Press Cake/ Finished/ Micronized)	215247-95-3	10.0	50.0	60.0	Paints/ Plastics/ Rubber Industries, Printing Inks & Textile Printing

5. The PP reported that the existing project was established before 2006 and didn't attract the provisions of EIA Notification, 1994.

6. The PP reported that there is no violation as per the EIA notification, 2006, no court case is pending against the proposal and no direction issued under E (P) Act/Air Act/Water Act.

7. The PP reported that the existing land area is 5519 m^2. No additional land will be required for proposed expansion. Expansion will be done within the existing unit and no R&R is involved in the Project.

8. The PP reported that the proposal does not involve Approval/Clearance under Forest (Conservation) Act, 1980, Wildlife (Protection) Act, 1972 and C.R.Z Notification, 2011, as

amended. There is no Forest, Eco Sensitive Area/National Park/Wildlife Sanctuary in 10 km radius of the site.

9. The PP reported that the total effluent generation will be 312.5 KLD (Industrial - 308.5 KLD + Domestic - 4.0 KLD). Sources of industrial effluent generation will be process, scrubber, washing, utilities and water treatment. Process effluent will be segregated in 2 parts. Concentrated stream from process (65 KLD) will be sent to Common MEE/Spray Dryer. Dilute stream from process (186 KLD) along with other industrial effluent [scrubber (2.0 KLD), washing (45 KLD), utilities (7 KLD), water treatment (3.5 KLD)] and domestic sewage (4.0 KLD) will be treated in ETP having primary, secondary and tertiary treatment facility. After treatment, 247.5 KLD treated effluent will be sent to CETP, Vatva for further treatment and final disposal of effluent.

10. The PP reported that the power requirement will be 1000 KW including existing 600 KW and will be met from Torrent Power Limited. Unit has proposed 01 No. of D. G. set capacity of 500 kVA. D. G. sets will be kept as standby and used during power failure. Stack height of 11.00 m will be provided as per CPCB norms to the proposed DG sets.

11. The PP reported that the project being in notified industrial area, is exempted from the public hearing as per the Ministry's O.M. J-11011/321/2016-IA. II(I) dated 27.04.2018.

12. Greenbelt is already developed on an area of 41% i.e., 2250.00 m^2 out of total area of the project.

13. The estimated project cost is ₹35.28 Crores including existing investment of Rs. 3.91 Crore. Total capital cost earmarked towards environmental pollution control measures is Rs. 2.04 Crore and the Recurring cost (operation and maintenance) will be about Rs. 1.84 Crore per annum. The PP reported that the total employment will be 101 persons after expansion. Industry proposes to allocate Rs. 62.72 Lakhs @2.0% of project expansion cost towards Corporate Social Responsibility.

14. **Deliberations by the EAC:**

The EAC inter-alia, noted that the PP and the Consultant falsely claimed the development of green belt in 41% of the total area i.e. considering bushes/ornamental plants also in the greenbelt. The EAC took a serious note of this and warned, especially the Consultant (who was already cautioned earlier) that the Ministry/QCI-NABET shall be requested to take appropriate action, if any such lapse is repeated.

After detailed deliberations, the EAC sought the following requisite information/documents and accordingly, **deferred** the proposal:

(i) Gazette Notification of the industrial area. In case, the same is not available, a certificate from GIDC specifying the details of notification.

(ii) Being a project located in a Critically Polluted Area, the alternate site analysis for the proposed expansion.

(iii) Compliance to greenbelt development of minimum 40% of the total area of the exisiting unit (@2500 per hectare), **excluding bushes/ornamental plants** in consultation with forest department and accordingly, submit the details of green belt developed, number of trees and aerial photographs and video.

(iv) Self- certified compliance to the existing CTO conditions.

(v) Quantified and specific compliance and action plan for the additional safeguard measures prescribed in the Ministry's O.M. dated 31.10.2019 for critically and severely polluted areas.

Agenda No. 44.13

Proposed Expansion of Pesticides Manufacturing Unit of production capacity (Copper Oxy Chloride/Copper Fungicides from 10 MTPM to 150 MTPM) located at Plot No. 3730-31-32, Phase IV, GIDC Estate, Vatva, Ahmedabad, Gujarat by M/s Kundan Pestichem Pvt. Ltd. - Consideration of ToR

[Proposal No. IA/GJ/IND3/400443/2022; File No. IA-J-11011/127/2017-IA-II(I)]

1. The proposal is for the ToR for preparation of EIA/EMP for the Proposed Expansion of Pesticides Manufacturing Unit of production capacity (Copper Oxy Chloride/Copper Fungicides from 10 MTPM to 150 MTPM) located at Plot No. 3730-31-32, Phase IV, GIDC Estate, Vatva, Ahmedabad, Gujarat by M/s Kundan Pestichem Pvt. Ltd. **The PP reported that the project is located in a Critically Polluted Area (CPA) as identified by the CPCB.**

2. The project/activity is covered under Category 'A' of 5 (b), Pesticides industry and pesticide specific intermediates (excluding formulations) of Schedule of EIA Notification, 2006 (as amended) and requires appraisal at Central Level by the EAC.

3. The PP applied for the ToR vide proposal no. **IA/GJ/IND3/400443/2022** dated 1.10.2022. The EDS on 9.10.2022 and its reply was submitted by the PP on 9.12.2022. The proposal is now placed in the 44th EAC Meeting held on 16th & 19th December, 2022, wherein the PP and an accredited Consultant, M/s. Bhagwati Enviro Care Pvt. Ltd. [Accreditation number – **QCI/NABET/ENV/ACO/22/2552**, Valid up to 9.1.2023] made a detailed presentation on the salient features of the project. The information submitted by the PP is as follows:

4. The PP reported the following product details:

S. No.	Name of the Products	CAS No.	Quantity MT/Month			End-use of the products
			Existing	Proposed	Total	

1	Copper Oxychloride	1332-40-7	10	110	120	It is used in crops and plantation to fight & counter against fungal decease.
2	Copper Hydroxide	20427-59-2	0	30	30	
		Total	**10**	**140**	**150**	

5. The PP reported that the existing project was established before 2006 and didn't attract the provisions of EIA Notification, 1994.

6. The PP reported that there is no violation as per the EIA notification, 2006, no court case is pending against the proposal and no direction issued under E (P) Act/Air Act/Water Act.

7. The PP reported that the existing land area is 1500 m^2, no additional land will be used for the proposed expansion and no R&R is involved in the Project.

8. The PP reported that the proposal does not involve Approval/Clearance under Forest (Conservation) Act, 1980, Wildlife (Protection) Act, 1972 and C.R.Z Notification, 2011, as amended. There is no Forest, Eco Sensitive Area/National Park/Wildlife Sanctuary in 10 km radius of the site.

9. The PP reported that the total water requirement is 17.4 KLD of which fresh water requirement of 14.1 KLD will be met from GIDC Vatva water supply. Total effluent will be 9.3 KLD, of which, domestic effluent of 0.8 KLD will be treated in STP and reused for gardening within the premises. Out of the total industrial effluent of 8.5 KLD, low concentrated effluent (5 KLD) will be treated in ETP-1 and send to CETP Vatva (as per exiting valid CCA) after achieving SPCB norms and high concentrated effluent (3.5 KLD) will be treated in ETP-2 followed by RO. The RO Permeate (2.5 KLD) will be reused within premises and RO Reject (1.0 KLD) will be sent to in house evaporator.

10. The PP reported that the power requirement after expansion will be 250 KW including existing 100 KW and will be met from Torrent Power. There is no DG Set in existing Unit, as well as after expansion.

11. The PP reported that the project being in a notified industrial area, is exempted from the public hearing as per the Ministry's O.M. J-11011/321/2016-IA. II(I) dated 27.04.2018.

12. Industry has developed greenbelt in area of 500 Sq. m., which is 33.3% of total plot area. Additionally, we will develop 100 Sq. m. (6.7% of total plot area). So, after expansion total greenbelt area will be 600 Sq. m. (40% of total plot area).

13. The estimated project cost is Rs 1.92 Crore including existing investment of Rs. 0.98 Crores. The PP reported that the total employment will be 70 persons as direct & 15 persons indirect for proposed expansion project. Industry proposes to allocate Rs. 4.0 Lakhs towards corporate Environmental responsibility

14. **Deliberations by the EAC:**

After detailed deliberations, the EAC sought the following requisite information/documents and accordingly, **deferred** the proposal:

(i) Since Pesticides (Technical) did require EC as per the EIA Notification 1994, detailed justification with supporting documents for not obtaining EC for the existing unit. Else, the PP shall re-apply under violation category.

(ii) Gazette Notification of the industrial area. In case, the same is not available, a certificate from GIDC specifying the details of notification.

(iii) Being a project located in a Critically Polluted Area, the alternate site analysis for the proposed expansion.

(iv) Compliance to green belt development of minimum 40% of the total area of the exisiting unit (@2500 per hectare), **excluding bushes/ornamental plants** in consultation with forest department and accordingly, submit the details of green belt developed, number of trees and aerial photographs and video.

(v) Revised process flow diagram with stoichiometry and material balance, specifically copper.

(vi) Revised water balance.

(vii) Life Cycle Assessment including the impact on flora and fauna.

(viii) Self- certified compliance to the existing CTO conditions.

(ix) Quantified and specific compliance and action plan for the additional safeguard measures prescribed in the Ministry's O.M. dated 31.10.2019 for critically and severely polluted areas.

Agenda No. 44.14

Proposed Expansion of Marine Chemicals, Fertilizers & Organic Chemicals with production capacity from 3005 MTPM to 112917 MTPM and Captive Co-Gen Power Plant from 7.675 MW to 33.275 MW located at Survey No. 164, Village: Ratadia, Near, Khavda, Ta. Bhuj, Dist. Kutch, Gujarat by M/s. Solaris Chemtech Industries Ltd. - Consideration of EC

[Proposal No. IA/GJ/IND3/280064/2020; File No. IA-J-11011/271/2020-IA-II(I)]

1. The proposal is for the environmental clearance for the Proposed Expansion of Marine Chemicals, Fertilizers & Organic Chemicals with production capacity from 3005 MTPM to 112917 MTPM and Captive Co-Gen Power Plant from 7.675 MW to 33.275 MW located at Survey No. 164, Village: Ratadia, Near, Khavda, Ta. Bhuj, Dist. Kutch, Gujarat by M/s. Solaris Chemtech Industries Ltd.

2. The project/activity is covered under Category 'A' of item 5(a)-Chemical Fertilizers, 5(f) - Synthetic Organic Chemicals and 1(d)-Thermal Power Plants of Schedule of EIA Notification, 2006 (as amended) and requires appraisal at Central Level by the EAC.

3. The standard ToR has been issued by Ministry vide letter no. IA-J-11011/271/2020-IA-II-(I) dated 07.11.2020. The PP submitted that Public Hearing for the expansion project has been conducted by the Gujarat Pollution Control Board on 15.9.2021. The PP applied for Environment Clearance on 28.6.2022 in CAF and submitted EIA/EMP Report and other documents. The PP reported in Form that it is an **Expansion EC**. Due to some shortcomings, the Project.was referred back to PP on 6.7.2022 and the reply for the same has been submitted on 9.12.2022. The proposal is now placed in 44th EAC Meeting held on 16th &19th December 2022, wherein the PP and an accredited consultant, San Envirotech Pvt. Ltd. [Accreditation number – NABET/EIA/1922/RA 0216, Valid up to 23.12.2022] made a detailed presentation on the salient features of the project. The information submitted by the PP is as follows:

4. The PP reported that the existing land area is 222578 m^2 and no additional land will be required for proposed expansion. Expansion will be done within the existing unit and no R& R is involved in the Project. The details of products are as follows:

Sr. No.	Name of the Products	Quantity (MT/Month)			Type of products	Schedule as per EIA Notification, 2006
		Existing as per CCA	Proposed Addition	Total		
1	Liquid Bromine	1700.0	1375	3075	Inorganic Chemical	Non-EC
2	Hydrobromic Acid (48%)	180.0	2037	2217	Inorganic Chemical	Non-EC
3	6-Chloro Hexanone	5.0	00	5.0	Organic Chemicals	5(f)
4	n – Propyl Bromide	270.0	417	687	Organic Chemicals	5(f)
5	n – Butyl Bromide				Organic Chemicals	5(f)

6	TBBA-Tetra Bromo Bisphenol A	850.0	0.0	850	Organic Chemicals	5(f)
	HBr in TBBA (33% W/W)				Inorganic Chemical	Non-EC
7	Potassium Schoenite ($K_2SO_4.MgSO_4.6H_2O$)	0.0	29583	29583	Fertilizer	5(a)
8	Syngenite ($K_2SO_4.CaSO_4.H_2O$)				Fertilizer	5(a)
9	Potassium Sulphate (SOP)				Fertilizer	5(a)
10	Potassium Nitrate (KNO_3)				Fertilizer	5(a)
11	Magnesium Sulphate ($MgSO_4$)				Fertilizer	5(a)
12	Magnesium Hydroxide ($Mg(OH)_2$)	0.0	57333	57333	Inorganic Chemical	Non-EC
13	Magnesium Oxide (MgO)				Inorganic Chemical	Non-EC
14	Magnesium Chloride ($MgCl_2$)				Inorganic Chemical	Non-EC
15	Enriched Mix Mineral Salt	0.0	16667	16667	Inorganic Chemical	Non-EC
16	Zinc Bromide (75%)	0.0	1667	1667	Inorganic Chemical	Non-EC
17	Lithium Bromide					
18	Calcium Bromide (CaBr) (52%)					
19	Calcium Bromide Solid Powder					
20	Sodium Bromide (45%)					
21	Sodium Bromide Solid Powder					
22	Di Bromo Neo Pentyl Glycol (DBNPG)	0.0	833	833	Organic Chemicals	5(f)
23	2,4,6 Tri Bromo Phenol (TBP)				Organic Chemicals	5(f)
24	Deca Bromo Diphenyl Ethane (DBDPE)				Organic Chemicals	5(f)
25	Tri Bromo Neo Pentyl Alcohol (TBNPA)				Organic Chemicals	5(f)
	Total	**3005**	**109912**	**112917**		

Captive Co-Gen Power Plant	7.675 MW	6.4x4 = 25.6 MW	33.275 MW	CPP	1(d)

5. The PP reported that there is no violation case as per the Notification No. S.O. 804(E) dated 14.03.2017 and no direction is issued under E (P) Act/Air Act/Water Act.

6. The PP reported that Ministry had issued EC earlier vide letter no. J-11011/400/2008-IA-II (I), dated 13.05.2009 to the existing project in favour of M/s. Solaris Chemtech Limited. The same EC is transferred by MoEF&CC in favour of M/s. Solaris Chemtech Industries Limited vide letter no. J-11011/400/2008-IA-II(I), dated 08.02.2012. Certified compliance report has been issued by the IRO, Gandhinagar dated 10.10.2022, which summarizes that, out of 29 conditions, 18 are complied, 7 are partly complied and 4 are agreed to comply.

7. The PP reported that there are no national parks and Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site. Pond of Khavda Village is at a distance of 2.5 km in E direction from project site. Schedule I species Peacock or Indian Peafowl) exist within 10 km study area of the project, for which conservation plan is submitted to Deputy Conservator of Forest dated 5.12. 2022.

8. The PP reported that the **ambient air quality** monitoring was carried out at 8 locations during October, 2020 to December, 2020 and the baseline data indicates the ranges of concentration as: PM_{10} (58.0 – 65.9 µg/m^3), $PM_{2.5}$ (22.1 – 34.2 µg/m^3), SO_2 (9.3 – 12.3 µg/m^3), NOx (11.6 – 15.9 µg/m^3). AAQ modeling study for point source emission indicated that the maximum incremental GLCs after the proposed project would be 11.536 µg/m^3, 7.911 µg/m^3, 6.036 µg/m^3, 0.168 µg/m^3, 0.185 µg/m^3 and 0.868 µg/m^3 with respect to PM_{10}, SO_2, NOx, Br_2, Cl_2, HBr. The resultant concentrations are within the national ambient air quality standards (NAAQS). **Noise**- The monitored noise level in the day time Leq (Ld) varies from 48.1 to 53.9 dB(A) and the night time Leq (Ln) varies from 38.6 to 42.8 dB(A) within the study area. Higher noise value of 53.9 dB(A) was recorded during day time at Project Site & lower noise value of 38.6 dB(A) was recorded during night time in Village Ludiya. **Soil**- soil quality of the study area, analysis of all eight locations including the project site was conducted by making suspension of soil sample. The samples were examined for various physical and chemical characteristics in order to assess the impact on soil. **Water**- In the study area, variations in the pH value ranging from 7.58 to 8.06 which shows that the soil is slightly alkaline in nature. Organic Matter ranges from 0.36 to 3.59 mg/kg in the soil samples. Soil of the study area is known as saline soil and no or poor for cultivation. High bulk density and exhibit poor physical conditions for agriculture crops.

9. The PP reported that the total water requirement is 91316 KLD, of which 9614 KLD will be fresh water demand, 4101 KLD will be recycle/treated water and 77601 KLD Brine water. Fresh water requirement will be met from desalinated Sea water and rejected Brine water. Total industrial effluent generation will be 86032 KLD, of which 3596 KLD will be close loop recycle. Hence actual w/w generation will be 82436 KLD. Domestic sewage generation will be 35 KLD. Source of wastewater generation will be process effluent (75895 KLD), Scrubber (30.0 KLD), stripper washing (5811 KLD), cooling bleed off (810 KLD), boiler blow down (470 KLD), RO Reject (2316 KLD), Water with Lime slurry (700 KLD).

Effluent is segregated into two streams one is from Bromides, TBBA and Organics products and second stream is from Bromine Recovery plant. Both the streams are treated separately and treated effluent will be sent to evaporation pan for recovery of mineral salt, which is one of the raw materials of products. Generated 35 KLD of domestic wastewater/sewage will be treated in STP and treated sewage will be reused in greenbelt.

10. Power requirement after expansion will be 32000 KVA will be partially met from PGVCL (Paschim Gujarat Vij Company Limited) and partially by Captive Co-gen Power Plant. Existing unit has DG sets of 500 kVA and 1735 kVA capacity. After expansion, unit proposed to add 3 more DG Sets of 500 kVA x 3 nos. DG sets are used as standby during power failure. Stack (height 12 m, 30 m and 21 m) will be provided as per CPCB norms to the proposed DG sets.

11. Total Flue stacks after expansion will be 16 nos. (Existing: 4 nos. + Additional: 12 nos.). Details of flue gas stacks are given below.

Flue Gas Stacks

S. No.	Stack attached to	Fuel Type	Stack Height (m)	APC measures	Probable Emission
Flue Gas Stacks-Existing					
1.	Boiler (15.0 TPH)	Imported Coal 63 TPD	63	ESP	PM: 50 mg/Nm^3 SO_2: 600 mg/Nm^3 NO_x: 300 mg/Nm^3 Hg: 0.03 mg/Nm^3
2.	Boiler (45.0 TPH)	Imported coal 189 TPD	60	ESP	
3.	DG Set (500 KVA)	HSD 150 Lit/hr.	12	Adequate stack height	
4.	DG Set (1735 KVA)	HSD 400 Lit/hr.	30	Adequate stack height	
Flue Gas Stacks-Proposed					
1.	45 TPH Boiler	Imported Coal 189 TPD	60	ESP	PM: 50 mg/Nm^3 SO_2: 600 mg/Nm^3 NO_x: 300 mg/Nm^3 Hg: 0.03 mg/Nm^3
2.	45 TPH Boiler	Imported Coal 189 TPD	60	ESP	
3.	45 TPH Boiler	Imported Coal 189 TPD	60	ESP	
4.	45 TPH Boiler	Imported Coal 189 TPD	60	ESP	
5.	Boiler (30 TPH) (non-salt based products)	Coal 131 TPD	47	ESP +Wet scrubber	PM: 150 mg/Nm^3 SO_2: 100 ppm NO_x: 50 ppm
6.	Hot Air Generator-1 (non-salt based products) 5 Lakh kcal/hr.	Coal 2 TPD	24	Cyclone Separator	PM: 150 mg/Nm^3 SO_2: 100 ppm NO_x: 50 ppm
7.	Hot Air Generator-2 (Salt based products)	Coal 1.6 TPD	24	Cyclone Separator	PM: 150 mg/Nm^3 SO_2: 100 ppm

	4 Lakh kcal/hr.				NO_x: 50 ppm
8.	Hot Air Generator-3 (Salt based products) 50 Lakh kcal/hr.	Coal 26 TPD	30	Cyclone Separator & Bag filter	PM: 150 mg/Nm^3 SO_2: 100 ppm NO_x: 50 ppm
9.	Hot Air Generator-4 (Salt based products) 50 Lakh kcal/hr.	Coal 26 TPD	30	Cyclone Separator & Bag filter	PM: 150 mg/Nm^3 SO_2: 100 ppm NO_x: 50 ppm
10.	Hot air generator-5 (Salt based products) 50 Lakh kcal/hr.	Coal 26 TPD	30	Cyclone Separator & Bag filter	PM: 150 mg/Nm^3 SO_2: 100 ppm NO_x: 50 ppm
11.	Hot air generator-6 (salt based products) 50 Lakh kcal/hr.	Coal 26 TPD	30	Cyclone Separator & Bag filter	PM: 150 mg/Nm^3 SO_2: 100 ppm NO_x: 50 ppm
12.	DG Set-4, 5 & 6 (500 kVA x 3 nos.)	Diesel 630 lit/hr.	21	Adequate stack height	PM: 150 mg/Nm^3 SO_2: 100 ppm NO_x: 50 ppm

12. **Details of emissions generation and its management:** Total process stacks after expansion will be 27 nos. (Existing: 7 nos. + Additional: 20 nos.). Details of process gas stacks are given below.

Process Gas Stacks

Sr. No.	Stack attached to	Stack Height (m)	APC measures	Probable Emission
Process Gas Stacks – Existing				
1.	Bromine Plant-1	30	Water and Alkali Scrubber	Br_2: 2 mg/Nm^3 Cl_2: 9 mg/Nm^3 HBr: 30 mg/Nm^3
2.	Bromine Plant-2	30		
3.	Bottling Plant	32	Water and Alkali Scrubber	Br_2: 2 mg/Nm^3
4.	Bromine Plant (HBr, n-PBr, n-BBr & 6 CH_X)	14	Water and Alkali Scrubber	Br_2: 2 mg/Nm^3 Cl_2: 9 mg/Nm^3 HBr: 30 mg/Nm^3
5.	TBBA Plant	30	Water and Alkali Scrubber	Br_2: 2 mg/Nm^3 HBr: 30 mg/Nm^3
6.	Bromine ETP Tank	17	Alkali Scrubber	Br_2: 2 mg/Nm^3 Cl_2: 9 mg/Nm^3
7.	Chlorine Charging Station	20	Alkali Scrubber	Cl_2: 9 mg/Nm^3
Process Gas Stacks – Proposed				
1.	Bromine Plant-3	20	Water and Alkali Scrubber	Br_2: 2 mg/Nm^3 Cl_2: 9 mg/Nm^3 HBr: 30 mg/Nm^3
2.	Bromine Plant Plant-4	20	Alkali Scrubber	
3.	Bromine Plant Plant-5	20	Alkali Scrubber	
4.	N Propyl Bromide	20	Alkali Scrubber	
5.	Hydrobromic Acid	30	Alkali Scrubber	

6.	ZnBr/LiBr/CaBr/ NaBr	30	Alkali Scrubber	
7.	HBr in TBBA	30	Alkali Scrubber	
8.	Process reactor of DBNPG	30	Alkali Scrubber	
9.	Process reactor of TBP	30	Alkali Scrubber	
10.	Process reactor of DBDPE	30	Alkali Scrubber	
11.	Process reactor of TBNPA	30	Alkali Scrubber	
12.	Air dryer for $CaBr_2$ solid	25	Bag filter	PM<45 mg/Nm^3
13.	Air dryer for NaBr solid	25	Bag filter	PM<45 mg/Nm^3
14.	Air dryer for LiBr	25	Bag filter	PM<45 mg/Nm^3
15.	Rotary dryer 1 (for SOPM - Schoenite)	15	Bag filter	PM<45 mg/Nm^3
16.	Rotary dryer 2 (for SOP - Sulphate of potash)	15	Bag filter	PM<45 mg/Nm^3
17.	Rotary dryer 3 (for Syngenite)	15	Bag filter	PM<45 mg/Nm^3
18.	Rotary dryer 4 (for $MgSO_4$)	15	Bag filter	PM<45 mg/Nm^3
19.	Rotary dryer 5 (for $(MgOH)_2$)	15	Bag filter	PM<45 mg/Nm^3
20.	Calciner (for MgO)	25	Bag filter	PM<45 mg/Nm^3

13. Details of Solid Waste/ Hazardous Waste Generation and its Management:

S. No.	Name of waste	Source	Category as per HAZ Rule 2016	Quantity			Disposal Method
				Existing	Proposed addition	Total after expansion	
1.	ETP sludge	ETP	35.3	1500 MT/Month	15000 MT/Month	16500 MT/Month	Collection, Storage, Transportation, and disposed off at approved TSDF site
2.	ETP sludge	ETP (Bromide Plant)	35.3	20 MT/Month	30 MT/Month	50 MT/Month	
3.	Process Sludge	Process	20.4	66 MT/Month	--	66 MT/Month	Collection, Storage, Transportation, and incinerate at common CHWIF
4.	Discarded Containers/ Liner/Bags	Material storage	33.1	3.6 MT/Year	5.4 MT/Year	9.0 MT/Year	Collection, Storage, Decontamination, Transportation,

							Disposal by selling to Authorized Recycler
5.	Used Oil	Driving units	5.1	10.2 MT/Year	25 MT/Year	35.2 MT/Year	Collection, Storage, Transportation, Disposal by selling to Registered Reprocess

14. The Budget earmarked towards the Environmental Management Plan (EMP) is ₹ 7.335 Crore (capital) and the Recurring Cost (operation and maintenance) will be about ₹ 1.445 Crore per annum, Industry proposes to allocate Rs. 1.5 Crore @0.75% of project expansion cost towards Corporate Social Responsibility

15. The industry has developed greenbelt in an area of 7350 m^2 and proposes to add greenbelt in an area in 12350 m^2 for expansion project. Hence after expansion, total greenbelt area will be 19700 m^2 of total project area.

16. The PP proposed to set up an Environment Management Cell (EMC) by engaging Chief Operating Officer - Manager EHS- Safety Manager- Safety Officer- Environment- ETP in charge for the functioning of EMC.

17. The PP reported that the total CO_2 generation would be 1292456386 tonnes/annum.

18. The PP submitted the Disaster and On-site and Off-site Emergency Plans in the EIA report.

19. The estimated project cost is Rs. 500 Crore including existing investment of Rs. 300 Crore. Total Employment will be 500 Persons after expansion.

20. **Deliberations by the EAC:**

The EAC inter-alia, noted that the PP and the Consultant falsely claimed the compliance to some of the EC conditions, which were reported to be partly complied by the IRO in its certified compliance report. The EAC took a serious note of this and warned, especially the Consultant (who was already cautioned earlier) that the Ministry/QCI-NABET shall be requested to take appropriate action, if any such lapse is repeated.

After detailed deliberations, the EAC sought the following requisite information/documents and accordingly, **deferred** the proposal:

(i) Compliance to green belt development of 33% of the total area of the exisiting unit (@2500 per hectare), in consultation with forest department and accordingly, submit the details of green belt developed, number of trees and aerial photographs and video.

(ii) Action taken report submitted to IRO, MoEF&CC for the partly complied and agreed to comply conditions of the existing EC.

(iii) Confirmation from GCZMA or authorized agency of the ministry on an authenticated map regarding the location of the project outside the CRZ area.

(iv) Justification with supporting documents regarding CRZ clearance for the withdrawal of sea water for desalination.

(v) Quantitative and project specific carbon sequestration details of the existing unit and for the proposed expansion.

(vi) Fuel composition to be re-done, as that submitted seems to be erroneous.

(vii) Undertaking for replacement of lignite with a cleaner fuel.

Agenda No. 44.15

Setting up of Pesticides Technical and Pesticides Intermediates Manufacturing Plant of production capacity 3100 TPM located at Plot No. DP-154, GIDC Chemical Zone, Saykha-11, Taluka Vagra, District Bharuch, Gujarat by M/s Dharmaj Crop Guard Limited (Unit-II) - Amendment in Environmental Clearance

[Proposal No. IA/GJ/IND3/295128/2022; File No. IA-J-11011/419/2019-IA-II(I))]

1. The proposal is for amendment in the Environmental Clearance granted by the MoEF&CC vide letter no. IA-J-11011/419/2019-IA-II(I) dated 25th January, 2021 for the Setting up of pesticides technical and pesticide intermediates manufacturing plant of production capacity 3100 TPM located at Plot. No. DP-154, GIDC Chemical Zone, Saykha-II, Taluka Vagra, Dist: Bharuch, Gujarat in favour of M/s Dharmaj Crop Guard Limited (Unit-II).

2. The project proponent has requested for amendment in the EC with the details as under:

Sr. no.	Para of EC issued by MoEF&CC	Details as per the EC	To be revised/read as	Justification / reasons
1.	**Sr. no. 6, page no. 5 of 11**	Total fresh water requirement is estimated to be 450 cum/day, which is proposed to be met from GIDC water supply. Effluent of 400 cum/day shall be treated	Total fresh water requirement is estimated to be **492 cum/day,** which is proposed to be met from GIDC water supply. Effluent of 400 cum/day shall be treated in effluent	42 KLD water consumption will be increased due to increase in

		through comprehensive effluent treatment comprising of Fenton Treatment, in-house MEE, SBT, Primary Treatment of ETP. Treated water of 375 cum/day shall be sent to CETP Saykha for final treatment & disposal. Domestic wastewater of 10 KLD will be disposed through Septic Tank/ Soak Pit.	treatment plant consisting of primary ETP, Fenton Treatment followed By Solvent treatment, MEE and SBT. Treated water of **377 cum/day** shall be sent to CETP Saykha for final treatment & disposal. Domestic wastewater of 10 KLD will be treated in **STP** and treated domestic wastewater will be reused for gardening.	the capacity of boiler.
2.	**Para-3 of Sr. no. 6, Page no. 6 of 11**	Unit shall install one Natural Gas fired Steam Boiler (8 TPH), one Natural Gas based Thermopack (2 x 1000 U) and 2 D. G. Sets (Diesel-200 Liter/Day). Stack of height of 11 m will be installed for controlling the particulate emissions within statutory limit of 150 mg/Nm3.	Unit shall install **one Agro Briquettes/Imported Coal** fired Steam Boiler having capacity of **20 TPH,** and **Two Nos. of Agro Briquettes/Imported Coal** based Thermopack having a capacity of each 1000 U and 2 D. G. Sets (2x500 KVA). **ESP along with stack (40 m height) will be provided to Boiler and Cyclone & Bag Filter along with stack (21 m height) will be provided to Thermopack and Stack (11 m height) will be provided to DG Set** for controlling the particulate emissions within statutory limit of 150 mg/Nm^3.	Due to unavailability of Natural gas supply facilities in GIDC Saykha, hence we have amend fuel from Natural gas to Agro Briquettes/Imported Coal for steam boiler and Thermopack.
3.	**Point No. (xii) of Sr. no.12, Page no-8 of 11**	Total Fresh water requirement shall not exceed 450 cum/day proposed to be met from GIDC Water supply. Necessary permission in this regard shall be	Total Fresh water requirement shall not exceed **492 cum/day** proposed to be met from GIDC Water supply. Necessary permission in this regard shall be	42 KLD water consumption will be increased due to increase in

		obtained from the concerned regulatory authority, and renewed from time to time.	obtained from the concerned regulatory authority, and renewed from time to time.	the capacity of boiler.

3. The EAC noted that the proposal was earlier appraised in the 33rd and 39th meetings held in June, 2022 and September, 2022 respectively, wherein the EAC observed/recommended the following:

(i) ***33rd EAC meeting -*** *The EAC noted that, the PP requested to amend the Environmental Clearance w.r.t total and fresh water requirement, and fuel requirement for Boiler. i.e. Agro Briquettes/Coal shall be used in place of Natural Gas. The Committee is of the view that previous EC was granted considering the fuel as natural gas and this modification in fuel type require modification in the layout of the plant, pollution equipment, Environmental Management Plan etc. Further, the Committee observed that no serious efforts were made by the PP to escalate the matter to higher authorities in the Gujarat Gas Limited to obtain the gas connection. The Committee is also of the view that such type of proposal for fuel change needs to be supported by detailed scientific study.*

Based on the discussion held and documents submitted, the EAC ***deferred*** *the proposal and is of the view that the PP should first make serious efforts for obtaining the natural gas connection by escalating the matter to higher authorities in the Gujarat Gas Limited. In case, the Gujarat Gas Limited in writing commit that they are not able to provide gas connection at all or for a specific period of time, only in such case, the PP may approach this Committee with above documents.*

(ii) ***39th EAC meeting -*** *Subsequently, the PP vide letter dated 15.09.2022, inter-alia, submitted that in Saykha industrial area, the pipelines for supply of Gas have not been initiated yet and not a single company is running their Boiler & other Utilities based on Gas but all units are using either Bio-Briquettes or Imported Coal as fuel for running their utilities. Gujarat Gas Ltd. (GGL) will lay pipe line & other infrastructure, provided industries confirm certain minimum book quantity of gas by chemical units. Not even a single kilo qty. has been booked by any of the industries of Saykha region for installation of gas piping facilities as well as Basic Infrastructure, even bare minimum quantity as indicated by GGL as 30,000 SCM/Hr which is required has not been booked.*

GGL has not acquired land in Saykha Industrial Estate to install their Gas-Station and not even decided from which existing Gas Station point the Saykha Estate will be provided pipe lines & both current distance as Vilayat & Dahej GIDC which are appx 15/25 kilometres from Saykha Estate and it will take approximately one year for laying down pipe lines & ultimately supply gas to member units. GGL has not even taken necessary permission from other Government Authorities such as Forest, GIDC etc. and not obtained NOC/approval till date. Even if any Unit sign commercial agreement now also, then bringing the Gas supply to unit would take at least one & half years as indicated verbally by GGL.

The PP had approached GGL and they are ready to lay down pipe line for supply of natural gas, but it will take time. Letter dated 27.06.2022 also issued by GGL. The production plant as well as EMS is ready for commission and plan to commission by

January 2023. Civil Buildings & Infrastructure Completion Work Status Report dated 01.08.2022 obtained from a charted engineer.

The PP will use Agro Briquettes as principal fuel & coal shall be used only in emergency and also undertake that, we shall switch over to natural gas as and when we get the natural gas supply from Gujarat Gas limited.

The EAC deliberated on the above submissions of the PP and advised the PP to continue to pursue the matter of availability of natural gas with GGL, GIDC etc. so that the natural gas is made available. Till then, the usage of Agro Briquettes as principal fuel & coal as an emergency fuel may be considered subject to submission of a detailed addendum EIA/EMP Report on the proposed change of fuel.

The EAC also deliberated on the enhancement of the boiler capacity and PP needs to include this in the addendum EIA/EMP Report with proper justification for enhancement of boiler capacity. Further, detailed water balance, details of green belt developed (justified by KML file and video) and carbon sequestration should be addressed in the addendum EIA/EMP Report.

*In view of above, the EAC recommended to **return** the proposal in the present form.*

4. **Deliberations by the EAC:**

The EAC constituted under the provisions of the EIA Notification, 2006 and comprising of expert members/domain experts in various fields, examined the proposal submitted by the Project Proponent in desired form.

After detailed deliberations, the EAC sought the following information/documents from the PP:

- Undertaking for use of agro briquettes as primary fuel and coal shall be used only in emergency and, switch over to natural gas as and when the natural gas is available.
- Confirmation from GIDC regarding the non-availability of natural gas in the Saykha Industrial Estate.
- Detailed calculations of fuel cost w.r.t natural gas, agro-briquettes and coal.
- Comparative statement of incremental GLCs while using natural gas, imported coal and agro briquettes as a fuel.
- Carbon footprint for construction phase.

The PP submitted the above information/documents and the EAC found it to be satisfactory.

5. After detailed deliberations, the EAC **recommended** the amendment in EC **w.r.t fuel change, boiler capacity and water requirement,** as detailed in above-mentioned table subject to the following additional conditions:

(i). The PP shall use agro-briquettes as primary fuel and coal shall be used only in case of emergency.

(ii). All necessary precautions shall be taken to avoid accidents and action plan shall be implemented for avoiding accidents. The Project proponent shall implement the onsite/offsite emergency plan/mock drill etc. and mitigation measures as prescribed under

the rules and guidelines issued in the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996.

(iii). The project proponent shall utilize modern technologies for capturing of carbon emitted and shall also develop carbon sink/carbon sequestration resources capable of capturing more than emitted. The implementation report shall be submitted to the IRO, MoEF&CC in this regard.

Agenda No. 44.16

Clarification regarding Environmental Clearance Exemption for Green Ammonia Plants

1. M/s Greenko ZeroC Private Limited vide letter dated 24.11.2022 to MoEF&CC has submitted its justification/understanding regarding the non-requirement of EC for the Green Ammonia Plants and requested the Ministry to confirm the same.

2. Accordingly, the matter was placed before the EAC, wherein the PP made a presentation inter-alia, on the Global decarbonization push creating urgent Green Ammonia Market, potential for green ammonia production in the Country, Ammonia Production process, block diagram of Green Ammonia Plant.

3. The EAC deliberated on the subject matter and sought the **complete details of process and emissions (CO_2) from the PP.**

Any Other Item with Permission of Chair

Agenda No. 44.17

Clarification on applicability of Environment Clearance for formulation of additives at existing chemical manufacturing unit of M/s. BASF India Ltd., Suratkal, Mangaluru, Karnataka.

1. The proposal was earlier appraised in the 41st meeting held on 1st November, 2022, the MoM of which are as follows:

"The PP vide e-mail dated 12.10.2022 inter-alia, submitted to the Ministry that, M/s. BASF India Limited, the flagship company of BASF in India, has been operating at Mangalore since 1996. The unit is located at Sy Nos. 124/1-2, 126/1, 3, 127/1-2, Surathkal - Bajpe Road, Bala, Mangalore, Dakshina Kannada District, Karnataka – 575010. The industry is involved in the production of Dyes - 2,225 TPA, Polymer Dispersion - 70,000 TPA, Synthetic specialty Coatings - 19,000 TPA, Micronutrients - 15,000 TPA, Precious Slurry Metal catalysts - 230 TPA and Paint, textile and leather auxiliaries -10,000 TPA. The industry has obtained Environmental Clearance and Consents for the existing facility. The industry has valid Consent for Operation (CFO) for existing facility obtained under red category from Karnataka State Pollution Control Board (KSPCB) with Consent No. AW-326393 and PCB ID: 10123 dated 25.08.2021 valid till 30.06.2026.

M/s. BASF India Limited is proposing to expand the product portfolio to include formulation of Additives (Sovermol & Loxanol) - 10,000 TPA and Mining auxiliaries - 5000 TPA. The proposed formulation products will be manufactured at the existing facility itself. As part of this proposal, we will install additional required equipment within the existing production block. With continuation of the same, as the nature of proposed products are formulations, we have submitted Application for Consent for Establishment to the SPCB on 21.04.2022. The Enforcement Committee considered the proposal in its meeting held on 23.08.2022 and after deliberation recommended to verify the applicability of EIA Notification, 2006 for the proposed expansion.

The proposal was placed before the EAC, wherein the PP made a presentation on the subject matter. The EAC deliberated on the subject matter and sought the following information/documents and ***deferred*** *the proposal:*

- *Quantification of pollution load*
- *Complete details of process and MSDS*
- *The PP shall also justify that no chemical reaction is possible in the manufacturing process and no secondary products are being produced at the operating conditions".*

2. The PP submitted the above sought information to the EAC and accordingly, the matter was again placed before the EAC, wherein the PP and an accredited consultant, made a presentation on the said information.

3. The EAC deliberated on the same and observed that the information/documents submitted by the PP are not complete and conclusive. Hence, **complete details of the earlier sought information needs to be submitted by the PP.**

ANNEXURE-I

GENERAL EC CONDITIONS

- 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.
- The PP shall strictly comply with the rules and guidelines issued under the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996, and Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016 and other rules notified under various Acts.
- The energy source for lighting purpose shall be preferably LED based, or advanced having preference in energy conservation and environment betterment.
- 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).
- The company shall undertake all relevant measures for improving the socio-economic conditions of the surrounding area. The activities shall be undertaken by involving local villages and administration. The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment.
- 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.
- A copy of the clearance letter shall be sent by the PP 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.
- The PP shall also upload/submit six monthly reports on Parivesh Portal on the status of compliance of the stipulated Environmental Clearance conditions including results of monitored data to the respective Integrated 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.
- 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 Integrated Regional Office of MoEF&CC by e-mail.

- The PP 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.
- 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.
- 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.

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ANNEXURE-II

STANDARD TERMS OF REFERENCE

A. GENERIC TERMS OF REFERENCE

1) **Executive Summary**
2) **Introduction**
   i. Details of the EIA Consultant including NABET accreditation
   ii. Information about the PP
   iii. Importance and benefits of the project

3) **Project Description**
   i. Cost of project and time of completion.
   ii. Products with capacities for the proposed project.
   iii. If expansion project, details of existing products with capacities and whether adequate land is available for expansion, reference of earlier EC if any.
   iv. Details of existing products and production, if any, along with present product/production details in tabular format, to verify the compliance of the EIA Notifications.
   v. Details of existing products and production, if any, along with present product/production details in tabular format, to verify the compliance of the EIA Notifications.
   vi. List of raw materials required and their source along with mode of transportation.
   vii. Other chemicals and materials required with quantities and storage capacities
   viii. Details of Emission, effluents, hazardous waste generation and their management.
   ix. Requirement of water, power, with source of supply, status of approval, water balance diagram, man-power requirement (regular and contract)
   x. Details of boiler/gensets (including stacks/exhausts) and fuels to be use
   xi. Details of boiler/gensets (including stacks/exhausts) and fuels to be used
   xii. Process description along with major equipment's and machineries, process flow sheet (quantitative) from raw materials to products to be provided
   xiii. Hazard identification and details of proposed safety systems.
   xiv. Expansion/modernization proposals:
      a. Copy of all the Environmental Clearance(s) including Amendments thereto obtained for the project from MOEF/SEIAA shall be attached as an Annexure. A certified copy of the latest Monitoring Report of the Integrated Regional Office of the Ministry of Environment, Forest and Climate Change as per circular dated 30th May, 2012 on the status of compliance of conditions stipulated in all the existing environmental clearances including Amendments shall be provided. In addition, copy of the latest CTO and status of compliance of Consent to Operate for the ongoing/existing operation of the project from SPCB shall be attached with the EIA-EMP report.
      b. In case the existing project has not obtained environmental clearance, reasons for not taking EC under the provisions of the EIA Notification 1994 and/or EIA Notification 2006 shall be provided. Copies of Consent to

Establish/No Objection Certificate and Consent to Operate (in case of units operating prior to EIA Notification 2006, CTE and CTO of FY 2005-2006) obtained from the SPCB shall be submitted. Further, compliance report to the conditions of consents from the SPCB shall be submitted.

4) Site Details

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

5) <u>Forest, wildlife and CRZ related issues (if applicable):</u>

i. Permission and approval for the use of forest land (forestry clearance), if any, and recommendations of the State Forest Department. (if applicable)
ii. Land-use map based on High resolution satellite imagery of the proposed site delineating the forestland (*in case of projects involving forest land more than 40 ha)*
iii. Status of Application submitted for obtaining the stage I forestry clearance along with latest status shall be submitted.
iv. The projects to be located within 10 km of the National Parks, Sanctuaries, Biosphere Reserves, Migratory Corridors of Wild Animals, the PP shall submit the map duly

authenticated by Chief Wildlife Warden showing these features vis-à-vis the project location and the recommendations or comments of the Chief Wildlife Warden-thereon

v. Wildlife Conservation Plan duly authenticated by the Chief Wildlife Warden of the State Government for conservation of Schedule I fauna, if any exists in the study area
vi. Copy of application submitted for clearance under the Wildlife (Protection) Act, 1972, to the Standing Committee of the National Board for Wildlife
vii. Recommendations and NOC from the concerned State/UT Coastal Zone Management Authority on CRZ angle

6) Environmental Status

i. Determination of atmospheric inversion level at the project site and site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall.
   - AAQ data (except monsoon) at 8 locations for PM10, PM2.5, SO2, NOX, CO and other parameters relevant to the project shall be collected. The monitoring stations shall be based CPCB guidelines and take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Study should indicate minimum, maximum value of different parameters for the period (3 months) collected. Collected data should be supported by the reference data of either CPCB or SPCB. AAQ data & GLC of pollutants from stack emissions should suggest technology/ measures- Best Practiced Technology (BPT) indicating best achieved results.

ii. Raw data of all AAQ measurement for 12 weeks of all stations as per frequency given in the NAQQM Notification of Nov. 2009 along with – min., max., average and 98% values for each of the AAQ parameters from data of all AAQ stations should be provided as an annexure to the EIA Report.
iii. Surface water quality of nearby River (100m upstream and downstream of discharge point) and other surface drains at eight locations as per CPCB/MoEF&CC guidelines.
iv. Whether the site falls near to polluted stretch of river identified by the CPCB/MoEF&CC, if yes give details.
v. Ground water monitoring at minimum at 8 locations shall be included.
vi. Noise levels monitoring at 8 locations within the study area.
vii. Soil Characteristic as per CPCB guidelines.
viii. Traffic study of the area, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.
ix. Detailed description of flora and fauna (terrestrial and aquatic) existing in the study area shall be given with special reference to rare, endemic and endangered species. If Schedule-I fauna are found within the study area, a Wildlife Conservation Plan shall be prepared and furnished.
x. Socio-economic status of the study area.

7) Environment Impact and Environment Management Plan

i. Assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. In case the project is located on a hilly terrain, the AQIP Modelling shall be done using inputs of the specific terrain

characteristics for determining the potential impacts of the project on the AAQ. Cumulative impact of all sources of emissions (including transportation) on the AAQ of the area shall be assessed. Details of the model used and the input data used for modelling shall also be provided. The air quality contours shall be plotted on a location map showing the location of project site, habitation nearby, sensitive receptors, if any.

ii. Water Quality Modelling – in case of discharge in water body
iii. Impact of the transport of the raw materials and end products on the surrounding environment shall be assessed and provided. In this regard, options for transport of raw materials and finished products and wastes (large quantities) by rail or rail-cum road transport or conveyor-cum-rail transport shall be examined.
iv. A note on treatment of wastewater from different plant operations, extent recycled and reused for different purposes shall be included. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the prescribed standards of discharge under E(P) Rules 1986.
v. Details of stack emission and action plan for control of emissions to meet standards.
vi. Measures for fugitive emission control
vii. Details of hazardous waste generation and their storage, utilization and management. Copies of MOU regarding utilization of solid and hazardous waste in cement plant shall also be included. EMP shall include the concept of waste-minimization, recycle/reuse/recover techniques, Energy conservation, and natural resource conservation.
viii. Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 2009. A detailed plan of action shall be provided.
ix. Action plan for the green belt development plan in 33 % area i.e. land with not less than 1,500 trees per ha. Giving details of species, width of plantation, planning schedule etc. shall be included. The green belt shall be around the project boundary and a scheme for greening of the roads used for the project shall also be incorporated.
x. Action plan for rainwater harvesting measures at plant site shall be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources.
xi. Total capital cost and recurring cost/annum for environmental pollution control measures shall be included.
xii. Action plan for post-project environmental monitoring shall be submitted.
xiii. Onsite and Offsite Disaster (natural and Man-made) Preparedness and Emergency Management Plan including Risk Assessment and damage control. Disaster management plan should be linked with District Disaster Management Plan.

8) Occupational health

i. Plan and fund allocation to ensure the occupational health & safety of all contract and casual workers
ii. Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG,

during pre-placement and periodical examinations give the details of the same. Details regarding last month analyzed data of above mentioned parameters as per age, sex, duration of exposure and department wise.

iii. Details of existing Occupational & Safety Hazards. What are the exposure levels of hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,

iv. Annual report of health status of workers with special reference to Occupational Health and Safety.

9) Corporate Environment Policy

i. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.

ii. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.

iii. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.

iv. Does the company have system of reporting of non-compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism shall be detailed in the EIA report

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

10) Corporate Environmental Responsibility (CER)

i. Adequate funds, as per the Ministry's OM/Guidelines, shall be earmarked towards the Corporate Environmental Responsibility based on Public Hearing issues/socio-economic issues and item-wise details along with time bound action plan shall be included (CER activities shall be related to environment). Socio-economic development activities need to be elaborated upon. For the projects where public hearing is not conducted, CER plan shall be provided based on socio-economic study of the area.

11) Additional studies/Measures to be considered

(i) Provide latest and ecofriendly technology for product manufacturing.
(ii) Emphasize on Green chemistry/Clean Manufacturing
(iii) Provide CAS No. of products along with product list.
(iv) Provide details of amount of carbon sequestered in their unit through greenbelt/other modes, in case of expansion project.
(v) Life structure and sustainability for carbon and water foot print.
(vi) Detailed pollution Load estimation.
(vii) Transportation of Hazardous substance, effluents etc shall be carriedout through

authorized and GPS enable vehicles/Trucks only.

(viii) Category of Hazardous Wastes shall be mentioned in the EIA/EMP report and in presentation.

(ix) Details of greenhouse gases and emissions shall be provided.

(x) Greenbelt shall be developed in the first year of the project and wind breaks shall be erected.

(xi) Study area map shall be overlapped with all the associated features.

(xii) Emphasize on green fuels.

(xiii) The project from NCR shall not use Coal as fuel. Further, PP shall avoid use of Coal in the CPAs and elsewhere also if alternatives are available.

(xiv) Provide the Cost-Benefit analysis with respect to the environment due to the project.

12) Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof shall also be included. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, details thereof and compliance/ATR to the notice(s) and present status of the case.

13) A tabular chart with index for point wise compliance of above TORs and its details needs to be submitted in the EIA/EMP Report.

B. SPECIFIC TERMS OF REFERENCE FOR EIA STUDIES FOR 5(f) CATEGORY SYNTHETIC ORGANIC CHEMICALS INDUSTRY (DYES & DYE INTERMEDIATES; BULK DRUGS AND INTERMEDIATES EXCLUDING DRUG FORMULATIONS; SYNTHETIC RUBBERS; BASIC ORGANIC CHEMICALS, OTHER SYNTHETIC ORGANIC CHEMICALS AND CHEMICAL INTERMEDIATES)

1. Details on solvents to be used, measures for solvent recovery and for emissions control.
2. Details of process emissions from the proposed unit and its arrangement to control.
3. Ambient air quality data should include VOC, other process-specific pollutants* like NH3*,chlorine*,HCl*,HBr*,H2S*,HF*,*etc*.,(*-as applicable)
4. Work zone monitoring arrangements for hazardous chemicals.
5. Detailed effluent treatment scheme including segregation of effluent streams for units adopting 'Zero' liquid discharge.
6. Action plan for odour control to be submitted.
7. A copy of the Memorandum of Understanding signed with cement manufacturers indicating clearly that they co-process organic solid/hazardous waste generated.
8. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF, if any.
9. Action plan for utilization of MEE/dryers salts.
10. Material Safety Data Sheet for all the Chemicals are being used/will be used.
11. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
12. Details of incinerator if to be installed.
13. Risk assessment for storage and handling of hazardous chemicals/solvents. Action plan

for handling & safety system to be incorporated.

14. Arrangements for ensuring health and safety of workers engaged in handling of toxic materials.

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Annexure-III

List of the Expert Appraisal Committee (Industry-3) members participated during Video Conferencing (VC) meeting

S. No.	Name of Members	Designation
1.	**Prof. (Dr.) A.B. Pandit** Vice Chancellor, Institute of Chemical Technology, Mumbai, Sir JC Bose Fellow, Government of India Email: ab.pandit@ictmumbai.edu.in	Chairman
2.	**Dr. Ashok Kumar Saxena, IFS** Bunglow No. 38, Sector-8A, Gandhinagar, Gujarat – 382008 E-mail: ashoksaxena1159@gmail.com	Member
3.	**Prof. (Dr.) S. N. Upadhyay** Research Professor (Hon.), Department of Chemical Engineering & Technology, Indian Institute of Technology (Banaras Hindu University), Varanasi E-mail: snupadhyay.che@iitbhu.ac.in	Member
4.	**Prof. (Dr.) Suneet Dwivedi,** Professor in K Banerjee Centre of Atmospheric and Ocean Studies, University of Allahabad, Allahabad - 02 Uttar Pradesh E-mail:dwivedisuneet@rediffmail.com /suneetdwivedi@gmail.com	Member
5.	**Shri Santosh Gondhalkar** 'Shree' Apartment, Flat 401, Plot No. 22, Tukaram Society, Santnagar, Pune- 411009 E-mail: santoshgo@gmail.com	Member
6.	**Dr. Suresh Panwar** House No.4, Gayateri Green Society, NH 58 Bypass,Kankerkhera, Meerut, Uttar Pradesh Email-spcppri@gmail.com	Member
7.	**Shri Tukaram M Karne** "SHREYAS ORNATE" F-1, 95-Tulasibagwale Colony, Sahakarnagar-2, PUNE: 411 009, Maharashtra E-mail: tmkarne@gmail.com	Member
8.	**Shri Dinabandhu Gouda** Additional Director, DH IPC-I, Room No. 309A, Third Floor,	Member

	Central Pollution Control Board, Parivesh Bhawan, East Arjun Nagar, Delhi – 110032 E-mail: dinabandhu.cpcb@nic.in	
9.	**Dr. M. Ramesh** Scientist 'E' Ministry of Environment, Forest and Climate Change Indira Paryavaran Bhawan, Room No. V-203, Vayu Wing, Jor Bagh Road, New Delhi-110003 Tel. 011-20819338 E-mail: ramesh.motipalli@nic.in	Member Secretary

MOM approved by

(Prof. Aniruddha B. Pandit)
Chairman

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