GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE
(IA DIVISION-INDUSTRY-3 SECTOR)
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Dated: 12.08.2023

MINUTES OF THE 57th EXPERT APPRAISAL COMMITTEE (INDUSTRY-3 SECTOR) MEETING HELD ON 24th JULY, 2023

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 49th and 53rd Meetings of the EAC (Industry-3 Sector).

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. Accordingly, the MoM were confirmed.

Agenda No. 49.20

Proposed Expansion in Dyes and Pigments Manufacturing Unit of Production Capacity 10.6 MT/Month located at Plot No. 729, Ankleshwar GIDC Estate, Taluka Ankleshwar, Dist. Bharuch, Gujarat by M/s. Shree Ambe Colour Chem - Consideration of ToR

[Proposal No. [IA/GJ/IND3/422087/2023, File No. IA-J-11011/114/2023-IA-II(I)]

1. The proposal was recommended by the EAC in its 49th Meeting held on 3rd, 5th & 6th April, 2023 and the MoM were published on 18.4.2023. Subsequently, the Ministry noted that although the proposal is not a violation proposal, the additional ToR for violation proposals were also recommended.

2. The EAC noted that this is a typographical error and recommended to delete the same. Accordingly, 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 O.M dated 31.10.2019.

(iii) Being in a Critically Polluted Area (CPA), 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 analysed 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 816 m^2 area inside the plot premises and deficit area to the tune of 23% i.e. 937.02 m^2 within the Tarapur MIDC only with the permission and lease agreement within the MIDC. The plant species 245 nos. of trees shall be planted within the premises and 282 nos. of trees shall be planted on MIDC land before the running monsoon season selected for greenbelt 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. 53.4

Proposed expansion of Synthetic Organic Chemicals manufacturing facility by Debottlenecking of existing plants and establishing new plant, Plot No. C-93, C-93 Part, C-GEN-20, 20A,20B, C-GEN-20, 20A,20B PART, TTC Industrial Area, Navi Mumbai, Dist. Thane, Maharashtra by M/s Lubrizol India Pvt. Ltd. – Consideration of ToR (under violation category)

[Proposal No. IA/MH/IND3/412443/2023; File No. IA-J-11011/221/2023-IA-II(I)]

1. The proposal was recommended by the EAC in its 53rd Meeting held on 14th-16th June, 2023 and the MoM were published on 7.7.2023. Subsequently, the PP vide e-mail dated 1.8.2023 requested the following modification in the MoM:

As per Minutes of 53rd EAC Meeting	Our reply	Revised as per submission
Point no. 2 - Since the project site is located within a Critically Polluted Area (CPA), the project attracts the general condition and is considered as Category 'A' at Centre.	Navi Mumbai area is listed under Sr. no. 51 of Polluted Industrial Areas with Comprehensive Environmental Pollution Index (CEPI) Score of 66.32 and falls under Severely Polluted Area (SPA). (Ref.	Point no. 2 - Since the project site is located within a Severely Polluted Area (SPA), the project attracts the general condition and is considered as Category 'A' at Centre.

As per Minutes of 53rd EAC Meeting	Our reply	Revised as per submission
	NGT order No. 1038/2018, Date- 10.07.2019)	
Point no. 14 (viii)- The penalty amount shall be calculated as per provision of SOP dated 07.07.2021 (i.e. 1% of the total project cost incurred up to the date of filing of application along with EIA/EMP report PLUS 0.25% of the total turnover during the period of violation) with supporting documents. In addition to this, actual production vis-a-vis CTO capacity financial year wise in a tabular format with supporting documents.	As per OM No. 22-21/2020-IA.III, date- 7th July 2021, penalty provision for expansion proposals with production have commenced is 1% of project cost + 0.25% of total turnover during violation period. However, as per point no. 12.2 of above OM- *The percentage rates, as above, shall be halved if the project proponent suo-moto reports such violations without such violations coming to the knowledge of the Government either on inquiry or complaint.* On noticing violation, we have on our own accord submitted- 1. CTO amendment application for maintaining the production level capacity pre EIA notification, 2006 and 2. Application for Terms of Reference under Violation category. We wish to submit that, no action/show cause notice/direction issued against our facility by any statutory body till date for violation. Hence, penalty provisions are applicable to our proposal *as per point no. 12.2 of OM dated 7th July 2021* is 0.5% of project cost + 0.125% of total turn over during violation period.	Point no. 14 (viii) - The penalty amount shall be calculated as per provision of SOP dated 07.07.2021 (i.e. 0.5% of the total project cost incurred up to the date of filing of application along with EIA/EMP report PLUS 0.125% of the total turnover during the period of violation) with supporting documents. In addition to this, actual production vis-a-vis CTO capacity financial year wise in a tabular format with supporting documents.
Point no. 14 (x) - The status of the action plan, if any, prepared by the State Government/ SPCB for the CPA needs to be provided.	Navi Mumbai area is listed under Sr. no. 51 of Polluted Industrial Areas with Comprehensive Environmental Pollution Index (CEPI) Score of	Point no. 14 (x)- The status of the action plan, if any, prepared by the State Government/ SPCB for the SPA needs to be provided.

As per Minutes of 53rd EAC Meeting	Our reply	Revised as per submission
Point no. 14 (xi)- 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.	66.32 and falls under Severely Polluted Area (SPA). (Ref. NGT order No. 1038/2018, Date- 10.07.2019)	Point no. 14 (xi) - The PP needs to submit the action plan with respect to mitigation measures for SPA mentioned in the Ministry's OMs dated 31.10.2019.
Point no. 14 (xii). Being in a Critically Polluted Area (CPA), the PP need to submit alternative site analysis and Environmental Cost Benefit analysis in the EIA report.		Point no. 14 (xii). Being in a Severely Polluted Area (SPA), the PP need to submit alternative site analysis and Environmental Cost Benefit analysis in the EIA report.

2. The EAC deliberated on the above and recommended for modification in the MoM, as requested above.

Agenda No. 57.1

Proposed Expansion in the Existing Plant Capacity from 115 MT/Month to 245 MT/Month with addition of Synthetic Organic Chemical Manufacturing Unit located at Plot No. C-1B/5104/2, Phase IV, GIDC Vapi, Taluka Vapi, District Valsad, Gujarat by M/s. Nikhil Industries - Consideration of Environmental Clearance

[**Proposal No: IA/GJ/IND3/410046/2022; File No. IA-J-11011/537/2022-IA-II(I)]**

1. The proposal is for environmental clearance for the Proposed Expansion in the Existing Plant Capacity from 115 MT/Month to 245 MT/Month with addition of Synthetic Organic Chemical Manufacturing Unit located at Plot No. C-1B/5104/2, Phase IV, GIDC Vapi, Taluka Vapi, District Valsad, Gujarat by M/s. Nikhil Industries.

2. The project/activity is covered under Category 'B' of Item 5(f), Synthetic organic chemicals industry. 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 standard ToR was issued by the SEIAA, vide letter no SIA/GJ/50103/2022 dated 19.3.2022. The PP applied for Environment Clearance in the 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 placed in this 57th EAC meeting on 24th July, 2023, wherein the PP along with accredited Consultant, M/s. Ecogreen Enviro Services [Accreditation number NABET/EIA/2124/SA 0185, Valid up to 24.12.2023] 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 785.0 m^2, no additional land will be used for proposed expansion. The PP reported the product details as follows:

S. no	Name of products	Cas no	Existing (MT/MONTH)	Proposed (MT/MONTH)	Total (MT/MONTH)	End use
Group-A: Paper Chemicals				35	150	Paper Industry
1.	Wax Emulsion (Paraffin based)	8002-74-2	25			
2.	De-Inking Agent	10028-22-5	10			
3.	Defoamer (Hydrogenated palm oil)	68514-74-9	25			
4.	Melamine Formaldehyde Resin	82115-62-6	0			
5.	Urea Formaldehyde Resin	9011-05-6	0			
6.	Glyoxalated Polyacrylamide	9003-05-8	0			
7.	Wet strength resin (N'-(2-aminoethyl) ethane-1,2-diamine, 2-chloromethyl)oxirane,hexanedioic acid,N-methylmethanamine)	68583-79-9	0			
8.	Polyacrylamide-co-Styrene (Sizing Agent-A & Sizing agent- B)	24981-13-3	0			
9.	Alkyl Ketene Dimer wax emulsion	144245-85-2	0			
10.	Cationic rosin emulsion	8050-09-7	0			
11.	Rosin Maleic anhydride (Neutral Sizing Agent)	68333-69-7	0			
12.	Rosin Derivatives (Rosin Fumarated)	65997-04-8	30			
13.	Dry strength Resin (Dry strength Resin – Route 1 to 5)	25068-38-6	25			
Group-B: Speciality chemicals			0	80	80	Dispersing & Wetting agent
14.	B-Naphthalene sulfuric acid sodium salt (Dispersing & Wetting agent based on Naphthalene)	120-18-3				
15.	Phenol formaldehyde sodium salt (Dispersing & Wetting agent	40798-65-0				

	based on Sulphite)					
16.	Phenol formaldehyde B-Naphthalene sulfuric acid sodium salt (Dispersing & Wetting agent-DN Liquid)	9084-06-4				
17.	Sodium Di Butanol Alcohol Naphthalene (Dispersing & Wetting agent-FBP)	5466-77-3				
18.	B-Naphthalene sulphonic acid sodium salt (Methyl Naphthalene based Dispersing Agent)	532-02-5				
19.	Di-Butyl Naphthalene sulphonated, sodium salt	25417-20-3				
20.	Sulphonated Alkyl Naphthalene Formaldehyde Condensate Sodium Salt	36290-04-7				
21.	Polyacrylic acid (Dispersing agent -A)	9003-01-4				
22.	Poly Methacrylic acid (Dispersing agent -B)	25087-26-7				
23.	Polyacrylamide-co-itaconic acid (Dispersing agent -C)	97-65-4				
Group-C: Textile Chemicals						Textile industry
24.	Formaldehyde based dye fixing agent	55295-98-2				
25.	Non-Formaldehyde based dye fixing agent	42751-79-1				
26.	Dioctyl Sodium Sulfosuccinate (DOSS)	577-11-7				
27.	Softener	91995-81-2				
28.	Anti-Dusting Oil	8012-95-1				
29.	Acrylic Thickener	25133-97-5				
30.	Ammonium Thickener	68333-79-9				
Group-D: Construction Chemicals						construction industry
31.	PEG based Polycarboxylate Ether	27599-56-0				

32.	Water Proofing Chemicals	--				
33.	Sulphonated Melamine Formaldehyde Condensate	9084-06-4				
34.	Sulphonated Acetone Formaldehyde Condensate	25619-09-4				
Group-E: Leather Chemicals			0	10	10	leather industry
35.	Lauryl-Myristyl Alcohol (FAT Liquor)	68855-56-1				
36.	Syntan	108-95-2				
37.	Acrylic Lacquer Emulsion	1330-20-7				
Group-F: Optical Whitening Agent			0	5	5	paper, textile and leather
38.	Fluorescent brightener 230 (OBA-2B)	27344-06-5				
39.	Fluorescent brightener 264(OBA-BSU)	68971-49-3				
40.	Fluorescent brightener 71 (OBA-DMX)	16090-02-1				
41.	Fluorescent brightener 220 (OBA-BBU)	16470-24-9				
42.	Fluorescent brightener 28 (OBA-BA)	4193-55-9				
		Total	**115**	**130**	**245**	

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 the unit does not have environment clearance for the existing unit as it was established before the EIA notification, 2006. Hence, unit has CCA for existing production obtained from GPCB latest vide consent order no.: AWH-98360, Date of issue: 31.12.2018, valid upto: 30.09.2023 in favour of M/s. Nikhil Industries.

7. The PP reported that Compliance report of CTO certified from GPCB vide letter no.: GPCB/CCA-VSD-1049(3)/ID: 24004/742254, Dated: 17.05.2023 as per MoEFCC's OM no. F. No: IA3-22/10/2022-IA.III [E 177258] issued dated: 08.06.2022. All conditions are complied.

8. The PP reported that there are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves and Wildlife Corridors etc. within 10 km distance from the project site. Reserve Forest Near Morai Village is at 7.35 km in NW Direction, Reserve Forest Bilakhia R.F.- 6.57 km in NW, Reserve Forest Punat R.F. – 9.21 km in SW, Reserve Forest Mohan R.F. – 8.19 km in SW, Reserve Forest Kherlav R.F. – 9.58 km in NE. Daman Ganga river is flowing at a distance of 4.2 km in South-West direction, Kolak River is flowing at a distance 2.72 km in North-East direction, Rati River is at a distance of 2.60 km in E direction,

Karvad Lake is at 0.8 km in SE direction, Lake of Kumbhar Faliya is at a distance of 0.84 km in NE direction & Daman Ganga Canal is at the distance of 0.85 km in W direction. There is no forest land involved in the proposed project. Schedule-I species i.e Indian peafowl (Pavo cristatus) is observed in the 10 km radius from the proposed expansion project site. Wildlife Conservation Plan has been submitted at the PCCF & Chief Wildlife Warden, Gandhinagar dated 22.11.2022.

9. The PP reported that **Ambient Air Quality** monitoring was carried out at 8 locations during 1st March 2022 to 31st May 2022 and the baseline data indicates the ranges of concentrations as: PM_{10} (47.3-118.5 µg/m^3), $PM_{2.5}$ (20.3-62.1 µg/m^3), SO_2 (9.9-28.1 µg/m^3), NOx (11.9-28.2 µg/m^3), CO (BDL-1938 µg/m^3) & VOC (BDL-2.47 µg/m^3). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed expansion project would be 0.068 µg/m^3, 0.034 µg/m^3, 0.182 µg/m^3 and 0.064 µg/m^3 with respect to PM_{10}, $PM_{2.5}$, SO_2 and NO_x. The resultant concentrations of PM_{10} & $PM_{2.5}$ exceeded at project site during baseline study period which may be due to the location of project in Vapi GIDC. Also, average values of PM_{10} & $PM_{2.5}$ are nearer to NAAQS standards. Other values are within the National Ambient Air Quality Standards (NAAQS).

10. **Noise:** Noise monitoring was carried out at 8 locations during 1st March 2022 to 31st May 2022. The monitored noise level during the day time Leq(day) varied from 53.1 to 70.6 dB(A) and during night time Leq (night) varies from 42.0 to 60.0 dB(A) within the study area. Highest noise value of 70.6 dB(A) during day time was recorded at Project site & lowest noise value of 53.1 dB(A) during day time was recorded at PHC Karvad. Highest noise value of 60.0 dB(A) during night time was recorded at Project site & lowest noise value of 42.0 dB(A) during night time was recorded at PHC Karvad. The monitored noise levels were compared with the standards prescribed by MoEF&CC which indicates that the noise levels were nearer to the limit for day & night time.

11. **Ground Water:** Ground water monitoring was carried out at 8 locations 1st March 2022 to 31st May 2022 and the baseline data indicates the ranges as: pH of ground water samples varied from 7.14 to 8.42. Chloride is found within the acceptable (Desirable) limit of Drinking water standards IS: 10500 – 2012 at all locations. Calcium hardness is found well within the Permissible limit except Nr. Project Site (235.08 mg/l) and Balitha Village (211.37 mg/l). Sulphate is found within permissible limit at all the monitoring locations. TDS is found higher than the acceptable (Desirable) limit at all locations but it is under the permissible limit at all locations. Ground water is suitable for domestic and agricultural purpose after adequate treatment such as Tertiary treatment and disinfection. **Surface Water:** Surface water monitoring was carried out at 8 locations during 1st March 2022 to 31st May 2022 and the baseline data indicates the ranges as: pH of surface water samples varied from 7.45 to 7.94. Chloride is found within the acceptable (Desirable) limit of Drinking water standards IS: 10500 – 2012. Sulphate is found within the acceptable (Desirable) limit at all the locations. Calcium Hardness is found higher than the permissible limit at Damanganga River Downstream (228.46 mg/l) but it is found below permissible limit at all other locations. TDS is within the acceptable (Desirable) limit at all the locations except Damanganga River

Downstream (1174.84 mg/l) and GIDC Vapi Lake (511.83 mg/l). Thus, surface water can be used after conventional treatment followed by disinfection in only domestic activities.

12. **Soil:** Soil monitoring was carried out at 6 locations during 1st March 2022 to 31st May 2022 and the baseline data indicate that the soils of the proposed project area are slightly alkaline in nature. EC of soils at all the sampling locations is good at all locations. Organic carbon content of soils of all locations are Moderate sufficient as per ICAR standards. The soils of proposed project area are sand clay soil in texture and water holding capacity of soils is found to be good. Nutrient availability of soil samples found very low in Nitrogen (N), high in Phosphorus (P) and high in Potassium (K). Sodium value ranges from 32.14 to 117.11 mg/kg. SAR value of soil found medium at Project site, Chanod Village and Nr. Vapi GIDC and at other locations the SAR value is low. Bulk density varied from 1.15 to 1.52 gm/cm^3. In short, the soil of proposed project area is found sand clay, moderately fertile, good water holding capacity and slightly alkaline in nature.

13. The PP reported that the total water requirement is 15.45 KLD (2.0 + 1.6 + 7.8 + 1.0 + 3.0 + 0.05) in Domestic, Gardening, Process, Washing, Cooling and Scrubber. Condensate @1.6 KLD from Evaporator will be reused in washing & cooling as well as 1.6 KLD treated sewage from septic tank (with filtration system) will be reused in Gardening. Hence, total fresh water requirement will be 12.25 KLD (Industrial + Domestic) which will be met from GIDC water supply. Permission for water requirement has been obtained from GIDC vide letter no.: DEE/WS/NA/VPI/981, Dated: 24.11.2022. Effluent/Industrial wastewater of 2.0 KLD will be treated in in-house Primary & Secondary ETP & then in Single Effect Evaporator. After treatment condensate from Evaporator i. e., 1.6 KLD will be reused within Plant Premises. 0.05 KLD scrubbing solution will be sent to end users under rule-9 permission. Moreover, 1.6 KLD sewage/domestic wastewater will be treated in septic tank with filtration system and treated water will be reused in gardening within premises. Thus, the plant will be achieved Zero Liquid discharge (ZLD).

14. The PP reported that the power requirement after expansion will be 350 KVA including existing 100 KVA and will be met from **Daxin Gujarat Vij Co. Ltd. (DGVCL)**. Unit has proposed 1 nos. DG set of capacity 250 KVA. Additionally, DG set will be used as standby during power failure. Stack (11 meters) will be provided as per CPCB norms to the proposed DG set.

15. Existing unit has 2 Lacs kcal/hr. Natural gas fired 1 no. Thermic Fluid Heater. Additionally, 10 lac Kcal/hr. Natural gas fired 1 no. Thermic Fluid Heater will be installed. Stack of height of 30 m will be installed for controlling the particulate emissions within the statutory limit of 120 mg/Nm^3 as per CPA notification for the Thermic Fluid Heaters.

Flue Gas Stack details

S. no.	Source of emission With Capacity	Stack Height (meter)	Type of Fuel	Quantity of Fuel	Type of emissions i.e. Air Pollutants	Air Pollution Control Measures (APCM)

1.	Thermic Fluid Heater (2 Lacs kcal/hr) **(Existing)**	30	Natural Gas	192 SCM/Day	PM: 120 mg/Nm^3 SO_2: 80 ppm NO_x: 40 ppm	Adequate stack height
2.	Thermic Fluid Heater (10 lac Kcal/hr) **(Proposed)**	30	Natural Gas	1734 SCM/Day		Adequate stack height
3.	DG Set (250 KVA) **(Proposed)**	11	Diesel	45 lit/hr		Adequate stack height

16. **Details of Process Emissions Generation and its Management:**

S. no.	Source of emission With Capacity	Stack Height (meter)	Type of emissions	Permissible Limit	Air Pollution Control Measures (APCM)
EXISTING					
No Process Gas Emission in existing.					
PROPOSED					
1	Reaction vessel (Mfg: Group-B: Dispersing & Wetting agent based on Napthelene) (Sulphonation)	18 m	SO2	32 mg/Nm^3	Two stage alkali Scrubber

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

Particulars	No.	@kg/day/Person	Quantity of waste (in kg/day)	Management
Workers	24	0.1 kg/day/person	2.4	Will be segregate and collected in dustbins and will be sent to Municipal Council Vapi, Gujarat.
Total			**2.4 kg/day**	

Hazardous Waste Generation

S. No.	Type of Hazardous Waste	Hazardous Waste Category & Schedule	Source	Qty. (MT/Year)			Management of HW
				Existing	Proposed	Total	

1.	Used Oil	5.1/ SCH-I	Machinery	11.0	10.0	21.0	Collection, Storage, Transportation & Disposal reused as lubricant within premises or by selling to Authorized re-refiners Through GPS Mounted Vehicles
2.	Discarded Containers/ Bags/Liners	33.1/SCH-I	Raw Material Supplier	0.2	5.8	6.0	Collection, Storage, Transportation & Reuse/ Sale to Authorized Vendor Through GPS Mounted Vehicles
3.	ETP Sludge	35.3/SCH-I	ETP	0.0	22.0	22.0	Collection, Storage, Transportation, disposal at nearest TSDF site Through GPS Mounted Vehicles
4.	Evaporation Salt	35.3/SCH-I	Evaporator	0.0	2.0	2.0	Collection, Storage, Transportation, disposal at nearest TSDF site Through GPS Mounted Vehicles
5.	Distillation Residue	20.3/SCH-I	Mfg: Group-A: Melamine Formaldehyde Resin	0.0	11.0	11.0	Collection, Storage, Transportation & send to pre/co-processing units (cement industries) OR disposal at nearest CHWIF site Through GPS Mounted Vehicles
6.	Spent solvents	20.2/SCH-I	Mfg: Group-A: Melamine Formaldehyde Resin	0.0	541.0	541.0	Collection, Storage, Handling recovered & recycled by Solvent Distillation Plant within premises or sell to End Users having permission under

							Rule-9 Through GPS Mounted Vehicles.
7.	Scrubbing Solution (20-22% Na2SO3)	28.1/SCH-I	Mfg. Group-B: Dispersing & Wetting agent based on Napthelene	0.0	18.0	18.0	Collection, Storage, Transportation & Sell to End Users having permission under Rule-9 Through GPS Mounted Vehicles
8.	Organic Process waste	26.1/SCH-I	Mfg. Group-B: Dispersing & Wetting agent based on Napthelene	0.0	170.0	170.0	Collection, Storage, Transportation & send to pre/co-processing units (cement industries) OR disposal at nearest CHWIF site Through GPS Mounted Vehicles

18. The Budget earmarked towards the Environmental Management Plan (EMP) is ₹ 0.87 Crores (capital) and the Recurring Cost (operation and maintenance) is about ₹ 0.24 Crores per annum Industry proposes to allocate Rs. 0.07 Crores towards Corporate Social Responsibility.

19. The PP reported that the project, being in notified industrial area i.e., GIDC Vapi vide Notification No. GHU 75-45 GID. 1974- 408410 (CH) dated 6.5.1975, is exempted from the public hearing as per the Ministry's O.M. J-11011/321/2016-IA. II(I) dated 27.04.2018.

20. The PP proposed to set up an Environment Management Cell (EMC) for the functioning of EMC.

21. Industry has already developed greenbelt over an area of 16.6% i.e., 130.0 m^2 & will develop greenbelt over an area of 23.4% i.e., 184 m^2 within plant premises out of total area of the project. Moreover, industry has already developed greenbelt in an area of 45.22% i.e., 355.0 m^2 outside plant premises in Common Plot Area of GIDC (within GIDC Vapi) @ 3.52 km in W direction from project site.

22. The PP reported that the Industry will reduce approx. 1015 tons per year or 44 % of total carbon dioxide generated during year (considering direct as well as indirect Source of CO2 emission) through above mitigation measures suggested.

23. The estimated project cost after expansion is Rs. 351.0 Lakhs. The PP reported that the total Employment will be 24 persons as direct & 20 persons indirect after expansion.

24. **Deliberations by the EAC:**

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 to the effect 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 greenbelt development plan and its budget, EMP cost, Compliance of CPA OM dated 31.10.2019, compliance of OM dated 18.5.2023, and advised the PP to submit the following:

- Revised layout plan showing minimum two-row plantation instead of existing one row plantation in North and South direction.
- Greenbelt development plan and its budget, EMP cost
- Compliance of OM dated 31.10.2019.
- Supporting Documents of the Compliance of OM Dated 18.5.2023 Regarding the Verification of the Consultant.

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

The EAC noted that although the standard ToR was issued by the SEIAA, the EAC during the appraisal of the project, ensured that the additional ToR being prescribed for the projects located in the CPAs/SPAs such as additional mitigative measures for CPA regarding the greenbelt, air, land, wastewater, solid waste, monitoring, CER have been complied in the project.

Accordingly, the EAC ensured that the EIA/EMP report and the additional documents submitted by the PP after the EAC meeting have addressed the additional ToR. Hence, the EIA/EMP report and other documents submitted by the PP are adequate and found 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.

25. The EAC, after detailed deliberations, recommended for the grant of environmental clearance to the project, 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.

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 shall be done by conveyor belt.

v. Natural gas shall be proposed as the primary fuel.

vi. The best available technology shall be used.

vii. The PP shall develop greenbelt over an area of at least 256.0 m^2 within the premises and additional 355 m^2 area shall be developed outside the premises & plant boundary within one year of grant of EC. The saplings 223 nos. (185 + 38 with 80% survival rate) number of trees 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. 1.6 KLD of treated water from Evaporator shall be reused for washing purpose and gardening within the plant premises.

x. Flow meter & PTZ camera at reused line shall be connected to CPCB and GPCB server.

xi. 3.0 KL of rainwater shall be harvested during monsoon season for which 4.0 KL underground RCC water storage tank shall be provided. Storage Tank dimensions shall be - 2.0 m X 2.0 m X 1.0 m (depth). Stored rain water shall be used in washing, cooling, domestic etc after necessary pre-treatment.

xii. In-house Effluent treatment plant followed by single effect evaporator shall be installed to achieve Zero Liquid Discharge (ZLD). Treated water quality is feasible to reuse in washing and cooling tower make up water.

xiii. Domestic wastewater generation of **1.6 KLD** after proposed expansion shall be treated in septic tank with filtration system and reused for gardening purpose within premises.

xiv. There shall be no generation of High volume – Low effect wastes i.e fly-ash, slag, red-mud, de-inking sludge etc

xv. The PP shall strictly follow Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016 for dispose of hazardous wastes. We will explore possibility to dispose its hazardous wastes through co-processing, pre-processing to the extent possible prior its disposal to incineration/ landfill. Discarded Containers/ Bags/Liners will be Reuse OR Sale to Authorized Vendor Through GPS Mounted Vehicles Spent solvent will be Collection, Storage, Handling recovered & recycled by Solvent Distillation Plant within premises OR sell to End Users having permission under Rule-9 Through GPS Mounted Vehicles. Used oil will be reused as lubricant within premises OR by selling to Authorized re-refiners Through GPS Mounted Vehicles. ETP Sludge and Evaporator Salt will be sent to TSDF site for landfilling.

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

xvii. As proposed, an amount of ₹ 7.00 Lakhs shall be allocated towards CER activities for Common treatment facility, Solar Energy Utilization, Green belt Development

xviii. 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 Environment management cell. 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.

xix. 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 proposed under EMP is ₹ 87.0 Lakhs (Capital cost) and ₹ 24.0 Lakhs/ 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.

xx. The total water requirement for the proposed expansion project shall be 15.45 KLD, out of which Fresh water requirement shall be 12.25 KLD sourced from GIDC water supply.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.

xxi. 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.

xxii. 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.

xxiii. The project proponent shall comply with the environment norms for 'synthetic organic chemical as notified by the Ministry of Environment, Forest and Climate Change, vide GSR 608 (E), dated 21st July, 2010 under the provisions of the Environment (Protection) Rules, 1986.

xxiv. 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.

xxv. 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.

xxvi. 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.

xxvii. 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.

xxviii. 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.

xxix. 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.

xxx. 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.

xxxi. 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. 57.2

Setting up of a Proposed Formaldehyde (300 TPD), Melamine Formaldehyde Resin (25 TPD) and Cardanol Phenol Formaldehyde resin (75TPD) manufacturing unit located at Khasra Nos. 18//6/2 (7-0), 7/2 (6-4), 8/2 (6-4), 9/2 (6-0), 10/2 (3-0) Village Jeetpur, Behra

Road, Barwala, District Panchkula, Haryana by M/s Virgo Laminates Ltd. – Consideration of Environmental Clearance

[Proposal No. IA/HR/IND3/428703/2023; File No. IA-J-11011/285/2021-IA-II(I)]

1. The proposal is for the environmental clearance for Setting up of a Proposed Formaldehyde (300 TPD), Melamine Formaldehyde Resin (25 TPD) and Cardanol Phenol Formaldehyde resin (75 TPD) manufacturing unit located at Khasra Nos. 18//6/2 (7-0), 7/2 (6-4), 8/2 (6-4), 9/2 (6-0), 10/2 (3-0) Village-Jeetpur, Behra Road, Barwala, District- Panchkula, Haryana by M/s Virgo Laminates Ltd.

2. The project/activity is covered under Category '**A**' of item 5(f) Synthetic Organic Chemicals Industry of Schedule of Environment Impact Assessment (EIA) Notification, 2006 (as amended) and requires appraisal at Central Level by the EAC as the project is located outside the industrial area.

3. The ToR was issued by the Ministry vide letter no IA-J-11011/285/2021-IA-II(I) dated 29th November, 2021.The PP applied for Environment Clearance in the Common Application Form and submitted EIA/EMP Report and other documents. The PP in the Form reported that it is a **Fresh case.** The proposal is placed in this 57th EAC meeting on 24th July, 2023, wherein the PP along with accredited Consultant, M/s. Gaurang Environmental Solutions Pvt. Ltd [Accreditation number NABET/EIA/2023/RA0192 dated valid till 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 proposed land area for the proposed project is 14,366.22 m^2 land and no R& R is involved in the Project. The details of products to be manufactured are as follows:

S. No.	Product Details (Complete name)	CAS No.	Total Quantity	Uses
1.	Formaldehyde	50-00-0	300TPD	• Resins for adhesives, plastics, and coatings. • Preservative in products and cosmetics. • Improves wrinkle resistance in textiles. • Agricultural fumigant. • Disinfectant and sterilant in certain settings.
2.	Melamine Formaldehyde Resin	9003-08-1	25 TPD	• Used in decorative laminates, dinnerware, and coatings. • Provides heat resistance and durability.

				• Adhesive for wood products.
3.	Cardanol phenol Formaldehyde Resin	37330-39-5	75 TPD	• Used in friction materials and surface coatings. • Provides heat resistance and electrical insulation. • Adhesive for bonding rubber to metal. • Binder for sand molds in foundry industry.

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, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wild life Corridors etc. within 10 km distance from the project site. Dudhgarh ki Nadi is flowing at a distance of 4.3 km towards the W direction. There is no forest land involved in the proposed project. Wildlife conservation plan for Schedule-I species i.e. Peafowl has been submitted to Chief wildlife warden on 5.7.2022.

7. The PP reported that the total water requirement is 353 m^3/day of which fresh water requirement of 330.4 m^3/day will be met from borewell. Effluent of 24 KLD quantity will be treated through ETP of capacity 30 KLD followed by DM and RO plant.

8. The Power requirement will be 125 Kva and will be met from Haryana State Electricity Board (HSEB). The unit will have a DG Set of capacity 125 kVA. Stack (3.5 mt.) will be provided as per CPCB norms to the proposed DG set. The unit will have a 6.0 TPH Bio Mass Briquettes fired boiler. Multi Dust Cyclone, bag filter, with a stack of height of 30 m will be installed for controlling the particulate emissions within the statutory limit of 115 mg/Nm3 for the proposed boilers.

9. **Details of Process Emissions Generation and its Management:** Process emissions**:** The following process emissions are likely to be generated from the plant:
   - Formaldehyde (HCHO) vapours
   - Methanol (CH3OH) vapours
   - Carbon monoxide (CO
   - Nitrogen oxides (NOx)
   - Particulate matter (PM)
   - Volatile organic compounds (VOCs)

10. **Details of Solid Waste/ Hazardous Waste Generation and its Management:** There will be generation of hazardous as well as non-hazardous solid waste from the plant.

Solid Waste (Hazardous)

Particulars	Category	Management
Spent Oil	5.1	The same will be sent to nearest TSDF Site.
Chemical sludge from ETP	35.3	
Discarded Plastic Bags/ Drums/ Barrels	33.1	Collection, storage & sold to authorized vendor.
Hazardous and other waste		
Cured waste resins	B3010	Stored and disposed off at TSDF approved by State Pollution Control Board.
Resin Sediments (max 0.2-0.5% of the production quantity for resins only)		

Municipal Solid Waste

Particulars	Details	Basis	Waste generated kg/day	Management
Domestic workers	15	@ 0.4 kg/ person/day	6	Color coded bins will be provided for the segregation of the waste and the same will be sent to municipal disposal site.
Landscaping waste	1.17acres	@0.2kg/acre/day	0.234	
		Total	6.23 say 7 kg/day	

11. The Budget earmarked towards the Environmental Management Plan (EMP) is ₹ 97.34 Lakhs (capital) and the Recurring Cost (operation and maintenance) will be about ₹ 17 Lakhs/annum. Industry proposes to allocate Rs. 9.50 Lakhs towards Corporate Social Responsibility.

12. Industry will develop greenbelt over an area of 33 % i.e., 4740.85 m^2 out of total area of 14,366.22 sq. m. of the project.

13. The PP reported that the Public Hearing for the proposed project has been conducted by the State Pollution Control Board on 29.09.2022 which was presided in the presence of Deputy Commissioner. The main issues raised during the public hearing are related to:

Issue raised	Response/Commitment from Project Proponent	Action plan with time frame and budget
Quantity of waste water generated and treatment	Total effluent to be generated from the process is 24 KLD; out of which 22 KLD will be reused in process and rest 2 KLD will be a loss another	**Water pollution management:** Capital cost: Rs. 10 Lacs Recurring cost: Rs. 2 Lacs

	02 KLD will be generated from the domestic process and that will be treated through STP.	**Air pollution management:** Capital cost: Rs. 30 Lacs Recurring cost: Rs. 5 Lacs
Measures to be taken to control air pollution generated from the boiler	6 TPH Boiler will be used for the process and Wet scrubber, along with multi-Cyclone separator and Bag Filter followed by adequate stack height of 30 mt. as per CPCB norms will be provided APCM's to control air pollution.	
Duration of boiler operation	Boiler will be in operation for 1 hour for initiating reaction process and after that boiler is not required for 01 week and then manufacturing process continues upto 01 week by reaction process only. Then again, the same process repeated	
Directed to submit the undertaking that all the pollution Control measures proposed to be installed should be completed during the construction phase only, plantation should be done in 02 rows at the boundary wall after taking approval from forest department	Agreed to be done by the PP	
Directed to submit the action plan for controlling the foul smell to be generated from the proposed manufacturing process	Will be submitted in Regional Office, Panchkula by the PP	
Informed the public that this	-	

is an adhesive raw material manufacturing factory and it generates a foul smell Too and asked of anybody wants to enquire more on this.		
intimated the public that, if the industry found producing any kinds of water/air/noise pollution then anybody can complaint to HSPCB and we will initiate the action against the unit as per the rules prescribed	-	
detail of 9.50 lakh CSR fund and also inquired about the area of 1 acre land proposed for plantation and also directed to submit the undertaking of the amount proposed in CSR fund to be used in the Govt. School of village-Barwala, Panchkula	Plantation will be carried out on the boundary of the plant premises. Undertaking provided for spending CSR funds be used in Govt. School, Village-Barwala, Panchkula.	CER Budget: Capital cost: Rs. 9.5 Lakhs Recurring cost: Rs. 2 Lakhs
Details of the measures to be taken in case of fire accident.	Firefighting extinguisher shall be provided as per the requirement	Firefighting budget: Capital cost: Rs. 10 Lacs Recurring cost: Rs. 0.15 Lacs
Requested Mr. Virender Singh Punia, R.O, HSPCB, Panchkula to ensure environmental safety		

14. The PP proposed to set up an Environment Management Cell (EMC) by engaging GM- EHS Manager- Operators for the functioning of EMC.

15. The PP reported that the Total Amount of CO_2 emitted proposed plan was 13100 TPA Ton /annum and carbon sequestrated with plantation was 3503 TPA.

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

17. The estimated proposed project cost is Rs 471.73 lakh. Total Employment will be 12 persons as direct & 3 persons indirect.

18. Deliberations by the EAC

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 inter-alia, deliberated on the plant layout, Greenbelt development plan, carbon footprint, wildlife conservation plan, soil microbiology, Life cycle assessment and advised the PP to submit the following:

- Revised Greenbelt development plan
- Carbon footprint of the project activity and carbon sequestration details,
- Acknowledgement slip of the wildlife conservation plan for Schedule-I species
- Soil microbiology of the project area.
- Life cycle assessment of the products.
- Issues raised in the Public Hearing and commitment made by PP to address the same

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

The EAC deliberated the Onsite and Offsite Emergency plan 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 recommendation of EAC 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.

19. 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 at least 4740.85 m^2 by planting 1440 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 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 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.

(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 and shall also engage GM- EHS Manager- Operators. 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 proposed under EMP is ₹ 97.34 Lakhs (Capital cost) and ₹ 17 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.

(iv) The total water requirement is 353 m^3/day of which fresh water requirement of 330.4 m^3/day shall be met from borewell. 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.

(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 synthetic organic chemical as notified by the Ministry of Environment, Forest and Climate Change, *vide* GSR 608 (E), dated 21. 7.2010 under the provisions of the Environment (Protection) Rules, 1986.

(vii) 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.

(viii) 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.

(ix) 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.

(x) 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.

(xi) Effluent of 24 KLD quantity shall be treated through ETP of capacity 30 KLD followed by DM and RO plant.

(xii) 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.

(xiii) 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.

(xiv) 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.

(xv) 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.

(xvi) 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.

(xvii) 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 fire 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.

(xviii) 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.

(xix) 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.

(xx) 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. 57.3

Expansion of Pesticide Technical and Pesticide Intermediates manufacturing production capacity from 12 TPM to 1650 TPM at the existing unit located at Plot No. 1504, 1505, 1506/1 and by Addition of Adjoining New Plot No. 1503/1, 1502, Phase: III, Notified Industrial Estate, GIDC Vapi, Taluka Pardi, District Valsad, Gujarat by M/s. Heranba Industries Limited – Consideration of ToR

[Proposal No. IA/GJ/IND3/434430/2023; File No. J-11011/31/2015-IA II (I)]

1. The proposal is for the issue of ToR for preparation of EIA/EMP for the Proposed Expansion of Pesticide Technical and Pesticide Intermediates of production capacity from 12 TPM to 1650 TPM at existing unit located at Plot No. 1504, 1505, 1506/1 and by Addition of

Adjoining New Plot No. 1503/1, 1502, Phase: III, Notified Industrial Estate, GIDC Vapi, Tal: Pardi, Dist: Valsad-396195, Gujarat by M/s. Heranba Industries Limited. **The PP reported that the project is located within a Critically Polluted Area (CPA) as identified by the CPCB.**

2. The project/activity is covered under Category 'A' of Item 5 (b)-Pesticide Industry of Schedule of Environment Impact Assessment (EIA) Notification, 2006 (as amended) requires appraisal at Central Level by the Expert Appraisal Committee (EAC).

3. The PP applied for the ToR vide proposal number No. **IA/GJ/IND3/434430/2023** dated 29.6.2023. The proposal is placed in this 57th EAC Meeting held on 24th July, 2023, wherein the PP and an accredited Consultant, M/s. Eco Chem Sales & Services (ECSS) – Surat. [Accreditation number: NABET/EIA/2023/SA 0156, Valid up to 11.9. 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 product details as follows:

S. No.	Product Name	Capacity, TPM			Cas No.	End Use
		Existing	Proposed	Total		
	Group: 1 (Pesticide Technical)					
1	Deltamethrin	4.0	71.00	75.00	52918-63-5	Use on areas such as golf courses, ornamental gardens, lawns, outdoor perimeter treatments, indoors as spot and crack and crevice treatments, and pet collars
2	Lamdacyhalothrin	4.00	96.00	100.00	91465-08-6	Used to control a wide range of pests
3	Propenophos	4.00	-4.0	0	41198-08-7	used on a variety of crops including cotton and vegetables such as maize, potato, soybean, and sugar beet, Insecticide

4	Glyphosate Technical	0	30	30	1071-83-6	Is widely used herbicide that controls broadleaf weeds and grasses
5	Permethrin Technical	0	50	50	52645-53-1	Can Use to kill a broad range of pests, such as fleas, ticks, cockroaches, flies, and mosquitoes.
6	Temephos	0	30	30	3383-96-8	Used as a larvicide to control mosquitoes
7	Tricyclazole	0	100	100	41814-78-2	Use as fungicide for the preservation of fruits, that can cause several health issues
8	Acephate	0	25	25	30560-19-1	Used for variety of field, fruit, and vegetable crops
	Total Group: 1	**12**	**398**	**410**		
	Group: 2 (Fungicide)					
9	Hexaconazole	0	100	100	79983-71-4	Can be used on fruit trees, Fungicide
10	Difenoconazole	0			119446-68-3	Controls a broad spectrum of foliar, seed and soil-borne diseases caused by Ascomycetes, Basidiomycetes and Deuteromycetes in cereals, soya, rice, grapes, pome fruit, stone fruit, etc.
11	Propiconazole	0			60207-90-1	Used agriculturally as a systemic

						fungicide on turf grasses
12	Cyproconazole	0			94361-06-5	Use on greenhouse- and field-grown roses and as a wood preservative.
13	Tebuconazole	0			105734-96-3	Used agriculturally to Treat plant pathogenic fungicide.
14	Prothioconazole	0			178928-70-6	Use for the control of diseases caused by ascomycetes, basidiomycetes, and deuteromycetes
15	Myclobutanil	0			88671-89-0	Used as broad spectrum Triazole fungicide
16	Paclobutrazol	0			76738-62-0	Plant Growth Regulator
17	Azoxystrobin	0			131860-33	used for the protection of plants and crops from harmful fungal diseases
18	Fluazinam Tech	0			79622-59-6	Fluazinam acts by inhibiting the germination of spores and the development of infection structures.It is widely used to control late blight (P. infestans) in potato due to its activity against the zoospores of the pathogen which makes it

						particularly effective at controlling infection of the potato tubers. Its is also used to control Sclerotinia on peanuts and turf, Botrytis on grapes and beans and clubroot in br assicas.
19	Thifluzamide	0			130000-40-7	Used to control Rhizoctonia spp. diseases on rice, potatoes, maize, grass and other crops.
20	Thiophanate Methyl	0			23564-05-8	It is a widely used fungicide on tree, vine, and root crops. it is applied to tomato, wine grapes, beans, wheat, and aubergine.
21	Dodine	0			2439-10-3	Used primarily on fruits and nuts
	Total Group: 2	**0**	**100**	**100**		
	Group: 3 (insecticide)					
22	Imidacloprid	0	200	200	138261-41-3	used for pest control in agriculture
23	Profenophos	0			41198-08-7	used on a variety of crops including cotton and vegetables such as maize, potato, soybean, and sugar beet, Insecticide

24	Ethion Technical	0			563-12-2	Used to control insects on citrus trees, but also on cotton, fruit and nut trees, and some vegetables
25	Quinalphose Technical	0			13593-03-8	Insecticide which is widely used in agricultural practices
26	Malathion Tech	0			121-75-5	Used on fruits and vegetables, and to control mosquitoes, flies, and animal parasites
27	Phenthoate Technical	0			2597-03-7	Used as insecticide and acaricide for rice, vegetables, fruits, and tea.
28	Chloropyriphos (CPP) Ethyl	0			2921-88-2	Used to kill number of Pests
29	Chloropyriphos (CPP) Methyl	0			5598-13-0	Used to control insect pests on a range of crops, also used to treat stored cereal grain and empty warehouses
30	Methamidophos Tech - 73% (MMP	0			10265-92-6	Used to kill number of Pests
31	Dinotefuran	0			165252-70-0	Used for crop and pest control
32	Diflubenzuron	0			35367-38-5	Used to control many leaf eating larvae of insects feeding on agricultural, forest and ornamental plants
33	Chlorantraniliprole	0			500008-45-7	Insecticide, Ryanodine Receptor

						Activator is used to control a wide variety of crops including Corn, Cotton, Grapes, Rise & Potatoes.
34	Cyantraniliprole	0			736994-63-1	Insecticides for controlling insects with mandibulate as well as piercing-sucking mouthparts. Specially use in Vegetables, Bush Berries, Turf & Oilseeds Crops
35	Fipronil	0			120068-37-3	Used to control ants, beetles, cockroaches and Other Insects
	Total Group: 3	**0**	**200**	**200**		
	Group: 4 (Insecticide)					
36	Cypermethrin & its Beta & Gamma Isomers Technical	0	50	50	52315-07-8	Used to control a broad spectrum of chewing, sucking and flying insects
	OR					
37	Zeta Cypermethrin	0			131555-01-18-8	used to control a number of insects, such as beetles, aphids and numerous Lepidoptera.
38	Transfluthrin	0			118712-89-3	Used to control a broad spectrum, of chewing, sucking and flying insects
	OR					
39	Bifenthrin	0			82657-4-3	Used against

						malaria and filarial vector mosquitoes
	OR					
40	Tefluthrin	0			79538-32-2	Used primarily in the control of soil insect pests on corn plants
41	Fenpropathrin	0			39515-41-8	Widely used Pyrethroids insecticide in agriculture and household
42	Cyphenothrin	0			39515-40-7	Is a synthetic pyrotheroids insecticide and is effective against cockroaches
43	Beta Cyfluthrin	0			1820573-27-0	used in agriculture to control insects that feed on cotton, turf, ornamentals, hops, cereal, corn, fruit, and potatoes.
44	Alpha Cypermethrin	0			67375-30-8	Used to control a wide range of chewing and sucking insects
	Total Group: 4	**0**	**75**	**75**		
	Group: 5 (Herbicide)					
45	Propanil	0	100	100	709-98-8	Used as an Herbicide to control numerous grasses and Broad-Leaved weeds in Rice, Potatoes and Wheat.
46	Aclonifen	0			74070	Herbicide to

					-46-5	control broadleaf and grass weed species in Carrot.
47	Metribuzine	0			21087 -64-9	Used to Selectively Control Certain Broadleaf Weeds and Grassy Weed Species
48	Metamitron	0			41394 -05-2	Widely used in Italy for weed control in sugar beets.
49	Tembotrione	0			33510 4-84-2	Used as a Post-Emergence Herbicide to Control wide range of Broad Leaved and Grassy Weeds in Corn and other Crops.
50	MesotrioneMe Mesotrione	0			10420 6-82-8	Used as a Selective Herbicide specialy in Maize, also used to control broadleafweeds.
51	Triclopyr Butotyl	0			64700 -56-7	Used to control a wide variety of woody plants as a foliar spray
52	Mepiquate Chloride	0			24307 -26-4	Mepiquat chloride is plant growth regulator, iused in agriculture to reduce vegetative growth including sprout suppression in garlic, leeks and onions. It has a role as a plant growth retardant

						and an agrochemical. It is used exclusively on cotton. It is intended to increase yield by inhibiting gibberellic Acid acid synthesis.
53	Clodinafop Propargyl	0			105512-06-9	used for the control of grassy weeds in cereals mainly wheat
	Total Group: 5	**0**	**100**	**100**		
	Group: 6 Specific Pesticide Intermediates					
54	Bromo Benzene	0	115	115	108-86-1	Uses as a Solvent
55	Dibromo Benzene	0			106-37-6/583-53-9	It is widely used as a heavy liquid solvent as well as a motor oil additive
56	Propyl Bromide	0			106-94-5	Used as an intermediate in organic synthesis and in the manufacture of Agrochemicals and Pharmaceuticals.
57	Bromine	0			7726-95-6	Used in many areas such as agricultural chemi-cals, dyestuffs, insecticides, pharmaceuticals and chemical intermediates.
58	Orixane for Hexaconazole	0			88374-07-6	Used as an intermediate in synthesis of Hexaconazole
59	Valerophenone	0			1009-	Used as an intermediate in

					14-9	synthesis of Hexaconazole
60	n-Valeryl Chloride	0			638-29-9	Used as an intermediate in synthesis of Hexaconazole.
61	4,4' ThiDiphenol	0			2664-63-3	Used as an intermediate in synthesis of Temephose.
	Total Group: 6	**0**	**115**	**115**		
	Group: 7 Pyrethroid Intermediates					
62	RRCMA	0	150	150	-	Used as an intermediate in organic synthesis and in the manufacture of Deltamethrin.
63	SSCMAC	0			-	Used as an intermediate in organic synthesis and in the manufacture Alphacypermethrin
64	R- CMAC	0			-	Used as an intermediate in organic synthesis and in the manufacture of Deltametnrin.
65	Hi trans CMA	0			-	Used as an intermediate in organic synthesis and in the manufacture of Trsnsfluthrin
66	Hi Trans CMAC	0			-	Used as an intermediate in organic synthesis and in the manufacture of Trsnsfluthrin
	Total Group: 7	**0**	**150**	**150**		
	Group: 8 (Pyrethroid Intermediates)					

67	**MPBAD**	**0**	**500**	**500**	39515 -51-0	Use as Intermediate for Fenpropathrin, Cycloprothrin, Acrinathrin, Flucythrinate
	Total Group: 8	**0**	**500**	**500**		
	Grand Total	**12**	**1638**	**1650**		

5. The PP reported that the existing land area is 9740.00 m^2. Additional 5062.00 m^2 land will be used for proposed expansion. Hence, total land area after proposed expansion will be 14802.00 m^2

6. The PP reported that Ministry had issued EC earlier vide letter no. J-11011/31/2015-IA-II(I) dated 5th September 2017 for the expansion in the existing project in favor of M/s. Heranba Industries Limited (Unit-1). After obtaining the EC, the unit obtained only the CTE from GPCB on 06/03/2018 for the expansion in the existing project. After that, the unit applied for CTO of GPCB on 10/12/2019. But the CTO was not granted by the GPCB due to the non-compliance of CETP, Vapi where the unit proposed to discharge additional effluent after the proposed expansion and the CTO was rejected on dated: 16/10/2020. Now, at present, the unit has decided to introduce new pesticide products group with a total capacity of 1650 TPM. Also, the unit has purchased adjoining plots No. 1503/1, 1502, Phase: III, GIDC Vapi, Dist: Valsad for our proposed expansion project.

7. The PP reported that there are no National Parks, Wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, and Wildlife Corridors etc. within 10 km distance from the project site. River Damanganga is flowing at a distance of 4.88 kms in the SW direction.

8. The PP report that the total water requirement is 1185.00 KLD of which fresh water requirement of 783.00 KLD will be met from GIDC water supply department, Vapi. After Expansion, total industrial Wastewater Generation will be 772.00 KLD. 322.00 KLD of boiler condensate will be directly recycled in boiler. 70.00 KLD (40.00 cooling tower blow down + 30.00 boiler blow down) will be treated in RO plant. 56.00 KLD of RO permeate will be recycled in cooling tower. 280.00 KLD of process & product washing effluent having high TDS and COD, will be treated in primary ETP followed by solvent stripper followed by MEE and ATFD. 236.00 KLD of MEE / ATFD condensate + 70.00 KLD normal effluent from process & product washing + 14.00 KLD of RO rejected + 20.00 KLD of floor / container / lab washing + 10 KLD from tail scrubber = total 350.00 KLD of normal effluent will be treated in primary followed by bio reactor and tertiary ETP and finally discharge into CETP Vapi. Domestic waste water 24.00 KLD will be treated through STP and it will be utilized for plantation and Floor washing.

9. The PP reported that the Power requirement after expansion will be 3500 kVA including existing 500 kVA and will be met from Dakshin Gujarat Vij Co. Ltd. (DGVCL). Existing unit has 1 no. of D.G Set of capacity 380 kVA, additionally, unit has proposed 1 no. of D. G. Set of

capacity 1000 kVA. D.G sets will be used as standby during power failure or during emergencies. Stack height of 11.0 m is/will be provided as per CPCB norms to the proposed D.G set.

10. The PP reported that the project, being in **notified industrial area (Notification No.GHU-75-45-GID-1974-4084 (I0) CH dated 06.05.1975), 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. At present, the unit has developed 200.00 m^2 greenbelt within the premises. After expansion, the unit will develop 2320.00 m^2 greenbelt within the premises. Total greenbelt with the remises will be 2520.00, which is 17.02 % of total plot area i.e. 14802.00 m^2. To comply with the CPA condition (40% greenbelt of the total plot area), the unit need to develop additional 3400.80 m^2 (22.98% of total plot area) greenbelt area. However, the unit has proposed to develop 4700.00 m^2 (31.75 % of total area) green belt area outside the premises.

12. The total cost of the proposed expansion project will be Rs. 213.00 Crores including existing investment of Rs. 30.00 Crores. The PP reported that the total Employment will be 600 persons as direct & 150 persons indirect after expansion Industry proposes to allocate Rs. 274.50 Lakhs towards CER.

13. **Deliberations by the EAC:**

The EAC inter-alia, deliberated on the various environmental aspects such as Greenbelt development plan, Life Cycle Assessment, Carbon Sequestration study, Soil microbiology test & Soil toxicity due to proposed products, List of specific insects/pests that will be affected by the proposed product and advised the PP to submit the following:

- Layout plan by increasing the greenbelt area within the premises to 20 % of total plot area.
- Undertaking regarding Life Cycle Assessment, Carbon Sequestration study, Soil microbiology test & Soil toxicity due to proposed products, List of specific insects/pests that will be affected by the proposed product
- Undertaking stating, that additional greenbelt to be developed within the plant premises and outside the premises shall be carried out before the running monsoon season.

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

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) 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 O.M dated 31.10.2019.

(iii) Being in a Critically Polluted Area (CPA), 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 analysed 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 2965.00 m^2 of the total land area. The plant species 900 nos. of trees within the premises and 1450 nos. of trees shall be planted outside the premises before the running monsoon season and saplings selected for

greenbelt 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.

(xvii) The PP shall list out the specific pests which shall be eliminated or killed by using their products and submit the relevant study report(s) along with the EIA/EMP report.

Agenda No. 57.4

Proposed project for manufacturing of Synthetic Organic Chemicals of production capacity 13620 TPA located at Plot No. E-12, MIDC Tarapur, Boisar, Dist. Palghar, Maharashtra by Premier Solvents Pvt. Ltd. - Consideration of ToR

[Proposal No. IA/MH/IND3/433957/2023; File No. IA-J-11011/252/2023-IA-II(I)]

1. The proposal is for the issue of ToR for preparation of EIA/EMP for the Proposed project for manufacturing of Synthetic Organic Chemicals of production capacity 13620 TPA located at Plot No. E-12, MIDC Tarapur, Boisar, Dist. Palghar, Maharashtra by Premier Solvents Pvt. Ltd. **The PP reported that the project is located within 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 of Schedule of Environment Impact Assessment (EIA) Notification, 2006 (as amended) however, due to applicability of the General Conditiions the project requires appraisal at Central Level by the Expert Appraisal Committee (EAC).

3. The PP applied for the ToR vide proposal number No. **IA/MH/IND3/433957/2023** dated 29.6.2023. The proposal is placed in this 57th EAC Meeting held on 24th July, 2023, wherein the PP and an accredited Consultant, Goldfinch Engineering Systems Private Limited [Accreditation number: NABET/EIA/2023/SA 0161, Valid up to 1.9.2023] 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 product details as follows:

S. No.	Name of Product	CAS No.	Capacity MT/A	Uses
1	BUTYL GLYCOL ACETATE	112-07-2	3000	Solvent for dyes in wood stains and furniture polishes, urethane finishes, printing inks, ballpoint pastes and various chemical downstream industries.
2	ISO BUTYL ACETATE	110-19-0	1200	Used as a solvent and in perfumes and artificial fruit-flavoring agent
3	ETHYLENE GLYCOL DI ACETATE	111-55-7.	1200	Used in cosmetics, paints, lacquers, printing inks, cellulose esters, fluorescent paint, adhesives, plasticizers and solvents, especially solvents in manufacturing explosive
4	ISO AMYL ACETATE	123-92-2	960	Used in flavor foods, solvent for oil colors, lacquers, and resins
5	2 ETHYL HEXYL ACETATE	103-09-3	960	Used as a solvent for nitrocellulose, resins, lacquers, baking finishes, screen inks, cleaners, and paint removers
6	BUTYL DIGLYCOL ACETATE	112-34-5.	720	Coalescent in paints and lacquers (including emulsion paints and textured finishes) and printing inks (primarily

				screen printing inks)
7	ETHYL GLYCOL ACETATE	111-15-9	600	Used in printing ink and surface coating formulations
8	BUTYL ACETATE	123-86-4	600	Used is in the production of lacquers and paints (due to its low volatility) as a solvent,uses in the manufacturing of artificial leather, plastics adhesives and hardened coatings and topcoats
9	METHOXY PROPYL ACETATE	108-65-6	600	Used in dyes for furniture polish or wood stains, and in dye solutions and pastes for printing
10	ETHYL DIGLYCOL ACETATE	111-90-0.	480	Used in processes that colour leather and textiles, and in ball-point pen pastes.
11	3 METHOXY BUTYL ACETATE	4435-53-4	360	Used in the following products: adhesives and sealants, anti-freeze products, coating products, fillers, putties, plasters, modelling clay, finger paints, non-metal-surface treatment products, polishes and waxes and textile treatment products and dyes.
12	ISO AMYL SALICYLATE	87-20-7	240	Used in the preparation of beauty soap,use a lot

				as base/Sweet, balsamic
13	N AMYL ACETATE	628-63-7	240	Banana-like odor, used as a solvent and in the manufacture of artificial fruit-flavoring agents
14	DI PROPYLENE GLYCOL MONO METHYL ETHER ACETATE	34590-94-8.	120	Used in paints, inks, lacquers, and other types of surface coatings.
15	PROPYLENE GLYCOL DI ACETATE	623-84-7	120	Used for applications such as can/coil coatings, acrylic paints, epoxy and polyurethane coatings, general paint and varnish formulations, high quality thinners, high gloss enamels, printing inks, and silk-screen printing inks.
16	METHYL SALICYLATE	119-36-8	60	Temporary relief of minor aches and pains caused by strains, sprains, arthritis, bruising, nerve pain, simple backache, or pain in the lower spine.
17	PERFUMERY ALDEHYDES	590-86-3	240	Used as a reagent for the production of pharmaceuticals and pesticides.
18	3 METHOXY BUTANOL	2517-43-3	240	Spray paints, adhesives, coatings and inks,used in lacquers to improve brushability and flow.

19	VERDYL ACETATE	5413-60-5	120	Used for manufacture of Fragrance Substances. Used in formulation of washing & cleaning products, air care products, polishes and waxes, cosmetics, and personal care products.
20	PERFUMERY ALCOHOLS	75-65-0	120	Used as a solvent, ethanol denaturant, paint remover ingredient, and gasoline octane booster and oxygenate
21	PHENYL ETHYL SALICYLATE	87-22-9	120	Useful as a blender fixative in all florals especially Hyacinth Rose Orchid Carnation Lilac Trefle Clover Frangipani Muguet and in flavour types like Honey Peach and Apricot.
22	PERFUMERY ESTERS	103-45-7	1320	Widely used in perfume compositions, from everyday soap and detergent perfumes to fine cosmetic fragrances, room-sprays, deodorants, etc. almost any type of perfume
	Total		**13620**	

Non EC Products (By mixing and Blending process only):

S. No.	Mixing / Blending / Purification	Capacity MT/A
1	ETHYL ACETATE	1800

2	BUTYL DIGLYCOL ETHER	120
3	ETHYL DIGLYCOL ETHER	120
4	PRIMESTER	780
5	PRIMESOL	960
6	ISO AMYL ALCOHOL	2400
7	PRIMESOLVE (PRIMESOLVE 101)	1080
8	PRIMEPERFUME / PRIMEFRAGRANCE / PRIMEFLAVOURS	720
	Total	7980

5. The PP reported that the proposed land area is 4074 m^2. No additional land will be used for proposed expansion.

6. The PP reported that there are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, and Wildlife Corridors etc. within 10 km distance from the project site. Banganga River is located at distance of 2.2 Km.

7. The PP reported that the total water requirement is 253.5 CMD. After recycling 29.9 CMD water, the total fresh water requirement will be reduced to 223.6 CMD. fresh water requirement of 223.6 m3/day will be met from MIDC Tarapur. The Effluent will be treated in proposed ETP of capacity 40 CMD. Effluent from process plant (6.5 CMD) will be fed to primary treatment. This primary treated effluent followed by stripper along with RO reject (3.3 CMD), totaling to (9.8 CMD) will be fed to evaporator. Utility blow down & washing (18.5 CMD) along with condensate from Evaporator (14.70 CMD), totaling to (33.20 CMD) will be fed to secondary treatment. This treated waste water will be fed to tertiary treatment. Tertiary treated effluent (33.20 CMD) will be passed through RO, RO permeate (29.9 CMD) will be reused & reject (3.3 CMD) will be fed to evaporator. Salts from evaporator will be disposed to CHWTSDF. This unit will be Zero Liquid Discharge (ZLD).

8. The PP reported that the Power requirement of the project will be 460 KW (Connected load) & 350 KW (Operating load) and will be met from Maharashtra State Electricity Distribution Company Limited (MSEDCL). 1 no. of DG sets having capacity 250 KVA will be used as standby during power failure. Stack (height 4 m above enclosure to each DG Sets) will be provided as per CPCB norms to the proposed DG sets.

9. Proposed unit will require 2 no of 20 lakh Kcal/hr. Thermopack. Fuel for Thermopacks will be LSHS / Briquette / PNG, which is cleaner than other fuels. A common stack of 35 m will be provided for Thermopacks as air pollution control device.

10. The PP reported that the project, being in notified industrial area i.e., MIDC Tarapur vide **Notification No. IDC -2109/23023 – IND dated 27.5.1989**, 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. Industry will be developed 816 m^2 (20.02 %) green belt inside the plot premises & 245 nos. of trees will be planted within the premises. Deficit green belt area of 937.02 m^2 (23 %) will be provided within MIDC area, 282 nos. of trees will be planted on outside Green Belt Area. Thus the total green belt area will be 1753.02 m^2 i.e. 43.03 % of total plot area of 4074.00 m^2 will be developed as a green belt area and total nos. of trees will be 527 Nos.

12. The total cost of the proposed expansion project will be Rs. 24.3 Crores. The PP reported that Total Employment will be 55 persons during operational phase and 25 persons during construction phase. Industry proposes to allocate Rs. 97.2 Lakhs towards CER.

13. **Deliberations by the EAC:**

The EAC inter-alia, deliberated on the various environmental aspects such as layout, domestic wastewater and advised the PP to submit the following:

- Revised layout depicting the 20% green belt instead of 10% inside the plot premises,
- Treatment of domestic wastewater 2.5 CMD in Sequential Batch Reactor (SBR) technology instead of septic tank followed by soak pit and reused the treated water for gardening. Hence, revision in the recycled water in water balance.

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

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) 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 O.M dated 31.10.2019.

(iii) Being in a Critically Polluted Area (CPA), 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 analysed 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 816 m^2 area inside the plot premises and deficit area to the tune of 23% i.e. 937.02 m^2 within the Tarapur MIDC only with the permission and lease agreement within the MIDC. The plant species 245 nos. of trees shall be planted within the premises and 282 nos. of trees shall be planted on MIDC land before the running monsoon season selected for greenbelt 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. 57.5

Establishment of Active Pharmaceutical Ingredients (APIs) & Intermediates manufacturing unit along with R & D and validation products of production capacity 45 TPM located at Plot No. 276-P, Kadechur Industrial area, Yadagir Taluk & District of Karnataka by M/s Shimoga Health Care - Consideration of Environmental Clearance

[Proposal No. IA/KA/IND3/434130/2023; File No. IA-J-11011/175/2023-IA-II(I)]

1. The proposal is for the grant of environmental clearance to the project for Establishment of Active Pharmaceutical Ingredients (APIs) & Intermediates manufacturing unit along with R & D and validation products of production capacity 45 TPM located at Plot No. 276-P, Kadechur Industrial area, Yadagir Taluk & District of Karnataka by M/s Shimoga Health Care.

2. The project/activity is covered under Category 'A' of item 5(f), 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) of Schedule of Environment Impact Assessment (EIA) Notification2006 (as amended) as the General condition is applicable due to presence of (interstate boundary within 5 km) since the Karnataka - Telangana interstate boundary is at 3.4 km in South direction. Therefore, the project requires appraisal at Central Level.

3. The standard ToR has been issued by Ministry vide letter No. F. No. IA-J-11011/175/2023-IA-II(I)dated 7.5.2023. The PP submitted that Public Hearing is not required for the proposed project as it is located at KIADB, Industrial area – Kadechur Industrial Area. EC was granted by MOEFCC dated 14.10.2016. The PP applied for Environment Clearance in Common application form and submitted EIA/EMP Report and other documents. The PP reported that it is a **Fresh EC.** The proposal is placed in 57th EAC Meeting held on 24th July, 2023 wherein the Project Proponent and an accredited Consultant, M/s. AM Enviro Engineers [Accreditation number NABET/EIA/2023/SA 0167 (Rev.01) valid till September 29, 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 20,234.3 m^2 and no R& R is involved in the Project. The details of products and by–products are as follows:

S. No.	Name of Products	Qty (TPM)	CAS No.	Therapeutic Use
1.	Clopidogrel Bisulphate	5	120202-66-6	To treat the symptoms of acute coronary syndrome
2.	Dolutegravir Sodium	2	1051375-19-9	Anti-retroviral (ARV) for

S. No.	Name of Products	Qty (TPM)	CAS No.	Therapeutic Use
				treatment of HIV infection
3.	Domperidone	3	57808-66-9	Anti-sickness drug
4.	Famotidine	3	76824-35-6	To treat gastritis
5.	Itraconazole	5	84625-61-6	Anti fungus
6.	Ivabradine HCl	2	148849-67-6	To treat heart disease
7.	Lacosamide	2	175481-36-4	To prevent and control seizures
8.	Lenalidomide	1	191732-72-6	To treat anaemia
9.	Linagliptin	5	668270-12-0	Anti-diabetic
10.	Linezolid	5	165800-03-3	Antibiotic
11.	Montelukast Sodium	2	151767-02-1	To prevent wheezing
12.	Nebivolol HCl	5	152520-56-4	To treat high blood pressure
13.	Ondansetron HCl Dihydrate	4	103639-04-9	To prevent nausea and vomiting
14.	Rosuvastatin Calcium	4	147098-20-2	To manage cholesterol
15.	Sitagliptin Phosphate	2	654671-77-9	To control high blood sugar
16.	Stavudine	1	3056-17-5	Nucleoside reverse transcriptase inhibitors
17.	Telmisartan	5	144701-48-4	Anti-hypertensive
18.	Topiramate	10	97240-79-4	To prevent migraine headaches
19.	Vildagliptin	2	274901-16-5	Anti-diabetic
20.	Voriconazole	2	137234-62-9	Anti-fungus
21.	Zoledronic acid	1	165800-06-6	To treat high levels of calcium
22.	Sertraline HCl	2	79559-97-0	Antidepressant
23.	Terbutaline Sulphate	1	23031-32-5	Bronchodilator
24.	Ambroxol HCl	2	23828-92-4	Respiratory diseases
25.	Bromhexine HCl	2	611-75-6	Respiratory diseases
26.	Rivaroxaban	2	366789-02-8	Anticoagulant medication
27.	6-Heptenyl acetate	5	5048-30-6	Aroma product
28.	O-Benzyl Salbutamol	2	56796-66-8	Salbutamol intermediate
29.	3,5-Dibenzyloxy acetophenone	2	28924-21-2	Terbutaline intermediate
30.	R&D and validation products	0.25		
	TOTAL (8 Products)	**45**		

Note: From above list of products any 8 products will be manufactured at a given point of time.

LIST OF BY-PRODUCTS

S. No.	Name of the Product	Name of the By-product	Quantity in Kg/Day
1.	Famotidine	Potassium chloride	53.1
2.	Rosuvastatin	Triphenyl phosphine oxide	100.3

	Calcium		
3.	Telmisartan	Sodium Phosphate	250.9
		1-Bromo-5,5-dimethyl imidazoline-2,4-dione	86.9
4.	Topiramate	Pyridine Hydrochloride	261.1
5.	Ambroxol HCl	Sodium acetate	92.4
6.	Bromhexine HCl	Sodium acetate	92.8

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, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site. Bhima River is flowing at a distance of 8.3 km SW in direction. The PP reported that no Schedule-I species exist within 10 km study area of the project.

7. The PP reported that **Ambient air quality** monitoring was carried out at 8 locations during December 2022 to February 2023 and the baseline data indicates the ranges of concentrations as: PM_{10} (67.63 – 73.84 $\mu g/m^3$), $PM_{2.5}$ (32.60 – 43.53 $\mu g/m^3$), SO_2 (13.31 – 24.31 $\mu g/m^3$) and NO_2 (29.00 – 41.60 $\mu g/m^3$). AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.10, 0.06 and 0.10 $\mu g/m^3$ with respect to PM_{10}, SO_2 and NO_x. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS). **Noise** - Industrial Zone: The daytime noise levels at the Project site were observed to be in the range of 50.8 (A) to 54.0 dB (A), which is well below the permissible limits of 75 dB(A). Residential Zone: The daytime noise levels in both the residential locations were observed to be 48.0 dB (A) & 49.4 dB (A). The noise levels at all the locations were below the permissible limits of 55 dB(A). Night time Noise Levels (Lnight) Industrial Zone: The night-time noise level in the Project site were observed to be in the range of 43.6 dB (A) to 44.8 dB (A), which is well below the permissible limits of 70 dB (A). Residential Zone: The night-time noise levels in both the residential locations were observed to be 42.8 dB (A) & 43.5 dB (A). The noise levels were below the permissible limits of 45 dB (A) in night-time. **Water** - pH of the water sample collected was in the range of about 7.23 – 7.38. The parameter conforms to all the Class Criteria. Total dissolved solids in the sample were in the range of about 340 mg/l – 510 mg/l. The value at Kadechur lake is slightly more than the limit 500 mg/l for Class A. For other locations, the parameter conforms to all the Class Criteria. Total hardness was found in the range of about 180 mg/l – 240 mg/l. The parameter conforms to all the Class Criteria. Chloride concentration was found in the range of about 62 mg/l – 90 mg/l. The parameter conforms to all the Class Criteria. Fluoride concentration was found in the range about 0.2 mg/l – 0.4 mg/l. The parameter conforms to all the Class Criteria. Sulphate concentration was found in the range about 15.1 mg/l - 23.1 mg/l. The parameter conforms to all the Class Criteria. **Soil -**Physicochemical characteristics of the soil samples obtained from 7 areas in the buffer zone and one from the project site reveals that all are basically reddish brown in color and Loamy sand in texture. Since the upper soil layers

are formed by the deposition of fine sand and silt carried down by the storm waters from the surrounding areas, they are moderately productive, and they are not prone to water logging.

8. The PP reported that the total water requirement will be 163.3 KLD of which freshwater requirement of 94.1 KLD will be met from KIADB Water Supply. The total effluent of quantity is 67.4 KLD, out of which industrial effluent of 64.9 KLD will be sent to CETP, Kadechur and domestic effluent of 2.9 KLD will be send to septic tank (As per IS:2470 Part-I) followed by soak pit.

9. Power requirement will be 1000 KVA which will be met from GESCOM (Gulbarga Electricity Supply Company Limited). DG sets of capacity 1 X 250 KVA & 1 X 500 KVA will be used as standby during power failure. Stack of height 8 m AGL will be provided as per CPCB norms to the proposed DG sets.

10. The boilers with capacity 1 X 2 TPH (Briquettes/Coal) & 1 X 3 TPH (Briquettes/Coal), 2 Lakh kcal/Hr (Diesel fired) thermic fluid heater, scrubbers of 1 X 500 cfm & 1 X 1000 cfm (Two stage) and cooling towers of 2 X 300 TR and 1 X 400 TR will be used. Multi-cyclone separator with bag filters will be provided for the boilers for controlling the particulate emissions within the statutory limit of 115 mg/Nm3.

11. **Details of Process Emissions Generation and their Management:**

S. No	Name of the Gas	Quantity in Kg/Day	Treatment Method	Disposal Method
1.	Hydrogen chloride	190.8	Scrubbed by using water media	Generated Dil. HCl will be reused within the industry
2.	Ammonia	60.9		Generated NH_4OH will be reused within the industry
3.	Hydrogen Bromide	53.4	Scrubbed by using C.S. Lye solution	The generated effluent will be sent to CETP along with high TDS effluent.
4.	Sulphur Dioxide	42.9		
5.	Oxygen	24.3	Dispersed into atmosphere	-
6.	Carbon dioxide	282.5		
7.	Nitrogen	10.4		
8.	Hydrogen	17.2	Dispersed into atmosphere through flame arrester	-

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

S. No.	Category of HW	Name of HW	Quantity	Disposal Method
Hazardous waste generation from plant				

S. No.	Category of HW	Name of HW	Quantity	Disposal Method
1.	5.1	Waste oils & Grease/ Used Mineral oil	0.4 KL/Annum	Agencies authorized by KSPCB
2.	5.2	Oil-Soaked Cotton	3 Kgs/month	KSPCB authorized Vendor
3.	20.3	Distillation Residue	1094.4 kgs/day	Store in secured manner and hand over to authorized cement industry for Co-processing
4.	28.1	Process Residues & Waste	1662.2 kgs/day	Store in secured manner and hand over to authorized cement industry for Co-processing/TSDF
5.	28.2	Spent Catalyst	75.3 kgs/day	Store in secured manner and hand over to authorized recycler
6.	28.3	Spent Carbon	150.6 kgs/Day	Store in secured manner and hand over to authorized cement industry for Co-processing
7.	28.4	Off Specification Products	2 TPM	Store in secured manner and hand over to authorized cement industry for Co-processing/TSDF
8.	28.5	Date expired products	500 Kgs/Month	Store in secured manner and hand over to authorized cement industry for Co-processing/TSDF
9.	28.6	Spent Solvents	250 KL/Month	Store in secured manner and hand over to authorized recyclers/cement industries
10.	33.1	Detoxified-Container & Container Liners of Hazardous Chemicals and Wastes	300 No's/Month	After complete detoxification, shall be disposed to the outside agencies.
11.	33.2	Contaminated cotton rags or other cleaning materials	25 Kgs/month	Store in secured manner and hand over to KSPCB Authorized Vendor
12.	35.2	Spent ion exchange resin	150 kgs/annum	Sent to TSDF
13.	A1160	Used Lead Acid batteries	2 No's/Annum	Returned back to dealer/ Supplier
Other Solid Wastes				
14.	--	Coal ash	1400 kgs/day	Sent to Brick Manufacturers
15.	--	Briquette ash	3640 kgs/day	Sent to fertilizer industries
16.	--	Used PPE	6 Kgs/	Sent to TSDF

S. No.	Category of HW	Name of HW	Quantity	Disposal Method
			Month	
17.	--	E- Waste	150 Kgs/ Annum	Authorized recyclers
18.	--	Plastic Waste	200 Kgs/ Annum	Authorized recyclers
19.	--	Metal Scrap	2 TPA	Sale to outside agencies/ recyclers
20.	--	Used Filters (HEPA filters, Oil Filters etc.)	25 Nos /Year	Sent to TSDF
21.	--	Used / Discarded RO Membranes	0.2 TPA	Sent to TSDF

13. The Committee was informed that the Ministry has recently issued an Office Memorandum dated 28.01.2021, which inter-alia request EAC to clearly recommend the permissible pollution loading i.e., quantity and quality, including composition of emissions, discharge and solid waste generation. In compliance this OM, PP has submitted the following pollution load information and the EAC deliberated on the issue. PP also requested that EC may include the name of products also otherwise PP will face difficulty in obtaining the CTE/CTO from concerned SPCB.

Kg per day													
EFFLUENT WATER								SOLID WASTE					
Water in put	Water in Effluent	Organics in effluents	TDS	COD	HTDS	LTDS	Total Effluent	Organic	Inorganic	Spent carbon	Spent Catalyst	Process Emission	Distillation residue
36228.5	36740.9	592.0	1749.8	1184.8	33586.1	4727.3	3831.5	1298.7	363.4	150.6	75.3	520.6	1094.4

14. The Budget earmarked towards the Environmental Management Plan (EMP) is ₹ 135.5 lakhs lakhs (capital) and the Recurring cost (operation and maintenance) will be about ₹ 35.0 lakhs per annum, Industry proposes to allocate Rs. 15 lakhs towards CER.

15. Industry will develop greenbelt over an area of 37.50 % ie., 7,586.5 m^2 out of total area of the project.

16. The PP proposed to set up an Environment Management Cell (EMC) to engage HOD – Environment and safety- Dy. manager (Environment) – Assistant Manager safety- officer for the functioning of EMC.

17. The PP reported that the proposed project is exempted from Public Hearing as it is located in a Notified Industrial Area i.e., KIADB, Industrial area, Kadechur and MoEF&CC has granted Environmental Clearance to Kadechur Industrial Area at Kadechur village in Yadgir district, Karnataka vide F. No. 21-8/2014-IA. II, dated 14.10.2016.

18. The PP reported that the total carbon emission from the project in operation phase will be 1,577.88 Tons /year and by adopting Greenbelt and Afforestation and solar power the amount of carbon offset that could be achieved will be 3,135.17 Tons/year. Therefore, the net contribution of Carbon is 1,557.30 Tons/year (Carbon Positive).

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

20. The estimated project cost is Rs 15.0 Crores. Total Employment will be 75 persons.

21. **Deliberations by the EAC**

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 to the effect 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 Committee noted that the EIA reports are in the 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 inter-alia, deliberated on the coal, Modular STP, green belt development, compliance of OM dated 18.5.2023 and advised the PP to submit the following:

- Undertaking for not using Coal as primary fuel for Boiler.
- Explore the possibility of using Modular STP for treating domestic sewage.
- Undertaking for greenbelt development.

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

The Committee also 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 Experts Members of the EAC found the proposal in order and recommended for grant of environmental clearance.

The Committee is of the view that recommendation of EAC 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 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) The PP shall develop Greenbelt over an area of at least 7,586.5 m^2 by planting 81 number of trees (within core) and 137in buffer area within a period of one year grant of EC. Additionally the PP shall plant minimum 500 saplings within a month along the Nala which is located at the west side of the project site The saplings selected for the plantation should be of sufficient height, preferably 6-ft (about 2m). 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 HOD – Environment and safety- Dy. manager (Environment).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 the 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 ₹ 135.5 Lakhs (Capital cost) and ₹ 35.0 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 the previous year.

(iv) The total water requirement shall not exceed 163.3 KLD of which freshwater requirement of 94.1 KLD shall be met from KIADB Water Supply.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

(v) The total effluent of quantity shall be 67.4 KLD, out of which industrial effluent of 64.9 KLD will be sent to CETP, Kadechur and domestic effluent of 2.9 KLD shall be send to septic tank (As per IS:2470 Part-I) followed by soak pit. The PP shall explore the possibility of using modular STP for treating domestic sewage of 4 KLD.

(vi) Agrobriquette shall be used as a primary fuel, Coal shall be used as standby fuel during non-availability of biomass briquettes (rainy season) and shall not use coal after 2 years of project implementation

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

(viii) The PP 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) The PP shall comply with the environment norms for Pharmaceuticals/Bulk Drugs Industry as notified by the Ministry of Environment, Forest and Climate Change, vide GSR 541(E), dated 06.08.2021 under the provisions of the Environment (Protection) Rules, 1986.

(x) All necessary precautions shall be taken to avoid accidents and action plan shall be implemented for avoiding accidents. The PP 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.

(xi) 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.

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

(xiii) A 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.

(xiv) 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.

(xv) 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.

(xvi) 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.

(xvii) The unit shall make the arrangement for the protection of possible fire hazards during manufacturing process in material handling. Fire-fighting system shall be as per the norms.

(xviii) 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.

(xix) 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.

(xx) 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. 57.6

Proposed Expansion of Organic Azo Pigments, Organic Pigments, Pigment Violet, Quinacridone Pigments of production capacity from 317 to 425 TPM (Overall production capacity: 657 to 565 TPM) located at at Plot No. 23, Phase I, GIDC Notified Industrial Area, Vapi, Ta: Pardi, Dist- Valsad (Gujarat) by M/s. Pidilite Industries Limited - Consideration of ToR

[Proposal No. IA/GJ/IND3/434035/2023; File No. IA-J-11011/258/2023-IA-II(I)]

1. The proposal is for the issue of ToR for preparation of EIA/EMP for the Proposed Expansion of Organic Azo Pigments, Organic Pigments, Pigment Violet, Quinacridone Pigments of production capacity from 317 to 425 TPM (Overall production capacity: 657 to 565 TPM) located at at Plot No. 23, Phase I, GIDC Notified Industrial Area, Vapi, Ta: Pardi, Dist- Valsad (Gujarat) by M/s. Pidilite Industries Limited. **The PP reported that the project is located within 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. 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 number No. **IA/GJ/IND3/434035/2023** dated 10.7.2023. The proposal is now placed in the 57th EAC meeting held on 24th July, 2023, wherein the PP and an accredited Consultant, M/s. Eco Chem Sales & Services (ECSS) [Accreditation number: NABET/EIA/2023/SA 0156, Valid up to 11.9.2023 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 product details are as follows:

S. No	Product	CAS No.	MT/Month			End use of product
			Existing	Proposed	Total after Proposed Expansion	
1	Carbazole Dioxazine Violet Pigment	215247-95-3	61	+39	100	Paint, Paper, Plastic, Textile Ink and as
2	Organic Azo Pigment	6410-30-6	160	+40	200	

S. No	Product	CAS No.	MT/Month			End use of product
	(Orange/Yellow/ Red)	5567-15-7 15793-73-4*				Colorants
3	Pigment Emulsion	-	340	-200	140	
4	Quinacridone Pigment	1047-16-1 980-26-7 3089-17-6 1047-16-1 3089-16-5	56	+19	75	
5	Organic pigments (like Benzimidazolone group, Isoindoline Group & Quinalphathalone group) (Yellow (110, 138,139,151,154,180,183) & Orange (36, 64)	5590-18-1 56731-19-2 36888-99-0 61036-28-0 68134-22-5 77804-81-0 65212-77-3 12236-62-3 72102-84-2	40	+10	50	
	Total		**657**	**-92**	**565**	

5. The PP reported that the existing land area is 38443.0 m^2. No additional land will be used for proposed expansion.

6. The PP reported that in the year 2019, the unit has obtained Environmental Clearance from SEIAA, Gujarat vide File No. SEIAA/GUJ/EC/5(f)/139/2019, dated: 28th January 2019, for the expansion of Organic azo pigment, organic Pigment, pigment violet, Quinacridone pigments & Pigment emulsions Manufacturing.

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. Damanganga is flowing at a distance of 1.73 km in S direction.

8. The PP reported that the total water requirement is 2817.0 KLD of which fresh water requirement of 1355.2 KLD will be met from GIDC water supply department, Vapi. After

Expansion, total effluent generation will be 2737.7 KLD (110 KLD: Domestic + 2627.7 KLD Industrial). Out of which 110 KLD of domestic effluent will be treated in STP and STP treated water used in Gardening, Boiler scrubber, cooling tower etc. Out of 2627.7 KLD of industrial effluent, 454 KLD of concentrated effluent is treated in RO followed by MEE/MVR/WHE. 318 KLD of RO permeate is recycle for process. From MEE/MVR/WHE, 90.2 KLD of condensate will be recycle in process, 23.4 MT of salt will be generated for TSDF disposal and 22.4 MT will be evaporation loss. 561.7 KLD process water is directly recycled for process. 130 KLD of Boiler blow down and cooling tower blown is treated in RO. Balance 1321 KLD of industrial normal effluent is treated in primary, secondary and tertiary ETP. From final treated effluent, 114 KLD will be treated in RO and recycler for process and balance 1207 KLD normal waste water discharge into underground effluent drainage line to CETP for further treatment and disposal into tidal zone of River Damanganga to Arabian Sea. Thus after proposed expansion, there will be no additional discharge into CETP.

9. Power requirement after expansion will be 4000 kVA including existing 3000 kVA and will be met from Dakshin Gujarat Vij Co. Ltd. (DGVCL). Existing unit has 3 Nos. of D.G. Set of capacity 750 kVA & 1 nos. of 125 kVA capacity. D. G. sets which will be used as standby during power failure or during emergencies. Stack height of 11.0 m has been provided as per CPCB norms to the existing DG set.

10. The PP reported that the project, being in notified industrial area (Notification No.GHU-75-45-GID-1974-4084 (I0) CH dated 06.05.1975), is exempted from the public hearing as per the Para 7.III. Stage (3) (i) (b) of the EIA Notification, 2006 and O.M. No. J-111011/321/2016-IA. II(I) dated 27.04.2018

11. Unit has already developed 11.65 % of total area as greenbelt within the premises. Additional, 7.52 % greenbelt area will be developed after proposed expansion within the premises. Hence, total 19.16 % (7367 m2) will be developed after proposed expansion within the premises. 38.66 % (14862 m2) greenbelt area will be developed outside the premises after proposed expansion. Total 57.82 % (22,229 m2) will be developed as greenbelt after proposed expansion.

12. The estimated project cost is Rs. 377.5 Crores including existing investment of Rs. 253.5 Crores. The PP reported that Total Employment will be 332 persons as direct & 100 persons indirect after expansion.

13. **Deliberations by the EAC:**

The EAC inter-alia, deliberated on the greenbelt, and advised the PP to submit the following.

- Undertaking required, stating that unit will develop 20% greenbelt area within the plant premises before the end of running monsoon season.

The PP submitted the same and the EAC found these to be satisfactory.

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) 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 O.M dated 31.10.2019.

(iii) Being in a Critically Polluted Area (CPA), 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 analysed 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 shall develop Greenbelt over an area of 3210.0 m^2 within the premises immediately before the running monsoon season. Accordingly, 867 Nos. of trees shall be developed inside the premises & 4459 Nos. of trees shall be planted outside the premises selected for greenbelt 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. 55.7

Proposed expansion of Pesticide Intermediates & Technical Pesticides production capacity from 21780 MT/Annum to 10800 MT/Annum located at Plot No. 133 & 134, G.I.D.C. Estate, Ankleshwar, Dist. Bharuch, Gujarat by M/s. Tagros Chemicals India Private Ltd. - Consideration of ToR

[Proposal No. IA/GJ/IND3/436560/2023; File NoIA-J-11011/521/2017-IA-II(I)]

1. The proposal is for the issue of ToR for preparation of EIA/EMP for the Proposed expansion of Pesticide Intermediates & Technical with production capacity from 21780 MT/Annum to 10800 MT/Annum located at Plot No. 133 & 134, G.I.D.C. Estate**,** Ankleshwar – 393002, Dist. Bharuch, Gujarat by M/s. Tagros Chemicals India Private Ltd. **The PP reported that the project is located within a Critically Polluted Area (CPA) as identified by the CPCB.**

2. The project/activity is covered under Category 'A' of item 5(b), Pestcide industry. 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 number No. **IA/GJ/IND3/436560/2023** dated 14.7.2023. The proposal is now placed in the 57th EAC meeting held on 24th July, 2023, wherein the PP and an accredited Consultant, **M/s. Shree Green Consultants**, [Accreditation number: NABET/EIA/2124/IA0072 valid till 24th February, 2024made 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 are as follows:

Sr. No.	Products	Category as per EIA Notification	CAS Nos.	Production Capacity (MTPA)		
				Existing	Proposed	Total
Pesticides Intermediates & Technical						
Group-A						
1	DV Acid Chloride and/or derivatives /intermediate	5(b)	52314-67-7	3000	1800	1800
2	Meta Phenoxy Benzaldehyde and/or derivatives /intermediate	5(b)	39515-51-0	3000		
3	Deltamethrin Tech and/or derivatives /intermediate	5(b)	105512-06-9	600		
Group-B						
4	Cypermethrin Tech. and/or derivatives /intermediate	5(b)	52315-07-8	2400	4200	4200
5	Permethrin Tech. and/or derivatives /intermediate	5(b)	52643-53-1	1200		
6	Alphamethrin Tech. and/or derivatives /intermediate	5(b)	67375-30-8	600		
7	Trans CMAC and/or derivatives /intermediate	5(b)	52314-67-7	1800		
8	Meta Phenoxy Benzyl Alcohol and/or derivatives /intermediate	5(b)	13826-35-2	1200		
9	Tefluthrin and/or derivatives /intermediate	5(b)	79538-32-2	1200		
Group-C						
10	Pyriproxyfen and/or derivatives /intermediate	5(b)	95737-68-1	1200		

Sr. No.	Products	Category as per EIA Notification	CAS Nos.	Production Capacity (MTPA)		
				Existing	Proposed	Total
11	4-Phenoxy Phenol and/or derivatives /intermediate	5(b)	831-82-3	0	4800	4800
12	APJ 1 and/or derivatives /intermediate	5(b)	-	0		
13	APJ 2 and/or derivatives /intermediate	5(b)	-	0		
14	APJ 3 and/or derivatives /intermediate	5(b)	-	0		
15	APJ 4 and/or derivatives /intermediate	5(b)	-	0		
16	APJ 5 and/or derivatives /intermediate	5(b)	-	0		
17	TFNA-AM and/or derivatives /intermediate	5(b)	-	0		
18	CCIM and/or derivatives /intermediate	5(b)	-	0		
19	IKI 3106 and/or derivatives /intermediate	5(b)	-	0		
20	IKI 916 and/or derivatives /intermediate	5(b)	-	0		
Total (A+B+C)				**16200**	**10800**	**10800**
Inorganic Products (Not Covered Under EIA Notification, 2006)						
21	Sodium Sulfite Powder	-	7757-83-7	7586.28	0	7586.28
22	Sodium Fluoride	-	7681-49-4	75	-75	00
23	KCl Powder	-	7447-40-7	1656	2220	3876
24	Ammonium Chloride	-	12125-02-9	1650	0	1650
25	SS CMA	-	59042-49-8	294	0	294
26	Chloro Bromo Acid	-	21739-92-4	66	139	205

Sr. No.	Products	Category as per EIA Notification	CAS Nos.	Production Capacity (MTPA)		
				Existing	Proposed	Total
27	Poly Aluminium Chloride(powder)	-	1327-41-9	4704	5061	9765
Total Inorganic products				**16031.28**	**7345**	**23376.28**
Formulation		**-**	**-**	**65700**	**0**	**65700**
By-Product						
1	Cupric Chloride	-	7447-49-4	31.56	0	31.56
2	HCL	-	7647-01-0	2850.24	4205.76	7056
3	AlCl3 Solution / PAC Solution	-	7446-70-0	9765	-9765	00
4	Hydrazine Hydrate	-	7803-57-8	0	1200	1200
5	Sodium Acetate	-	127-09-3	0	1200	1200
6	Sodium Sulphate	-	7757-82-6	0	4000	4000
Total By products				**12646.8**	**840.76**	**13487.56**

5. The PP reported that the Existing land area 33160 m^2. No additional land will be used for proposed expansion.

6. The PP reported that Ministry had issued EC earlier vide letter no. F.No. J-11011/521/2017-IA-II (I) dated 31st December 2019 to the existing project for setting up of Pesticide Specific Intermediates manufacturing unit in favour of M/s. Tagros Chemical India Ltd. Further this EC got transferred in the name of M/s. Tagros Chemical India Pvt. Ltd. EC vide File No. J.11011/521/2017-IA-II(I) dated 1st August, 2022 from the MOEF&CC. Certified compliance report received by MoEF&CC, Gandhinagar vide File No. J-11/24-2023-IROGNR dated 1st March, 2023. Out of 54 conditions 25 conditions are complied, 8 are partly complied (Conditions related to production, Greenbelt, avenue plantation, storage of flyash, budget for EMP (capital and recurring cost), condition enforced under the various laws mentioned in the EC) and 10 are noted.

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. Narmada River is flowing at a distance of 15 km in North direction.

8. The PP reported that the total water requirement is 1605.36 m^3/day of which fresh water requirement of 1266.36 m^3/day will be met from Ankleshwar GIDC water Supply System. Effluent of 926 m^3/day quantity will be treated through proposed in house ETP, MEE & STP. Approximately 926 KLD (22 KLD Domestic effluents + 904 KLD Industrial Effluent) effluent will be generated from after proposed expansion. Total industrial effluent (1295 KLD) will be segregated into two streams having HTDS & LTDS stream. Total 500 KLD HTDS (450 KLD HTDS process waste water + RO Reject 50 KLD) shall be sent to Stripper followed by MEE & ATFD for further treatment. MEE Condensate 450 KLD will be reused in washing, scrubber & cooling. 904 KLD Low TDS effluent (LTDS 337 KLD + Cooling 37 KLD +Boiler 50 KLD +Scrubber 30 KLD + MEE Condensate 450 KLD) will be treated in house ETP. 457 KLD treated effluent out of 824 KLD will be sent to NCT for further treatment. Remaining 367 KLD will be sent to RO for further treatment 317 KLD RO permeate will be reused in utility. RO reject (50 KLD) will be sent to MEE for further treatment. Domestic effluent (22 KLD) shall be treated in STP and treated water (25 KLD) will be reused in Gardening.

9. Power requirement after expansion will be 8.5 MW and will be met from Dakshin Gujarat Vij Company Limited (DGVCL) Power Supply. Three D.G set of 1000 KVA x 1Nos., 1500 KVA x 1 Nos. and 2500 KVA x 1 No. will be used as standby during power failure. Stack height of 11 meter will be provided as per CPCB norms to the proposed DG sets.

10. The PP reported that the project, being in notified industrial area i.e., GIDC Industrial Estate, vide Notification No. GHU ;8/2008-GID; 102004: 1496 DATED 1.4.2008 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. A total of 33160 m² land area is available at site; out of this 4430.95 m² (i.e., 13.4 % of total area) has already been developed as a greenbelt inside the premises. In addition, approximately 12000 m² (i.e., 36.18 % of total area) green belt development is being done outside premises, in collaboration with Gujarat Forest Department. This will constitute a total of 49.5 % greenbelt area development by M/s. Tagros Chemicals India Pvt.

12. The estimated project cost is Rs. 485.00 Crores. The PP reported that Total Employment will be 365 persons as direct & 135 persons indirect after proposed expansion.

13. **Deliberations by the EAC:**

The EAC inter-alia, deliberated on the greenbelt, fuel, impact of each molecule on soil and their toxicity profile and advised the PP to submit the following.

- Submit the revised green belt action plan regarding the increase in green belt within the premises.
- Submit the undertaking for shifting to green fuel.
- Submit the notarized undertaking for incorporating impact of each molecule on soil and their toxicity profile in EIA/EMP.

The PP submitted the same and the EAC found these to be satisfactory.

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) 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 O.M dated 31.10.2019.

(iii) Being in a Critically Polluted Area (CPA), 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 analysed 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 shall develop Greenbelt over an area from 13.49 % to 16.69% inside the plant premises. Additionally, industry shall also develop 36.18% greenbelt with the help of State Govt. Forest Department adjacent to Ankleshwar GIDC Estate.Accordingly, 2500 /ha considering 80% survival rate number of saplings selected for greenbelt 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) Action plan shall be prepared for switching to a cleaner fuel within 5 to 10 years, and a phase wise implementation plan shall be submitted along with EIA/EMP report.

(xv) The PP shall list out the specific pests which shall be eliminated or killed by using their products and submit the relevant study report(s) along with the EIA/EMP report.

(xvi) The PP should explain the life cycle analysis study. PP needs to submit details reflecting specific adverse and harmful impacts of Pesticide on flora and fauna of microbiota.

(xvii) 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.

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

(xix) 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. 57.8

Proposed Project for manufacturing of Synthetic Organic Chemicals of production capacity 600 MT/Month. located at Plot No. A1/47/4, Nandesari GIDC Industrial Estate, Vadodara, Gujarat by M/s. Sabri Chemicals Pvt. Ltd. - Consideration of ToR

[Proposal No. IA/GJ/IND3/436941/2023; File No: IA-J-11011/266/2023-IA-II(I)]

1. The proposal is for the issue of ToR for preparation of EIA/EMP for the Proposed Project for manufacturing of Synthetic Organic Chemicals of production capacity 600 MT/Month. located at Plot No. A1/47/4, Nandesari GIDC Industrial Estate, Vadodara, Gujarat by M/s. Sabri Chemicals 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 'B' of item 5(f) Synthetic Organic Chemicals Industry. 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 number No. IA/GJ/IND3/436941/2023 dated 17.7.2023. The proposal is now placed in the 57th EAC meeting held on 24th July, 2023, wherein the PP and an accredited Consultant, **M/s. Jyoti Om Chemical Research Centre Pvt.LTD**, [Accreditation number: NABET/EIA/2023/IA0071 valid till 18.12.2023 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 product details are as follows:

S. No	**Name of Products**	**CAS No.**	**Production Quantity [MT/Month]**	**End Uses**
1	Benzyl Alcohol Derivatives		400	
1.1	Benzyl Alcohol (All Grades) And/Or	100-51-6		used as a solvent in the production of perfumes, paints and adhesives, etc.
1.2	Benzyl Benzoate (All Grades) And/Or	120-51-4		used to treat lice and scabies infestations.
1.3	Benzyl Salicylate And/Or	118-58-1		used as a flavour and fragrance agent and as a UV absorber.
1.4	Benzyl Cyanide And/Or	140-29-4		used as a speciality chemical
1.5	Para chloro Benzyl Cyanide And/Or	140-53-4		used in the synthesis of clopidogrel, platelet aggregation inhibitor.
1.6	Ortho chloro Benzyl Cyanide And/Or	2856-63-5		

2	Phenyl Acetic Acid	103-82-2	100	used as an adjunct to treat acute hyperammonaemia and associated encephalopathy in adult and pediatric patients with deficiencies in enzymes of the urea cycle.
3	Butyl Cyanide (Valeronitrile)	110-59-8	20	used as a raw material for organic synthesis and also as an extractant to extract benzene
4	Para Methoxy Phenyl Acetonitrile	104-47-2	60	pharmaceutical intermediate used to make anti-depressants such as Venlafaxine
5	Para Methoxy Phenyl Acetic Acid	7021-09-2	20	used as an intermediate for pharmaceuticals and other organic synthesis
	Total		600	

5. The PP reported that the proposed land area is 2702 m^2.

6. 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. Mahi River is flowing at a distance of 1.87 km in W direction.

7. The PP reported that total water requirement is 185 m^3/day of which freshwater requirement of 181 m^3/day will be met from GIDC Supply. Effluent of 152 m^3/day quantity will be treated through Primary ETP and 148 KLD sent to CETP of M/s. NIA, Nandesari for the final disposal. 4 KLD sludge will be generated. Sewage 4 KLD will be treated through STP and reused in Gardening.

8. The power requirement will be 250 KW and will be met from Madhya Gujarat Vij Company Limited (MGVCL). Unit will have 1 No. of DG sets (250 KVA) capacity, as standby during power failure. Stack (height 11 m) will be provided as per CPCB norms to the proposed DG sets.

9. Unit will have 2 Nos. of Boilers (2 TPH) will be installed with a stack of height, of 30 m and 2 Nos. of Thermic Fluid Heater (4 lac Kcal/Hr) will be installed with a stack of height, of 13 m

will be installed for controlling the particulate emissions within the statutory limit of 120 mg/Nm^3 for the proposed boilers.

10. The PP reported that the project, being in notified industrial area i.e., Nandesari GIDC Industrial Estate, vide Notification No. GHU 75/36-GID; 1974/4084 dated 6.5.1975 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. Industry will develop greenbelt over an area of. 798.4 m^2 (29.55 %) out of 2702 m^2, total area of the project within premises and additional 400 m^2 (14.70 %) of the project outside premises. Total greenbelt area will be 44.25 %.

12. The estimated project cost is Rs. 23.50 Crores. The PP reported that Total Employment will be 58 persons as direct & 30 persons indirect.

13. **Deliberations by the EAC:**

The EAC inter-alia, deliberated on the greenbelt, plant layout and advised the PP to submit an Undertaking regarding the greenbelt within the premises and outside the premises and plant layout. The PP submitted the same and the EAC found these to be satisfactory.

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) 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 O.M dated 31.10.2019.

(iii) Being in a Critically Polluted Area (CPA), 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 analysed 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 shall develop Greenbelt over an area of 30% inside the premises and 10% outside the premises within GIDC. Accordingly, Number of saplings selected for greenbelt 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.

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.

15. Details of carbon foot prints and carbon sequestration study w.r.t. proposed project needs to spelled out. Proposed mitigation measures also needs to be analysed and submitted for further appraisal of the EAC.

C. SPECIFIC TERMS OF REFERENCE FOR EIA STUDIES FOR 5(b) CATEGORY - PESTICIDES INDUSTRY AND PESTICIDE SPECIFIC INTERMEDIATES (EXCLUDING FORMULATIONS)

a. Commitment that no banned pesticides will be manufactured.
b. Details on solvents to be used, measures for solvent recovery and for emissions control.
c. Details of process emissions from the proposed unit and its arrangement to control.
d. Ambient air quality data should include VOC, other process-specific pollutants* like NH3*, chlorine*, HCl*, HBr*, H2S*,HF*, CS2etc.,(*-as applicable)
e. Work zone monitoring arrangements for hazardous chemicals.
f. Detailed effluent treatment scheme including segregation for units adopting 'Zero' liquid discharge.
g. Action plan for odour control to be submitted.
h. A copy of the Memorandum of Understanding signed with cement manufacturers indicating clearly that they co-process organic solid/hazardous waste generated.
i. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF, if any.
j. Material Safety Data Sheet for all the Chemicals are being used/will be used
k. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
l. Details of incinerator if to be installed.
m. Risk assessment for storage and handling of hazardous chemicals/solvents. Action plan for handling & safety system to be incorporated.
n. Arrangements for ensuring health and safety of workers engaged in handling of toxic materials.
o. Details of carbon foot prints and carbon sequestration study w.r.t. proposed project needs to spelled out. Proposed mitigation measures also needs to be analysed and submitted for further appraisal of the EAC.

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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 Member	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.	**Shri Santosh Gondhalkar** 'Shree' Apartment, Flat 401, Plot No. 22, Tukaram Society, Santnagar, Pune- 411009 E-mail: santoshgo@gmail.com	Member
5.	**Dr. Suresh Panwar** House No.4, Gayateri Green Society, NH 58 Bypass,Kankerkhera, Meerut, Uttar Pradesh Email-spcppri@gmail.com	Member
6.	**Shri Tukaram M Karne** "SHREYAS ORNATE" F-1, 95-Tulasibagwale Colony, Sahakarnagar-2, PUNE: 411 009, Maharashtra E-mail: tmkarne@gmail.com	Member
7.	**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

8.	**Shri Dinabandhu Gouda** Additional Director, DH IPC-I, Room No. 309A, Third Floor, Central Pollution Control Board, Parivesh Bhawan, East Arjun Nagar, Delhi – 110032 E-mail: dinabandhu.cpcb@nic.in	Member
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

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MOM approved by

(Prof. Aniruddha B. Pandit)
Chairman

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